EUROPEAN EXHIBITION OF
CREATIVITY AND INNOVATION

EURO INVENT 2013

CATALOGUE
CATALOG

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Editura Universităţii Alexandru Ioan Cuza din Iaşi

Editor:
Eng. **Andrei-Victor SANDU** Ph.D

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Gheorghe Asachi Technical University of Iasi

The *Gheorghe Asachi* Technical University of Iasi (TU IASI) has the oldest tradition in the engineering field of education in Romania. In 1813 the scholar Gheorghe Asachi established the first school for surveyors and civil engineers considered to be the nucleus of the technical higher education in Iasi. Currently, the *Gheorghe Asachi* Technical University of Iasi has 11 faculties and 4 departments that offer educational and doctoral programmes for more than 17000 students in 61 engineering specializations, 73 *Master of Science* programs and 10 doctoral schools.

Besides its educational mission, the *Gheorghe Asachi* Technical University of Iasi has an important research dimension, having 21 accredited centers and laboratories for scientific research. These centers activate in different fields, within national and international research grants, research contracts with industry or governmental organizations, their activities placing our university in the Romanian top of scientific research.

The constant focus on interdisciplinary research, on innovation and knowledge transfer, as well the quality of the research staff and their commitment for excellence provided a constant dynamics of research activities and the recognition and visibility of our university. The increased trend observed in the number of research contracts, published papers in peer reviewed international journals and conference proceedings, books, international co-operation grants, as well as joint Ph.D. supervision with well-known European universities contribute to the continuous appreciation of our university as a successful research and innovation institution able to provide proactive relationships with industry and public services and a contributor to local and regional development. Only in the last academic year, our university has participated in more than 350 national and international projects as well as research contracts .

Our research profile is directed towards high-tech engineering areas, which enable our research staff to have a very innovative approach towards research problems. Innovation in our university comes as sum of experience provided by our 172 of senior researchers, PhD supervisors and the enthusiasm brought by our 1512 PhD. students. This focus on scientific research in high-tech areas and cutting-edge technologies is proven by the outstanding innovation capabilities of our staff members that have produced nearly 65% of the Romanian patents in the last 10 years, which enabled our institution to win the *Creativity Trophy* issued by the National Register of Inventions and Trademarks in 2006.

Alexandru Ioan Cuza University of Iaşi

Alexandru Ioan Cuza University of Iaşi is the oldest higher education institution in Romania. Since 1860, the university has been carrying on a tradition of excellence and innovation in the fields of education and research. With over 38.000 students and 800 academic staff, the university enjoys high prestige at national and international level and cooperates with over 250 universities world-wide. Alexandru Ioan Cuza University is a member of some of the most important university networks and associations: the Coimbra Group, EUA - European University Association, Utrecht Network, International Association of Universities, University Agency of Francophony and the Network of Francophone Universities (RUFAC). These partnerships offer us the opportunity to experience changes, to have student and teacher mobilities and joint academic, research and strategy programmes.

Alexandru Ioan Cuza University became the first student-centered university in Romania, once the Bologna Process was implemented. We believe in the power of individual choice and customized education. Thus, we became the first Romanian university to offer students the opportunity to choose both a major and a minor field of study, in a combination at their choice, that best suits their career goals.

Research at our university is top level. In 2008, for the third year in a row, Alexandru Ioan Cuza University was placed first in the national research ranking compiled on the basis of Shanghai criteria. Our teachers are involved in over 400 national and international research projects, with the logistic support of 24 research centres. Striving for excellence, the university takes unique initiatives to stimulate research quality, to encourage dynamic and creative education and to involve its best students in academic life.

Today, with its fifteen faculties, Alexandru Ioan Cuza University offers to all inquisitive young minds a large diversity of academic programmes which are aimed to open the way towards their personal fulfilment and social recognition. In a world characterized by rapid and profound changes, where knowledge is the most valuable asset, Alexandru Ioan Cuza University aims to strengthen the flexibility of learning, to create opportunities for the intellectual and professional development of its students, to assist quality research and to contribute to the society's cultural and economic growth.

ROMANIAN INVENTORS FORUM

Romanian Inventors Forum (FIR), as a professional association of dialog and representation, has the purpose to support, stimulate, develop and valorize the scientifically, technically and artistically creativity. Under the aegis of FIR, Romanian Inventors have participated at more than 50 World Invention Exhibitions, where their creations have been awarded with orders, prizes and medals. The performance of Romanian inventics is renowned in the whole world, that is the reason why FIR became member in different international clubs, associations and federations, with special contributions.

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FORUMUL INVENTATORILOR ROMÂNI

Forumul Inventatorilor Români (FIR), este o asociație profesională de dialog şi reprezentare a inventicii româneşti în context internațional, care are drept scop sprijinirea, stimularea, dezvoltarea si valorificarea activităților de creatie stiintifică, tehnică şi artistică. Sub egida FIR, inventatorii români au participat la peste 50 de saloane mondiale de invenții, creațiile lor fiind apreciate cu numeroase ordine, premii şi medalii. Performanța inventicii româneşti este recunoscută în întreaga lume, motiv pentru care FIR a devenit membru a diverselor cluburi, asociații şi federații internaționale de profil, unde are contribuții deosebite.

EUROPE DIRECT IAŞI

Association for Ecology and Sustainable Development is the host for Europe Direct Information Centre Iaşi. The EUROPE DIRECT Information Centre Iaşi assures the European information transfer to Romanian citizens and the feedback to the E.C., enhancing dialog between European institutions and the common citizen concerning to all European policies and the personal expectations.

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EUROPE DIRECT IAŞI

Asociația pentru Ecologie şi Dezvoltare Durabilă este structura gazdă a Centrului de Informare EUROPE DIRECT Iaşi. Acesta asigură transferul informației către cetățenii români şi feed-back-ul către Comisie, facilitând dialogul între instituțiile europene şi cetățeanul de rând, referitoare la toate problemele privind politicile europene şi aşteptările individuale.

THE ORGANIZERS

„GHEORGHE ASACHI" TECHNICAL UNIVERSITY OF IASI
Faculty of Materials Science and Engineering

"Gheorghe Asachi" University of Iasi is an excellent choice for the highschool graduates, who wish to embrace a carrier in the attractive field of engineering. The eleven faculties of the university are well equipped and have renowned specialists.

The Faculty of Materials Science and Engineering at the "Gheorghe Asachi" Technical University of Iasi has the mission to train specialists for the materials engineering, mechanical engineering and industrial engineering fields, through a 4-year programme (B.Sc.), Master Courses and Ph.D. Programmes. Also, our faculty is involved in the scientific research programmes, as well as in life-long education programmes for professionals that wish to extend their expertise. Besides the formative activity, research in various fields, focused to multi-disciplinary national and international co-operation is highly valued.

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UNIVERSITATEA TEHNICĂ "GHEORGHE ASACHI" IAŞI
Facultatea de Știința și Ingineria Materialelor

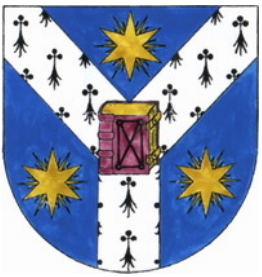
Universitatea Tehnica din Iasi este o alegere excelenta pentru absolventii de liceu care s-au hotarat sa imbratiseze o cariera in domeniul provocator al ingineriei. Cele unsprezece facultati ale universitatii sunt dotate cu laboratoare si echipamente de ultima ora, unde isi desfasoara activitatea specialisti recunoscuti pe plan european si international.

Facultatea de Știința și Ingineria Materialelor din cadrul Universității Tehnice "Gh. Asachi" din Iași, are ca misiune pregătirea specialiștilor pentru domeniul ingineriei materialelor, ingineriei mecanice și ingineriei industriale, prin programe de licență (4 ani), masterat și doctorat. De asemenea, facultatea este implicată în proiecte de cercetare și în programe de perfecționare pentru specialiștii. Valoarea personalul academic din cadrul facultății aduce o notă distinctivă predării ingineriei materialelor. Pe lângă activitatea de formare și de cercetare în diverse domenii de activitate, apreciabile sunt și cooperările multi-disciplinare naționale și internaționale.

THE ORGANIZERS

ALEXANDRU IOAN CUZA
UNIVERSITY OF IASI

The Alexandru Ioan Cuza University of Iași is the oldest higher education institution in Romania. Since 1860, the university has been carrying on a tradition of excellence and innovation in the fields of education and research. With over 38.000 students and 800 academic staff, the university enjoys a high prestige at national and international level and cooperates with over 250 universities world-wide. The Alexandru Ioan Cuza University became the first student-centered university in Romania, once the Bologna Process was put into practice. Research at our university is top level. For the second year in a row, the University is placed first in the national research ranking. Striving for excellence, the university takes unique initiatives to stimulate research quality, to encourage dynamic and creative education and to attract the best students to academic life.



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Universitatea "Alexandru Ioan Cuza" este cea mai veche instituție de învățământ superior din România continuând, din anul 1860, o tradiție a excelenței şi inovației în educație şi cercetare. Cu peste 38.000 de studenți şi 800 de cadre didactice, universitatea se bucură de un important prestigiu la nivel național şi internațional, având colaborări cu peste 250 de universități din străinătate. Universitatea "Alexandru Ioan Cuza" este membră a unora dintre cele mai importante asociații şi rețele universitare: Grupul Coimbra, EUA - Asociația Europeană a Universităților, Rețeaua Utrecht, IAU - Asociația Internațională a Universităților, AUF - Agenția Universitară a Francofoniei şi RUFAC - Rețeaua Universităților Francofone. Acestea permit schimbul de experiență, mobilități ale studenților şi profesorilor şi realizarea în comun a unor programe academice, de cercetare sau strategice.

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PROGRAM EUROINVENT 2013

DAY 1 – THURSDAY MAY 9th	
8^{00}	Participants arrival
12^{00}	Opening Ceremony Welcoming Speeches Opening of National Salon of Technically and Scientifically Books
13^{30}	Jury Evaluation
14^{00}	Media Interviews
16^{45}	End of Exhibition Day
17^{00}	European Visual Art Exhibition

DAY 2 – FRIDAY MAY 10th	
10^{00}	Jury Evaluation
10^{30}	**WORKSHOP** – Romanian Creativity in European Context
12^{00}	Delegation presentation
14^{00}	Brokerage – by TEHNOPOLIS
16^{00}	**Scientific Book Salon** Award Ceremony
16^{30}	Jury Final Decision
17^{00}	End of Exhibition Day
18^{00}	Cocktail

DAY 3 - SATURDAY MAY 11th	
10^{00}	Exhibition closure
12^{00}	**EUROINVENT Award Ceremony**

Cercetare, dezvoltare si inovare la nivel european, Energia si schimbarile climatice

9 mai 2013

Drepturile şi oportunităţile oferite de cetăţenia europeană

10 mai 2013

Educatia la nivelul Uniunii Europene, Reducerea abandonului scolar, Bursele scolare pentru elevi si studenti la nivel european

11 mai 2013

INTERNATIONAL JURY

Honorary President:

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Soung-Mo HONG
Korea Invention Academy (KIA) (South Korea)

Duu-Jong LEE
National Taiwan University of Science & Technology (Taiwan)

Aurelia LUPAN
AGEPI Moldova (R.Moldova)

Ionel MANGALAGIU
Alexandru Ioan Cuza University of Iasi (Romani)

Ion SANDU
Romanian Inventors Forum (Romania)

Mohammad Reza SHAFAIERAD
Int. Iranian Innovators & Elites Institute (Iran)

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"Gheorghe Asachi" Technical University of Iasi (Romania)

Mihail Aurel TITU
"Lucian Blaga" University of Sibiu (Romania)

Pep TORRES
MIBA (Spain)

Dmitry ZEZYULIN
Archimedes Centre (Russian Federation)

AWARDS LIST

EUROINVENT Great Prize
Prize of Europe Direct
Prize of FIR
Prize of UTI
Prize of Romanian Inventors Forum
Prize of ARHEOINVEST
Prize for Green Environment
Medicine Award
Best Design Award
International Delegation Award
Prize for the Youngest Inventor
Prize for the Woman Inventor
Prize for the Oldest Inventor
Aurel Vlaicu Order
Prize of AGEPI
Awards of Malaysian Delegation
Awards of South Corea
Awards of Moldavian Delegation
Awards of Iranian Delegation
Awards of Croatian Delegation
Awards of Ukrainean Delegation
EUROINVENT Gold Medal
EUROINVENT Silver Medal
EUROINVENT Bronze Medal
EUROINVENT Diploma

INVENTIONS CLASSIFICATION

1	Environment - Pollution Control
2	Energy and sustainable development
3	Agriculture and Food Industry
4	Medicine – Health Care – Cosmetics
5	Industrial and laboratory equipments
6	Mechanical Engineering – Metallurgy
7	Buildings and Materials
8	Aviation, car industry and transportation
9	Chemical and Textile Industry
10	Information Technology and Communication
11	Printing and advertising
12	Safety, protection and rescue of people
13	Sports, Games and Leisure
14	Other
X	Innovative Research

Jury of Book Salon

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"Gh. Asachi" Technical University of Iasi

VicePresidents: **Maria URMĂ**
"G.Enescu" Art University Iasi

Vasile VANTU
"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine Iasi

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Al.I.Cuza Publishing House

Valeriu DULGHERU
Technical University of Moldova (Moldova)

Maria GAVRILESCU
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Gabriel Ioan OLTEANU
"Al.I.Cuza" Police Academy, Bucharest

Gheorghe POPA
"Al.I.Cuza" Police Academy, Bucharest

Valentin SAVA
"G.Enescu" Art University Iasi

Jury of European Visual Art Exhibition

President: **Constantin TOFAN**
"G.Enescu" Art University Iasi, UAP Iasi

Members: **Valentin SAVA**
"G.Enescu" Art University Iasi, UAP Iasi

Atena Elena SIMIONESCU
"G.Enescu" Art University Iasi, UAP Iasi

Mihai TARASI
"G.Enescu" Art University Iasi, UAP Iasi

Dragos PATRASCU
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Bogdan TEODORESCU
"G.Enescu" Art University Iasi, UAP Iasi

PREAMBLE

The Inventions' exhibitions and shows, national or international ones, represent one of the exogenous determining factors, with multiple effects on the creative process. The system is one of the most encouraging, an interactive manner to disseminate inventions, a competitive background generating innovative ideas, while as an evaluative scientometric system, allow attracting the potential applicants or inventions' owners. It is the best medium for negotiating, conveying or transferring inventions, the place where the complete new results are exhibited.

The past 20 years experience, a time in which many Romanian inventors took their new releases in international exhibitions and were rewarded with numerous medals, orders, distinctions and diplomas, situated each time Romania, in unofficial statistics, on the first places. The honours list of the Romanian inventions create a paradoxal result of the two very close fields, the technological or applied research and on the other hand the fundamental or scientifically research. If the scientific output, represented by papers published in ISI Thomson acknowledged journals, situate Romania dragging behind the second league, in compensation, the patented awarded inventions turn it in one of first countries. So much more we should focus especially on the organizing of this kind of shows which offer real opportunities to many inventors to see their dreams come true by putting their results into a competitive-interactive system of evaluation.

Interdisciplinarity of inventics as a science is approached today in a connected, integrated way (education-research-production), with both educative and research functions, carrying great attractivity for the young generation and increasing standards both for inventors and for their products. In this respect, it is necessary to pay a special attention to the inventics schools, as they have, beside the role to form characters, professions, as well as vocations and talents, the mission to stimulate the technical creativity. We should underline the fact that after 1990 we noticed a slight lowering of the Iaşi inventics school contribution in its aim to form young inventors. Meetings and

workshops in the inventics exhibitions should put light on and find solutions to turn the inventics schools in institutions and to improving and harmonizing the laws regarding the intellectual propriety and the industrial one.

Another serious, upsetting and alarming aspect which I want to put light on is the fact that about 60 to 70% of the Romanian specialists with international output accepted to work abroad, where they are appreciated and stimulated according to their value. We should as well attract them and offer the opportunity to revaluate them selves at home and participate to such representative competitions.

A peculiar notice is the fact that many Romanian inventors of success, internationally acknowledged, are invited in organizing committees, in international juries and are active members or founders of associations or professional clubs. The Romanian delegations created a tradition in the international exhibitions, to organize a Romanian event, the so-called "The Romanian Inventors Day", where they present in a festive atmosphere their inventions, their contributions and offer diplomas and small gifts to the hosts and the other participants.

This fifth edition of EUROINVENT sent invitations to inventors associations from many countries, as United Kingdom, Spain, Croatia, Poland, Republic of Iran, Malaysia, Indonesia, Korea, United Arab Emirates, Turkey, Poland, Portugal, France, Ukraine, Taiwan, Russian Federation, Republic of Moldova. A big number of institutions and individual inventors are participating from Romania, a remarkable fact being to have here many young inventors (from schools or universities) as well as older inventors. This show is exhibiting more than 200 inventions.

With pleasure and gratitude, acknowledgements to all the persons, institutions and organizations who participate to EUROINVENT, to the partners, Romanian Inventors Forum, EUROPE-DIRECT Center, "Gheorghe Asachi" Technical University of Iaşi and "Alexandru Ioan Cuza" University of Iasi and all the partners for all their support and efforts to organize the events".

Prof. Ion SANDU – President of Romanian Inventors Forum

PARTNERS / PARTENERI

Universitatea de Arte "George Enescu" Iasi

Uniunea Artistilor Plastici Iasi

Institutul de Informatica Aplicata Academia Romana Iasi

Asociația Dentară Română pentru Educație

Societatea Română pentru Reabilitare Orală

Asociația pentru Ecologie și Dezvoltare Durabilă Iași

Primăria Iași

Rotaract Club Iași Copou

Ad Media Group

World Invention Intellectual Property Associations

www.wiipa.org.tw

INTRODUCTION:

World Invention Intellectual Property Associations (WIIPA) is a non-profit social organization, taking the whole world as the area of organization. The memberships are foreign inventors associations, schools and related organizations. Now WIIPA has 18 member countries, like Japan, Indonesia, Malaysia, Korea, Hong Kong, Iran, Philippines, Kingdom of Saudi Arabia, Macau, Thailand, Myanmar and Vietnam in Asia; Croatia, Romania and Poland in Europe; Brazil, Canada and the United States in America.

PURPOSE:

To improve the status of inventors at international levels, enhance mutual assistance and experience amongst inventors of the world, encourage creative thinking and the spirit of invention among national university hence to establish the WIIPA.

OBJECTIVES:

The objectives of WIIPA are:

1. To encourage invention / creation development and protect the intellectual property of inventors or designers.
2. To promote and enhance the development and utilization of inventions and designs.
3. To secure cooperation and mutual assistance amongst international associations of inventors and designers.
4. To establish and carry on institutions of education, instruction or research and to provide for the experience of invention knowledge generally.
5. To promote cooperation amongst the associations of inventors, designers and persons who in different fields of interests and research work for invention, research and technology.
6. To improve the status of WIIPA inventors at international levels, and to promote cooperation between inventor associations worldwide.
7. Hold or assist in holding conferences, exhibitions, competitions and organize lectures for the purpose of promoting the objects of WIIPA.
8. To achieve the foregoing objectives with WIIPA members.

ROMANIAN INVENTORS FORUM & EUROINVENT
is member of WIIPA

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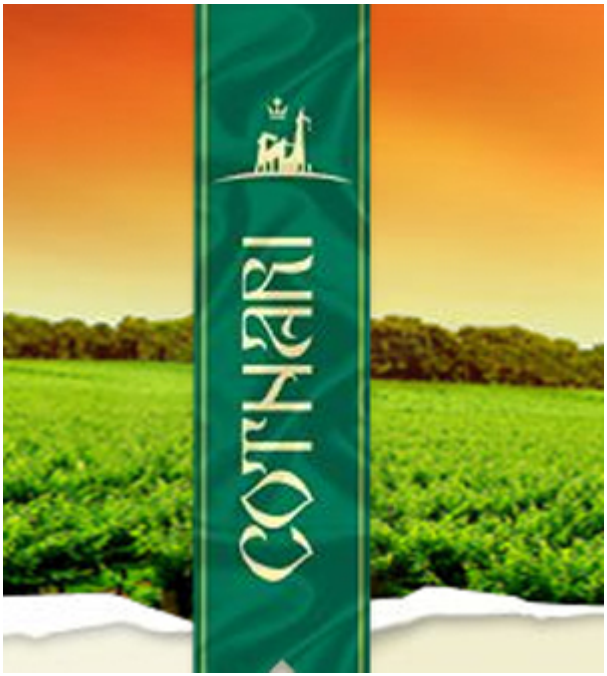
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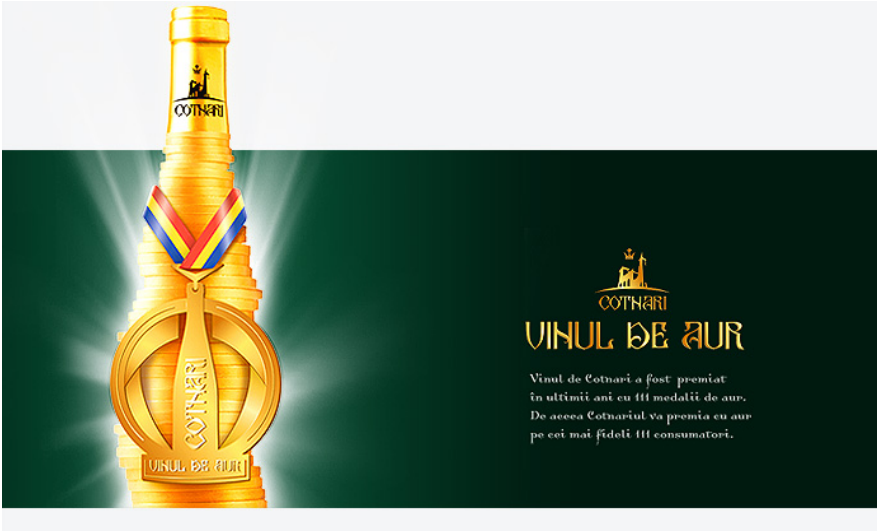
COTNARI
VINUL DE AUR
Vinul de Cotnari a fost premiat
în ultimii ani cu fff medalii de aur.
De aceea Cotnariul va premia cu aur
pe cei mai fideli fff consumatori.

SCAROM, producator de scari din lemn, scari din metal, combinatii lemn-metal si mobilier la comanda din lemn masiv are o experienta acumulata in vanzarile acestor produse de peste 15 ani.

De-a lungul timpului s-a reusit sa se diversifice puternic gama de produse datorita investitiilor facute în tot acest timp in unitatea de productie, ca urmare a dotarilor cu roboti de sudura, CNC-uri, numeroase echipamente performante dedicate activitatii noastre.

Dupa experienta acumulata in colaborarea cu marile platforme de vanzari din Marea Britanie, Franta, Germania si Ucraina, societatea noastra a reusit sa acopere prin distribuitori peste 85% din suprafata României, astfel încat cei interesati sa aiba acces la produsele noastre într-un timp cât mai scurt prin marile centre specializate. Acum, mai mult ca niciodata, experienta noastra ne permite sa fim mai aproape de dorintele dumneavoastra si sa va propunem solutii estetice, performante si inovatoare la cel mai bun raport calitate-pret.

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Președinte: Prof. Univ. Dr. Norina Forna

ASOCIAȚIA DENTARĂ ROMÂNĂ PENTRU EDUCAȚIE (ADRE) - membră AMR (Asociația Medicilor din România), afiliată ICOI (International Congress of Oral Implantologists) şi **ADEE (European Association for Dental Education)** - are ca scop crearea unui cadru de specialitate care să reunească în rândurile sale pe baza voinței libere a fiecărui candidat, specialişti atât în domeniul medicinei dentare cât şi în cel destinat învățământului superior, racordarea învățământului românesc la cel european, uniformizarea curriculară, în plan național şi în plan european.

OBIECTIVE:

- ✓ Racordarea curriculelor naționale în teritoriul medicinii dentare la învățământul european;
- ✓ Realizarea de granturi în domeniul educației cu impact practic, crescând performanțele în fiecare specialitate în parte; Realizarea unei interrelații între aspectele de asistență medicală şi latura educațională, reflectată în cadrul procesului de educație medicală continuă;
- ✓ Crearea de centre metodologice pe teritoriul țării, adiacente centrelor universitare cu tradiție, care să identifice gradul de pregătire al practicienilor în domeniile de specialitate ale medicinii dentare şi să pledeze pentru susținerea teoretică şi practică de cursuri şi demonstrații practice în aceste domenii, ridicând țintit nivelul de pregătire al acestora ;
- ✓ Realizarea de workshopuri pe diferite aspecte curriculare atât din cadrul pregătirii pentru licență cât şi în cadrul activității postuniversitare;
- ✓ Diversificarea specialităților în domeniul medicinii dentare în acord cu necesitățile prevalenței unui anumit tip de patologie pe anumite zone ale țării sau creşterea numărului de competențe;
- ✓ Colaborarea între decanii din România şi celelalte organisme abilitate din teritoriul educațional şi profesional pentru sincronizarea aspectelor educaționale cu necesitățile practice;
- ✓ Implicarea cadrelor didactice în activitatea postuniversitară pentru optimizarea procesului de educație medicală continuă;
- ✓ Ridicarea nivelului de sanogenitate populațională prin identificarea nivelului deficitar pe teritoriul țării şi formarea de specialişti în acele teritorii;
- ✓ Realizarea de cursuri în vederea obținerii titlurilor în cadrul ierarhiei medical – profesionale;
- ✓ Realizarea de conferințe, seminarii, congrese şi alte activități adiacente acestora;
- ✓ Editarea de publicații, cataloage sau periodice pentru promovarea imaginii şi informare în sectorul medical, social şi economic
- ✓ Încheierea de parteneriate – acorduri de cooperare, cu structuri similare din țară şi străinătate.

Publicaţie oficială:
ROMANIAN JOURNAL
OF DENTAL EDUCATION
(august 2009)

Sub redacţia Prof. Dr. Norina Forna,

Ambasador ICOI
Decan al Facultăţii de Medicină Dentară
U.M.F. "Gr.T. Popa", Iaşi

DATE CONTACT:
Strada Kogalniceanu, Nr. 9, Iaşi , România
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Tradiţia manifestărilorştiinţifice ne-a oferit, într-o perioadă de numai 6 ani, rezultate marcante, prin dezvoltarea unor teme de avangardă în medicina dentară şi atragerea, în calitatea de Invited Speaker, a unor personalităţi de elită din medicina dentară internaţională; cuantificat în cifre, putem enumera:

· **18 manifestări ştiinţifice de succes;**
· **peste 300 de lectori străini, nume marcante în medicina dentară;**
· **peste 250 de participanţi din ţară şi străinătate la fiecare ediţie;**
· **derularea manifestărilor sub egida Academiei Române, reper al înaltei ţinute academice;**

ASOCIAŢIA DENTARĂ ROMÂNĂ PENTRU EDUCAŢIE (ADRE) este Partener Activ al Proiectului European **„Adaptarea ofertei învăţământului medical dentar superior la nevoile pieţii muncii şi ale societăţii bazate pe cunoaştere"(Manager Proiect:Prof.Univ. Dr. Norina Forna),** nr. contract: POSDRU/86/1.2/S/63699, ce permite **materializarea primei forme de reprezentare a unei curricule de medicină dentară integrată, unitară la nivel naţional** si introducerea în metodele cotidiene a **bibliotecii virtuale**.

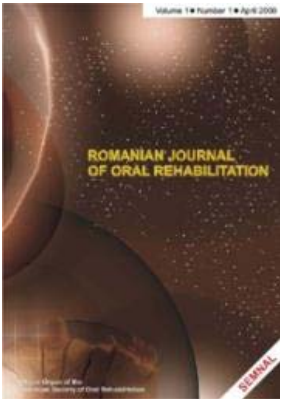
SOCIETATEA ROMÂNĂ DE REABILITARE ORALĂ

Preşedinte: Prof. Univ. Dr. Norina Forna

SOCIETATEA ROMÂNĂ DE REABILITARE ORALĂ (SRRO) – membră AMR (Asociația Medicilor din România), EPA (European Prosthetic Association), afiliată ICOI (International Congress of Oral Implantologists) - are ca scop în **general** crearea unui cadru de specialitate care să reunească în rândurile sale, pe baza voinței libere a fiecărui candidat, medici specialişti în domeniul proteticii dentare, odontoterapiei, chirurgiei oro-maxilo-faciale, medici de specialitate conexă, cadre didactice, studenți, angajați ai Ministerului Sănătății sau ai altor ministere, precum şi cadre medicale cu liberă practică, iar în **special** desfăşurarea de activități de educație medicală a specialiştilor şi societății civile care să contribuie la îmbunătățirea stării de sănătate a populației, eficienței şi eficacității serviciilor oferite de asistența medicală stomatologică şi optimizarea conducerii acestora.

OBIECTIVE:

- ✓ Promovarea concepției integrative în formarea specialiştilor în domeniul reabilitării orale;
- ✓ Stimularea cercetării pe specialități în vederea individualizării traiectoriilor ce guvernează derularea activității practice în domeniul reabilitării orale, segment complet şi complex al terapiei patologiei orale;
- ✓ Perfecționarea continuă în vederea dobândirii cunoştințelor în domeniul reabilitării orale - sistem integrat, în strânsă relație cu organismul uman, cu care formează un tot unitar;
- ✓ Permanenta ameliorare a sănătății orale pe plan mondial, şi promovarea în lume a realizărilor ştiințifice şi practice, orientate spre îmbunătățirea activităților de prevenție individuală şi colectivă;
- ✓ Realizarea de granturi de cercetare cu impact practic şi economic într-un domeniu complex;
- ✓ Realizarea de cursuri de formare profesională în scopul creşterii calității actului medical;
- ✓ Realizarea de conferințe, seminarii, târguri şi alte activități adiacente acestora;
- ✓ Editarea de publicații, cataloage sau periodice pentru imagine sau promotional ; publicații de specialitate şi diverse alte mijloace de informare media;
- ✓ Încheierea de parteneriate – acorduri de cooperare cu structuri similare din țară şi străinatate.



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(aprilie 2009)

Sub redacţia Prof. Dr. Norina Forna,
Decan al Facultăţii de Medicină Dentară
U.M.F. "Gr.T. Popa", Iaşi

Indexată B+ (CNCSIS), EBSCO, Copernicus
Editată sub egida Academiei Române

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SITE: www.asrro.ro

SOCIETATEA ROMÂNĂ DE REABILITARE ORALĂ este partener activ in cadrul proiectului POSDRU/90/2.1/S/63942 „Stagii de pregatire practica pentru integrarea rapida pe piata muncii a studentilor specializati in medicina dentara", Axa prioritară 2 „Corelarea invatarii pe tot parcursul vietii cu piata muncii", Domeniul major de intervenţie 2.1 „Tranzitia de la scoala la viata activa - Manager proiect, Prof. Univ. Dr. Norina Forna in cadrul caruia a fost achizitionat sistemul DENTSIM - Cel mai performant echipament de simulare în medicina dentară existent în lume la ora actuală; fiind inaugurat în cadrul facultăţii în martie 2013.

In egala masura SOCIETATEA ROMÂNĂ DE REABILITARE ORALĂ participa activ la implementarea Sistemului de avangardă, folosit în implantologia orala de înaltă performanţă, ROBODENT achiziţionat în cadrul proiectului POSDRU/87/1.3/S/62208 „Centru de Formare Specialişti şi Resurse în Reabilitare Orală", Axa prioritară 1 - Educaţia şi formarea profesională în sprijinul creşterii economice şi dezvoltării societăţii bazate pe cunoaştere, Domeniul 1.3 - „Dezvoltarea resurselor umane din educaţie şi formare", Numărul 87 - „Profesionişti în educaţie şi formare" - Manager proiect, Prof. Univ. Dr. Norina Forna, in acest proiect fiind partener activ.

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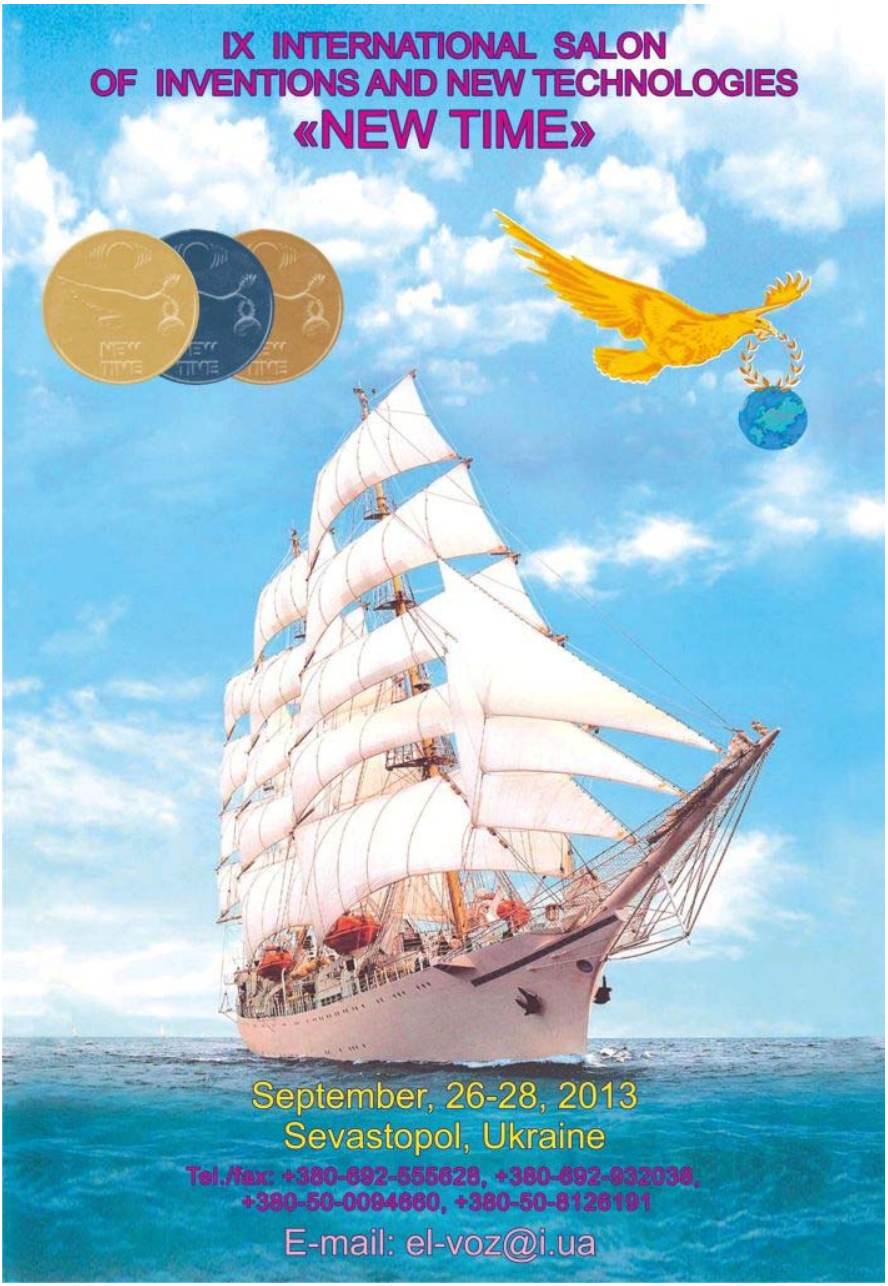
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Bulgaria, Canada, Croatia, Egypt,

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Taiwan, Tunisia, Turkey, Ukraine

Bulgaria

1.1.

Title **ANALYTICAL CONTROL OF CYANIDE IN ENVIRONMENTAL SAMPLES**

Authors Andriana Surleva, Valentin Stojanov

Institution **University of Chemical Technology and Metallurgy Sofia**

Description

The Environmental Authorities impose stringent demands to analytical methods for cyanide determination at low levels considering the high toxicity of cyanide compounds. Besides high sensitivity, the methods have to be fast, cheap, selective, using non-toxic reagents at ambient conditions and easily automated and miniaturized. Considering spectrophotometric analysis as an available, easy maintained tool for pollutant determination, we focused our research on color reagents for cyanide determination. Cyanide compounds are divided in three groups according to their environmental fate and toxicity: (1) free cyanide – the most toxic, includes cyanide ion and hydrogen cyanide; (2) weak acid dissociable cyanide (WAD) – includes free cyanide and metal-cyanide complexes which easy dissociate at environmental conditions, and (3) total cyanide – all compounds containing CN group in the molecule.

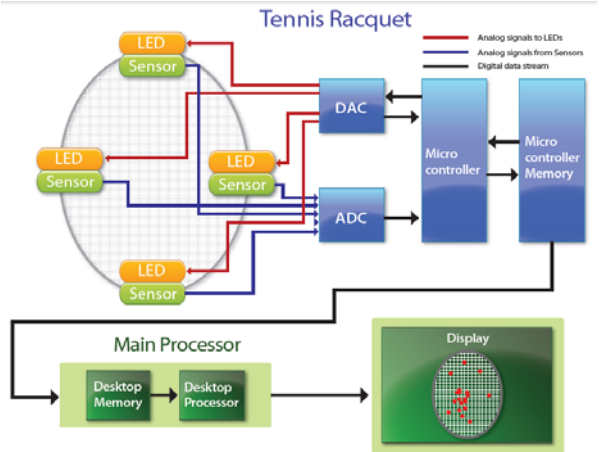
From environmental point of view, free and WAD cyanides are the most important and maximum pollutant level is as low as 50 ppb at drinking and surface water. The ninhydrin was proposed as a sensitive color reagent for cyanide determination at ppb levels. Limit of detection was 8 ppb free cyanide and the reaction time was 15 min. The research is now extended on WAD cyanide aiming to develop an analytical method for low levels WAD cyanide determination. The preliminary results showed that ninhydrin could replace cyanide ions in metal-cyanide complex preserving the sensitivity of obtained color compound. Different reaction rates were observed according to the lability of metal-cyanide complex and study on the mechanism of the replacement reaction is initiated. Due to the fast response of color reaction at ambient conditions, the non-toxicity of color reagent and the high sensitivity of color product, a development of a sensitive assay for WAD cyanide monitoring in environmental samples is currently in progress.

Class Innovative Research

Canada

Represented by **University of Waterloo (Moonsuk Chang)**

2.1.	
Title	**SMART RACQUET**
Authors	SUNGYEON KIM & VAKAR KOHLI
Institution	**University of Waterloo**
Patent no.	Pending
Description	Smart Racquet captures ball impact locations on racquet head via vibration sensors. It stores impact location data in microcontroller over the time the racquet is in use. When the user is done using the racquet, the impact location data is retrieved from the microcontroller's memory, moved to a PC, and then processed by the desktop software. Desktop software outputs a diagram depicting how accurate the user was in making the tennis ball contact the racquet's "sweet spot" over time. Users can then modify their swing behavior accordingly to create the "ideal stroke" and thus improve their game.
Class	13. Sports, Games and Leisure



2.2.

Title **Portable Traffic Lights**
Authors DOUGLAS CHIN
Institution **PTLights Inc.**
Patent no. 1093569 Canada

Description

Police now stands in an intersection, directing traffic using hand signals. Our portable traffic lights will replace the police personnel in the middle of the intersection, when the traffic lights are not working. They will change the sequence of the lights remotely. Thus, greatly increase the safety of both police and motorists. This product was developed with the inputs from police and from different Canadian agencies.

Stored in the trunk of a vehicle, it is been taken out, assembled and tested, then moved into the intersection. It is battery-operated. Height of 85 inches and the usage of LEDs great visibility are obtained. Market surveys indicate that there is a huge global market. There is no other product like this on the market.

Class

8. Aviation, car industry and transportation
12. Safety, protection and rescue of people

2.3.

Title **Portable Floodlight**
Authors DOUGLAS CHIN
Institution **PTLights Inc.**
Patent no. 1093569 Canada

Description

Some police suggested that we should make a Portable Floodlight. Our LED floodlight is either 30 or 50 Watts operating in the daylight spectrum. Sitting on top of the quad pod, the light can be moved into any position to properly illuminate an accident scene for both photographs and for taking care of the injured. There are definitely uses for it in the military. Some sheriffs in a country in Florida, USA expressed a need for proper lighting when they are doing spot checks and are inquiring about them. Someone in the movie industry was inquiring them.


Portable Floodlight.

Class

8. Aviation, car industry and transportation
12. Safety, protection and rescue of people

2.4.

Title	**Portable Traffic Director**
Authors	DOUGLAS CHIN
Institution	**PTLights Inc.**
Patent no.	1093569 Canada
Description	Some police suggested we should make a Portable Traffic Director (PTD) for the police monitoring our highways. Research indicated that there is one death per month of police personnel doing traffic duty in the USA. Secondary accidents were the main culprit. So we put a LED light bar on top of the quad pod. When the PTD is placed 200 feet downstream from the scene of an accident, adequate warning is given to motorists to move over to the next lane. It can be stored in the trunk of a cruiser and deployed within 3 minutes. Police personnel think that PTD is definitely a safety device. We are in the process of selling some of these units to the Canadian Federal Government. Also, it can be used by companies, which do work on our roads.
Class	8. Aviation, car industry and transportation 12. Safety, protection and rescue of people

Croatia

Represented by **Savez Inovatora Zagreba**

3.1.

Title	**IRDMark method to protect document and postal stamps printouts**
Authors	JANA ŽILJAK VUJIĆ, VILKO ŽILJAK, IVANA STANIMIROVIĆ ŽILJAK, KLAUDIO PAP
Institution	**Polytechnic of Zagreb**
Patent no.	P20130110A
Description	This invention is a method to install infrared protection marking (IRDMark method) on documents and postal stamps at the moment when the print file is proceeded to the Postscript printer from which colour printing is started. The infrared protection graphics is created dynamically by a dual separation algorithm for process colours, set in the form of PostScript function. The created protected protection evolves during the printing process without the user's knowledge and influence. The protection is detectable in the near infrared (NIR) range with a prepared detection apparatus. The hidden image is visible on the PostScript colour printer, whereas on all others is undetectable and unfeasible. At the moment of printing from any program of an operative system, the protection infrared graphics with a defined hidden message is automatically installed over the designed PPD (PostScript Printer Description) record. The method does not slow down the printing speed, because the protection graphics is installed as a pre-processed PostScript function.
Class	11. Printing and advertising

3.2.

Title	**Wellness treatment: DETOX-DESTRESS LAVANDER Holistic synergetic action of phyto, aroma and thalasso therapy in a single treatment**
Authors	ROBERTO LEGOVIĆ, IVANA LEGOVIĆ
Institution	**DERMOESTETIK Ltd.**
Patent no.	WIPO, IR –TRADEMARK 996233
Description	Detoxification, regeneration and complete body relaxation are achieved by a holistic approach combining synergic action of phyto-aroma-thalasso therapy and selected herbs, essential oil of lavender (Lavandula angustifolia), rosemary (Rosmarinus officinalis), algae and Indian chestnut (Aesculus Hippocastanea) according to a special protocol.
Class	13. Sports, Games and Leisure

3.3.

Title	**NESU Smart Phone Card**
Authors	JURICA MAVROVIĆ, SLAVKO LAUŠ
Institution	**Presencia d.o.o. Zagreb**
Patent no.	Z20121736A
Description	With its raw material composition and programming at a precisely defined frequency, NESU stabilizes the energy field and thus eliminates the negative effect of EMG radiation on human body. This neutralizes the mobile devices in terms of effect that they have on human health, as confirmed by the vegetative resonance test (IMEDIS-test). NESU eliminates electromagnetic radiation caused by the use of mobile devices. In addition to the loads generated by a mobile device during conversation, it also eliminates the loads generated by other devices, namely any loads that were already present. NESU is designed for use in any existing mobile device.
Class	14. Other

3.4.

Title	**Windshield wiper with an insect remover**
Authors	SLOBODAN RAJIĆ
Institution	**TELECOR ZAGREB**
Patent no.	P20130046A
Description	The windshield wiper, in addition to its existing parts (wiper blades etc.), has an adjunct that gets activated when the windshield glass is washed. The adjunct is fitted with an abrasive sponge designed to wash insects off without damaging the windshield glass. While the glass washing function is off, the wiper wipes the windshield glass only with the rubber blade. The innovation is designed for use in automobile industry as a windshield wiper with an additional insect remover.
Class	8. Aviation, car industry and transportation

3.5.

Title	**COSMEL – Natural/Organic Dermocosmetics Melli Cream for mature and sensitive skin**
Authors	MELITA PAVLEK-MOĆAN
Institution	**COSMEL d.o.o Zagreb**
Patent no.	PK20080177
Description	The invention combines elixir from the apiary (ROYAL JELLY liposomes, PROPOLIS, HONEY, BEESWAX) and the power of organic substances (oil of RASBERRY obtained by CO2 extraction, of APRICOT, OLIVE, FIREWEED, SHEA BUTTER) enriched with vitamin A, lavender and ginger. This unique formulation exemplifies an innovative approach to the revitalisation

	of mature skin and helps in dealing with inflammatory skin conditions. This is made possible by a composition of active substances rich in omega unsaturated acids, vitamins (A, B, C, D, E), minerals (phosphorus, magnesium, calcium), sugars (glucose, fructose), organic (malic, citric) acids, amino acids, biotin, folic acid…
Class	4. Medicine - Health Care - Cosmetics

3.6.

Title	**Nikel Tonic Alpine Rose Eco**
Authors	MIRJANA BRLEČIĆ
Institution	**PRIRODA LIJEČI (Nature Heals) d.o.o. Zagreb**
Patent no.	WIPO 1083058, M1083061, 1124243 OHIM 001622580-0001, 001622580-0002, 001622580-0003, 001622580-0004, 001622580-0005 DZIV Z20050257, Z20060688, 220060689, 220101735, Z20101735, Z20111709A, Z20111226, Z20111227, Z20081154, Z20081151, Z20121262A
Description	For the first time in cosmetics herbal stem cells are used in synergy with organic flower water of rose petals. A revolutionary active ingredient against aging, based on cutting edge technology of herbal cultures. Being highly active and safe, it writes a new history of skin care and rejuvenation. A unique formulation and simple application, the Tonik Alpska Ruža (Tonic Alpine Rose) is applied on everyday basis as the beginning of day and night skin care. Compatible with any cosmetic for day and night skin care, with the results being visible in a matter of days.
Class	4. Medicine - Health Care - Cosmetics

3.7.

Title	**Harvesting Lightning Energy**
Authors	IVANA FILIPOVIĆ, FILIP GLUHALIĆ
Institution	**POST AND TELECOMMUNICATIONS SCHOOL Zagreb**
Patent no.	Pending
Description	Human history abounds in attempts to harness lightning energy. The essential feature of the innovation is that a voltage current impulse transformer with pertaining protections is used as input circuit. Power is stored in high capacity capacitors and the desired output voltage is obtained by converters with a high usability factor. The system is applicable in mountainous areas with few sunny days. Power supply to telecommunications equipment is one of the innovation's potential uses.
Class	2. Energy and sustainable development

3.8.

Title	**Solar LED table**
Authors	DAVOR GUSIĆ
Institution	**Udruga Inovatora, Fakulteta Strojarstva I Brodogradnje Zagreb**
Patent no.	Pending
Description	Light is activated with a detection of a person who approaches near table and iluminates the table with text or drawing which are drawn by a fluorescent color. Table contains four motion sensors which enable iluminating the table if there is someone close to it. Table also contains light sensor that regulates turning ON motion sensors in time when there is not enough light. Two solar panels and a battery satisfies the need for light at night, but at daylight, light is off and the battery is charging until new usage. Text and drawings are replaceable by erasing and writing the new ones. Solar LED Table is an effective way to advertise or show price list of your products and it is ideal for coffee bars, clubs and restaurants.
Class	11. Printing and advertising

3.9.

Title	**Fuel economy gauge**
Authors	DINO ŠTEFANAC, RUŽICA KAMENJAŠEVIĆ
Institution	**Secondary School of Electrical Engineering and Computing**
Patent no.	Pending
Description	The unit is processing the vehicle speed signals and rpm. From the received data it records excessive acceleration and increased rpm. With a sound signal it informs the driver about acceleration higher than set and the resulting increased fuel consumption. As the driver cannot be mindful all the time about economy driving, the sound signal will do the warning. The unit can be adjusted to suit the size of the vehicle. The unit is set to sound acceleration higher than 10km/h and revolutions higher than 3000 rpm.
Class	2. Energy and sustainable development

3.10.

Title	**Collapsible Clothes Hanger**
Authors	LEONARDA GELUŠIĆ CUKON, BORIS CAPUT
Institution	**Electrical-industry Trade School Rijeka**
Patent no.	Pending
Description	The collapsible telescopic hanger can adapt to any size of shirt or jersey and prevent creasing on shoulders. after use, the "telescopic antennas" retract and fold. When folded, the collapsible hanger is smaller and occupies much less space. it can be carried in a small handbag, a briefcase, a gym bag, or the inside pocket of a men's suit.
Class	14. Other

3.11.

Title	**Beer Crate**
Authors	MIHOVIL PERANOVIĆ, NIKOLA ŠIMUNIĆ
Institution	**Udruga inovatora Veleučilišta u Karlovcu**
Patent no.	Pending
Description	On the crate a bottle opener is mounted. The bottle caps can be removed from the bottles using the bottle opener on the crate. Advantage is easier removal of the bottle caps.
Class	14. Other

Egypt

Represented by

4.1

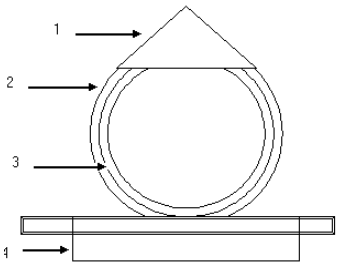
Title	**Clay Treated Molds for Economic Manufacturing of Composites**
Authors	Hebatalrahman Ahmed
Institution	**Housing and Building National Research Center Egypt**
Patent no.	2104/ 2011 Egyptian patent office
Description EN	Mold from a mixture of clay and Ceramics materials with fine casting sands are made. Water is added gradually to obtain homogeneous and easy shaping dough, Metal or wood stamp is made to take the shape of final product, it is used as negative in clay molds before drying. Glazing and drying are done for the mold until the surface becomes smooth and appropriate for the cast. The internal surface of the mold is lubricated with organic substances and oils. The composite mixture is prepared and poured into the mold, after drying ceramic mold is broken and the final product extracted.
Class no.	6. Mechanical Engineering - Metallurgy 7. Buildings and Materials

4.2.

Title	**New method for manufacturing of Cast Iron based composite**
Authors	Hebatalrahman Ahmed
Institution	**Housing and Building National Research Center Egypt**
Patent no.	321/2011 Egyptian patent office
Description EN	New method for the preparation of brake lining from cast iron based composite material. Dry mix was prepared by addition of rock wool, crushed mica, carbon-fiber and other additives with continuous cooling and size sorting. The design of the pouring ladle was modified to control temperature of the molten cast iron. The mixing technique was designed to overcome difference in density and viscosity between additives and molten cast iron. The homogeneity of the composite material was achieve and poured in molds. 1. Manufacture of composite material with a basis of gray cast iron or spherical (flexible) 2. composite material additions in the ladle 3. Design melting pot fitted with a special stirring and mixing systems and a private system to conserve heat
Class no.	6. Mechanical Engineering - Metallurgy

4.3.

Title	**Spherical building unit with sliding walls**
Authors	Hebatalrahman Ahmed
Institution	**Housing and Building National Research Center Egypt**
Patent no.	322/2011 Egyptian patent office
Description EN	The invention is a design for building element in the form of incomplete sphere, The design is consuming of energy. It consists of multiple layers on moving streams and equipped with sensors, The movement of the working layers were controlled automatically or manually according to climate changes in the surrounding atmosphere. The top and bottom of the layers are installed on several axes centered together. The movement of insulated layers are done by sliding on the certain channels 1. Work design is simple and cheap and environmentally compatible in the form of a spherical so as to reduce the surplus in the internal energy. 2. The building consists of several layers each layer move appropriate to climatic conditions or certain environmental manually or automatically 3. Provider-based sensors to change the exterior lighting or dark for the selection of the appropriate class. 4. Provider-based sensors for temperature change, climatic conditions and based on external temperature is the appropriate choice of classes. layers for protection against risks such as electrical hazards and lightning 5. Multi-purpose design and is easy to remove and install and move from one place to another place. 6. The ease and speed of construction and the possibility of adding any number of additional units because the units easy to remove and install and prefabricated.
Class no.	7. Buildings and Materials



4.4.

Title	**Method for treating hepatitis C with evaporate of *Ecballium elaterium* extract**
Authors	Essam M. A. Hob Allah, Said I. A. Shalaby
Institution	**National Research Centre**
Patent no.	US 7,282,227 B2 - Oct. 16, 2007
Description EN	An herbal-based treatment for Hepatitis C includes boiling a filtered residue from the Ecballium Elaterium plant to forma condensate. This condensate is mixed with water and administered in the form of drops. The drops were given to human patients, along with a single herb, Camel thorn, in a powder form. The combined herbal-based treatment was administered to human beings who were chronically infected with Hepatitis C. These patients, in terms of reduction of viral loads, normalization of enzymes, and general well being, were treated successfully in most instances.
Class no.	4. Medicine - Health Care - Cosmetics

4.5.

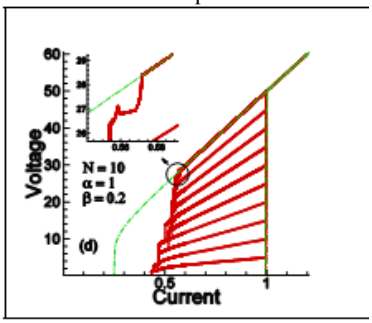
Title	**Evaporate of *Ecbalium elaterium* fruit extract for treating viral symptoms.**
Authors	Essam M. A. Hob Allah, Said I. A. Shalaby
Institution	**National Research Centre**
Patent no.	US 7,297,350 B2- Nov. 20, 2007
Description EN	A broad spectrum anti-viral includes a condensate, made by boiling a filtered residue of the Ecbalium Elaterium plant. The condensate, mixed with water, has been successfully used to treat humans for Hepatitis C, Hepatitis B, Influenza, and the Common Cold. The condensate was also subject in vitro assays. These assays showed antiviral activity, with an acceptable level of toxicity.
Class no.	4. Medicine - Health Care - Cosmetics

4.6.

Title	Ceramic dielectric materials used in the electronic devices at high frequency (~11G Hz).
Authors	**Doaa Abdel Nabi Abdel Aziz, Aisha. E. Reda**
Institution	**National Research Centre**
Patent no.	No.461/8/2006 –27/8/2006, accepted on 6/7/2011 / **No. 415/ 2010 - 29/3/2010- accepted 11-11-2012**
Description EN	Prepared dielectric materials by new method. We obtained on the excellent dielectric properties as compared with dielectric properties detected in the literature. These bodies can be used in microwave devices such as, cellular phones, wireless local area network satellite and DR antennas.
Class no.	10. Information Technology and Communication

4.7.

Title	**Renewable Energy**
Authors	Mostafa Mohamed Korany
Institution	**Science Friends** **Tiba Engineering Academy**
Patent no.	Patent application Egypt 242007 /2011
Description EN	Use of gravity between the objects and the forces of repulsion and attraction in the generation of electricity Water treatment chemically and magnetically
Class no.	1. Environment - Pollution Control 2. Energy and sustainable development



Iran

Represented by **XX**

5.1.	
Title	The Removal of Chlorinated Disinfection by-products using Nano filter
Authors	Dr.Mohammad Reza Mohammad Shafiee
Institution	Islamic Azad University, Najaf Abad Branch, Najaf Abad, Esfahan, Iran
Patent no.	76066 in 18/07/2012
Description EN	Regarding the fact that river, underground and current waters are taken into refinery in order to be refined. They solve many Natural Organic Matters (NOM) resulting from decomposition of plants and animals in themselves while passing the river. Consequently, the water being refined includes many organic materials such as sugars, proteins, fats and fatty acids. After chlorination being accomplished for the omission of bacteria and other living organisms which are harmful for human body, more than 300 harmful chemical material by-products which are not recognizable and omit able are produced. These materials will be stored in fat tissues and sensitive parts of the body and therefore cause cancer. In this plan, while the sensivity of the case is being concerned, we were able to make the plan producing Nano material in home and industrial designs and therefore separate most of these materials from the Water before its reaction to chlorine.
Class no.	1. Environment - Pollution Control

Korea

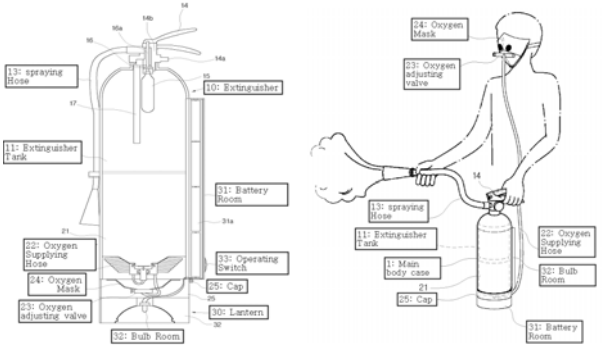
Represented by **Korea Invention Academy**

6.1.

Title	**System for shortening braking distance by using electro-motive and counter electro-motive forces**
Authors	Lee, Si woo
Institution	**Dream Issue/ Naksaeng High School**
Patent no.	Pending
Description EN	Car accidents occur often because of long braking distance of fast cars. To reduce accidents by shortening braking distance, when electric current is flowed to storage battery, electro-motive force is generated in electronic motor and the force is passed to power conversion coil. The electro-motive force that is generated in the middle of magnet and coil on the disk adds torque to motor without output of engine. It reduces the using of fossil fuel which is consumed when quick acceleration, adds braking force without physical friction and increases preventing efficiency by shortening braking distance of ABS. The brake system which use electro-motive and counter electro-motive forces prevents car accident through shortening brake distance, reduces fuel loss and increases fuel efficiency while car is accelerating or braking. By collecting energy which is wasted in acceleration to battery, ABS brake saves electronic power which is needed in battery charging. ABS brake is effective in that the brake which is worked by electro-motive and counter electro-motive forces that generated in quick braking and accelerating reduces the possibility of accident and its manufacturing expense is low
Class no.	8. Aviation, car industry and transportation 12. Safety, protection and rescue of people

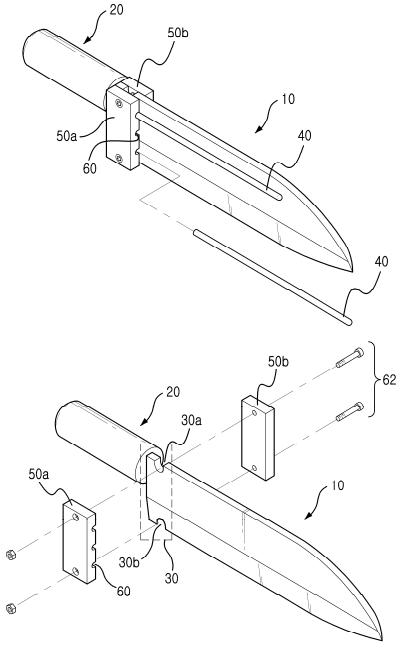
6.2.

Title	**Extinguisher combined with oxygen mask**
Authors	Lee, Si woo
Institution	**Dream Issue/ Naksaeng High School**
Patent no.	Pending
Description EN	Fire extinguisher that equipped with oxygen mask for emergency combines extinguisher tank that is placed on a side of inside to accommodate fire extinguishing chemicals, oxygen tank that is place on the opposite site of extinguisher tank of inside of main body of extinguisher that composed with extinguisher tank and injection system to conserve compressed oxygen and battery room that is placed on side of oxygen mask that is equipped with oxygen on-off valve which can adjust the amount of oxygen. The lantern that gets electronic power from battery room helps user to try to initial attack. Also oxygen mask prevents suffocation from poisonous gas and allows user to evacuate quickly and safely in emergency situation such as blackout or heavy smoke The extinguisher is combined with extinguisher tank that accommodate extinguishing chemical, hose that is attached with oxygen adjusting valve that adjusts the amount of oxygen that come out from oxygen tank which is connected with nozzle pipe, oxygen mask for helping breathing and lantern that gets electronic power from built-in battery. After failing in the early extinguishing of fire, if emergency evacuation is necessary, this extinguisher is useful for emergency equipment in that it makes possible to take breath by oxygen supply to prevent suffocation from poisonous gas. Also, in the situation of darkness of blackout or dense smoke, with the light of lantern, user can easily perceive a fire escape and evacuate quickly and safely.
Class no.	4. Medicine - Health Care - Cosmetics



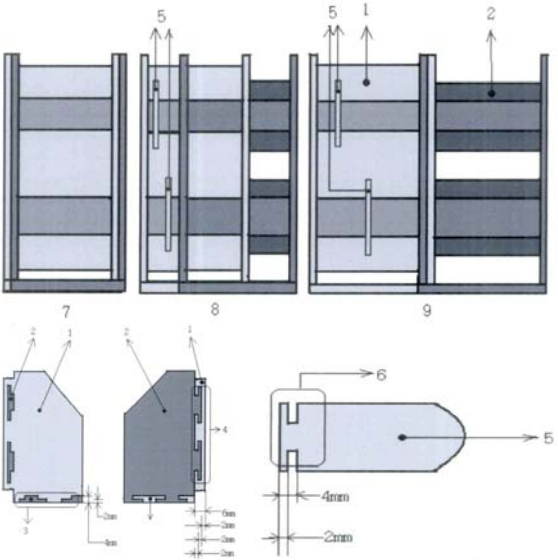
6.3.

Title	**Kitchen knife for preventing from attachment**
Authors	Ahn, Tai Kyung
Institution	**Kyung Hee University**
Patent no.	Pending
Description EN	When the knife that is used in kitchen of home or restaurant cut ingredients, the water stick on the side of blade and discomfort of knife use occurs because of viscosity of water. To prevent the discomfort, by adding sticking prevention stick on the side of blade, 'Kitchen knife for preventing from attachment' prevents blade from ingredients sticking and increases the ease use of knife. When the knife cut ingredients, the ingredients touch sticking prevention stick which is attached on the side of knife and the ingredients are dropped from knife. 'Cook knife for preventing from attachment' is convenient because it makes the cut ingredients to don't stick on blade. Also by adjusting position of sticking prevention stick, this knife can cut ingredients in various sizes.
Class no.	12. Safety, protection and rescue of people



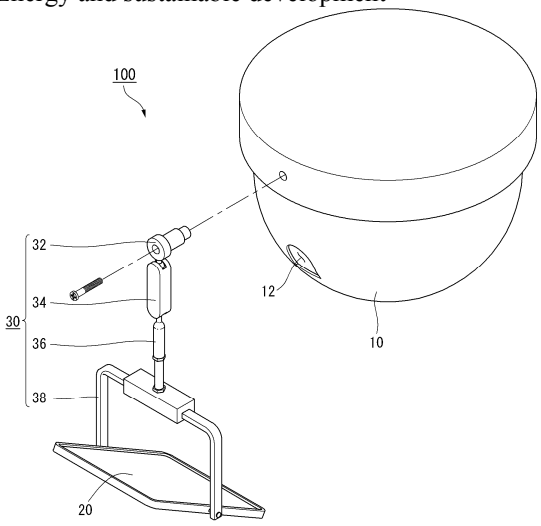
6.4.

Title	**A type of bookshelf for reducing book falloff dy using brackets**
Authors	Do, Yong Houn
Institution	**DaeJin University**
Patent no.	Pending
Description EN	The following inventions has several special properties. The interval of the bookshelf is controlled in order to reduce risk of falloff of books. Length is freely controlled, to utilize the large space effectively in a manual manner. One out of two bookshelves has motility in form of a slider, which makes this useful in narrow spaces. When stretched out a little to the center, it becomes a 'three-block barrier' and the barrier reduces the falloff of books By regulating the interval of spaces, the falloff of books is strictly controlled. The spare space is used very effectively in this manner. It is established as a inserted slide form, with a zigzag apparatus at the bottom line connection. In order to reduce time and inconvenience for rearranging books by book falloff, the invention is designed to adjust to the size and type of documents. The bookshelf barrier can be regulated from 1 to 3 intervals, that also makes the use of spare space effective.
Class no.	13. Sports, Games and Leisure



6.5.

Title	**Lighting Device with Reflector**
Authors	Jeoung, Hae Dam
Institution	**SookMyung Girl's High School**
Patent no.	Pending
Description EN	The lamp that equipped with refraction reflector reflect light to anywhere user wanted easily by adjusting angle. By getting rid of blind spot, passerby can secure a clear view and safety accidents can be prevented from happening. If this lamp is installed in blind spot or inside steps, it will receive light through lamp cover and reflect the light to dark place. As a result this lamp improves the intensity of illumination. This lamp have characteristic that shine the light which is penetrated through lamp cover that equipped with light refraction reflector to dark spot such as blind spot or stair of buildings by adjusting the angle with reflector of mirror. This device reflects the light through adjusting angle of refraction reflector by getting rid of blind spot. As result, passerby can secure a clear view and safety accidents can be prevented from happening.
Class no.	2. Energy and sustainable development



Malaysia

Represented by University Malaysia Perlis

7.1.

Title	**NOVEL PALM OIL FUEL ASH (POFA) GEOPOLYMER COMPOSITE**
Authors	Zarina Yahya, Mohd Mustafa Al Bakri Abdullah, Kamarudin Hussin, Ragunathan Santiago, Che Mohd Ruzaidi Ghazali, Norazian Mohamed Noor, Rafiza Abd Razak, Alida Abdullah
Institution	**Center of Excellence Geopolymer and Green Technology (CEGeoGTech), School of Materials Engineering, Universiti Malaysia Perlis (UniMAP),**
Patent no.	US 20110290153
Description EN	Palm oil industry is the main exported product in Malaysia, consequently, million tons of palm oil waste was produced annually. Approximately 4 million tons/year from its waste was generated, which leads to extensive criticism and complaints, which are prompted mainly by its chronic, carcinogenic, and bio-accumulative effects. The waste such as palm fibers, nut shells, palm kernel and empty fruit bunches is the solid waste obtained from palm oil processing for oil extraction. These wastes were incinerated in the boiler and the waste from this process known as palm ash. The palm ash can used in the production of geopolymer due to high content of Si. This product was described as a protective coating material that suitable to use for surface of concrete building, metal or clay and it can withstand high heat exposure, chemicals attack or abrasion. Moreover, this type of coating also can operate as X-ray shielding for building that use X-ray machinery. Besides that, this coating provides excellent properties such as high strength, chemical resistance, and excellent mechanical performance at both ambient and elevated temperature. It has valuable uses in construction industry, transportation projects or petrochemical plants.
Class no.	**2. Energy and sustainable development**

7.2.

Title	**High Chemical Resistance Geopolymer Pipe System**
Authors	Mohd Mustafa Al Bakri Abdullah, Muhd Izzat Bin Ahmad, Kamarudin Hussin, Norazian Mohamed Noor, Che Mohd Ruzaidi Ghazali, Liyana Jamaludin, Muhammad Faheem Bin Mohd Tahir
Institution	**Center of Excellence Geopolymer and Green Technology (CEGeoGTech), School of Materials Engineering, Universiti Malaysia Perlis (UniMAP)**
Patent no.	Saudi Arabia Patent (110320063) & US 20110290153
Description EN	OPC is a major binder technology in this decade, but several issues was haunted the durability of OPC towards aggressive environment. Geopolymer technology has superior durability compared to OPC in the chemical resistance issue. Geopolymer technology has been made from waste material such as fly ash and activated by alkaline source. This green technology is ideally preferable because zero emission of CO_2 compared to OPC which produce 1 tonne of CO_2 for 1 tonne of OPC manufactured. High chemical resistance geopolymer pipe system is our green technology which has superior durability against chemical attack compared to OPC-based pipe
Class no.	1. Environment - Pollution Control

7.3.

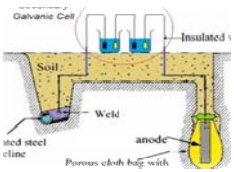
Title	**Green Glass Powder from Agricultural Waste**
Authors	Faizul Che Pa, Noorina Hidayu Jamil, Ruhiyuddin Mohd Zaki, Murizam Darus, Shahrizam Saad, Wan Mohd Arif W. Ibrahim
Institution	**Center of Excellence Geopolymer and Green Technology (CEGeoGTech), School of Materials Engineering, Universiti Malaysia Perlis (UniMAP),**
Patent no.	Patent application No. P/DYJ/UMP/0458/2012
Description EN	Green Glass Powder is an ecofriendly glass produced from agricultural wastes. The term "Green" is drawn from the idea that the glass is both economical as well as ecological. Ecological means the recycling process of agricultural wastes as raw materials for Green Glass Powder will hugely reduce the unnecessary materials on land and reducing the disposal cost. Besides disposal cost reduction, It is economical because the usage of **60-80%** agricultural waste as the main ingredient in the formula. This invention explored the potential of palm ash as one of the glass ingredient since there is existence of silica and flux in palm ash composition which needed in glass formation.
Class no.	**7. Buildings and Materials**

7.4.

Title	**Anti Corrosion Coating : New Advanced Technology Approach**
Authors	Kamarudin Hussin, Mohd Mustafa Al Bakri Abdullah, Azmi Rahmat, Farah Farhana Zainal, Mohd Arif Anuar Mohd Salleh, Muhammad Faheem Bin Mohd Tahir
Institution	**Center of Excellence Geopolymer and Green Technology (CEGeoGTech), School of Materials Engineering, Universiti Malaysia Perlis (UniMAP)**
Patent no.	PI 2012700134
Description EN	**Anti Corrosion Coating** is a novel material consists of fly ash or clay base material with intentionally incorporated silicate binder. With the use of **Anti Corrosion Coating**, this material resulted with superior product for construction industry. With suitable strength range, this cost effective novel **Anti Corrosion Coating** has been tested using real industrial construction processing and supported with industrial coating company especially for anti corrosion.
Class no.	6. Mechanical Engineering - Metallurgy

7.5.

Title	**Biofriendly and Long-lasting Secondary Galvanic Cell for Underground Corrosion Protection**
Authors	Shaiful Rizam Shamsudin, Azmi Rahmat, Rohaya Abdul Malek, Nazree Derman, Kamarudin Hussin, Chek Idrus Omar.
Institution	**Universiti Malaysia Perlis (UniMAP)**
Patent no.	Malaysia Patent: PI2011001297
Description EN	A method of protecting steel from corrosion attack for sea water, soil & concrete is disclosed. A secondary galvanic cell act as an additional battery in the sacrificial anode cathodic protection system. It connected in series or parallel depending on the need of protection and electrolyte resistivity. It produces a high negative potential if connected in series and generates a large current supply in parallel connection.
Class no.	2. Energy and sustainable development 6. Mechanical Engineering - Metallurgy



7.6.

Title	**Smart Rollator V2**
Authors	Muhammad Haziq Furqan, Muhammad Danish Afiq, Muhammad Safwan, Sheikh Muhammad Za'im
Institution	**Hulu Selangor Science School**
Patent no.	Patent Pending
Description EN	Nowadays, old people needs supporter to walk/ stand. But the elders have a huge problem about how to make the supporter easy to use by them as they are old and weak and can't do too much work. It was designed in squared shape so that the product can be folded easily. Besides storage, the old need somewhere they can reach their items easily, so; it comes with a basket. Therefore, it can save space. Rollers will be put under the 'Rollator' so that the user can move easily without any problems. There'll be safety appliances for users to control speed limit. Therefore, they can avoid slipping with the help of the brake that have been provided. A 'built-in' umbrella can be used in all conditions especially during sunshine and rain. It enables users to go anywhere without any hesitations. A canvas chair is connected to the 'Rollator' to allow the users sit on it comfortably. It'll enable the users to sit whenever they want as they stop at a location. Two holders enable the users to have a better grip during their journey. Mudguards help rollers to move constantly in one direction. The advantages are; it makes going out from the house easier and lessens the effort used to keep and use the supporter. It's multifunctional and can be used anytime and anywhere and it's light and can be easier store after use. We hope that this 'Rollator' will help those who had problem in their daily movement.
Class no.	**12. Safety, protection and rescue of people**

7.7.

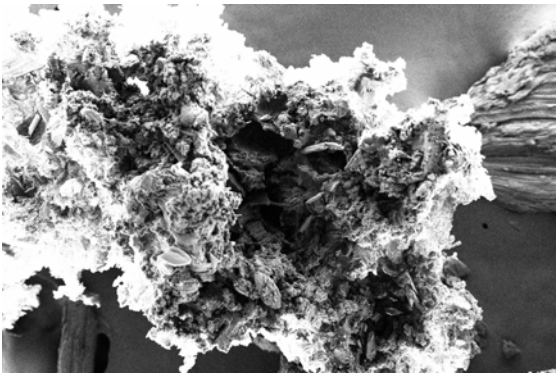
Title	**Once Thrown Now A Throne: Environmental Oil Absorbent**
Authors	Mohd Jaafar Mohd Ramli, B.C.K. Muhammad Atif Derani
Institution	**Kepala Batas Science Secondary School**

Patent no. Patent Pending

Description EN

Three main threats that give disastrous outcomes to the ecosystem; oil spill in the open sea, non-biodegradable wrapping plastics and logging to accommodate the paper industry. Current absorbents available in the market nowadays are fibers with hydrophilic characteristics. As a result, the oil been absorbed cannot be reused. Billions of money lost due to this cause for the past ten years. The objective of this project is to produce absorbent from the Empty Fruit Bunches (EFB) as a recycling initiative and able to reuse back the absorbed oil afterwards. Besides that, we also hope to produce a biodegradable wrapping paper using EFB. The production starts off with compounding which grinds the EFB along with some used rubbers. Flour is added to the mixture and then cooked until it is matured. The product is then grinded into refined form. Based on the our analysis, this absorbent able to absorb oil five times of its weight and using minimal pressure, the absorbed oil can be extracted without changing the oil physical or chemical properties. On the other hand, the plastic produced from the used absorbent showed potentials including low costing production, durability and competitive to the conventional plastic. In conclusion, we are one step closer in reducing the environmental pollution by using the EFB as the eco-friendly absorbent and plastic which not only stressed on recycling the wastes and precious oil resources but at the same time helps to reduce lost by oil companies. Further studies on this product also proven that it has high potential to be used as alternative energy source that can helps to reduce fossil fuel consumption.

Class no. 1. Environment - Pollution Control

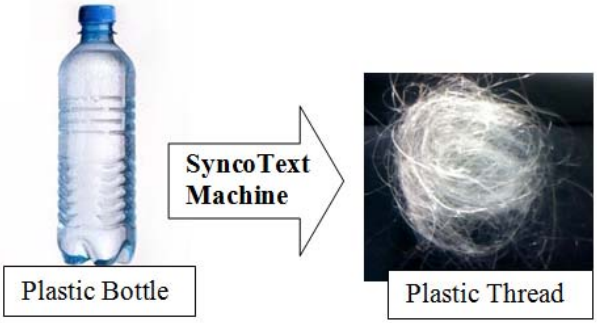


7.8.

Title	**Ceramic Thermal Barrier Piston For Advanced Thermal Application**
Authors	Muhammad Syahir Bin Harun
Institution	**Pokok Sena Science School**
Patent no.	Patent Pending
Description EN	Ceramic Thermal Barrier Piston is the most significant needs towards a better lifestyle as there is no hazardous gases produce. Ceramic coated piston is low cost rather than using the catalytic converter. Catalytic converter uses platinum as one of its component. Platinum is the most expensive metals in the world. Ceramic thermal barrier piston uses ceramic as its main component. Ceramic can be produced or manufactured easily in this world. The substances used in ceramic piston are easy to be found and much cheaper than the platinum. Plus we also can reuse old piston that totally reduce our cost. It is the most significant and leading engine that can reduce the amount of hazardous gases produced from the combustion in the engine. The combustion of petroleum produces carbon monoxide, carbon dioxide, nitrous oxide and lead. Reducing of the removal of harmful toxic gases can be achieved with efficient burning of the fuel, performed at higher temperature. Besides as people from all walks of life use billions and billions of vehicles, the dangerous gases continuously being produce. Humans still do not alert what is going to happen if there is no solution taken. With the high technology that increasing day by day, transformation which can ensure the sustainability is important. The biological demands of oxygen surely incline gradually.
Class no.	6. Mechanical Engineering – Metallurgy

7.9.

Title	**SyncoText Machine**
Authors	Abdul Rahim bin Md Tahir, Sarimah binti Mat Hashim, Mohd Syaiful Akmal bin Naim, Harith Zikry bin Md Nur Zaky, Mohamed Erfan Zhafri bin Mohamed Said
Institution	**Science Johore Secondary School**
Patent no.	Pending
Description EN	The ***SyncoText Machine*** is designed to convert thermoplastic into thread. Most popular products can be recycled using this ***SyncoText Machine*** is plastic bottle. This is because the high mass production of plastic bottles in water industry, therefore plastic bottle one of the main sources for producing plastic thread. This ***SyncoText Machine*** is design has 4 motor that can produce simultaneous release of four loops. Production function of this thread is to replace cotton and wool as the main material used to fill in a blanket, dolls, sweaters, footwear, decorative pillows and so on. Based on the study of the advantages of using plastic thread is that it is easy to dry, lightweight, waterproof, low humidity. In the long term, this machine can be commercialized and may develop in the world industry. Besides that, this process can control pollution of plastic because it need thousands of years to be decompose.
Class no.	**1. Environment - Pollution Control**



7.10.

Title	**PHOTOFUNNEL**
Authors	Mohammad Izzat Mohd Aliyas, Aini Arifah Abdul Karim, Ashraff Khan Fairuz Khan,
Institution	**Selangor Science Secondary School**
Patent no.	Patent Pending
Description EN	This project is to introduce PhotoFunnel as an alternative to the conventional use of artificial lights. We want to address specific needs of homes worldwide. Our proposal might not feature future sophisticated technology but most importantly, we can response to the pressing needs with available and feasible solution now. Homes contribute significantly as the shelter of the community. However, during the day, most houses turn on their lights because the sunlight outside cannot enter the insides of the house due to windows that are mostly installed at the sides of the house and not on top of the house. These lights run on electricity and incur cost of every day and night usage. PhotoFunnel is the perfect alternative for the lighting problem in houses. Our solution so far is to use Photofunnel as the alternative source of light from artificial lights. With PhotoFunnel, people can now reduce the amount of electricity used for lighting purposes and reduce carbon dioxide emission. It consists of a large transparent dome with its insides tinted thickly to trap sunlight outside the building, a convex lens that works as a light receiver to concentrate the light trapped into one point, mirrors are used to reflect and redirect the propagation of light into the building , dull carbon black coloured tubes that is used to absorb the heat brought by the sun rays, solar cells as another source of energy to power up the lighting appliances when there is no sunlight and a concave lens to diverge the light rays throughout the whole room. With sunlight as a primary energy source, users can enjoy a livelier environment in their buildings during the day without even spending a single cent, and yet can reduce the emission of excessive carbon dioxide production. Therefore, people worldwide can implement greener yet cheaper ways to provide lighting in their houses.
Class no.	**2. Energy and Sustainable Development**

7.11.

Title	**Recycled Aluminium From Beverage Cans As An Alternative To Hazardous Lead In Soldering**
Authors	Aini Arifah Abdul Karim, Ashraff Khan Fairuz Khan, Mohammad Izzat Mohd Aliyas
Institution	**Selangor Science Secondary School**
Patent no.	Pending
Description EN	Lead (Pb) based solder in assembling electronics components are hazardous and dangerous for humans. Environmental Protection Agency has strictly banned the use of lead solder alloy due to its toxicity. The use of silver (Ag) in solder is one of the best alternatives for replacing lead. Unfortunately, the expensive price of Ag will intensively increase the cost in mass production of electronic devices. In schools around Kuala Lumpur, beverage cans are found abundantly. Thus, it is the perfect solution to reuse the waste and subsequently reduce the toxicity of soldering properties. The number of cans collected from the school compound is more than 120 cans per week. These amounts of cans are considered plentiful proving that the source of recycled aluminium in the society is not a problem. Moreover, the aluminium cans are not disposed or recycled properly which causes a nuisance to the society. In this project, new composite solder Sn-0.7Cu with additions of recycled aluminium from beverage cans is suggested to be used for replacement. The addition of aluminium in Sn-0.7Cu from recycled beverage can produce the same properties as other sources of aluminium. Furthermore, it has low melting point and also a good corrosion resistance. Moreover, it is more ductile as a soldering material. The use of aluminium from beverage cans reduces the industrial cost as they are reused and recycled. Most importantly using recycled beverage cans is the solution to a greener and safer environment.
Class no.	6. Mechanical Engineering - Metallurgy

7.12.

Title	**Superb MSE: Potential Local Medicinal Herb As Analgesics Substitute For Morphine To Alleviate Pain**
Authors	Ahmad Wafiq Bin Abdullah & Teoh Hooi Eng
Institution	**Sultan Mohamad Jiwa Science Secondary School**
Patent no.	Patent Pending
Description EN	Mitragynine is the major constituent in the plant *M. speciosa* Korth (Rubiacea). In this study we investigated the antinociceptive activity of the crude methanolic extract in mice using hot plate test . Work was also carried out to investigate the possible mechanism of action using naloxone an opiod receptor antagonist. Prior to animal studies the mitragynine content in the methanolic extract was determined in order to prepare the standardized extract which will be named as Superb MSE. Chromatograph profiling (GCMS) on different concentration of Superb *Mitragyna speciosa* Extract (Superb MSE) was analysed and the results showed that the mitragynine content was only 1.76%. As for the animal tests, superb MSE (200 mg/kg) shows significant analgesic affect, and the extract effect was blocked by naloxone, a nonselective and pure opiod antagonist thus suggesting the involvement of central opiod system in mediating an antinociceptive activity. To conclude, this study proved that *M. speciosa* Korth contains mitragynine which can act as analgesic drug for treatment of severe pain. In addition this standardized extract could be considered as a substitute drug for morphine in pain management In view of this work , the government should reconsider the potential use of ketum in chronic pain management an thus the government should re-evaluate the usefulness of ketum in medical practice.
Class no.	4. Medicine - Health Care - Cosmetics

7.13.

Title	**LEO As An Eco-Saver**
Authors	Azra Zulaikha binti Haris, Iyliana Hiylda Fitri binti Haron
Institution	**TunkuKurshiah College**
Patent no.	Patent Pending

Description EN

For decades, fungi and insects namely ants and termites had been a nuisance to human life. Therefore, we used coconut fiber that is mixed with lemongrass essential oil to replace wood products. Lemongrass essential oil is usually used in oil treatments and insects repellent products, not only because of its insecticidal effect, but also due to its relaxing aroma and therapeutic benefits. Therefore, recent studies on producing aromatic wood products that can deduct insects away and prevent fungal growth had been studied. Our target was to produce a light, cheap and environmental friendly product that can help in controlling fungi and insect's problems. In this study, we extracted the essential oil of lemongrass and tested towards fungi (*Aspergillus* sp.). First method was conducted by inoculating the fungi spores onto Patatodextros medium (PDA) which was formerly put onto the glass slip. Next, the fungi spores were spread onto medium added with concentrated lemongrass essential oil. Results show that the lemongrass is able to control the fungal growth. Later, we tested the effect of lemongrass essential oil on 30 ants and termites respectively by placing two pieces of wood and coconut fiber plates in different containers. One is drop with lemongrass essential oil as manipulated variable, while one is set as constant variable. The behaviour of the termites and ants were observed within 5 minutes intervals. As a result, the wood and the fiber plate containing lemongrass essential oil were able to repel ants and termites.

Class no. 1. Environment - Pollution Control

Moldova

AGEPI Moldova

8.1.

Title	**HIGH-VOLTAGE DIVIDER**
Authors	Efim Badinter, Iulian Colpacovici, Ion Daniliuc, Vladimir Cleimenov, Dumitru Cojocaru
Institution	**Research Institute ELIRI S.A. Republic of Moldova**
Patent no.	MD: No. 3239; 4128
Description EN	Reducing the influence of capacitive leakage currents, reducing the modulus and phase errors of voltage divider division factor for the alternating current and pulse signals, and increasing the input voltage form transfer accuracy.
Class no.	10. Information Technology and Communication

Technical University of Moldova

8.2.

Title	**METHODS AND DEVICES WITH SIMULATED RESONANCE FOR IMPEDANCE MEASUREMENT**
Authors	Nastas Vitalie, Nicolaev Pavel
Institution	**Technical University of Moldova**
Patent no.	MD 3578, MD 3919, MD 3933, MD 351Z, MD 446Z, MD 447Z
Description EN	Cycle of inventions presents two methods for high-precision measurement of resistance (MD3578) and impedance (MD447Z) in Cartesian coordinates, an admittancemeter with simulated resonance for their practical implementation (MD351Z), an admittance converter (MD446Z), used as reference element and two practical applications of the methods on industrial technological processes for manufacturing the resistive components from insulated wire (MD3919, MD3933).
Class no.	5. Industrial and laboratory equipments

8.3.

Title	**Precesional mini motor reducer.**
Authors	Bostan Ion, Ionescu Florin, Dulgheru Valeriu, Dicusară Ion, Bodnariuc Ion, Cozma Ion
Institution	**Technical University of Moldova**
Patent no.	MD617, 2013.
Description EN	Precesional mini motor reducer have small dimensions, constructive simplicity and simple manufacturing technology. Ensures high transmission ratio (up to i = 5000 in one step).
Class no.	5. Industrial and laboratory equipments 8. Aviation, car industry and transportation

8.4.

Title	**Hydrodynamic rotor with reduced turbulent of water currents for flow SHP**
Authors	Bostan Ion, Graur Adrian, Dulgheru Valeriu, Bostan Viorel, Sochireanu Anatol, Ciobanu Oleg, Ciobanu Radu, Gladîş Vitalie .
Institution	**Technical University of Moldova**
Patent no.	MD 601, 2013; MD 589, 2013.
Description EN	Hydrodynamic rotors provides kinetic energy conversion of river water into mechanical or electrical energy without building barrages. Increased efficiency is provided by blades aerodynamic profile and their optimum position for efficient conversion of water kinetic energy. The experimental prototypes of the rotors are fabricated.
Class no.	2. Energy and sustainable development

8.5.

Title	**Horizontal Axle Power Wind Turbine with mechanical orientation to wind**
Authors	Bostan Ion; Dulgheru Valeriu, Bostan Viorel, Sobor Ion, Sochireanu Anatol, Vaculenco Maxim, Bodnariuc Ion, Dicusară Ion, Ciobanu Oleg, Ciobanu Radu, Trifan Nicolae, Odainâi Valeriu,Crudu Radu, Guţu Marin, Cozma Ion, Gladîş Vitalie, Porcescu Gavril.
Institution	**Technical University of Moldova**
Patent no.	MD 7369/2012, Y:F03B/2012; 7419/2013, B1:F03D 1/2013.

	Nr. 7452, 08.12.2012
Description EN	Aeolian turbine include three blades rotor with aerodynamic asymmetric profile. The wind orientation of the turbine is doing through a two-wheeled windroze linked by a reducer with turbine nacelle. The power of 10 kW is produced at wind speed of 11 m/s.
Class no.	2. Energy and sustainable development

8.6.

Title	**Terrestrial infrastructure of attitude control and command of microsatellite "Republic of Moldova"**
Authors	Bostan Ion, Dulgheru Valeriu, Bostan Viorel, Secrieru N., Sochireanu Anatol, Vaculenco Maxim, Ciobanu Radu, Ciobanu Oleg, drd Gangan Sergiu, Gladîş Vitalie, Candraman Sergiu, Zarea Ion.
Institution	**Technical University of Moldova**
Patent no.	Pending
Description EN	Terrestrial station is used for controlling and monitoring of microsatellite "Republic of Moldova" flight, also receiving and processing images. It also includes a Celeron Telescope CGE Pro 1400 to study celestial bodies and monitoring microsatellite flight.
Class no.	5. Industrial and laboratory equipments

8.7.

Title	**Microsatellite "Republic of Moldova"**
Authors	Bostan Ion, Dulgheru Valeriu, Bostan Viorel, Secrieru N., Sochireanu Anatol, Vaculenco Maxim, Ciobanu Radu, Ciobanu Oleg, Gangan Sergiu, Gladîş Vitalie, Candraman Sergiu, Zarea Ion
Institution	**Technical University of Moldova**
Patent no.	Pending
Description EN	Microsatellite "*Republic of Moldova*" has mass (9.2 ÷ 9.7) kg and dimensions (250x250x250) mm. The guidance is based on generating torques by wheeled through mechanisms leaflets driven high speed DC micromotors (60000 min-1)
Class no.	5. Industrial and laboratory equipments

Technical University of Moldova
Industrial Design, FIMCM

8.8.

Title	**Design Concept "Sewing Machine"**
Authors	Mitioglo Elena, Podborschi Valeriu
Institution	**Technical University of Moldova**
Description EN	Electric Sewing Machine. The structure is inspired by the shape of the scorpion.
Class no.	5. Industrial and laboratory equipments

8.9.

Title	**Design Concept "Unmanned aircraft"**
Authors	Şaptefraţi Ion, Podborschi Valeriu
Institution	**Technical University of Moldova**
Description EN	Unmanned aircraft equipped with the camera, for research and surveillance operations. Structure inspired by the shape of dragonfly.
Class no.	5. Industrial and laboratory equipments 8. Aviation, car industry and transportation

8.10.

Title	**Design Concept "Mobile unit sanitation services"**
Authors	Popesco Olesea, Popesco Eugen, Podborschi Valeriu
Institution	**Technical University of Moldova**
Description EN	Technical systems designed for sanitation works in urban areas (sweeping, vacuuming, washing, storage).
Class no.	5. Industrial and laboratory equipments 8. Aviation, car industry and transportation

Moldova State University

8.11.

Title **Street Lighting system with CdTe thin film PV cells and LED lamp**

Authors Potlog Tamara, Dumitriu Petru

Institution **Moldova State University**
Department of Physics and Engineering

Patent no. *MD-3112*

Description EN

The use of monocrystalline Si PV cells, known for their high efficiency is too expensive for utilization in the street lighting. Therefore we propose a system with CdTe thin film PV cells and LED lamp. LED lamps consume up to 72% less energy and have a lifespan of up to 10 years of continuous operation comparing to other lighting sources, meaning a much less energy cost. CdTe thin film PV cells were fabricated by close-space sublimation method in a superstrate configuration. The investigation at the room temperature under of 100 mW/cm^2 illumination through the wide gap component of CdTe thin film PV cell shows a value of conversion efficiency of solar energy to electric energy about 10.5% (Fig.1). In order to maximize energy collection and conversion, CdTe single cells are connected together (series and parallel) and housed in a module in order to obtain necessary power (Fig.2).

Class no. 2. Energy and sustainable development

8.12.

Title	**THE ELABORATION AND PILOT PRODUCTION OF CARRIERS AND DEVICES FOR HOLOGRAMS RECORDING IN REAL TIME**
Authors	Chiriţa Arcadi, Oleg Corşac, Iurie Jidcov, Vladimir Prilepov, Nadejda Nasedchina, Tatiana Bulimaga, Alexei Ciornîi
Institution	**State University of Moldova**
Patent no.	MD3896, MD214, MD313, MD3690, MD4022, MD278
Description EN	The aim of the proposed research is elaboration and creation of materials, methods and devices for optic and holographic information recording in real time. The main of these are: high accuracy of measuring compared to wave length or higher, capability to record and investigate the short-length processes, nondestructive character of measuring. The research team proceeds from assumptions that the combined inorganic-organic photothermoplastic (PTP) carriers used in a PTP recording process in the best way match these demands. For wider use of the received carriers in the scientific and commercial purposes a universal camera for PTP hologram recording in real time will be developed and produced. The camera is intended to be use in various optical recording devices. It will be controlled both in semi-automatic manual regime and programmed manner through computer.
Class no.	5. Industrial and laboratory equipments

8.13.

Title	**Devices for solid ash removal from exhaust gases and for reduction of noise produced by engines with internal combustion**
Authors	Al.Krachun, Gh.Duca, Vl.Ene, T.Sajin, B.Albert
Institution	**State University of Moldova**
Patent no.	MD3574; MD-310; MD-457; MD-170; MD-505
Description EN	The devices presented are meant to substantially diminish the emissions into the atmosphere of ash – a dangerous component of exhaust gases from Diesel engines that serves as solid phase for carcinogenic compounds, and for diminishing of the noise intensity of internal combustion engines
Class no.	1. Environment - Pollution Control

8.14.

Title	**Photoluminiscent nanocomposytes synthesis from cadmium sulphure and organic polymers**
Authors	P. Gaşin, S. Robu, I. Dementiev, T. Goglidze, T. Guţul, M. Caraman, P. Chetruş
Institution	**State University of Moldova**
Patent no.	MD3976; MD3888
Description EN	It was elaborated photoluminiscent nanocomposites from cadmium sulphure and organic polymers which possess effective photoluminescence in the visible diapason of the spectra. There were used as support hydrosoluble polymers like polivinilpyrolydona, polivinilalcohol and hydrofil propylene and others. The photoluminescence layers were placed on optic glass support but from polymers on individual samples. Areas of use: For the transformation of the UV and roentgen irradiations in visible light (…500-600nm); creation of some fluorescents layers with a high quantum in the visible diapason of the spectra.
Class no.	9. Chemical and Textile Industry

8.15.

Title	**PROCESS FOR EXTRACTION OF PHYCOCYANIN FROM SPIRULINA PLATENSIS ALGA BIOMASS**
Authors	Rudic Valeriu, Bulimaga Valentina, Pisov Maria, Djur Svetlana.
Institution	**State University of Moldova**
Patent no.	MD 4191
Description EN	New process of phycocyanin extraction from cyanobacterium Spirulina platensis biomass, under laboratory conditions have been proposed and elaborated. A blue solution containing phycocyanin in the concentration of 1.5% (A620/A280 = 3.0) was obtained. Experimental operation was performed under laboratory condition, conditions and parameters and storage stability of the extract obtained. During storage in the dark at 0-4oC temperature for 185 days.
Class no.	4. Medicine - Health Care - Cosmetics

8.16.

Title	**NEW ANTIBACTERIAL INHIBITORS**
Authors	Lozan-Tirsu Carolina, Gulea Aurelian, Tsapkov Victor, Rudic Valeriu, Barba Nicanor, Corja Ion
Institution	**Moldova State University**
Patent no.	MD 4112, 4069, 4016
Description EN	Chemical synthesis, characterization of coordination compounds and their antibacterial evaluation as selective inhibitors of Gram-positive *(Staphylococcus aureus* and *Bacillus cereus)* and Gram-negative *(Escherichia coli, Shigela sonnei* and *Salmonella abony)* microorganisms have been carried out. New copper tiosemicarbazidates displaying high antimicrobial activity have been obtained using the directed synthesis method. The new compounds have low toxicity. Additionally they display selective antibacterial activity in the concentration range 0,009-18,7μg/mL.
Class no.	4. Medicine - Health Care - Cosmetics

8.17.

Title	**NEW ORGANIC MOLECULE AS ANTICANCER DRUG**
Authors	Gulea Aurelian, Jalba Angela, Tsapkov Victor, Barba Nicanor, Sofroni Larisa.
Institution	**Moldova State University**
Patent no.	MD 4126
Description EN	Obtaining of new anticancer agents by means of thiosemicarbazones fluororganic compounds. New fluororganic compounds displaying high cancerostatic activity by means of directed synthesis method have been obtained. The resulting drug possesses anticancer activity, which 1.5 times exceeds the activity of doxorubicine of prostate cancer LNCaP cell proliferation inhibitors
Class no.	4. Medicine - Health Care - Cosmetics

8.18.

Title	**PHOTOLUMINESCENCE OF THE MASSIVE FS- GaN LAYERS GROWN BY CHEMICAL TRANSPORT REACTIONS METHOD AND ANNEALED IN BISMUTH**
Authors	S.D.Raevschi, Yu.V.Zhilyaev, K.D.Sushkevich, L.V.Gorchak, V.M.Botnariuk, A.V.Koval
Institution	**Moldova State University** **A.F.Ioffe Physicotecnical Institute of the Russian Academy of Science,**
Description EN	The photoluminescence (PL) spectra of massive, free-standing FS- GaN layers before and after annealed in bismuth melt at 900-1320K are studied at 77K. Layers grown up by chemical transport reactions method on sapphire. It is established that FS-GaN starts to decay in bismuth at 1100K. In spectrum PL of initial samples a number characteristic for GaN bands (EB, F, Y) with maxima of radiation is revealed at 3.454, 3.369-3.173 and 2.138- 2.175 eV. As a result of the FS-GaN annealing in bismuth melt a band of area 3.369-3.173 eV disappear, intensity of EB band falls down a little, and band Y does not undergo changes. The PL spectra of a buffer and face surface of layers as a result of annealing get an identical kind, and the centers of radiation belonging it are not found out to bismuth.
Class no.	

"N.Testemiteanu"
State Medical and Pharmaceutical University

8.19.

Title	**Device and method for treatment of hypermature senile cataract**
Authors	Jeru Ion
Institution	**State Medical and Pharmaceutical University**
Patent no.	MD 500
Description EN	The invention relates to medicine, particularly to ophthalmology. The device for treatment of hypermature senile cataract includes a syringe with a blunt needle, bent at an angle of 135° with the longitudinal axis of the syringe, the needle length being of 10 mm. The method for treatment of hypermature senile cataract consists in that it is carried out the local and regional anesthesia, is fixed the superior rectus muscle, is carried out an incision of conjunctiva at the limbus level, corresponding to 10... 14 o'clock and of cornea, corresponding to 11... 13 o'clock, is opened the anterior chamber and is carried out the anterior capsulorhexis at the level of 11 o'clock, with the help of the device according to the invention is mobilized the nucleus, after which it is fixed and removed by circular motions clockwise, and then it is implanted an artificial lens, is sutured the cornea and conjunctiva, and in the conjunctival space is administered an antibiotic and a steroid remedy.
Class no.	4. Medicine - Health Care - Cosmetics

8.20.

Title	**Method for predicting the developement of adverse effects in hearing aids fitting**
Authors	Ababii Ion, Parii Sergiu, Chiaburu Anghelina, Jucovschi Constantin
Institution	**State Medical and Pharmaceutical University**
Patent no.	MD Nr 291 Z/ 2011.07.16.
Description EN	Summary of the invention consists in that the method for predicting the developement of adverse effects in hearing aids includes the clinical and audiometrics examination, which reveals the following parameters: age of the patient, undergone diseases, evolution of hearing loss, auditory threshold and speech recognition index established in thonal audiometry and calculated the discriminant function by the special formula

	and predicte risk or lack of risk or developement of adverse effects. The invention relates to medicine, in particular to Otorhinolaringology and Audiology.
Class no.	4. Medicine - Health Care - Cosmetics

8.21.

Title	**Device for fragmentation of the extracted tooth**
Authors	Nacu Viorel, Samson Stella, Burlacu Valeriu, Zota Eremia
Institution	**State Medical and Pharmaceutical University**
Patent no.	MD s2012-0053
Description EN	The invention is related to medicine, especially to dentistry, and represents a device for fragmentation of the extracted tooth, which helps to obtain root and coronal pulp for stem cells collection. This device (which has: a base for stabilization; a rectangular removable table, rooted on the lower part of the bearing element; special systems for fixing teeth; handle compression rod screw and conical fragmentation component) don't lead to overheating of the extracted tooth, is easier to use, cheaper to produce and permit the extraction of an integral dental pulp.
Class no.	4. Medicine - Health Care - Cosmetics

8.22.

Title	**Method for laser correction of high myopia with insufficient corneal thickness**
Authors	Vrabii Irina
Institution	**State Medical and Pharmaceutical University**
Patent no.	Pending
Description EN	The invention relates to medicine, in particular ophthalmology and can be used for laser correction of myopia and myopic astigmatism with insufficient corneal thickness by using the LASIK method. The method for laser correction of high myopia with insufficient corneal thickness consists in that after the local anesthesia and application of blefarostat it is marked the cornea, then with a mechanical microkeratom is formed a corneal flap with nazal hinge of a thickness of 70-90 microns and a diameter of 8-9,5 mm. Then the corneal flap is pushed in the nasal part. It is carried out the aspherical ablation of corneal bed stroma with the eximer laser in mode of flying spot of a diameter of 0,67 mm with a power of 120 mJ/ cm^2 and a frequency of 200 Hz, afterwards the corneal flap is placed on the initial location.
Class no.	4. Medicine - Health Care - Cosmetics

8.23.

Title	**Method for prevention of complications of irradiation in cancer pathologies**
Authors	GHICAVÎI Victor, GAVRILUȚA Vadim
Institution	**State Medical and Pharmaceutical University**
Patent no.	MD 501Z /2012. 11. 30
Description EN	Summary of the invention consists of those that once a day immediately after meals for 15 days from the beginning of the course of radiation therapy is administered intramuscularly 5 ml of 5% solution of ascorbic acid and peroral a capsule (33,000) from retinol, a capsule (0.2 g) and a film-tocopherol (0.2 g) metiluracil. Concomitantly administered peroral nutmeg oil, one tablespoon (15 ml) 2 times a day, from 2 .. 3 days before beginning the course of radiotherapy and continued throughout his. The use of "Nucosan" in association proposed during radiotherapy, clearly diminishes the degree of manifestation of early complications of radiotherapy in the tissues and organs.
Class no.	4. Medicine - Health Care - Cosmetics

8.24.

Title	**Method of treatment of I-IIIA degree burns**
Authors	GHICAVÎI Victor, GAVRILUȚA Vadim
Institution	**State Medical and Pharmaceutical University**
Patent no.	MD 463 Z 2012.08.31
Description EN	Consists of those that the first and second day of treatment is administered intramuscularly ground. Ketoprofen - 100 mg once a day would be processed plagues local soil. Betadine 1%, while, on the first day of treatment the wound dressing is applied to grape seed oil and pumpkin seed oil, in the ratio of 1:1 for 6 days. The result is to reduce the risk of infection if tissue with improved combustion and increased their repair processes 4 ... 5 days early, which also reduces the length of hospital patients, help reduce treatment costs.
Class no.	4. Medicine - Health Care - Cosmetics

8.25.

Title	**Composition of S-alchilisothiourea derivatives for the treatment of upper respiratory congestion**
Authors	GHICAVÎI Victor, BARKAN Rafael
Institution	**State Medical and Pharmaceutical University**
Patent no.	PTC/IL2008/001465
Description EN	The present invention provides pharmaceutical compositions comprising a compound intranasal It alchilisotioureic and methods of treatment or alleviation of congestion of the upper respiratory tract. Administration of the composition given help relieve the symptoms of nasal congestion in a time period shorter than that obtained by the administration of medicines frequently used.
Class no.	4. Medicine - Health Care - Cosmetics

The State Agrarian University of Moldova

8.26.

Title	**A method of raising young pigs**
Authors	Caisin Larisa, Grosu Natalia, Covalenco Alexei, Harea Vasile
Institution	**The State Agrarian University of Moldova**
Patent no.	Patent application No. 2012/0151
Description EN	The invention refers to agriculture, namely to pig farming. The essence of the invention is to develop a new way to use the forage additive Synbiotics at the level of 0.3 kg/t in feeding pigs. It can be used in biotechnology and fodder production to provide an overall balanced feeding and to prepare balanced curative and preventive-oriented forage additives, in order to stimulate the physiological functions of the body, to enhance the activity of the gastrointestinal tract, to improve and normalize microflora, and to increase pigs' productivity and viability. The symbiotic preparation consists of such microbial strains as: Lactobacillus acidophilus, Lactobacillus Plantarum, Lactobacillus bulgaricus, Enterococcus (Streptococcus) faecium - $1x10^9$ UFC/g, Bifidobacterium bifidum - $1x10^8$ UFC/g, lyophilized cells antagonistic to pathogenic microflora, prebiotic lactulose, natural sorbent pectin, yeast extract, and essential phospholipids.
Class no.	3. Agriculture and Food Industry

8.27.

Title	**A method of pig production**
Authors	Caisin Larisa, Bivol Ludmila, Carpincic Valerii, Harea Vasile
Institution	**The State Agrarian University of Moldova / The State Enterprise for Pig Selection and Hybridization "Moldsuinhibrid"**
Patent no.	Patent application No. 2012/0176
Description EN	The invention refers to pig farming, namely to a method used to feed pigs. It consists in the supplementation of the mixed fodder for pigs with a new forage preparation, which contains highly activated cellulose, hemi cellulose, lignin, pectin, plant β-glucans, bentonite, humic acids, macro- and micronutrients in the chelate form of the adsorbent at the level of 0.2 kg/, which is added to the fodder using the method of stepwise dilution. The preparation-adsorbent provides an effective increase in the live weight, improves

	digestion and helps to stabilize the intestinal microflora, stimulates the immune system, increases the body's resistance to infection, and reduces the recovery time after treatment. It is a natural and organic product.
Class no.	3. Agriculture and Food Industry

8.28.

Title	**Process for raising bee colonies**
Authors	Eremia Nicolae, Crasocico Petru, Zagareanu Andrei, Bahcivanji Mihail, Caisin Larisa, Covalenco Alexei, Eremia Nina
Institution	**The State Agrarian University of Moldova**
Patent no.	MD 11 538 (13) Z
Description EN	The invention relates to beekeeping, in particular to a process for raising bee colonies. The process comprises additional feeding of bees with 50% sugar syrup, in which is introduced a feed supplement, including lacto- and bifidobacteria in a quantity of $1 \cdot 10^6$ CFU/g, and in mass %: lactulose up to 5, yeast extract up to 20, pectin up to 10, in a quantity of 50…200 mg/L of syrup. Feeding is carried out at the rate of one liter of mixture to a bee colony in the evening, every 10…12 days, starting from the first days of April up to the beginning of the main honey crop. The result of the invention is to increase the strength of bee colonies, prolificacy of bee females, the number of sealed brood and to increase honey productivity.
Class no.	3. Agriculture and Food Industry

Academy of Sciences of Republic of Moldova
Institute of Microbiology and Biotechnology

8.29.

Title	**Method for determination of catalase activity**
Authors	Efremova Nadejda, Usatîi Agafia, Molodoi Elena, Fulga Ludmila
Institution	**Academy of Sciences of Republic of Moldova** **Institute of Microbiology and Biotechnology**
Patent no.	**Patent application No. 4205/2013**
Description EN	The invention relates to a method for determination of antioxidant enzyme activity - catalase which which can be used in biochemical research; control of technological process for catalase obtaining in microbiological industry. Efficiency of the method is due to reducing of the basic reagent concentration, reducing of duration of optical density measurement and stabilization of catalase activity. The method is currently approved for the determination of catalase activity at *Saccharomyces cerevisiae* yeasts. Catalase can be used for antioxidant preparations elaboration for profilaxy and treatment of diseases associated with oxidative stress; food supplements;cosmetic products
Class no.	3. Agriculture and Food Industry

8.30.

Title	**PROCEEDING FOR ASSESSING THE TOXICITY OF NANOPARTICLES BY MEANS OF RED MICROALGA *PORPHYRIDIUM CRUENTUM***
Authors	RUDIC V., CEPOI L., RUDI L., MISCU V., CHIRIAC T., SADOVNIC D., GHELBET V.
Institution	**Academy of Sciences of Republic of Moldova** **Institute of Microbiology and Biotechnology**
Patent no.	**No. 4200MD/2013**
Description EN	The proceeding relates to nanobiotechnology, in particular to a method for assessing the toxicity of nanoparticles to algae. The proceeding comprises the cultivation of red microalga *Porphyridium cruentum* for 6 hours on a nutrient medium with addition in an hour after microalga inoculation of nanoparticles in different concentrations, afterwards in the alga biomass is determined the content of malonic dialdehyde, at the same time are considered toxic the concentrations of

	nanoparticles that cause the enhancement of malonic dialdehyde content in the biomass. **Applications:** The proceeding can be used as component part of the systems for monitoring the environment quality and safety of nanoparticle utilization and synthesis technological processes
Class no.	**1. Environment - Pollution Control**

8.31.

Title	***Trichoderma koningii Oudemans* CNMN FD 15 fungal strain – acid, neutral and alkaline proteases producer**
Authors	Deseatnic-Ciloci Alexandra, Tiurina Janetta, Bivol Cezara, Clapco Steliana, Labliuc Svetlana, Dvornina Elena, Stratan Maria.
Institution	**Academy of Sciences of Republic of Moldova** **Institute of Microbiology and Biotechnology**
Patent no.	Patent application MD: a 2013 0012 / 2013.02.28
Description EN	Invention refers to development of new mycelial fungu strain *Trichoderma koningii Oudemans* CNMN FD 15 tha in submerged culture synthesizes a complex of protease with high enzymatic activity: acid proteases (pH 3.6) 26.4-27.5 U/ml, neutral proteases (pH 7.4) – 63.5-66. U/ml and alkaline proteases (pH 9.0) – 59.9-61.9 U/ml, an in considerable amounts acid-labile α-amylase (pH 4.7 with an activity of 19.9-22.3 U/ml and acid-stable α amylase (pH 2.5) of 36.2-43.4 U/ml. Unique fungal enzym complex ensures effective hydrolysis of protein an polysaccharides from vegetable and animal matter and ca be widely used in biotechnological processes of food leather, detergent industry, oenology, at beer and alcoho production, feed processing, pharmaceuticals, medicine.
Class no.	3. Agriculture and Food Industry

8.32.

Title	**Saccharomyces cerevisiae yeast strain – producer of mannanes**
Authors	Usatîi Agafia, Molodoi Elena, Efremova Nadejda, Chiseliţa Natalia, Borisova Tamara, Fulga Ludmila
Institution	**Academy of Sciences of Republic of Moldova**

	Institute of Microbiology and Biotechnology
Patent no.	Patent MD nr. 7447 / 2013.02.13
Description EN	The invention relates to strains of microorganisms producers of biologically active substances, namely a strain of *Saccharomyces cerevisiae* yeast which can be used for polysaccharides obtaining, especially mannanes, for wine production, pharmaceutical and food industry.
Class no.	3. Agriculture and Food Industry

8.33.

Title	**Nutrient media and methods for enhancement and stabilization of enzymatic activity of mycelial fungal strains, producers of exocellular hydrolases**
Authors	Deseatnic-Ciloci Alexandra, Tiurina Janetta, Clapco Steliana, Bologa Olga, Coropceanu Eduard, Bivol Cezara, Stratan Maria, Condruc Viorica, Labliuc Svetlana, Rija Andrei, Dvornina Elena, Rudic Valeriu, Bulhac Ion.
Institution	**Academy of Sciences of Moldova** **Institute of Microbiology and Biotechnology** **Institute of Chemistry**
Patent no.	Patent Application MD: a. 2012 0124/ 2012.12.20, 4121/2011, 3945/2009, 3256/2007, 3255/2007, 2836/2005
Description EN	Inventions refer to microbial biotechnology and solve the major problem of production that involves fungi – the enhancement and stabilization of biosynthetic potential of micromycete strains, producer of exocellular hydrolases (proteases, cellulases, xylanases, amylases, pectinases). The aim is achieved by varying cultivation conditions of producers, by utilization of coordination compounds of metals and millimetre-range electromagnetic radiation as biostimulators and stabilizers of synthesis. The technical result is obtaining of cellulases-amylases complex with expected composition by varying the *Aspergillus niger* CNMN FD 10 growth duration, by increasing with 34.1-65.0% and 28.0-39.0% of enzyme activity of *Aspergillus, Penicillium, Fusarium*

strains and by reducing with 24-48 hours of cultivation cycle, at utilization of fluorinated coordination compounds of Co with oxime and Mo with amino acids or at irradiation with millimeter waves of seed material.

Applications: Industrial microbiology

Class no. 3. Agriculture and Food Industry;

8.34.

Title ***Rhizobium japonicum* CNMN RB 06 nodule bacteria strain – nitrogen-fixing symbiote of soybean**

Authors Onofraş Leonid, Prisacari Svetlana, Mohova Tatiana, Todiraş Vasile, Samoil Vitalie.

Institution **Academy of Sciences of Moldova**
Institute of Microbiology and Biotechnology

Patent no. Patent application MD a 2012 0093/2012.10.26

Description EN A new strain of nodule bacteria *Rhizobium japonicum* CNMN RB 06 – nitrogen-fixing symbiote of soybean as biotechnological object was selected and stored at the National Collection of Nonpathogenic Microorganisms (CNMN). The strain was isolated from large pink nodule collected from roots of soybean plants from north of Republic of Moldova. In the basis of this strain is produced the microbial biopreparation "Rizolic-S" for soybean seeds treatment before sowing for harvest increase and production and soil fertility improvement by increase the capacity of plants to fix atmospheric nitrogen.

Class no. 3. Agriculture and Food Industry;

Academy of Sciences of Republic of Moldova
Institute of Chemistry

8.35.

Title	**Process of modification of the porous structure of activated carbon impregnated with Cu (II) and its use in groundwater purification of hydrogen sulfide and sulfur**
Authors	Cibotaru S., Ciobanu M., Boţan V., Lupaşcu T., Sandu I., Creţu A-M.
Institution	**Academy of Sciences of Republic of Moldova** **Institute of Chemistry**
Patent no.	Pending
Description EN	The process of modification of the porous structure of activated carbon impregnated with Cu (II) includes mechanical mixing for one hour at room temperature of a suspension of adsorbent in demineralized water with simultaneous oxygen bubbling. As a result decreases the surface area and micropores volume of adsorbent Groundwater purification process of hydrogen sulfide and sulfur by catalytic oxidation includes the addition in groundwater of activated carbon impre-gnated with Cu (II) modified porous structure according to the above-mentioned process, mechanical mixing of coal-water suspension for one hour at room temperature with simultaneous oxygen bubbling, with subsequent separation of purified water from activated carbon for a possible reuse in a new cycle of purification
Class no.	1. Environment - Pollution Control

Academy of Sciences of Republic of Moldova
Institute of Genetics and Plant Physiology

8.36.

Title	**A Method Of Protection Of The Apple Fruits From P. expansum Link.**
Authors	Bujoreanu N., Todiras V., Svetlicenco V., Harea I., Marinescu M., Chirilov E.
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	MD 250 / Patent application No. 250/2010
Description EN	The proposed method of post-harvest treatment of fruit apple environmentally friendly agent "Pelicol", reducing production losses of fruit production in the post-harvest period, caused by fungal pathogens disease Penicillium expansum Link. The advantages of the invention, in comparison to the traditional methods is reflected in lower cost of this method and to improve the protection of fetal loss due to fungal diseases caused by P. expansum Link.
Class no.	3. Agriculture and Food Industry

8.37.

Title	**A Method Of Reduction Of Losses Of The Apple Fruits In The Postharvest Period**
Authors	Bujoreanu N., Todiras V., Svetlicenco V., Harea I., Chirilov E.
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	MD 406 / Patent application No. 406/2011
Description EN	A method of treatment the fruit of apples after removing them from the store, 0.5% of an aqueous solution containing, in g/l: ethyl esters of fatty acids from canola oil 600, 150 ethanol, glycerol 100, 100 medical paraffin oil, sodium bicarbonate 2; else - distilled water, with a total consumption of 15 ... 20 l/t. Environmentally friendly emulsion "Pelicol" to regulate the intensity of the dehydration process and the stability of fruits to harmful factors, creating a uniform film thickness of 35-40 microns on their surface.
Class no.	3. Agriculture and Food Industry

8.38.

Title	**New tomato Milenium**
Authors	Mihnea Nadejda, Grati Maria, Jacotă Anatol, Grati Vasile
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	MD 99 2012.03.31
Description EN	New tomato varieties *Milenium* have been developed at the Institute of Genetics and Plant Physiology. The fruits of the variety *Milenium* are medium sized weighing 60,0...75,0 g, round shaped (I = 0.93). The fruits contain 4,0...5,2% of dry matter, 3,5...4,9% of sugars, 23...56 mg/% of vitamin C, 0,35...0,60% of acidity. The variety is early ripening with a vegetation period is 103-106 days. In the transplant culture, the variety ensures a yield of 55.0...67.0 t/ha, while the standard fruit yield is high (90.0...92.0%). The varieties *Milenium* are recommended for cultivation through seedling transplants with a density of 50-55 thousand plants per ha. It can be used fresh, to produce juice and other tomato products. The cultivare *Milenium* is productive with large high-quality fruits, resistant to cold and salinity.
Class no.	3. Agriculture and Food Industry

8.39.

Title	**New variety of Dill (Anethum graveolens L.)**
Authors	Goncеariuc Maria, Balmus Zinaida, Jacota Anatol
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	**MD 78 2010.10.31**
Description EN	Early variety of Dill (*Anethum graveolens* L.)-

„Ambasador", distinguished by higher yield of row material (aerial part of plant in milk-wax stage of seeds – 12.0 t/ha; Higher production of the essential oil – 88.0 kg/ha; Efficiency – 5.8 kg of essential oil from 1 ton of row material. Carvone content in essential oil -38.9%

Applications: Agriculture, Food Industry, Medicine

Class no. 3. Agriculture and Food Industry



8.40.

Title **Variety of *Calendula officinalis* L. (Marigold) - Nataly**

Authors Goncearіuc Maria, Balmus Zinaida

Institution **Academy of Sciences of Moldova**
Institute of Genetics and Plant Physiology

Patent no. **MD 86 2011.05.31 (**Patent for plant variety)

Description EN New variety of **marigold (*Calendula officinalis* L.), Nataly**, distinguished by large inflorescences, large number of ligulate flowers, orange tubular flowers with a high production capacity –1.4 t/ha dry inflorescences. The variety is characterized by: drought resistance; disease resistance; high productivity, high quality of inflorescences: high content of flavones (0.873 g/%), high content of polyphenoles (0.988 g/%).

Applications: Agriculture, pharmacy, medicine, ornamental floriculture.

Class no. 3. Agriculture and Food Industry


8.41.

Title	**Variety of *Calendula officinalis* L. (Marigold) - Diana**
Authors	Gonceariuc Maria, Balmus Zinaida.
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	**MD 87 2011.05.31** (Patent for plant variety)
Description EN	New variety of **marigold (*Calendula officinalis* L.), Diana,** distinguished by large inflorescences, large number of ligulate flowers, brown tubular flowers and with a high production capacity of more than 1.3 t/ha of dry inflorescences. The variety is characterized by: drought resistance; disease resistance; high productivity, high quality of inflorescences: high content of flavone (0.624 g/%), high content of polyphenoles (1.038 g/%). **Applications**: Agriculture, pharmacy, medicine, ornamental floriculture.
Class no.	3. Agriculture and Food Industry

8.42.

Title	**Variety of *Salvia sclarea* L. (sage) Natali-Clary**
Authors	Gonceariuc Maria, Balmus Zinaida
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	**MD 84 2011.07.31 (plant variety patent)**
Description EN	**New variety of sage (*Salvia sclarea* L.), Natali-Clary**, distinguished by large, 55.4 cm long, highly branched, compact, higher yield of row material **-25.2.5t/ha** (first year of vegetation – 4.0 t/ha, second year -14.5t/ha, third year of vegetation-6.7 t/ha); higher content of essential oil (first year-0.911%, second year 0.876% (dry mat.), higher production of essential oil – **66.2 kg/ha** (15 kg/ha

	in first year and 33.9 kg/ha in second year and 17.3 kg/ha in third year of vegetation); higher quality of essential oil: concentration of linalil acetate - 69.8%, linalool - 12%, sclareol - 10.0%. Concentration of sclareol in concrete – 68.0 %. Group of maturity – **late**.
Class no.	3. Agriculture and Food Industry

8.43.

Title	**Treatment of onion seeds**
Authors	Botnari Vasile, Kintia Pavel, Borovskaia Alla
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	**MD 414 / 2012**
Description EN	The invention consists in increasing the germination energy of 22,1% and total germination of onion to 5,1%, treated with 0.01% aqueous solution of Ecostim and allows obtaining amicable germination, uniform growth of plants onions, productivity and improving product quality.
Class no.	3. Agriculture and Food Industry

8.44.

Title	**Method of growing eggplants**
Authors	Foksha Nina, Borovskaia Alla, Mashcenko Natalia, Botnari Vasile, Kintia Pavel, Ganea Anatole
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	Pending / 2013

Description EN	The invention consists in the treatment of seed and root fertilizing eggplant seedlings with 0.01% aqueous solution of glycosides from *Linaria vulgaris Mill.,* which increase the number of fruits by 29.2% and yield - by 18.6%. The method relates to vegetable growing.
Class no.	3. Agriculture and Food Industry

8.45.

Title	**The method of obtaining flavanoidic glycosides from *Linaria vulgaris Mill.***
Authors	Kintia Pavel, Mashcenko Natalia, Cozar Elena, Bespalco Lesea, Crivencov Leonid
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	Pending / 2013
Description EN	The invention provides a process for the production of biologically active substances from *Linaria vulgaris Mill*., by which at the presowing soaking lettuce seeds in 0.001% solution of linariozids amount by more than 25% germination. The method relates to bioorganic chemistry and can be used in vegetable growing.
Class no.	3. Agriculture and Food Industry

8.46.

Title	**Procedure of growing of apricot trees**
Authors	Shishkanu Georg, Titova Nina, Malina Raisa, Mashcenko Natalia, Kintia Pavel
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	Pending / 2013
Description EN	The invention provides a process for the growing of apricot trees by spraying trees in a phase of intensive growth with 0.01% solution of biologically active substances from *Linaria vulgaris Mill.* The method relates to agriculture and can be used in fruit growing.
Class no.	3. Agriculture and Food Industry

8.47.	
Title	**Method of tomato seed treatment following their long-term storage**
Authors	Korletianu Liudmila, Ganea Anatolie, Kintia Pavel
Institution	**Academy of Sciences of Moldova** **Institute of Genetics and Plant Physiology**
Patent no.	Pending / 2013
Description EN	Invention relates to agriculture and can be used in plant breeding. Method comprises pre-sowing treatment of tomato seeds aged during long-term storage with low viability using 0.1% water solution of steroid glycoside from tomato seeds during 24 hours.
Class no.	3. Agriculture and Food Industry

Academy of Sciences of Republic of Moldova
The Institute of Physiology and Sanocreatology

8.48.

Title	**Stimulator of spermatogenesis in cocks**
Authors	Turcanu Stefan, Gulea Aurelian, Bronciuc Gheorghe, Rosca Nicolae, Balan Ion, Birca Maria, Didilica Ina
Institution	**Academy of Science of Moldova** **The Institute of Physiology and Sanocreatology,** **The State Agrarian University of Moldova**
Patent no.	Patent No. MD 4193 B1
Description EN	The invention related to veterinary medicine, particularly to breeding of farm animals and can be used for stimulation of spermatogenesis in cocks. The coordination compound of zinc and selenium with the general formula $[Zn(HSeO_3) \cdot 2H_2O]$. Is used as a stimulator of spermatogenesis in cocks, administered in the form of solution containing 0,036…0,042 mg/ml of compound, per os, 1 ml a day, for 35 days.
Class no.	3. Agriculture and Food Industry 9. Chemical and Textile Industry

Academy of Sciences of Republic of Moldova
Institute of Zoology

8.49.

Title	**Processes for feeding bee families *Apis mellifera*.**
Authors	TODERAS Ion, MD; RUDIC Valeriu, MD; CEBOTARI Valentina, MD; BOGDAN Valeriu, MD; GULEA Aurelian, MD; BULIMAGA Valentina, MD; BUZU Ion, MD; CHIRIAC Tatiana, MD.
Institution	**Academy of Science of Moldova, Institute of Zoology**
Patent no.	MD 475, MD476, MD 477 (cycles of inventions)
Description EN	The process, according to the inventions, includes feeding of bees in spring with a mixture of 1 mass % solution of extract from the biomass of cyanobacterium strain *Spirulina platensis* CNM-CB-02 and 50% sugar syrup, taken in a ratio of 1:500, respectively. At the same time, when is used the biomass of cyanobacterium strain *Spirulina platensis* CNM-CB-02 obtaind upon cultivation in the presence of $Zn(CH_2ClCOO)_2 \cdot 4H_2O$, introduced into the composition of the nutrient medium in an amount of 30…35 mg/L in one of the first three days of cultivation, and feeding of bees with the mixture is carried out in an amount of 100…130 ml of mixture per one frame with bees, every two days, during two weeks, the result is to increase the honey productivity of the bee families *Apis mellifera.* When is used the biomass of cyanobacterium strain *Spirulina platensis* CNM-CB-02 obtaind upon cultivation in the presence of $KCr(SO_4)_2 \cdot 12H_2O$ the result is to accelerate the development of bee families *Apis mellifera* and if used the biomass of cyanobacterium strain *Spirulina platensis* CNM-CB-02 obtaind upon cultivation in the presence of $FeSeO_3 \cdot 6H_2O$ the result of invention is to accelerate the development of bee f0amilies *Apis mellifera.*
Class no.	3. Agriculture and Food Industry;

8.50.

Title	**A process for the development of natural nutritive base of fish ponds.**
Authors	ZUBCOV Elena, ZUBCOV Natalia, UNGUREANU Laurentia, BILETCHI Lucia, BAGRIN Nina, BORODIN Natalia, LEBEDENCO Liubovi
Institution	**Academy of Science of Moldova, Institute of Zoology**

Patent no.	MD 449
Description EN	The process includes introduction into the pond water of cobalt chloride and manganese chloride or potassium permanganate before stocking the pond with larvae or fry and after stocking with two-year or yearling fish, calculated for the content in water of at most 35…40 µg/L of cobalt and 35…40 µg/L of manganese. The result of the invention is to increase the biomass of phyto-and zooplankton.
Class no.	3. Agriculture and Food Industry;

8.51.

Title	**Process for rearing pike-perch fry**
Authors	CREPIS Oleg, USATII Adrian, TODERAS Ion, SAPTEFRATI Nicolae, USATII Marin
Institution	**Academy of Science of Moldova, Institute of Zoology**
Patent no.	MD 499
Description EN	The process includes the rearing of pike-perch larvae during two days in flow-through tanks or cages with the introduction of a bio-stimulating supplement, subsequent transfer of larvae into a pond at a density of 100… 150 thousand of specimen/ha and rearing with natural feeding. On the 20th and 30th day of pike-perch development is carried out placement in the pond of low-value and trash fish small fry in the ratio with the pike-perch of 10:1, and, beginning with the 36…40th-day age of pike-perch when it reaches the average weight of 2 g and body length of 6…7 cm and up to two-month age, is carried out the daily placement of low-value and trash fish small fry at the rate of 10% by weight of pike-perch per day, and then is carried out the daily placement of low-value and trash fish fry with the elongated shape of the body of a length of 2.5…3.0 cm at the rate of about 4% by weight of pike-perch.
Class no.	3. Agriculture and Food Industry;

8.52.

Title	**Laboratory equipment for registration of oxygen consumption by the laboratory animals**
Authors	SAVIN Anatolie, MUNTEANU Andrei
Institution	**Academy of Science of Moldova, Institute of Zoology**
Patent no.	MD 3829
Description EN	The invention relates to the laboratory equipment for registration of oxygen consumption by the laboratory animals and can be used in the experimental biology, medicine, physiology, ecology etc. The device for registering the oxygen consumption by laboratory animals comprises a chamber with temperature-controlled microclimate (1), inside which there are placed a chamber for the laboratory animals (2), provided with a stopper (18) and a thermometer (9), an oxygen reservoir (3), a vessel for CO2 adsorption (4), a vessel for water (5) and a burette-manometer (6). At the same time, the walls of the chamber with microclimate (1) are heat-insulated. Outside the chamber with microclimate (1) it is installed a thermal control device (11), which is connected to a contact thermometer (19). The vessel for water (5) is connected to a filler tube, the free end (21) of which is placed outside the chamber with microclimate (1). The burette-manometer (6) is connected by means of a nipple to the contact device (7), consisting of a plug (27), installed in the upper part of the oxygen reservoir (3), contacts of silver wire (31) and a pipette (29), which is connected to the burette-manometer (6). Inside the pipette (29) there is placed a wood chip (33). The contact device (7) is connected to a calculator for fixing the number of drops (8), according to which it is determined the quantity of the consumed oxygen. The burette-manometer (6) is connected to the oxygen reservoir (3) by means of a connecting branch (12). The vessel for CO2 adsorption (4) is filled with chips of organic glass. At the bottom of the chamber with microclimate (1) it is installed a microfan (13) and an illumination source (14).
Class no.	3. Agriculture and Food Industry;

8.53.

Title	**A method for prophylaxis and treatment of sarcocystosis to cattle**
Authors	ERHAN Dumitru, RUSU Stefan, ANGHEL Tudor
Institution	**Academy of Science of Moldova, Institute of Zoology**
Patent no.	MD 3832
Description EN	The invention refers to the veterinary medicine, particularly to a method for prophylaxis and treatment of sarcocystosis to cattle. The method includes subcutaneous administration of Ivomec preparation in a dose of 0,4 mg/kg of live weight on the 5-th and 12-th day or on the 25-th and 32-nd day from the beginning of grazing. The result of the invention consists in increasing the efficiency of sarcocystosis prophylaxis and treatment to cattle.
Class no.	3. Agriculture and Food Industry;

8.54.

Title	**A method for polyparasitosis complex treatment to cattle**
Authors	CHIHAI Oleg, ERHAN Dumitru, RUSU Stefan, MELNIC Galina, ANGHEL Tudor
Institution	**Academy of Science of Moldova, Institute of Zoology**
Patent no.	**MD 3885**
Description EN	The method for polyparasitosis complex treatment to cattle includes administration of antiparasitic, antibacterial preparations and additionally of Umbelicen immunomodulator, which is administered subcutaneously in a dose of 0,05 ml/kg of body weight sevenfold with an interval of 5 days, at the same time the first three administrations are carried out before administration of antiparasitic and antibacterial preparations, and beginning with the 4-th administration concomitantly with the Umbelicen it is consecutively administered Brovitacoccid perorally in a dose of 1,5 g/10 kg of body weight during 5 days, 1% Ivomec subcutaneously in a dose of 1 ml/kg of body weight one day and Tylovet 200 intramuscularly in a dose of 0,025 g/kg of body weight during 5 days.
Class no.	3. Agriculture and Food Industry;

National Center for Public Health
Republic of Moldova

8.55.

Title	**METHOD OF DIAGNOSIS OF VIRAL HEPATITIS B IN CHILDREN UNDER ONE YEAR**
Authors	C. SPÎNU, O. SAJEN, IG. SPÎNU, M.ISAC, VL. GURIEV
Institution	**National Center for Public Health** **Republic of Moldova**
Patent no.	MD 34 Y 2009.06.30
Description EN	**Aim:** Essence of invention consists in determining with certainty of the diagnosis of viral hepatitis B in children under one year. **Solution:** Determining in children of markers: anti-HBcor sum, HBsAg, anti-HBc IgM and in mother HBcor anti-HBcor sum, in case when the child is positive for anti-HBcor sum and negative for HBsAg and anti-HBcor IgM, while mother is positive for anti-HBcor sum is estimated that the child is not infected and do not require treatment, if the child is positive for anti-HBcor sum and negative for HBsAg and anti-HBcor IgM markers, while mother is negative for anti-HBcor sum marker, it is estimated that the child is potentially infected and require treatment. **Advantages:** Doctors are able to develop proper diagnosis and treatment of children under one year in which HBcor sum antibodyes were detected.
Class no.	4. Medicine - Health Care - Cosmetics

8.56.

Title	**METHOD OF TREATMENT OF CHRONIC HEPATITIS C VIRAL IN CHILDREN**
Authors	C. SPÎNU, O. SAJEN, T. RABA, VL. GURIEV, IG. SPÎNU, M.ISAC, S. BOLOGA
Institution	**National Center for Public Health** **Republic of Moldova**
Patent no.	MD7398
Description EN	**Aim:** Essence of invention consists in co-admninistration of two indigenous plant origin drugs – Pacovirina and Capsicozida in children suffering with chronic hepatitis C. **Solution:** Increasing the efficiency of the treatment of viral hepatitis C in children, normalization of biochemical indices, reduction of HCV viremia levels, prevention of installation of fibrosis and cirrhosis, normalization and improvement of the

general condition of the child's life by co-administration of two drugs: "Pacovirina" and "Capsicozida".
Advantages: Consist in obtaining a method of treatment of chronic viral hepatitis C based on the synergism of two drugs: "Pacovirina" and "Capsicozida" that can be applied even if there is a high cytolysis and in children who have contraindications to the administration of antiviral therapy.

Class no. 4. Medicine - Health Care - Cosmetics

8.57.

Title **METHOD OF VACCINATION AGAINST VIRAL HEPATITIS B IN IMMUNOCOMPROMISED PERSONS**

Authors IG. SPÎNU, C.SPÎNU, O SAJEN, M.ISAC, V.GURIEV, P. CHINTEA, V PÂNTEA

Institution **National Center for Public Health Republic of Moldova**

Patent no. MD 4177

Description EN
Aim: Enhancing the effectiveness of immunization against HBV in people with compromised immune status especially in pregnant women and people from group with high risk of HBV infection and the reduction of the number non-responders to the vaccine by co-administration of vaccine against HBV and an vegetable adaptogen - Mestim, which manifests mainly stimulating immunogenesis process.
Solution: Intensification of immunogenesis expressed by a significant titers of protective antibody, resulting in minimizing the risk of HBV cases in people with compromised immune status including pregnant women and the reduction of the number of non-responders to the vaccine.
Advantages: Mestim is of plant origin free of cumulative, toxic, action, teratogenic, rezorptive, carcinogenic action, medicinal product do not develop side effects and is easily tolerated by patients.

Class no. 4. Medicine - Health Care - Cosmetics

8.58.

Title **METHOD OF CHILDREN REVACCINATION AGAINST HEPATITIS B**

Authors O. SAJEN, V.GURIEV, C. SPÎNU, I. SPÎNU, V. PÂNTEA

Institution **National Center for Public Health Republic of Moldova**

Patent no. MD 223 Y

Description EN	**Aim:** Increasing significantly the effectiveness of primary vaccination against viral hepatitis B, extension of the duration of protection against this infection. **Solution:** Since the age of one year, annually must be determined the level of anti-HBs, and if anti-HBs level is from 10 to 150 mIU / ml must be administrated a booster dose of vaccine against HBV, and if the anti-HBs level is less than 10 mIU / ml must be administered a repeated course of three or four doses of vaccine against HBV. **Advantages:** A booster dose of vaccine against hepatitis B must be applied when the anti-HBs titre is found between the limit of 10-150 mIU / ml, because this level is considered protective, but not sufficient to ensure protection lasting.
Class no.	4. Medicine - Health Care - Cosmetics

8.59.

Title	**A diagnostic procedure infections caused by Enterobacteriaceae producing beta-lactamase**
Authors	O. BURDUNIUC., R. COJOCARU., C. SPÎNU., S. GHEORGHIȚĂ, I. ROȘCIN
Institution	**National Center for Public Health Republic of Moldova**
Patent no.	MD7438 2013
Description EN	Enterobacteriaceae family organisms producing beta-lactamases. Solution: Diagnosis of infections causes by Enterobacteriaceae producing beta-lactamases are carried by screening with multiplex PCR and using reference strains (E. coli profile ESBLs CTX-M1, CTX-M-3, CTX-M-14, CTX-M-15 phylogenetic group A, E. coli profile ESBLs CTX-M 3, CTX-M-14, CTX-M-15 from phylogenetic group B2 E. coli profile ESBLs CTX-M-14, CTX-M-15 group phylogenetic D), and when is identified new strains, profile is established by sequencing method with further adding in the list of reference strains. Advantages: updating case management regarding diagnosis and treatment of patients with infections caused by Enterobacteriaceae producing beta-lactamases
Class no.	4. Medicine - Health Care - Cosmetics

Republic of Moldova
Ministry of Health
Institute of Mother And Child

8.60.

Title	**THE GENERALIZED MULTIFACTOR DIMENSIONALITY REDUCTION METHOD OF ASTHMA IN MOLDOVAN CHILDREN ON APPLICATION SOFTWARE GMDR (*Generalized Multifactor Dimensionality Reduction*)**
Authors	Olga CÎRSTEA, Ala COJOCARU, Liubov VASILOS
Institution	**Institute of Mother And Child**
Patent no.	**MD3433 26.07.2012**
Description EN	The innovation relates to medicine especially for pediatry. The study results demonstrate that GMDR interaction model may work as a phenotype predictor based on the genetic information to improve the clinical diagnosis. Asthma is a multifactorial disease caused by numerous genetic and environmental factors, and their interactions. The generalized multifactor dimensionality reduction method (GMDR software, version *Beta 0.9*) proposes a combinatorial approach for genetic data analysis that unifies biological, statistical and evolutionary theories. A number of polymorphisms in nine asthma candidate genes (GSTT1, GSTM1, GSTP1, NAT2, IL-4, IL-4Rα, TNFα, NOS1 and CC16) were evaluated and the combination of genes that increases 3.6 folds the risk of childhood asthma development (OR=3,61; CI 95% 1,45-8,99; p<0,01) was identified.
Class no.	4. Medicine - Health Care - Cosmetics

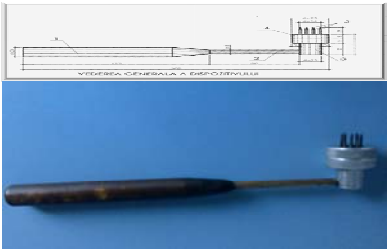
Republic of Moldova
Ministry of Health
National Scientific-Practical Center of Emergency Medicine
(NCPCEM)

8.61.

Title	**APPARAT FOR CLOSED REDUCTION AND EXTERNAL FIXATION OF BONE FRAGMENTS OF THE PELVIC BONES OF MAMMALS WITH MOBILE DEVICE FOR OSTEOSITHESIS**
Authors	BOROVIC Eduard, CIOBANU Gheorghe, PAVLOVSCHI Ecaterina
Institution	**National Scientific-Practical Center of Emergency Medicine (NCPCEM)**
Patent no.	**Brevet AGEPI–MD Nr.1383 din 2012**
Description EN	The invention relates to medicine and veterinary medicine, in particular to the medical instrument, and can be used in veterinary traumatology and orthopedics as an apparatus for closed reduction and external fixation of bone fragments of the pelvis of mammals in the osteosynthesis. The main therapeutic effects is improved control of compression and fixation of bone fragments in the closed treatment of injuries of the pelvic bones by improving the technological capabilities of the device for reduction and external fixation. The result of the method is to reduce surgical trauma and in the future - to improve conditions for the consolidation of the fracture in the bone, reducing its duration and early mobilization of the patient. The advantage of the method is the ease of implementation of osteosynthesis in the time limit, and no need to use special tools, such as drills, the ability to provide an early feature of the hip fractures of the acetabular.
Class no.	4. Medicine - Health Care - Cosmetics

8.62.

Title	**DEVICE - HAMMER FOR SURFACE ACUPUNCTURE**
Authors	**CIOBANU** Gheorghe,**VÎLCU** Alexandru
Institution	**National Scientific-Practical Center of Emergency Medicine (NCPCEM)**
Patent no.	**Brevet AGEPI–MD Nr.1382 din 2012**
Description EN	The invention relates to medicine, in particular, to reflexology, namely, devices for impacting the acupuncture points of needles associated with stimulation of biologically active points on the surface of the body with needles sheaf. The goal solved by the invention is to improve the treatment of patients with an effective universal tool for acupuncture superficial and deep impact with needle-impact-resonance effect, environmentally friendly, harmless to the patient and the doctor. The use of this device allows you to expand the zone of influence on biologically active points, more accurate dosing of skin irritation and reduce the duration of treatment. The acupuncture action of needles on nerve endings is gentle (soft). Taper needles are strength and service life is long. Needle on the device may be sterilized.
Class no.	4. Medicine - Health Care - Cosmetics



8.63.

Title **PSEUDOMYXOMA PERITONEI: OPTIMIZED ALGORITHM OF THE DIAGNOSIS AND TREATMENT**

Authors **MIŞIN** Igor**, GHIDIRIM** Gheorghe**, MIŞINA** Anna**, VOZIAN** Marin**, ZASTAVNIŢCHI** Gheorghe

Institution **National Scientific-Practical Center of Emergency Medicine (NCPCEM)**

Patent no. **Certificat pending**

Description EN

Pseudomyxoma peritonei (PMP) is a rare, chronic, relapsing, diagnostically challenging, and poorly understood disease characterized by disseminated mucinous ascites and peritoneal implants. PMP usually develops secondary to mucinous neoplasms of the appendix and/or the ovary. The most common sites of origin are considered the appendix and the ovary, although other sites, such as the gallbladder, stomach, pancreas, colon, uterus, fallopian tubes, urinary bladder, breast and lung. In summary, PMP is a severe condition frequently inducing complications which require emergency surgical treatment such as intestinal obstruction or abdominal compartment syndrome. We described the first PMP-induced ACS successfully treated by surgical decompression. Abdominal hypertension and compartment syndrome must be considered in all the patients with PMP and if recognized immediate abdominal decompression by surgical debulking, peritoneal stripping combined with intraoperative hyperthermic intraperitoneal chemotherapy should be considered. Our experience highlights that PMP requires careful observation, as it might be detected after a long-term follow-up period post-appendectomy for appendiceal mucocele. Histology is always required and should be achieved by laparotomy. The therapeutic recommendations are controversial due to the rarity of PMP, the lack of randomized studies, and its complex biology.

Class no. 4. Medicine - Health Care - Cosmetics

Fig. 1 *Abdominal CT-scan demonstrating mucinous ascites*

8.64.

Title	**Management of Pediatric Septic Shock**
Authors	CIOBANU Gheorghe, COJOCARU Ala, OGLINDA Ana, ARAMĂ Marina, HORODIŞTEANU-BANUH Adela
Institution	**National Scientific-Practical Center of Emergency Medicine (NCPCEM)**
Patent no.	Certificat AGEPI MD- ser. OŞ Nr.3311 din 08.02. 2012
Description EN	Debut infection in children is characterized by inflammatory triad: fever / hypothermia (the child under one year), tachycardia / bradycardia and vasodilation; association of neurological worsening (drowsiness, irritability, lack of collaboration with carers). Peripheral pulse amplitude modification and capillary filling time is sufficient for the diagnosis of suspected signs of septic shock. Hypotension is a late sign and has a low diagnostic value as circulatory failure is already present. Standardized management algorithm is presented diagnosis and treatment of patients in septic shock in emergency departments and intensive care wards and intensive care and ensure the creation of safe maximum for critically ill patients and enhance the effectiveness of medical interventions in medical assistance emergency. The implementation of this algorithm in daily practice may enhance efficacy managering of septic shock, avoiding drug and methods polipragmasia without scientific evidence.
Class no.	4. Medicine - Health Care - Cosmetics

8.65.

Title	**Method of treatment of acquired uncomplicated progressive myopia**
Authors	Bilba Rodica, Bendelic Eugen, Ghidirimschi Tatiana
Institution	**Medical Center OCULUS PRIM**
Description EN	The problem that the claimed invention solves is related to the increase of curative effect and control of acquired uncomplicated myopia progression. The treatment consists of a ten day consequent physiotherapeutic set of procedures During the 10 (ten) day treatment period, each day the general biologically active point of the eye GI4, GI11, E36, TR5 are electrically stimulated for 1 minute (one point at a time) Then, the same procedure is applied on the eye local acupuncture points V1; E1; VB1; BT5; V2; HT1, HT2, HT3, HT9. Next step is a 4 (four) minute ciliary muscle stimulation using helium-neon laser radiation of low intensity followed by computer assisted stimulation of the eyesight for 5 minutes.
Class no.	4. Medicine - Health Care - Cosmetics

Poland

Represented by **Eurobusiness-Haller**

9.1.

Title	**The System of Integrated Communication Operations „SZOK”®**
Authors	Institute of Physiology and Pathology of Hearing & Center of Hearing and Speech
Institution	**Institute of Physiology and Pathology of Hearing & Center of Hearing and Speech**
Patent no.	Pending
Description EN	**The System of Integrated Communication Operations „SZOK”®** is the highly advanced IT system supporting the diagnostics of a patient from a distance and assuring the transfer of tests' results to healthcare sector. The System has been developed by the teams of Institute of Physiology and Pathology of Hearing (IPPH) and Center of Hearing and Speech, in cooperation with partner from IT sector. „SZOK”® integrates Institute's information systems and introduces new possibilities – it enables to perform audiology screening programs on countrywide and European scale, supports scientific research in collecting, storing, popularizing and managing of screening tests' results. The System cooperates with various IT devices – for example in hearing, vision and speech screenings organized by the IPPH, the mobile devices "Senses Examination Platforms" enabling to run screenings out of medical centers – e.g. in schools across Poland and abroad, are used. Data from the Platforms are sent automatically via Internet to the Base of Knowledge – the "SZOK" ® system's module – where are analyzed and evaluated by specialists, and later included in reports used by physicians. Launching of the System aims at improving the quality of researches, decreasing the costs and increasing the quality of cooperation between scientific centers all over the world (cooperating with the Institute). Included in "SZOK" ® system the open standard of e-data exchange allows to collect and use tests' results by other institutions in the healthcare sector, from other fields of medicine. Integration of patients' data in "SZOK" ® will enable fast service and will shorten the waiting time for a visit in medical center, as well as will be patients' complex medical base.
Class no.	4. Medicine - Health Care - Cosmetics

9.2.

Title

Telefitting – system of the remote fitting of a cochlear implant's parameters

Authors

Institute of Physiology and Pathology of Hearing & Center of Hearing and Speech

Institution

Institute of Physiology and Pathology of Hearing together with the Center of Hearing and Speech

Patent no.

Pending

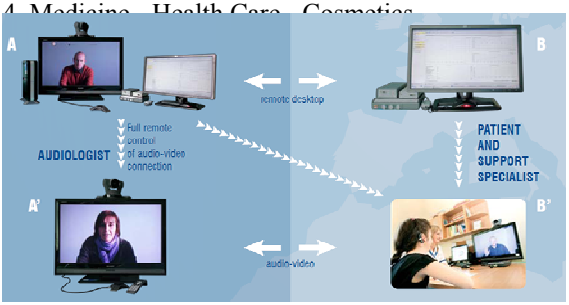
Description EN

First in the world clinical introduction of sophisticated **Teleffiting** method, developed by the team of Institute of Physiology and Pathology of Hearing, is used in the care of patients with cochlear implants. A cochlear implant is functioning properly, and gives hearing benefits to an implanted patient, only when it is set and adjusted to his/her individual characteristics. The fitting is not a onetime procedure – after the first activation, regular adjustments are required, as the patient's hearing faculties develop and change. **Telefitting**, using internet connection, enables the remote control and adjustment of cochlear implant's parameters of patients located in 20 distant centers in Poland and one in Odessa (Ukraine). The specialists, sitting in World Hearing Center of Institute of Physiology and Pathology of Hearing (near Warsaw) take over control of the distant computer and the speech processor (external part of the implant) connected via diagnostic interface to this computer, and proceed with the fitting of the device. All work stations consist of advanced devices for teleconference transmission and computer systems equipped with specialist clinical diagnostic interfaces, applications necessary for speech processor fitting and other audiology tools controlled remotely by the specialists from World Hearing Center. During the **Telefitting** session patients in distant centers are accompanied by speech therapists.

Telefitting enables to render medical services from distance, reducing geographic and financial barriers as patients do not have to travel to specialist centers and have better access to experienced specialists. Additional benefit is working with well-rested patient – very important in case of small children.

Class no.

4. Medicine - Health Care - Cosmetics



9.3.

Title	**ESKONzO - The Electronical Communication System of Disabled with The Surrounding**
Authors	Patryk Domagalik, Jakub Król, Paweł Krosny, Maciej Skórzański, Dariusz Radajewski, Krzysztof Smyczek
Institution	**Zespół Szkół Nr6 im. Króla Jana III Sobieskiego w Jastrzębiu-Zdroju, Centrum Kształcenia Praktycznego w Jastrzębiu-Zdroju** *(*Comprehensive and Technical Schools*)*
Patent no.	Pending
Description EN	ESKONzO (The Electronical Communication System of Disabled with The Surrounding) is a project designed to facilitate communication, i.e. those paralyzed, or with amyotrophic lateral sclerosis. The system is currently divided into two modules. The first one ("Life Project") provides basic communication with the immediate environment through our controller and application. The second module using our manipulator and software enables total control of computer - work, entertainment and communication via the Internet. The project is currently being implemented in many people and continues to be developed. - Very low cost of production (ready-to-use module: 3-50 Euro) - The use of end-of-use equipment - Module for paralyzed person providing basic communication with immediate/closest family - Module which allows paralyzed person to use a computer and perform any operations on it - work, play, communicate - Custom built equipment at the Center for Practical Training by students in the classroom - Custom software, supplied for free - Ergonomic equipment and applications facilitating the practical use of the system - Controllers and manipulators adapted to specific cases - Many implementations that patients use today - The project is still under development, continually adding new, improved versions
Class no.	**10. Information Technology and Communication**

9.4.

Title	**Spherical apparatus for determination of explosion characteristics of dust clouds**
Authors	Ryszard Dąbrowa Andrzej Kołaczkowski
Institution	**The Main School of Fire Service (POLAND)** **P.P.U. ANKO**
Patent no.	Pending
Description EN	Explosion indices in the 20 litre laboratory apparatus with software "dust explosion plotter" for the efficient prevention of dust explosions by preventive explosion protection it is necessary to know the optimum explosion indices: ➢ the dust explosibility, ➢ the lower explosibility limit (LEL), ➢ the maximum explosion pressure (P_{max}), ➢ the dust-specific characteristic (K_{max}), ➢ the limiting oxygen concentration (LOC). Pmax value measured in the 20 litre apparatus agrees excellent with those measured in the 1m³ vessel. Research fully confirmed compliance with international standards: EN 14034 and ASTME 1226 and the data presented in the literature research. Technology of the 20 litre apparatus leads to a significant reduction of production costs – the purchase cost 50%↓. A new approach to research results in carrying out research faster, cheaper and safer – the research cost 50%↓ Highly-effective research procedures shorten time and lower the costs of research in compliance with high level of safety for staff operating the machines and the surrounding environment – up to 2 or 3 times higher efficiency↑
Class no.	**5. Industrial and laboratory equipments**

Russian Federation

10.1.

Title

Biological treatment of industrial wastewater containing zinc by *Spirulina platensis*

Authors

I. Zinicovscaia[1,3], L. Cepoi[2], T. Chiriac [2], Gh. Duca[3], T. Mitina[3], M.V. Frontasyeva[1], S.S. Pavlov[1], S.F.Gundorina[1]

Institution

[1]Joint Institute for Nuclear Research, Dubna, Russia
[2]Institute of Microbiology and Biotechnology of the Academy of Science of Moldova
[3]The Institute of Chemistry of the Academy of Sciences of Moldova

Description EN

Biotechnology based on sorption of heavy metals by microorganisms offers a potential alternative to conventional techniques for water purification, due to their low cost, prompt availability, relatively high specific surface area and good binding affinity. The possibility of using blue-green microalgae *Spirulina platensis* from Institute of Microbiology and Biotechnology of the Academy of Science of Moldova for zinc removal from waste water of "Moldagrotehnica", the largest manufacturer of modern agricultural machinery in Republic of Moldova, was studied.

To study accumulation of Zn by *Spirulina* biomass three types of experiments were performed. Obtained data have shown that for large-scale application biosorption processes are more profitable than accumulation, because accumulation processes are more expensive. During 1 hour of microalgae-wastewater interaction approximately 50% of zinc ions were removed from wastewater. Atomic absorption spectrometry was used to determine concentration of Zn in waste water samples. The samples of dry *Spirulina* biomass after exposure to wastewater were subject to nondestructive instrumental neutron activation analysis. A total of 12 elements: As, Au, Br, Fe, K, Na, Nd, Np, Sb, Sm, W, and Zn were determined. Beside zinc removal *Spirulina platensis* showed a high capacity for the iron biosorption from wastewater.

The results of zinc ions biosorption from wastewater can be used for elaboration of the special methods of metals removal from wastewater from enterprises in the Republic of Moldova.

Class no. Innovative Research

Spain

11.1.

Title	**PRESSURE STOPPER FOR BOTTLES AND THE LIKE**
Authors	**JAVIER PAJÓN PERMUY**
Institution	**IDEA&JIT S.L.**
Patent no.	**WO0192124 (A1) — 2001-12-06** **WO2001ES00181 20010510**
Description EN	We present our product, TAPRESs®, a new cork stopper - **PRESSURE CORK FOR WINES, CHAMPAGNE AND OTHER TYPE OF GLASS BOTTLES-.** **WITH TEMPERATURE CONTROL.** ADVANTAGES: POLYVALENT: It can be used in any conventional glass bottle. (Wine, beer and champagne bottles) EASY TO OPERATE: To operate the Tapress is very simple. Manually, no need to use bottle openers. No need to use tools. FANCY: The design is discrete and elegant; it has the symmetry of a cork stopper and respects the design of a bottle. To remove the Tapress for a deep cleaning is very easy, besides you can boil it to sterilize it. MULTIVALENT: The Tapress can be used as many times as you wish, and in a variety of bottles. The quality of the materials guarantees the lasting of the product and its effectiveness. HERMETICAL: The Tapress is fully hermetical, so the bottle contents will preserve its quality and its properties (Flavour, scent and gas,). HYGIENICO: The Tapress is completely hygienically conceived to preserve the quality of the beverages and to preserve the buyer's health.
Class no.	11. Printing and advertising

Taiwan

Represented by **WIIPA**

12.1.

Title	**MULTI-FUNCTION SOCKET**
Authors	SHIH, YANG-LUNG, SHIH, YANG-CHEN
Institution	**DUN-HUA JUNIOR HIGH SCHOOL** **DUN-HUA ELEMENTARY SCHOOL**
Patent no.	M 432943
Description EN	Features: 1) Universal socket: different from an ordinary socket, the multi-function socket contains an additional international socket. It's ideal for the world traveler. 2) Built-in torch: we especially installed a rechargeable torch on the right side of the multi-function socket. Additionally, you can take the torch out for the purpose of illumination. 3) Automatic night light: with the built-in torch glowing in the darkness, the multi-function socket can be used as an automatic night light. 4) USB port: 5) Cell phone charger: with the USB port, you can charge your cell phone. 6) Provision of computer power: the USB port provides power to your computer. This invention has an attractive look and is practical.
Class no.	2. Energy and sustainable development

12.2.

Title	**ECO-FRIENDLY LED TORCH**
Authors	SHIH, YANG-LUNG, SHIH, YANG-CHEN
Institution	**DUN-HUA JUNIOR HIGH SCHOOL** **DUN-HUA ELEMENTARY SCHOOL**
Patent no.	M 447038
Description EN	Features: 1) No more batteries: with a small generator installed inside the action figure, the eco-friendly LED torch can generate electricity by itself and illuminate without batteries. Therefore, it not only saves you money in batteries, but also is environmentally friendly.

	2) Mechanical generator: a mini, light mechanical generator creates electricity. 3) Hand strap pulling to generate electricity: when the electricity is running low, we can pull the hand strap so that the built-in generator is turned, which generates electricity for illumination. 4) Decoration: the eco-friendly LED torch looks like an action figure, so it can be a decoration in normal times. Description: this invention can be applied to mountain-climbing and power outage. Especially when blackout happens, the eco-friendly LED torch can function efficiently. So, it's an eco-friendly and useful invention.
Class no.	2. Energy and sustainable development

12.3.

Title	**SOLAR POWER CHARGER PLUS FAN**
Authors	SHIH, YANG-LUNG, SHIH, YANG-CHEN
Institution	**DUN-HUA JUNIOR HIGH SCHOOL** **DUN-HUA ELEMENTARY SCHOOL**
Patent no.	M 378980
Description EN	This invention includes two parts: 1. Solar power charger: The charger has four charging battery grooves, and rechargeable solar panel is installed on the upper cover. The solar power charger can generate electricity and charge directly when it absorbs sunlight. Besides, with a built-in USB port, it can charge via computer as well. Additionally, the solar power charger includes a built-in torch. Therefore, it can be used as a cell phone charger and a lighting device. Also, it can be combined with a detachable fan. 2. A detachable fan: A switch and a power socket are installed on the fan base. When the fan operates, it not only creates air flow, but also helps disperse laptops heat and works as a cooling fan. Besides, the fan is powered by 5V DC motor.
Class no.	2. Energy and sustainable development

Tunisia

13.1.

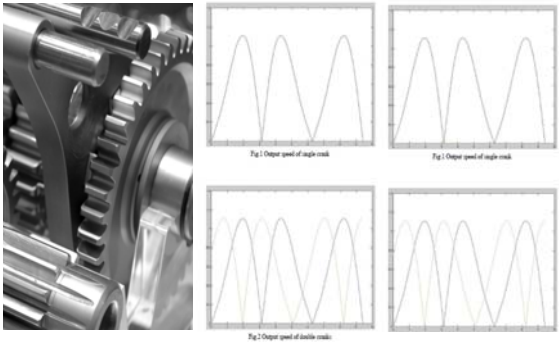
Title	**Design and production of a system for wirelessly charging the batteries of a robot**
Authors	Mohamed Zied Chaari
Patent no.	WO2012026895 / US Application Number: 13/818,698
Description EN	In the context of expanding the scope of the inspection field and in order to improve said field, the present invention is provided, which relates to a robot that inspects a pipeline, but may encounter certain problems during said operation. For this purpose and in order to avoid said major risk, a system for wirelessly charging the batteries of said robot is used, wherein the pipeline is used as a waveguide and as a Faraday cage in order to improve the performance of the inspection system.
Class no.	2. Energy and sustainable development 5. Industrial and laboratory equipments

Turkey

Represented by TROBOTIC & Istanbul Aydin University

14.1.

Title	**Continuously Variable Transmission**
Authors	Saeid Dadashzadeh, Farzad Narjabadi Fam, Ayat Aliasgharzadeh
Institution	**TROBOTIC, İAÜ Eengineering, Istanbul Aydın University**
Patent no.	Patent application No. 213999/2013
Description EN	**Applications**: Designer can use this CVT in all the systems that need to change speed or torque. For example: automobiles, capstan lathes, power planets, combine and other agricultural equipments, cranes, step motors and etc. **Advantages**: In automobile applications, introduced system causes to engine works with constant optimal speed, it causes reduction of 15 to 25 percent fuel consumption, and reduction of fuel consumption can eliminate a big part of output toxic gases
Class no.	8. Aviation, car industry and transportation

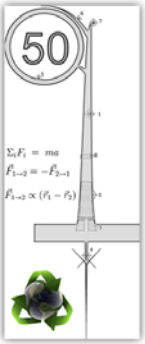


14.2.

Title	**Intelligent traffic sign**
Authors	Saeid Dadashzadeh, Maryam Dadashzadeh
Institution	**TROBOTIC, İAÜ engineering, Istanbul Aydın University**
Patent no.	Pending

Description EN

Applications:
Most of the accidents are due nowadays and for many years with the same design of new traffic signs, and technology to give a new face now. Our project consists of three main parts: the body and the root sign
1-body: bump on the airbag and the police against GPS Fog LED Lamp and the lower part of the flexible spring system prevent violence
2 - Signage: custom made carbon fiber, and destroys itself against rain and light.
3-Stem: 2 + ^ 90 trying to balance the physical
Another important issue separate from each other and change all the parts and pieces with a chance of eco-friendly recycling.



Class no. 11. Printing and advertising

14.3.

Title **Propagator electric regulator**

Authors Saeed Fallahi, Hamzeh Mirzaei, Saeid Dadashzadeh

Institution **TROBOTIC, Mechanic engineering, Shiraz Azad University**

Patent no. Pending

Description EN

Devices that are around us today can take advantage The same energy consumption, alternative energy including electrical energy produced.
Once open outlet or tap water, the water flow inside the tube is moved The Balkans will be entered into and positioned them. The main axis of rotation of the blades can be rotated and driven DC generator is connected to a mini. Rotation of the generator produces DC power.
Plan benefits: 1 - The energy produced by moving water pipe. 2 - The installation of water pipes. 3 - charging any type of rechargeable battery. 4 - If you use a larger pipe, Larger transducers are mounted in the electrical energy produced is greater and faster battery charging is done. 5 - free energy.

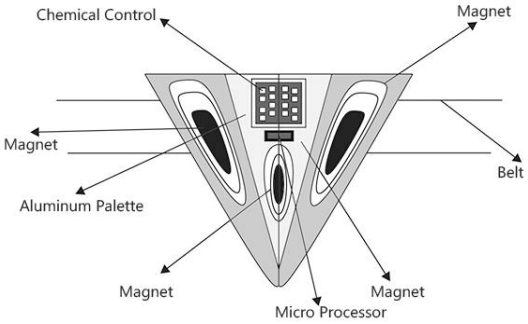
Class no. 2. Energy and sustainable development

14.4.

Title	**Gaining shopping understanding to kids with a computer game (Shopping Game)**
Authors	Ilkay YELMEN
Institution	**Istanbul Aydin University**
Patent no.	Pending
Description EN	This project is designed for children to gain understanding of shopping. Thanks to this game will increase the sensitivity of both young children and belongings around will spend the money will learn how to. Games will consist of 15 chapters, and each chapter apply to different activities. Implementing these activities, kids will increase the level of intelligence.
Class no.	10. Information Technology and Communication 13. Sports, Games and Leisure

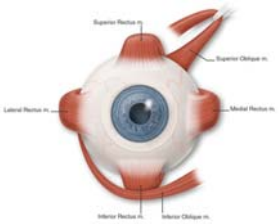
14.5.

Title	**Anti-Lumbago Belt**
Authors	Ilkay YELMEN
Institution	**Istanbul Aydin University**
Patent no.	Pending
Description EN	This project is designed to disorders such as herniated disc and back pain. Put the belt through the waist area, the signal will be sent to the spinal cord. Equipment is in the form of a triangle and it contains 4 magnets. Properties of the wave will determined over smartphone connected the belt. Using semantic web technology, the user will enter some personal characteristics. Furthermore, the ambient temperature and body temperature will be measured. Wave will be sent according to the system evaluation. (System will evaluate personal characteristics, ambient and body temperature)
Class no.	4. Medicine – Health Care - Cosmetics



14.6.

Title	**New Innovative Eye Sight Improving Mechanical Mechanism**
Authors	Sajjad Yaghoubi
Institution	***Bahçeşehir Üniversitesi***
Patent no.	Pending in Turkey, Patented in Iran
Description EN	This medical electrical system is a special mechanism to increasing eye sight without using of any drugs. One important advantages of this mechanism is controlling sight contrition in eyes and conformity of lentiform on retina in many state by exercising ciliate muscle. Eye lentiform is connected to ciliate muscles such as superior rectus muscle, lateral rectus muscle, medial rectus muscle, inferior rectus muscle, superior oblique muscle and inferior oblique muscle. The eye lentiform diameter is controlling by ciliate muscle. We exercised this muscle by to keep at a distance and to cause to approach mobile fragile substance at the regular and programmable time.
Class no.	4. Medicine - Health Care - Cosmetics



Ukraine

Represented by **Centre „AYUMEL"**

15.1.

Title	**Watch with pictographic composition**
Authors	V. Goch, M. Goncharenko, L. Kruchinin, Yu. Skomorovskyy, S. Serova, A. Karpin, A. Sergienko, N. Chornobay
Institution	**Centre of Living Systems Reseach of Ukrainian Academy of Sciences: Centre „AYUMEL" and Dep. of Valeology of V. Karazin Kharkov National University**
Patent no.	Pending UA 2012
Description EN	Produced special multistratum watch face with pictographic composition and effect of one' functional state harmonization.
Class no.	14. Other

15.2.

Title	**Wind-Driven Electrical Plant**
Authors	O. Onipko, S. Vasilenko, A. Onipko
Institution	**Ukrainian Academy of Sciences**
Patent no.	Pending UA 2009, 2010
Description EN	Wind-driven electric plant has been developed for electric power supply of apartments, houses, communities with low, medium and normal wind potential
Class no.	2. Energy and sustainable development

15.3.

Title	**Energy Concentration Devices**
Authors	V. Goch, V. Selishchev
Institution	**Centre of Living Systems Reseach of Ukrainian Academy of Sciences: Centre „AYUMEL" (Sevastopol) and „TSEL" LTD (Moscow)**
Patent no.	Patents of Ukraine, Eurasian Patents (2009, 2011)
Description EN	Generation of high positive energetic zones by means of device configuration effect which combines golden section and Reich accumulator effect (phenomena). ECD application permits: oil viscosity; increase the productivity of agriculture, plant, animals and fish keep food; increase food quality and its subsistent properties; eliminate insects and rodents in living and working areas and other.
Class no.	14. Other

15.4.

Title	**Method for determining the content of heavy metals in biological material**
Authors	M. Goncharenko, O. Konovalova, H. Andreyko, O. Gladka
Institution	**Dep. of Valeology of V. Karazin Kharkov National University**
Patent no.	Patents of Ukraine 2011
Description EN	Produced new method for determining the content of heavy metals in biological material, food industry, medicine.
Class no.	4. Medicine - Health Care - Cosmetics

15.5.

Title	**Features of formation of lactogenesis at women with a benign mammary dysplasia**
Authors	I. Shekera
Institution	**Institute of Pediatrics, Obstetrics and Gynecology of National Academy of Medical Sciences of Ukraine, INGO "Health of Society"**
Patent no.	Pending
Description EN	Research objective: To provide formation full lactogenesis at women with a benign mammary dysplasia and to develop a complex treatment-and-prophylactic actions for this category of women. Expected results: On the basis of carried out complex clinical, hormonal, biochemical, psychological, Ultrasonic researches at pregnant women with benign mammary dysplasia will be studied the course of pregnancy, delivery, the postnatal period, feature of lactogenesis and the complex of treatment-and-prophylactic actions for the purpose of formation full lactogenesis at women with a benign mammary dysplasia is developed.
Class no.	4. Medicine - Health Care - Cosmetics

15.6.

Title	**Express - diagnostics of the personnel reliability**
Authors	I.Shevchuk, A.Shevchuk
Institution	**Sevastopol Branch of the Plekhanov Russian Economical University**
Patent no.	Pending
Description EN	Developed an automated system integrated assessment of the staff functional state for express-diagnostics dangerous professions personnel reliability. Conclusions forming is a modular one. In the structure of evaluation modules: physiological body reserves, emotional state and professional performance. An important advantage of the developed system is that it allows making recommendations for professional staff activities optimization .
Class no.	4. Medicine - Health Care - Cosmetics

15.7.

Title	**Innovative technologies in tourism**
Authors	A. Skomorovskyy
Institution	**Centre of Living Systems Research of Ukrainian Academy of Sciences: Centre „AYUMEL" LTD**
Patent no.	Pending
Description EN	Proposed innovative technologies in tourism connected with question of tourist' self-cognition and self-realization.
Class no.	13. Sports, Games and Leisure

NATIONAL EXHIBITORS

Universities

Research Institutes

Companies

Individuals

University POLITEHNICA of Bucharest

16.1.

Title EN

INSTALLATION AND PROCEDURE FOR OBTAINING POWDERS OF BINARY ALUMINIUM-MAGNESIUM ALLOYS USED FOR MAKING METAL PIECES WITH THIXOTROPIC STRUCTURE

Authors Victor GEANTĂ, Ionelia VOICULESCU, Horia BINCHICIU, Aurelia BINCHICIU, Radu ŞTEFĂNOIU, Emilia BINCHICIU, Radu Mihai NEGRIU

Institution **SC SUDOTIM AS SRL Timişoara**
University POLITEHNICA of Bucharest

Patent no. RO125770/30.12.2011

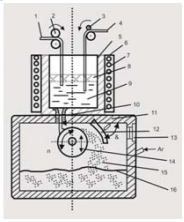
Description EN

INSTALLATION AND PROCEDURE for obtaining metallic powders of binary Al-Mg alloys used for making pieces with thixotropic structure comprising the steps of:

- controlled feeding, with a proper chemical composition prescribed for metal powders, of a 97% active aluminum wire and a Mg-cored aluminium pipe in a induction furnace with graphite crucible;
- wire melting under protective cryolite flux layer using the induction furnace;
- discharging, through ceramic nozzle, of the molten jet alloy on a revolving drum, placed in a closed preforming chamber protected by argon atmosphere; from the rotating drum the melted alloy is projected onto a deflector plate adjustable assembled inside the preforming chamber under a variable angle of 0 ... 45^{o}.

APPLICABILITY DOMAIN: production of precursors for obtaining the parts with thixotropic structure.

Class no. 6. Mechanical Engineering - Metallurgy



16.2.

Title EN	**ROD FOR BRAZING MADE BY SILVER ALLOY WITH COATING HAVING DEOXIDATION EFFECTS**
Authors	VOICULESCU Ionelia, GEANTĂ Victor, BINCHICIU Horia, BINCHICIU Aurelia, ŞTEFĂNOIU Radu, BINCHICIU Emilia, NEGRIU Radu Mihai
Institution	**SC SUDOTIM AS Timişoara**
Patent no.	RO 125835 /30.07.2012
Description EN	**BRAZING ROD** made by silver alloy, with coating having deoxidation effects, deposited by extrusion. The rod alloy include Silver – Copper and Zinc, having the trade mark like BCu44ZnAg 698-810, BCu38ZnAg 650-750, BAg45CuZn 660-740, and are characterised by the very high deposition coefficient, with ecological characteristics related to the covering composition, and deoxidation effects obtained by: addition of powder made by ecological metallic alloy similarly with those of metallic rod, having the grain dimension of maximum 0,1 mm, introduced in participation till 15 %; mineral mixture mechanical homogenised with 2/3 Boric acid + 1/3 Borax dehydrated in proportion of 35 ± 10 %; mineral mixture mechanical homogenised of Potassium hydroxide in proportion of 26 ± 10 %; mineral mixture homogenised with 1/2 Potassium Fluoride + 1/2 Potassium tetra-fluoride-boride in proportion of 20 ± 10 % and plasticizer made by carboxymethylcellulose in proportion of 4 ± 0,5 % and distillate water as binder in proportion of 18 ± 5 %. **APPLICABILITY DOMAIN**: Brazing of similar and dissimilar materials, used for complex solicitations.
Class no.	6. Mechanical Engineering - Metallurgy 7. Buildings and Materials

16.3.

Title EN

ELECTRODE WITH CORE FROM ALLOY 83% FE/17%CR

Authors

Lect. Dr. Eng. Radu ŞTEFĂNOIU, Prof. Dr. Eng. Victor GEANTĂ, Dr. Eng. Horia BINCHICIU, Prof. Dr. Eng. Ionelia VOICULESCU, Dr. Eng. Aurelia BINCHICIU, Eng. Emilia BINCHICIU

Institution

SC SUDOTIM AS SRL Timişoara

Patent no.

RO 125834/30.01.2013

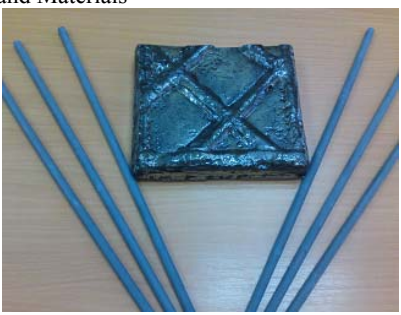
Description EN

This invention refers to a basic layer type fluoro – calcium with 35% adding of metallic powders, destined to covering by extrusion of some metallic bars realized from alloys 83%Fe and 17%Cr, resulting thus electrodes with increased deposition efficiency that can be used for manual electric welding. The weld deposit obtained is an alloy type with 71%Fe, 25%Cr, 2,5%C, 1%Mo, 0,5%V and micro-alloyed with lanthanides with austenitic microstructure, with high resistance at abrasion combined with corrosion at high temperatures, and associated hardness in the domain of 45 – 60 HRC. The coating of electrode, according to the invention, consists in powder mixture of 30 – 33% marble, 20 – 22% fluorine, 6 – 8% rutile, 0.5 – 1.5% cat silver, 2 – 4%FeSi 45, 1 – 2%FeMn45, 14 – 18%FeCr60, 8 – 12% metallic Cr, 5 – 7% colloidal graphite, 1 – 2% lanthanide, 1 – 2% carboximetilcelulose, having maximum granulation of 0.3 mm, being initially mixed in dry state, and then mixed in wet state, with adding an amount of liquid sodium silicate of 18 – 20% from the total powder mass.

APPLICABILITY DOMAIN: Deposition by manual electric welding of some layers with high resistance at abrasion combined with corrosion at high temperatures, and associated hardness in the domain of 45 – 60 HRC.

Class no.

6. Mechanical Engineering - Metallurgy
7. Buildings and Materials

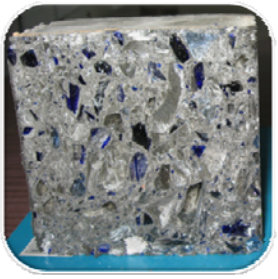


Technical University of Cluj-Napoca, România

17.1

Title EN	**INNOVATIVE GREEN CONCRETE MIXES BY USE OF GLASS BY-PRODUCTS**
Authors	Ofelia-Cornelia CORBU, Cornelia MAGUREANU
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	RO A10023/2010
Description EN	The advent of value added products by use of by-products from a wide range of industries is one of the solutions the scientific community is called upon to provide for a sustainable future for mankind. This invention will present a green concrete mix developed as part of a PhD research programme, aiming at finding uses for waste glass. Costs are lower than for normal concrete since waste products are already available; cement and/or aggregates may be replaced by materials that are capable of providing high durability with no strength loss making the final product not only cost effective but also suitable for structural and non-structural members {slabs, façade panels, swimming polls, wellness centres, architectural panels for elevators, architectural concrete, stairs (tread & riser), garden & urban furniture, etc}, with a prominent ecological character.
Class no.	7. Buildings and Materials

glass aggregates & powder



concrete split from a cub

17.2

Title EN	**Ultra High Strength Concrete with Hybrid Fibers without heat treatment**
Authors	***Mircea POPA, Raul ZAGON, Ofelia-Cornelia CORBU***
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	Pending
Description EN	In the research which was carried out by the authors a recipe for concrete using local materials has been achieved. This outstanding result regards its fresh and hardened characteristics. The concrete obtained has a dense, fluid state and a compressive strength of 160 MPa, featuring all the descriptions of ultra-high strength concrete (UHSC).
Class no.	7. Buildings and Materials

Cargo concrete - Cubic concrete samples tested at compression

17.3

Title EN	**Tele-operated multifunctional mobile platform**
Authors	Mihai STEOPAN, Adrian COSTEA, Andrei KOKUCS
Institution	**Technical University of Cluj-Napoca, România Faculty of Machine Building, Department of Industrial Design and Robotics**
Patent no.	Pending
Description EN	Tracked mobile platform having a 5 degrees of freedom arm. The platform and the arm can be controlled remotely through Bluetooth equipped devices (eg. Mobile phones, tablet pc). The mobile platform is actuated by two motors that through a kinematic chain engage in motion the two tracks. The special displacement of the tracks is triangular allowing for the navigation on various types of terrains. The articulated arm has a flexible 5 degrees of freedom arm and has a two finger gripper mounted as end-effector.
Class no.	5. Industrial and laboratory equipments 6. Mechanical Engineering - Metallurgy

17.4

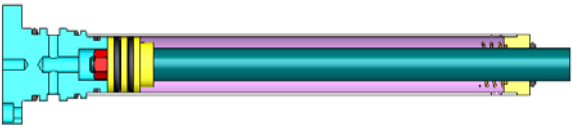
Title EN	**Tele-operated multifunctional mobile platform**
Authors	Mihai STEOPAN, Adrian COSTEA, Andrei KOKUCS
Institution	**Technical University of Cluj-Napoca, România** **Faculty of Machine Building, Department of Industrial Design and Robotics**
Patent no.	Pending
Description EN	Mobile platform for exploring areas that might contain gas leaks or areas that are underwater. The command and control module (including the motors) is incapsulated in a plastic box, the transmission of the motion from the servomotor to the wheels being done through the use of magnets. The magnets are paire assembled on the shaft of the servomotor and on the shaft of the wheel.
Class no.	5. Industrial and laboratory equipments 6. Mechanical Engineering - Metallurgy

17.5

Title EN	**Self Compacting Concrete (C50/60) without mineral additions for precast concrete industry**
Authors	Ioani Adrian Mircea, Szilagyi Henriette, Mircea Călin Radu Grigore
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	Patent application No. A/10034/2010
Description EN	Self-compacting concrete (SCC) has the following advantages: no compacting operation, faster construction, good looking surface and edge finishes; improved durability; reduced noise level, the use of local materials, etc. The invention concerns SCC composition with C50/60 strength class, made only with commonly used materials in the production of precast concrete elements: cement, aggregates, admixtures and water, without any additions. This type of concrete can be used in all areas: precast / prestressed civil, industrial, agricultural construction, bridges, viaducts, tunnels but also to achieving monolithic structures such as concrete produced in prefabricated plants and construction sites.
Class no.	7. Buildings and Materials

17.6

Title EN	**Pneumatic ejector for injection molds**
Authors	Simion HARAGÂŞ, Lucian TUDOSE, Dumitru POP
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	**RO123479** / 28.09.2012
Description EN	The invention relates to a pneumatic ejector used in the construction of plastic injection molds for removing the auto parts mold. The pneumatic ejector described here, uses dual action pneumatic cylinders which are made in standardized modules mounted in typified pockets. The pneumatic cylinders are designed in such way that the two chambers have no special requirements regarding the connecting pipes or seals. The air is acting on the piston through a network of holes in the mold body.
Class no.	6. Mechanical Engineering - Metallurgy 9. Chemical and Textile Industry



17.7

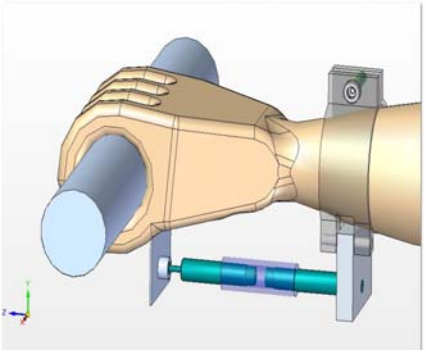
Title EN	**ULTRA-HIGH PERFORMANCE CONCRETE AND CASTING PROCEDURE**
Authors	***Cornelia MAGUREANU, Ofelia-Cornelia CORBU***, ***Ioan SOSA, Henriette SZILAGYI***
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	RO A/10024/2010
Description EN	Ultra-High Performance Concrete represents a technical solution for structures due to concrete ultra-high compression resistance, high durability and ductility, which conduct to smaller cross-sections, greater spans and lower costs for erection and maintenance. Furthermore, the concrete technology enables rapid casting due to concrete good workability and great strengths at early ages (if subject to thermal treatment). The invention refers to an Ultra-High Performance Concrete (UHPC) with compression strength of 180±10 MPa suited for building structures, road and bridges structures, railways sleepers, containment buildings for nuclear reactors, marine

structures, safe boxes etc.

Class no. 7. Buildings and Materials

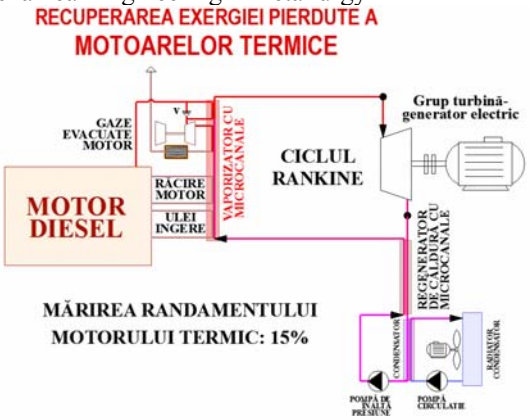
17.8

Title EN	**Vibrations attenuator attached to the hand - arm human system, regarding the human operator**
Authors	Aurora Felicia CRISTEA (POP); Mariana ARGHIR
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	RO A/10011/2012
Description EN	New device vibration attenuation will be projected regarding the hand-arm human operator, this using in the production process. The device will be designed, dimensioned and realized in real conditions of work. It will perform in the measurements of vibrations, on the arm of a worker, with or without the attached device
Class no.	12. Safety, protection and rescue of people



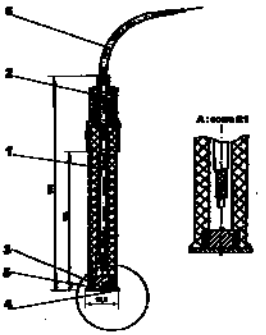
17.9

Title EN	**MICRO-CHANNEL HEAT TRANSFER EQUIPMENT**
Authors	**Bercea V. Zorin, Bercea Mariana Doina**
Institution	**Technical University of Cluj-Napoca, România**
Patent no.	C.B.I. nr. A/00142/12.02.2013
Description EN	The invention relates to the development of micro-channel heat transfer equipment with a surface density of up to 30,000 m^2/m^3. We present a few application: - industrial heat sources, ventilation and air conditioning, boilers, heat engines, air heaters, furnaces etc.; - cooling equipment of microprocessors, of power electronic components, and so on, with refrigerants and thermal power constant or variable, as needed.
Class no.	6. Mechanical Engineering – Metallurgy



17.10

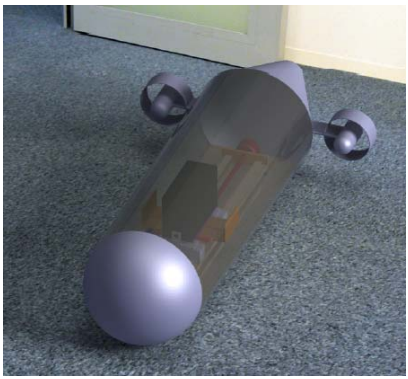
Title EN	**PROCEDURE FOR OBTAINING OF A HIGHLY SELECTIVE POTENTIOMETRIC SENSOR FOR SILVER ION DETECTION BASED ON PORPHYRIN IONOPHORE**
Authors	Eugenia Fagadar-Cosma, Dana Vlascici, Elena Maria Pică, Otilia Costişor, Viorica Cosma, Liliana Olenic, Otilia Bizerea
Institution	**Institute of Chemistry Timisoara of Romanian Academy; West University of Timişoara, Technical University from Cluj-Napoca, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca.**
Patent no.	RO 123.447/30.05.2012,
Description EN	The principle of operation of the sensor is based upon the measurement of the potential developed at the surface of the silver sensitive membrane based on porphyrin (Figure 1), determined by the concentration of silver ions in the solution where in the sensor is immersed. The electrochemical sensor for silver and the calomel or Ag/AgCl reference electrode is connected to an ionmeter/milivoltmeter. The pair of electrodes immersed in the solution forms an electrochemical cell whose e.m.f. is practically determined by the concentration of silver ions in the solution.
Class no.	1. Environment - Pollution Control



Vertical plan section in a Ag^+ - selectiv potentiometric Sensor. 1 - Body; 2 - Lid; 3 - Conductive support (copper tablet); 4 - Ag^+- selective membrane; 5 - Epoxy resin; 6- Connecting wire

17.11

Title EN	**Repositioning system of the submersible robot by changing the relative center of gravity with the volumetric center**
Authors	Vuşcan Gheorghe Ioan, Farkas Felix Attila
Institution	**Technical University of Cluj-Napoca**
Patent no.	OSIM A/00369
Description EN	The invention relates to a submersible robot with a repositioning system which is able to reposition the submersible robot by changing the position of the relative weight center from the volumetric center. This system is able to maintain the robot at a given angle to the original axis system. Also the repositioning movement of the system combined with the movement generated by the two engines, can generate highly complex trajectories. The system has two axes of movement in horizontal plane made by two guides, located at 90 degrees to each other, and the travel guides are being trained by the engines that train the bolts.
Class no.	14. Other

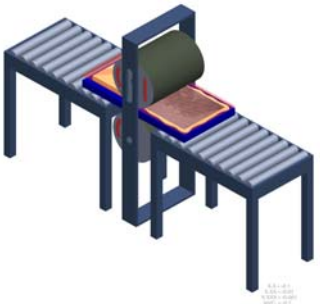


17.12

Title EN	**Method and device for obtaining composite reinforced polymeric plates**
Authors	Bere Petru Paul, Berce Petru, Nemeş Ovidiu, Bâlc Nicolae
Institution	**Technical University of Cluj-Napoca**
Patent no.	Patent application No. a 2012 00540/18.07.2012
Description EN	The process for obtaining fiber-reinforced composite plates is filing the fibers with the un-polymerized matrix on a flat covered mold and pressed them in a machine. The innovative

idea is to mold pressing the composite material with an external force applied to the foil covering the composite material.
Applications: Polymeric composite materials plates manufacturing

Class no. 6. Mechanical Engineering - Metallurgy



17.13

Title EN **Modern Girders with Spatial Structure for Roofs used in Civil, Industrial and Agricultural Buildings**

Authors Dumitru Marusciac, Dorin Maier, Alma-Gabriela Varga

Institution **Technical University of Cluj-Napoca, Faculty of Civil Engineering**

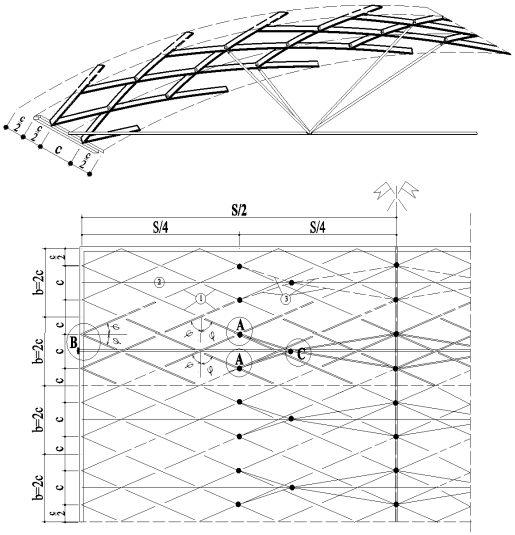
Patent no. Patent application No. OSIM A/00757/2012

Description EN

The purpose of the invention is to improve the behaviour and general stability of the roof under the action of loads (vertical and horizontal), to reduce material consumption and to simplify the assembling. The invention relates to modern girders with spatial structure, at which upper flange is composed of a reticulated network (a rhombus shape) of laminated standardized beams made from wood, steel or reinforced concrete. The lower flange and the diagonals are in a ”V” shape made from steel, having a static scheme which allows a better distribution of loads, respectively of stresses (strains), in comparison with the conventional construction solutions. Lightweight roofs made of modern girders with spatial structure according to the invention have the advantage of industrial execution and a reduced consumption of materials, and due to their reduced weight, their installation is simple and without problems, which leads to a considerable shortening of the period of execution and costs in comparison with conventional solutions.

Class no. Applications: Civil, Industrial and Agricultural Buildings
7. Buildings and Materials

Image/ Photo



17.14.

Title EN **A Special Type of Construction for Passive Greenhouses Coupled with Animal Shelters**

Authors Dumitru Marusciac, Alma-Gabriela Varga, Ioan Călin Moş
Institution **Technical University of Cluj-Napoca, Faculty of Civil Engineering**

Patent no. Patent application No. OSIM A/00101/2013

Description EN

The invention relates to a special type of building for passive greenhouses, that uses, during the cold season, as operating energy the energy recovered from an animal shelter coupled horizontally and vertically as follows:
-animal shelter at the ground floor;
-greenhouses for plants, vegetables and flowers at the attic floor and on both sides of the animal shelter.
The purpose of the invention is implementing a new technology in order to achieve a passive greenhouse coupled with animal shelters that uses as operating energy the energy recovered from the animal shelters, properly equipped according to current requirements on quality and cost of food products. In addition to the energy recovered from the animal's shelter photovoltaic panels located on the roof of the greenhouses can be used.

The new type of building, with it's particular functions, architectural form and construction quality, has a long lasting impact on the environment.
Applications: Agricultural Buildings

Class no. 3. Agriculture and Food Industry

Image/ Photo

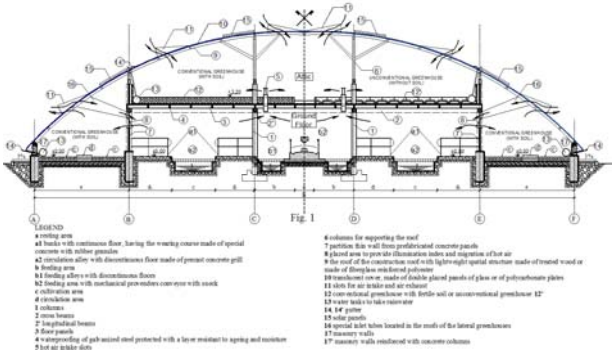


Fig. 1

Tehnical University of Cluj Napoca.
North University Centre of Baia Mare-Romania

17.15

Title EN **LINIAR MULTIAXIAL ACTUATOR MECANISM**

Authors Vasile NĂSUI

Institution **Tehnical University of Cluj Napoca.**
North University Centre of Baia Mare-Romania

Patent no. RO 122 846 B1

Description EN The invention refers itself to the linear mechanism actuator with coaxial linear movements or with parallel distribution of movement, as linear reduction mechanism of turation, used for multiple linear acting

Class no. 6. Mechanical Engineering - Metallurgy

Image/ Photo

17.16

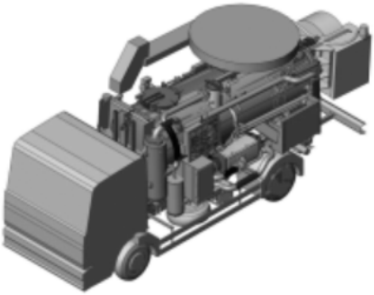
Title EN	**BAND LINE MECHANISM TENSIONER**
Authors	Prof. dr. ing. Vasile NĂSUI
Institution	**Tehnical University of Cluj Napoca.** **North University Centre of Baia Mare-Romania**
Patent no.	RO 122347 B1
Description EN	The invention relates to a linear type actuator, which has a ball screw mechanical transmission with embedded force transducer for automatic adjustment of the stretching band conveyors.
Class no.	6. Mechanical Engineering - Metallurgy
Image/ Photo	

17.17

Title EN	**Sewage cleaning vehicle for maintenance of the sewer system**
Authors	LOBONŢIU Mircea, RAVAI NAGY Sándor, MEDAN Nicolae
Institution	**Tehnical University of Cluj Napoca.** **North University Centre of Baia Mare-Romania** **The Center for Research in Engineering and Technology Management**
Patent no.	Patent application: No. A 01053/ 20.12.2012
Description EN	The invention relates to equipment for maintenance of sewerage systems mounted on a carrier truck chassis. Sewage cleaning vehicle is used to clean sewer systems, intended for the wastewater flow, using a high pressure hose on which is mounted cleaning heads or washing heads for the release the deposits from the sewage network. Suction system with vacuum pump, absorbs the mixture of water and residue from deep or from a distance.. Applications: Cleaning and maintenance of sewerage systems.
Class no.	1. Environment - Pollution Control

6. Mechanical Engineering - Metallurgy

Image/ Photo



17.18

Title EN **Process for obtaining a pellet from concentrated cuprous oxide**

Authors Jozsef JUHASZ

Institution **Tehnical University of Cluj Napoca.**
North University Centre of Baia Mare-Romania

Patent no. 125453 / 30.09.2011

Description EN

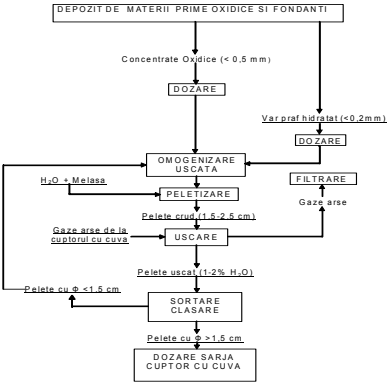
The patent reffers to a process for preparing concentrated cuprous oxide pellet by pelleting operation on a type peletizor pad. Technical problem, solved by the invention is to achieve a process that will produce cuprous oxide concentrates of pellets through the pelleting process, applicable at industrial level. It started from the premise of establishing a formula for the preparation of raw material as easy to work further in the blast furnace melting, respectively to minimize the possible use of additional aids.

Applications

- Recovery of cuprous oxide concentrates heavily processed by other methods;
    1. Recovery of slag's from pyrometallurgical processing concentrates of copper and copper products in pyrometallurgical processes.

Class no. 6. Mechanical Engineering - Metallurgy

Image/ Photo



17.19

Title EN	**The plant for Capture of Sulfur Dioxide and Carbon Dioxide in the Flue Bases**
Authors	Vasile Hotea
Institution	**Tehnical University of Cluj Napoca.** **North University Centre of Baia Mare-Romania**
Patent no.	RO 125756 B1/29.11.2012
Description EN	The patent relates to a plant for sulfur dioxide and carbon dioxide capture in the flue gases. According to the invention that gases is are treated in a first step with sodium carbonate solution for SO_2 absorption with chemical reaction followed by CO_2 adsorption zeolitic tuff. The plant according to the patent consists essentially of a centrifugal scrubber (1) buffer solution of Na_2CO_3 (2), filter zeolite (6) and a rotating crystal tilt (5).
Class no.	1. Environment - Pollution Control

17.20

Title EN	**Synthesis of the ecomaterials by Alkaline Activated Industrial Wastes**
Authors	Vasile Hotea, Badescu Gabriel, Juhasz Jozsef
Institution	**Tehnical University of Cluj Napoca.** **North University Centre of Baia Mare-Romania**
Patent no.	Patent application a 01080 / BOPI 10/2012
Description EN	The patent application relates to a process of immobilization toxic heavy metals (Pb, Cd, Zn, Cu) from metallurgical slag and natural zeolite tuff as a construction material with compressive strength of 40-50 MPa. The process, is to enable

the raw material (slag and zeolite tuff) with sodium silicate and sodium hydroxide so that the ratio Na_2O / SiO_2 have a positive effect on compressive strength.

Class no. 7. Buildings and Materials

17.21

Title EN **Device and method for testing the asymmetric gear teeth**

Authors RAVAI NAGY Sándor, LOBONȚIU Mircea

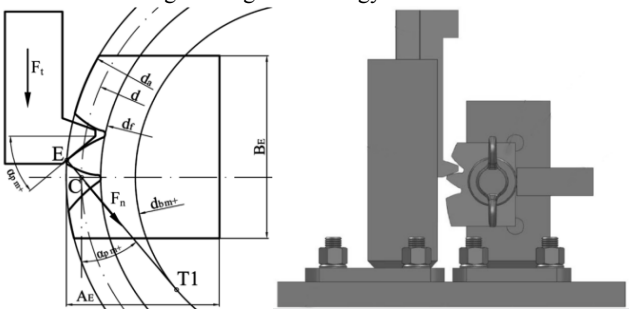
Institution **Tehnical University of Cluj Napoca.**
North University Centre of Baia Mare-Romania
The Center for Research in Engineering and Technology Management

Patent no. Patent application No.: A 2012 00532/ 16.07.2012

Description EN The invention relates to a device and a method of testing the teeth of asymmetric gears, intended to be used in determining the maximum static loading force on a teeth of the asymmetrical gearwheel, since the design of the gear from a gearbox.
Testing of the gear teeth.

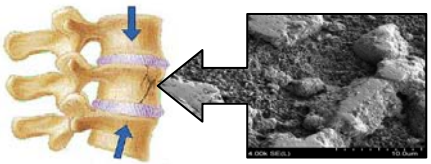
Class no. 6. Mechanical Engineering - Metallurgy

Image/ Photo



University of Craiova

18.1

Title EN	**BIOCOMPOSITE MATERIAL AND PROCESSING FOR OBTAINING THE SAME**
Authors	Gingu Oana*, Pascu Cristina Ileana*, Lupu Nicoleta**, Benga Gabriel Constantin*
Institution	*** University of Craiova, Faculty of Mechanics** **** National Institute of Research and Development for Technical Physics, Iasi**
Patent no.	OSIM: Patent application No. A00318 / 2010 Derwent Primary Accession Number**:** 2010-M69278 [69]
Description EN	The patent's subject refers to the processing of a biocomposite material based on hydroxyapatite matrix reinforced by titanium particles by a flexible and cost saving route of powder metallurgy technology. The provided advantages concern some mechanical and technological properties such as: density 1,9…2,5 g/cm^3, porosity 5…12%, friction coefficient 0,5…0,7; wear rate 0,9…1,8 x 10^{-4} mm^3/Nm. These properties are at least comparable with the same for similar biocomposites that are processed by complex and expensive technologies. **Applications**: grafts for cortical tissue as bulk material or coatings
Class no.	4. Medicine - Health Care - Cosmetics
Image/ Photo	

18.2

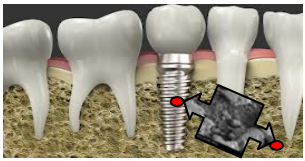
Title EN	**BIOCOMPOSITE MATERIAL AND PROCESS FOR OBTAINING THE SAME**
Authors	Pascu Cristina Ileana, Gingu Oana, Ciupitu Ion, Rotaru Petre
Institution	**University of Craiova, Faculty of Mechanics**
Patent no.	OSIM: Patent application No. A00317 / 2010 Derwent Primary Accession Number**:** 2010-M69276 [79]
Description EN	The patent's subject refers to the processing of a biocomposite material based on hydroxyapatite matrix

reinforced by titanium particles by a flexible and cost saving route of powder metallurgy technology. The material structure provides the following characteristics: density 1,2...1,6 g/cm^3, porosity 50...65%, friction coefficient 0,59....0,8; wear rate 1...1,5x10^{-4} mm^3/Nm. These properties are at least comparable with the same for similar biocomposites that are processed by complex and expensive technologies.

Applications: grafts for trabecular tissue as bulk material or coatings

Class no. 4. Medicine - Health Care - Cosmetics

Image/ Photo



18.3

Title EN **Plate of metallic foam-rubber composite material mechanically attached to the table tennis bat and process for making the same**

Authors Mangra Gabriel Ioan, Gingu Oana

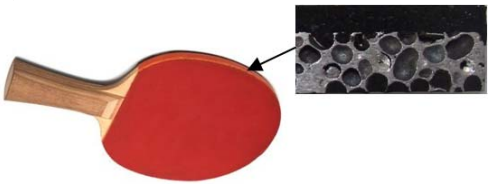
Institution **University of Craiova, Faculty of Mechanics**

Patent no. OSIM: Patent application No. A00117 / 12.02.2010
Derwent Primary Accession Number**:** 2011-A29765 [42]

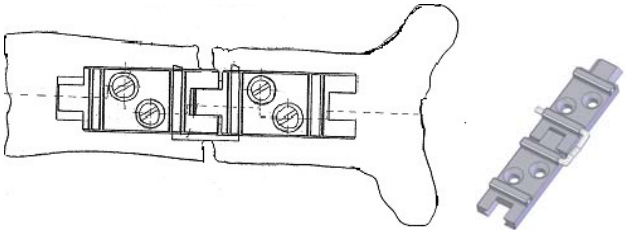
Description EN The patent refers to a plate for the tennis table racket and its processing technology. The plate is made of Al-based foam that one side is rubberized and the opposite side is machined in order to attach it on the wooden support of the racket. The major advantage of this racket and its processing technology is the volatile organic compounds disposal, forbidden to be used for rubber adhesion on the wooden support. Also, this racket patent provides a long-standing exploitation in environmental friendly terms. **Applications**: table tennis racket

Class no. 13. Sports, Games and Leisure

Image/ Photo



18.4

Title EN	**MODULAR PLATE SYSTEM FOR THE OSTHEO-SYNTHESIS OF THE LONG BONES FRACTURES AND METHOD FOR THEIR USE**
Authors	Tarniță Daniela, Tarniță Dan, Bîzdoacă Nicu
Institution	**University of Craiova**
Patent no.	126084 / 29.11.2012
Description EN	The patent's subject refers to the fabrication of modular orthopaedic implants for the ostheosynthesis of the long bone fractures which comprise a predefined number of modules which, by mechanical coupling, and forms various dimension plates adaptable to the fractured bones and to the tensions developed in the bone by muscular forces. The coupling system of the adjacent modules is made of Nitinol staples which act by the property of shape memory and enable the stability of the implant, the continue compression and the good union of the bone fractures, an essential factor of the healing process. Advantages: The small sizes of the modules enable minimally invasive surgical techniques, having the following advantages: ▪ reduction of soft tissues destruction; ▪ eliminating intra-operator infections;▪ reduction of blood losses; ▪ reduction of infection risk;▪ reduction of the healing time for the plagues;▪ reduction of the scar. Medicine: The treatment of the long bones fractures.
Class no.	4. Medicine - Health Care - Cosmetics
Image/ Photo	

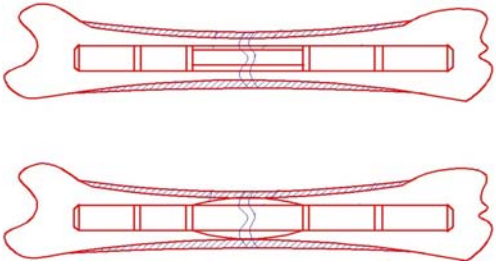
18.5

Title EN	**MODULAR-ADAPTIVE INTRAMEDULLARY ORTHOPEDIC NAIL USED FOR THE TREATMENT OF THE LONG BONES DIAPHYSEAL FRACTURES**
Authors	Tarniță Daniela, Cismaru Florin, Tarniță Dan, Berceanu Cosmin
Institution	**University of Craiova**
Patent no.	OSIM Decision No.4/268/ 28.12.2012
Description EN	The patent's subject refers to the fabrication of a modular-adaptive intramedullary nail based on smart materials,

consisting of several components of lengths and diameters suitable to be assembled together, using shape memory elements for a better cohesion between intramedullary bone canal and intramedullary nail.
It is used in the treatment of long bone shaft fractures, having following advantages:
-it is modular and adaptable to any type of long bone shaft fracture;
-it ensures proper compaction of bone fragments, reducing or eliminating the risk of nonunion;
-it does not allow micro-movements between bone fragments in the focus of the fracture;
-the stability is provided by continue compression of bone fragments;
-it avoids the occurrence of important degenerative-dystrophic lesions in the contact area of the focus of the fracture.
Medicine: The treatment of the long bones fractures.

Class no. 4. Medicine - Health Care - Cosmetics

Image/ Photo



18.6

Title EN **ARTIFICIAL HAND-FOREARM SYSTEM USED AS PROSTHESIS FOR THE HUMAN UPPER LIMB**

Authors Berceanu Cosmin, Tarniță Daniela
Institution **University of Craiova**

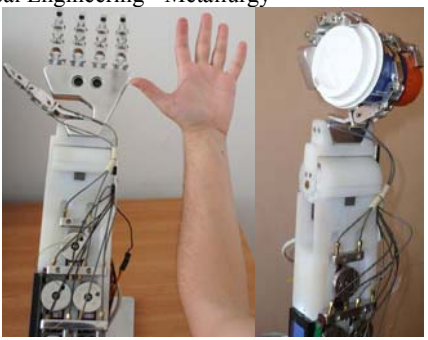
Patent no. Patent application A/00211/2012

Description EN
The patent's subject refers to an artificial hand-arm assembly composed by an anthropomorphic five finger artificial hand and an artificial forearm, linked by a revolute joint. The system comprises 16 revolute joints at hand level plus another revolute joint between artificial hand and artificial forearm, which allows the flexion-extension movements of the hand with respect to the forearm. The system reproduces the aesthetics, mass, dimensions and functionality of the human upper limb, and, in particular, of the human hand
Prosthesis, robotic structures

Class no.

4. Medicine - Health Care – Cosmetics
6. Mechanical Engineering - Metallurgy

Image/ Photo



Dunarea de Jos University of Galati, Romania

19.1	
Title EN	**Acetabular cup-hip wear simulator**
Authors	Cătălin FETECĂU, Ion POSTOLACHE, Felicia STAN
Institution	Dunarea de Jos University of Galati, Romania
Patent no.	123041/2010
Description EN	The present invention refers to a device (simulator) for simulation of human walking. The simulator can be used to investigate not only the wear of the acetabular cups using periodic weight loss measurements, but also the deformation after a specified number of wear cycles. Random loads can be applied such that the simulations are performed under different conditions regarding the combination of motion and loads which are similar to those of the natural hip joint.
Class no.	4. Medicine - Health Care - Cosmetics 5. Industrial and laboratory equipments
Image/ Photo	 

„Alexandru Ioan Cuza" University of Iasi

20.1.

Title EN

NMR and X-ray complete characterization of some unexpected fused azaheterocycles

Authors Dorina Mantu,[1] Vasilichia Antoci,[1] Costel Moldoveanu[1], Sergiu Sova[2], Ionel I. Mangalagiu[1]

Institution
[1] **"Al. I. Cuza" University of Iasi, Faculty of Chemistry**
[2] **"Petru Poni" Institute of Macromolecular Chemistry**

Description EN

Heterocylic compounds in general and nitrogen heterocycles in particular, are the basis of many significant pharmaceuticals, physiologically-active natural products and synthetic compounds. Among them, the 1,2-diazine derivatives are important constituents in some drugs already in use for different human diseases or agrochemical products.

In this respect, one of the main objectives of our research activity was the synthesis of new hydrazides/hydrazones starting from some N^2-substituted pyridazin-3(2*H*)-ones and hydrazine hydrate, by adapting the literature procedures. Thus, varying the reactant ratio and using ethanol as solvent, we obtained the desired hydrazides, but also some unexpected fused azaheterocycles, as products of cyclocondensation reactions. The structure of compounds was proved by spectral analysis (IR, ^{1}H-NMR, ^{13}C-NMR) and X-ray diffraction (using a X-ray diffractometer: *Xcalibur, Eos diffractometer*).

The newly obtained compounds are of practical interest as biological-active compounds (the tests are ongoing), and also those one bearing the amino marginal group could be used as intermediates for cyclization processes, to obtain oxazole/ imidazole derivatives, known also as biological-active units and ionic liquid compounds.

Financial support was provided by the project: **PN-II-DE-PCE-2011-3-0038, no. 268/05.10.2011.**

Class X. Innovative Researches

20.2.

Title EN	**Synthesis of new azaheterocyclic compounds using *eco-friendly* methods**
Authors	Vasilichia Antoci, Dorina Mantu, Gheorghita Zbancioc, Ionel I. Mangalagiu
Institution	**"Al.I. Cuza" University, Faculty of Chemistry**
Description EN	Ultrasound (US) irradiation, during the last decades, has became an increasingly valuable tool in organic chemistry, since it is a versatile and facile technique applicable to a large variety of syntheses. In particular, for the chemistry of nitrogen heterocycles, literature data indicates that Huisgen [3+2] dipolar cycloaddition has been done under ultrasound irradiation in the class of nitrogen ylides, except for the cycloimmonium ylides, our group being the first one investigating this aspect. We desired to obtained new azaheterocyclic compounds, using *eco-friendly* synthesis. In this order we synthesized new azaheterocyclic compounds with acetophenonic chain, using a general and straightforward strategy (quaternization and cycloaddition reactions) under classical conditions and nonconventional methods (ultrasounds irradiation). Ultrasound assisted reactions were carried out using two different reactors: Sonics (Sonics VCX-130, USA), with a nominal power of 130W and Bandelin (Sonopuls GM 3200), with a nominal power of 200W. The structure of compounds was proved by elemental and spectral analysis [IR, ^{1}H NMR, ^{13}C NMR, 2D-COSY, 2D-HETCOR (HMQC), long range 2D-HETCOR (HMBC)]. A comparative study classical *vs* US was done. Financial support was provided by the project **PN-II-DE-PCE-2011-3-0038, no.268/05.10.2011.**
Class	X. Innovative Researches

20.3.

Title EN	**Antituberculosis activity of new indolizinyl-pyridinium quaternary salts**
Authors	Ramona Danac, Ionel Mangalagiu
Institution	**"Al. I. Cuza" University, Faculty of Chemistry**
Description EN	Indolizine is an aromatic 10π-electron system and constitutional isomer of 1-*H* indol which due to its special electronic structure has long drawn much theoretical interest. Besides, indolizine derivatives have been found to possess a variety of biological activities such as anti-inflammatory, antiviral, analgesic and antitumor activities. The aim of this work was to synthesize new indolizinyl-pyridinium quaternary salts and to use them in antituberculosis testing. Thus, five new compounds were obtained using pyridyl indolizines as starting materials, and one was tested and found to possess a very good antituberculosis activity.
Class	X. Innovative Researches

20.4.

Title EN	**Title Synthesis and Antibacterial Properties of ZnO/Clinoptilolit and TiO2/ZnTiO3/Clinoptilolite Powders**
Authors	Violeta Elena Copcia, Claudia Mihaela Hristodor, Simona Dunca, Reni Iordanova, Albena Bachvarova-Nedelcheva, Ion Sandu
Institution	**"Alexandru Ioan Cuza" University of Iaşi**
Description EN	The purpose of this study was to estimate the antimicrobial activity of ZnO/clinoptilolit and ZnTiO3/clinoptilolite samples in solid media (agar plates) against Gram-negative Escherichia coli ATCC 25922 and Gram-positive Staphylococcus aureus ATCC 25923. Samples of clinoptilolite rich tuff (from Beli Plast deposit in Eastern Rhodopes, Bulgaria) treated with oxalic acid were obtained. The ZnO and TiO2/ZnTiO3 were additionally incorporated into the clinoptilolite samples. The structure, morphology and elemental composition of the pre-treated clinoptilolite samples were characterized by XRD, SEM and EDX analysis. The antibacterial activity was investigated by exposing Escherichia coli (E. coli) and Staphylococcus aureus (S. aureus) in nutritive media to the ZnO, TiO2/ZnTiO3, ZnO/clinoptilolit and TiO2/ZnTiO3/clinoptilolite samples. A strong bactericidal action of both samples against E. coli and S. aureus was observed. Moreover, the TiO2/ZnTiO3/clinoptilolite sample

exhibited a strong antibacterial effect in the presence of E. coli, while another sample (ZnO/clinoptilolit) showed strong antibacterial effect against S. aureus.

Class X. Innovative Researches

20.5.

Title EN **QUALITY MANAGEMENT AND ITS ROLE IN THE DEVELOPMENT OF THE COMPANY'S BRAND**

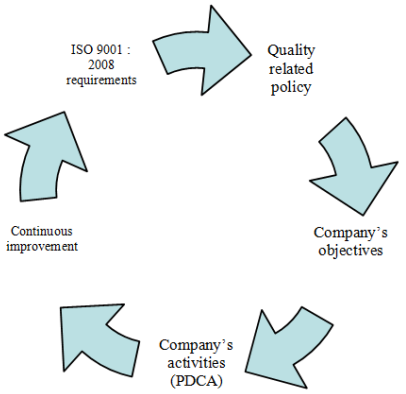
Authors Corina AnaMaria Ioan, Florin Alexandru Luca, Cosmin Daniel Vatavu

Institution "Al.I. Cuza" University, Faculty of Economics and Business Administration, The Doctoral School of Economics and Business Administration Iasi, Romania,
"Gheorghe Asachi" Technical University of Iasi, Romania

Description EN

The top management should consider the implementation of a quality management system in the Romanian companies just as important as the organizational technological development, from the viewpoint of the companies' competitiveness and hence profitability. Quality management leads to the implementation, development and preservation of a series of essential processes and procedures, ideas and absolutely indispensable tools for the organizational development of the Romanian companies. International studies show that the TOP 10 most important economic powers in the world are the top 10 countries that hold quality certificates granted for their compliance with a set of standards - China, Italy, Japan, Spain, Russia, Germany, UK, India, USA and South Korea. Quality is currently a strategic tool of general company management, and also an essential constituent influencing the company's competitiveness.

Class X. Innovative Researches



20.6.

Title EN	**Intrafamilial abuse on students**
Authors	Carmen Gabriela Lazareanu
Institution	**Faculty of Orthodox Theology**
Description EN	The research points out some aspects of domestic violence within a community of regular students. The research was based on using a structured questionnaire applied to 62 students of which 31 boys and 31 girls from schools "ST. Luchian "in which 37 urban and 25 rural. Questions answered was whether subjects apply corporal punishment with or without cause, if subjects have beaten for misconduct if using inappropriate vocabulary if the current social circumstances the family or school environment safe. Results showed that subjects think they should not be beaten for some mistakes but have to explain why they were wrong in their behavior and this will correct. Physical correction by parents was not generally influenced by subject sex. Sourcing urban and rural subjects demonstrated its influence on parenting event. Generally rural students were more exposed to abuse than those in urban areas. Other punishments consisted of children, especially the ban on the computer and the TV, which has a higher frequency in rural areas. Research carried out on a group of subjects that are not normally part of a potentially vulnerable group showed reduced frequency of physical punishment used by parents and demonstrating their belief that the prohibitions and communicating with children are higher for subjects than avoid improper conduct corporal punishment.
Class	X. Innovative Researches

"Gheorghe Asachi" Technical University of Iasi

21.1

Title EN **Hair Coloring Comb**

Author Cojocaru Filipiuc Vasile

Institution **"Gheorghe Asachi" Technical University of Iasi**

Patent no. RO 123288

Description EN

The hair coloring comb is formed from plug, hair highlighting limiting device, hair color holder (coloring case), hair color pushing piston and color mixing stick.

The hair coloring comb has as purposes as follows:

-complete hair coloring;

-hair highlighting;

-even distribution in the hair of various products with the following destinations:

*hair structure repair (mask);

*hair repair and hydration (conditioner);

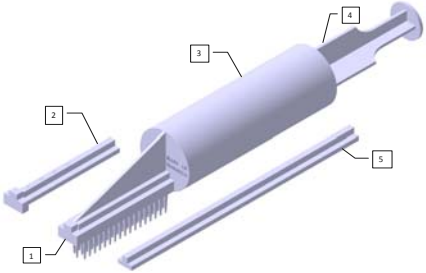
*hair dyeing (shading dye);

*hair bleaching (particle-free hair bleach);

*excess sebum reduction (anti-sebum product), allergy resistance, hair loss control, scalp resistance increase, etc.

Class no. 4. Medicine - Health Care - Cosmetics

Image/ Photo



1 – cork;
2 – hair highlighting limiting device;
3 – hair color holder (coloring case);
4 – hair color pushing piston ;
5 – color mixing stick

21.2

Title EN	**INSTALLATION FOR STUDYING THE THERMOPLASTIC STRESS RELIEVING**
Authors	Aelenei Neculai, Nejneru Carmen, Hopulele Ion, Aelenei Marian Nicolae
Institution	**Gheorghe Asachi Technical University of Iasi**
Patent no.	RO117767
Description EN	The invention relates to an installation for studying the thermoplastic stress relieving, meant for establishing the optimum conditions for reducing stress in the welded metal assemblies. According to the invention, the installation consists of an electrically driven movable carriage (1) having mounted thereon a cooling device (14) in the shape of horizontal parallel pipes (16) connected to a manifold (17). The cooling device (14) is mounted on the movable carriage (1) by means of a support (15) provided with a positioning groove (a). On a support (23) there leans a weld seam (c) of a specimen (20), said seam being oriented to the moving direction of the movable carriage (1).
Class no.	6. Mechanical Engineering – Metallurgy

21.3

Title EN	**INSTALLATION FOR THE STUDY OF THE STABILITY OF IMPLANTS USED IN TREATING FEMORAL NECK FRACTURES**
Authors	SEGHEDIN Neculai, CIONCA Dan, COJOCARU Ion, DROSESCU Radu
Institution	**Gheorghe Asachi Technical University of Iasi** **County Emergency Hospital St. Spiridon Iaşi**
Patent no.	Patent application nr. A 2008 00529/ 09.07.2008
Description EN	In the case of femoral neck fracture, according to the viability of the femoral head, one can use two therapeutic methods: internal fixation and arthroplasty. The patent consists in an experimental installation for the experimental study of the stability of various types of implants used in the femoral neck fractures treatment. The offered installation allows the simulation of the actions that solicit the femoral head while walking.
Class no.	4. Medicine - Health Care - Cosmetics 6. Mechanical Engineering – Metallurgy

21.4

Title EN	**KNITTING NEEDLE FOR WEFT FLAT KNITTING MACHINES**
Authors	Mirela BLAGA, Neculai Eugen SEGHEDIN, Dragos CHITARIU
Institution	**Gheorghe Asachi Technical University of Iasi**
Patent no.	OSIM patent application no. A 00137/01.03.2012
Description EN	The invention relates to a needle, designed for weft electronic flat knitting machines, coarse gauge, with the purpose of a lower initial impact friction, between needle but and knitting cam profile. According to the invention, the needle comprises of the main body, which has on the lower part a cilindric part, on which is placed a roll. The roll is replacing the normal needle but and ensures its movement up and down inside the cam track.
Class no.	9. Chemical and Textile Industry

21.5

Title EN	**Device of administration through the membrane diffusion phytosanitary substances in ligneous plants**
Authors	VLAHIDIS VIRGIL, MANEA LILIANA ROZEMARIE, LUPASCU TUDOR, SANDU ION
Institution	**Gheorghe Asachi Technical University of Iasi** **„Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine Iaşi** **Institute of Chemistry of Academy of Science of Moldova** **Alexandru Ioan Cuza University of Iasi**
Patent no.	Pending
Description EN	The device uses a command system that controls the difusion of the phytosanitary solution from a basin through a unidirection membrane with a micro-pump. The device is attached to the plant, close to the soil. The device is automatic being monitored by a command center.
Class no.	**3. Agriculture and Food Industry**

21.6

Title EN	**Device of administration by absorption on pseudo-roots of phytosanitary substances in ligneous plants**
Authors	MANEA LILIANA ROZEMARIE, VLAHIDIS VIRGIL, LUPASCU TUDOR, SANDU ION
Institution	**Gheorghe Asachi Technical University of Iasi**

	„Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine Iaşi **Institute of Chemistry of Academy of Science of Moldova** **Alexandru Ioan Cuza University of Iasi**
Patent no.	Pending
Description EN	The device is manualy set on each plant durring the fructification cutting during the vegetative rest. The solution is changed each year and the device every 3-4 years.
Class no.	**3. Agriculture and Food Industry**

21.7

Title EN	**Cobalt alloys used in medical applications**
Authors	Mirabela Minciuna, Petrica Vizureanu
Institution	**Gheorghe Asachi Technical University of Iasi**
Description EN	The research is focused on metallic biomaterials which are currently considered the most widely used class of materials to achieve prostheses, implants and medical instruments. These types of materials have very good mechanical properties, a good corrosion resistance and an acceptable biocompatibility. The main point of the paper is biomaterials metallic, especially Co-Cr group.
Class no.	Innovative Researches

21.8

Title EN	**Microstructure and phases of copper based SMA**
Authors	Iulian Cimpoeşu, Sergiu Stanciu
Institution	**Gheorghe Asachi Technical University of Iasi**
Description EN	Shape memory alloys (SMAs) based on copper present beside shape memory effect and superelasticity a high damping capacity especially on M↔A range. This reversible thermo-mechanical behavior is very different from the conventional elastic/plastic materials. These unique properties are based on martensitic transformation induced by stress or temperature variations. Even the martensitic transformation is a diffusionless transition it can be extremely fast especially on Ni-Ti shape memory alloys. This work deals with the application of several SEM, AFM and XRD methods to analyze the mechanisms of thermal induced martensite transformation in CuZnAl alloy polycrystals. The martensite dimensional characteristics were determined in 2D and 3D modes. The martensite structure was morphologically characterized after two heat treatment conditions. By chemical means the phases obtained after the transformation were followed to establish the recovery heat treatment influence on water cooled quenched sample.
Class no.	Innovative Researches

21.9

Title EN	**Contributions to weld-brazing of thin duplex sheet of carbon steels intended for automotive parts**
Authors	Dragoş-Ionuţ Dană, Petrica Vizureanu
Institution	**Gheorghe Asachi Technical University of Iasi**
Description EN	The use of technologies by welding- brazing of the steel structure building protected with a layer of zinc has the following advantages in comparison with traditional solutions: • contribute to maintaning the original quality of material; • eliminates the use of zinc unprotected portions of steel plates; • creating a corrosion-resistant material the same as the base material; • technology simplifies maintenance and repair of certain structures, while achieving mechanical and corrosion resistant joints;
Class no.	Innovative Researches

21.10

Title EN	**Research and contributions on flexible analysis methodology for organizational structures**
Authors	Petronela Simona Epure, Mihaela Luminta Lupu
Institution	**"Gheorghe Asachi" Technical University of Iasi**
Description EN	The objective of this research is to develop a concept of changing the clasical methodology for the organizational structures analysis into a flexible metodology that will represent a basic instrument in the management of all organizations. Model flexibility advantage consists in the fact that can analyze any organizational structure of any type of organization, because it includes all possible common issues and develop a direction of analysis for each aspect. The model helps to more complex analysis of factors related to organizational structure and takes into account even the external factors that determine and influence the structure. This model will help provide a detailed image regarding the organizational structure, and this is important because organizational design is the basic tool for the management of all organizations.
Class no.	Innovative Researches

21.11

Title EN	**Environmental decision seen as a fractal process**
Authors	Ionut Viorel Herghiligiu[1], Luminita Mihaela Lupu[1], Christian Robledo[2], Abdessamad Kobi[2]
Institution	**[1]„Gheorghe Asachi" Technical University of Iasi, Romania** **[2] University of Angers**

Description EN	The new proposed approach to environmental decision making as a fractal process, is based on the necessity to correct the „major inconsistencies" observed at the multiple relationships level: environmental objectives and/ or environmental issues - environmental activities undertaken - environmental responsibility, and so on. These inconsistencies were found (a) after performing a survey through questionnaire on the large organizations in the North East, Romania, with a sample of 178 environmental managers and/ or managers which carry out different environmental activities, (b) from discussions with various experts in environmental management, and (c) as findings in some previous research. Environmental decision-making architecture designed following the principles of fractal philosophy, provides flexibility, dynamicity, sustainability, quick adaptability to the environment, and decentralization of the environmental decision-making objectives. Regarding to the more tangible benefits it should be noted that such an new approach offers: (a.) the environmental decision can be generated after a small series of aspects that are considered relevant for this process; (b.) decreases the level of redundancy; (c.) reduce the storage space of environmental data/ information/ knowledge, and environmental reports; thereby is reduced the costs; (d.) it's simplifies the analysis/ coding process of environmental data/ information/ knowledge, (e.) it's reduced the response time for the environmental decision; (f.) it's decrease the number of connections established at the environmental decision-making process, and (g.) provides the basis to develop more easy environmental decision methodologies with a particular character in order to efficiencies the decisional process, and so on.
Class no.	Innovative Researches

"Gheorghe Asachi" Technical University of Iasi
Faculty of Civil Engineering and Building Services

21.12.

Title EN	**Wind turbines for areas with low wind speeds**
Authors	Alexandru Stanila, Axinte Elena, Dumitru Cuciureanu, Andrei Negru, Buza Stefan
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	This innovative technical solution allows users to capture low speed- air currents' energy (1-2 m/s), which are very common in lowland within or outside the city areas and turn them into electricity.
Class	Innovative Research

21.13.

Title EN	**Hotel "Eolis"**
Authors	Alexandru Stănilă, Axinte Elena, Oana Stanila, Cristian Coroama Andrei Negru
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	Hotel "Eolis" is to be located in mountainous areas, on slopes or ridges, exposed to the air currents. Its specific architectural form, developed on three functional levels, was designed to capture the energy of horizontal, downward or upward air masses that come in direct contact with the entire surface of the building.
Class	Innovative Research

21.14.

Title EN	**Photovoltaic panels – steerable parasols**
Authors	Alexandru Stanila, Dumitru Cuciureanu, Andrei Negru, Ursache Vlad, Lupan Marius, Gherasim Florin
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	Parasol panels, steerable according to the sun's position, using a simple electromechanical system, are placed on the glazed or non-glazed southern surfaces of the buildings, and are designed to capture the solar energy, using the photovoltaic effect.
Class	Innovative Research

21.15.

Title EN	**Panels for domestic current water production, for vertical surfaces**
Authors	Alexandru Stanila, Dumitru Cuciureanu, Munteanu Alexandru, Botezatu Catalin Gabriel, Filimon Catalin
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The new system of vertical panels, placed on sun-exposed facades, has been designed with two purposes: for additional thermal protection of walls and for Domestic Current Water (DCW) production, by capturing thermal radiation in an area that is usually less used for this purpose.
Class	Innovative Research

21.16.

Title EN	**Multi-purpose compact-expandable- easily transportable buildings**
Authors	Alexandru Stanila, Oana Stanila, Busuioc Octavian, Pricop Daniel
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The results obtained after applying the "X * D-Criteria" logical method are presented. This method was used for an original creative task, and its aim was of develop ground floor constructions, with easy assemblage-storage properties, for various purposes: - Seasonal tourism; - Social houses for emergency situations; - Individual holiday homes; - Permanent houses; - High comfort trailers.
Class	Innovative Research

21.17

Title EN	**“Eco" houses made of round rafters**
Authors	Alexandru Stanila, Oana Stanila, Grigorici Cristina, Bejan Simona, Ulea Iustina
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**

Description EN	Fir tips (of maximum 15cm diameter and 8-10m length) or young softwood forests, devastated by strong winds, are a potential building material. Usually these woods are abandoned on the spot due to their low recovery potential. Solutions were sought for ways to utilise this material, using a Hyperbolic Paraboloid spatial shape, combined with stable triangular frames.
Class	Innovative Research

21.18

Title EN	**Thermal resistant, precast wall panels for non-bearing walls**
Authors	Alexandru Stanila, Alexandru Balevici, Oana Stanila, Cristian Coroama, Marian Paraschiv, Marius Malancus
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The need for energy savings, in the context of sustainable development, requires innovative technical solutions for creating the thermal envelope of a building. Panels made of micro-concrete, reinforced with ribbed meshes, with a thermal resistant core, are a viable solution that leads to an important change in the design and execution concepts of future constructions, with significant reductions in execution and service costs.
Class	Innovative Research

21.19

Title EN	**Automatically ventilated facades**
Authors	Alexandru Stanila, Oana Stanila, Adrian Georgian Neculai, Cristian Coroama, Marian Paraschiv, Marius Malancus
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	Automatically ventilated facades are the optimal solution for maintaining an efficient hygrothermal balance for old or newly built constructions. The effect of this invention has two directions: removal of water vapours from in-between and thermal system and the external walls, and their cooling during the night, in summer time, when the exterior temperature is lower than the interior one, hence saving energy for air conditioning services.
Class	Innovative Research

21.20

Title EN	**Formwork and reinforcement system for load-bearing reinforced concrete structures**
Authors	Alexandru Stanila, Alexandru Balevici, Cristian Coroama, Marian Paraschiv, Marius Malancus
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The modern structural formwork presented by this invention simultaneously solve the formwork, reinforcing and partial plastering of reinforced concrete structures. This system's application leads to reductions of production costs, together with substantial increases in labour productivity.
Class	Innovative Research

21.21

Title EN	**Ground - floor houses made of stabilized soil**
Authors	Alexandru Stanila, Alexandru Balevici, Cristian Coroama, Marian Paraschiv, Marius Malancus
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The need to build cheap houses in underdeveloped warm areas has led us to this invention. The usage of extremely lightweight structural formworks and of some binders, give these domestic ground- floor houses the required structural resistance and thermal protection.
Class	Innovative Research

21.22

Title EN	**Environmentally friendly and technologically efficient process for geothermal energy capture in large cities**
Authors	Alexandru Stanila, Dumitru Cuciureanu, Alexandru Balevici
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services**
Description EN	The banning tendency of vertical drillings to greater depths, made to prevent the water transfer between water tables, to preserve the ecological balance, can reduce the use of geothermal energy capture using heat pumps. The technical solution for simultaneous drilling and pipeline network planting, for the primary transfer agent of a heating system, using heat pumps, ensures, at the same time, the possibility of applying this method in large cities.
Class	Innovative Research

21.23.

Title EN	**Method for floods control and clogged lake reservoirs rehabilitation**
Authors	Alexandru Stanila, Alexandru Balevici, Catalina Deleanu
Institution	**Gheorghe Asachi Technical University of Iasi** **Faculty of Civil Engineering and Building Services** **Faculty of Hydrotechnics, Geodesy and Environmental Engineering**
Description EN	Floods control and clogged lake reservoirs rehabilitation is an issue of great actuality. Application of structural casing according to the invention will successfully solve these issues with major economic benefits, regarding economic losses reduction.
Class	Innovative Research

21.24.

Title EN	**Microstructural evolution and mechanical properties of AlMg/AlN composite materials obtained "in-situ"**
Authors	Raluca Maria Florea, Ioan Carcea
Institution	**Gheorghe Asachi Technical University of Iasi**
Description EN	In this paper characteristics of an AlMg/AlN composite produced "in-situ" and processed in a flowing N_2 atmosphere is investigated. Some critical parameters such as the manufacturing process temperature, the percentage of the magnesium consumed, the flowing reactive gas flow and the time for completing the manufacturing are considered as variables for the parametric investigation. Moreover, the effect of different amount of Mg employed has been also investigated, since Mg acts as a catalyst at the surface both for the gas/liquid and solid/liquid systems. Traditional methods were used for the basic characterization of the composite. The microstructure of the composite was investigated by optical and scanning electron microscopy (OM, SEM). SEM analysis was performed in order to observe the microstructural evolution as a function of the Mg content and to identify some reasons of the presence of porosity or any irregularities within the metal matrix. The evolution of mechanical properties, in terms of micro hardness, at different percentage of Mg were monitored. By EDS technique the distribution of the elements was obtained. Furthermore, employing an optimization process, uniform

	dispersion of the strengthening (AlN) particles in the metal matrix with homogeneous properties along the composite material is obtained. Based on the aforementioned statements, it can be concluded that the reactions between Al, Mg and the N_2 atmosphere induce spontaneous infiltration in the metal matrix. The complete mix of properties and experimentally assessed parameters can be used for industrial purpose manufacturing design and development.
Class no.	Innovative Researches

21.25.	
Title EN	**Cu-Zn-Al-Ni shape memory alloy and obtaining process**
Authors	S. Stanciu, L.G. Bujoreanu, N. Cimpoesu
Institution	**Gheorghe Asachi Technical University of Iasi**
Patent	RO Application 4740/4.09.2009
Description EN	A shape memory alloy based on copper was obtained through classical melting method and advance melt processing. Also the methodology of obtaining and education of this intelligent material is presented.
Class no.	6. Mechanical Engineering – Metallurgy

University of Medicine and Pharmacy „Grigore T. Popa" Iași

22.1.

Title EN	**Stomatognatic neural-muscular manifestations in dysfunction syndrome of stomatognatic system**
Authors	Laura Checherita, Liliana Foia
Institution	**University of Medicine and Pharmacy „Grigore T. Popa" Iași**
Description EN	Stomatognatic system is an integrated biological system and we can not talk about a barrier, a line of demarcation, regarding the neurological illnesses and the triggering of stomatognatic dysfunction. The neurological disorder will constitute an oversystemic etiological factor of dysfunction syndrome. The development of this study represents a natural medical act, because we consider that it is our duty as practitioners to comprehend and the treat from a dental point of view this type of patients. The study was developed two years, on a sample of 43 patients, with the diagnose of Parkinson disease and hemifacial spasm, within the Department of Recovery of Recovery Clinic Hospital of Iasi. From these 43 patients, 33 were diagnosed, investigated and filed for the symptomatology of Parkinson's disease, and 10 patients, for hemifacial spasm. Treatment planning must be interdisciplinary established ,the dysfunctional syndrome of stomatognatic system was proved in all the 33 cases taken into study, the following table presenting an evaluation of dis-homeostasis type. The high incidence of Parkinson disease within the third age population imposes knowledge regarding the clinical symptomatology by the dental practitioner, because these patients must be treated for the stomatognatic dysfunctions too.
Class	X. Innovative Researches

22.2.

Title EN	**The Effects of Using A Dry Salt Inhaler Aerosols on Adults with Obstructive Respiratory Pathology**
Authors	Radu CRIȘAN-DABIJA, Traian MIHĂESCU
Institution	**University of Medicine and Pharmacy „Grigore T. Popa" Iași**
Description EN	This study is a genuine breakthrough clinical research, unique in Romania, that scientifically proved for the first time, the benefits of halotherapy on patients with obstructive respiratory diseases. Introduction: The clinical benefits of salt air-ions are widely recognized but the mechanisms are scarcely studied and there is not enough available clinical data to prove the efficacy of adding halotherapy to regular treatment. Halotherapy is responsable for 5 therapeutical actions: mucolysis, antibacteriologic agent, anti-inflammatory agent, and immunomodulator - hyposensibilizing agent. We conducted a study where we use a dry-salt inhaler on patients with asthma and COPD with the purpose to prove the efficacy of adding halotherapy to regular bronchodilatatory medication. Methods:This study was double-blind, randomized trial, single crossed. During the 12 months of the study there were 4 visits. The total patient population - 128 individuals (76 – asthma and 52 - COPD stages II and III) was divided in 2 arms, crossed after first evaluation visit (V1). Results:The study revealed an improvement of all spirometry parameters after the first month of treatment with salt aerosols versus placebo. The final data showed an overall improvement of FVC by 4%, 14% improvement of the FEV1 and 25% improvement of PEF parameter – showing significant improvement in asthma patients condition. Also, analyzing the quality of life responses we found out that the scores of the patients that used salt aerosols were improved throughout the study by 24% showing a significant impact on the quality of life.
Class	X. Innovative Researches

22.3.

Title EN	**Study regarding the effect of Carisolv system on chemical composition of residual root dentine**
Authors	Antonia Moldovanu, Galina Pancu, Simona Stoleriu, Andrei Georgescu, Sorin Andrian
Institution	**„Gr.T.Popa" University of Medicine and Pharmacy, Faculty of Dental Medicine, Iaşi, Romania**
Description EN	The aim of the study was to assess the chemical composition of root dentine resulted after carious dentine removal using Carisolv system. 12 extracted teeth having root carious lesions were used in this study. The teeth were divided in two halves so that the section plan to separate the healthy root surface from the carious one. Two samples were obtained for every tooth: one with a dentinal surface affected by caries (study group) and the other with a healthy dentinal surface (control group). On the study group the carious root infected dentine was removed using the Carisolv system. The other 12 root dentinal section from the healthy surfaces were used as samples in the control group. The dentin surfaces resulted were subjected to examination by the microanalysis of the energy dispersive X-ray (EDX) elements system, which allowed the determination of the quantitative and qualitative chemical composition, as well as the chemical elements mapping on the examined surfaces. The mean calcium and phosphorus ions concentration in the control group were 25,23 wt% and 10,84 wt%, respectively. In the study group the mean calcium and phosphorus ions concentration were 24,61wt% and 10,52 wt%, respectively. The results were statistically analyzed using Mann-Whitney test. No statistical significant differences were found when compared the calcium and phosphorus ions concentrations on carious root dentin in the two groups. Carisolv system did not lead to quantitative and qualitative changes of the mineral content in residual root dentin.
Class	X. Innovative Researches

22.4.

Title EN	**AIR OZONATION MODULE**
Authors	Norina Consuela FORNA
Institution	**„Gr.T.Popa" University of Medicine and Pharmacy**
Patent	**OSIM File A/00338/14.05.2012**
Description EN	The purpose of such air ozonation module is to eliminate viral and bacterial infections that can occur following some dental works. The module is made up of three detachable compartments and it is introduced in the compressed air circuit achieving an air-ozone mixture.
Class	4. Medicine - Health Care - Cosmetics

22.5.

Title EN	**DISINFECTION MINI BOX WITH NON-IONIZING RADIATIONS**
Authors	Norina Consuela FORNA, Roxana Ionela VASLUIANU
Institution	**„Gr.T.Popa" University of Medicine and Pharmacy**
Patent	**OSIM File U/00006/30.01.2012**
Description EN	The disinfection mini box with non-ionizing radiations was created in order to be used in the medical area. It ensures a safe disinfection without consuming other materials, entirely eliminating the danger related to the contamination of the probes used for establishing some diagnoses. The disinfection is done with the help of ozone resulted through the action of the ultraviolet radiations UV-C with a wavelength of 185 nm.
Class	4. Medicine - Health Care - Cosmetics

22.6.

Title EN	**THE PROCEDURE FOR OBTAINING A DENTAL COMPOSITE**
Authors	Norina Consuela FORNA, Magda - Ecaterina ANTOHE
Institution	**„Gr.T.Popa" University of Medicine and Pharmacy**
Patent	**OSIM File U/00016/22.02.2012**
Description EN	The procedure for obtaining a dental composite mainly used in dentistry was intended for lining the inside of dentures. The characteristic of this material is the variable resilience established depending on the peculiarities of the prosthetic field.
Class	4. Medicine - Health Care – Cosmetics 6. Mechanical Engineering - Metallurgy

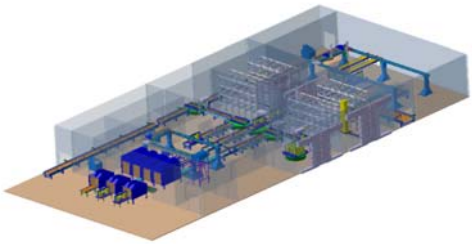
22.7.	
Title EN	**Installation for highlighting the noise interference**
Authors	Norin Forna, Receanu Ionela
Institution	**„Gr.T.Popa" University of Medicine and Pharmacy**
Patent	**Pending**
Description EN	The purpose of this invention is to conceive an installation for the creation of pressure waves upon emission of sounds inside a metal tube with holes. The tube is closed at one end with a rubber membrane and at the other end is connected to a gas source. When the gas is turned on, inside the tube waves of flame are created, which take the form of stationary waves.
Class	5. Industrial and laboratory equipments

"Vasile Alecsandri" University of Bacau

23.1	
Title EN	**Nut for Helical Ball Transmissions**
Authors	Puiu Vasile, Popinceanu Niculai, Bontas Dumitru, Nasturas Vasile, Ionescu Adrian Mirel, Grigori Gheorghe
Institution	**"Vasile Alecsandri" University of Bacau** **"Gheorghe Asachi" Technical University of Iasi** **"George Bacovia" University of Bacau** **S.C. "Electrica" S.A. Bacau** **Politehnica University Bucharest** **S.C. "Aerostar" S.A. Bacau**
Patent no.	**Pending**
Description EN	This invention refers to a nut for ball helical transmissions (ball screws), provided with frontal, identical recirculation parts, having ring sector shapes that are mounted by means of pins and screws in the seats of the same shape located in the nut body. This assures constructive and technological simplicity, high productivity and low machining costs.
Class no.	

University of Pitesti

24.1

Title EN	**Proceeding and installation for cultivation of eatable and medicinal mushrooms**
Authors	Marian Petre, Adrian Nicolescu, Marcel Dobre
Institution	**University of Pitesti and "Politehnica" University of Bucharest**
Patent no.	**RO123132/2010**
Description EN	This invention relates to a proceeding and a fully automatic installation, modular and scalable in mono- or multiflux variants for continuous producing of the bags filled with sterilized compost and inoculated with mycelium as well as the eatable and medicinal mushroom fruit bodies cultivated on natural substrates for growth. The whole process of mushroom growing does not require any use of pesticides to prevent mushroom diseases at all. It has to be mentioned that all harvested mushroom fruit bodies are produced only by organic cultivating with no use of any kind of pesticides and they are 100% natural products. The mushroom fruit bodies are produced by such fully automatic installation can instantly be used for: - nutraceuticals and/or drugs producing (in the form of extracts with strong effects to stimulate the immune system and prevent serious human diseases) because all the harvested mushrooms are completely free of any microbial contamination; - food production by automatic processing of harvested mushroom fruit bodies (such as: fresh or dehydrated food products). The exhausted composts resulted after mushroom cultivation can be directly used as feed supplements (containing proteins) or natural fertilizer of certain soils that are poor in organic substances closing a short food chain of plant wastes recycling.
Class no.	**5. Industrial and laboratory equipments**
Image/ Photo	

24.2

Title EN	**Biotechnological proceeding to get fungal biomass of *Lentinula edodes* with immunomodulatory, antitumoral and antiinfection properties**
Authors	**Marian Petre**
Institution	**University of Pitesti**
Patent no.	**RO121678/2008**
Description EN	The invention refers to the biotechnology of submerged cultivation of *Lentinula edodes* mushroom species by using a natural nutritive culture medium in order to get the fungal biomass having immunomodulatory, antitumoral and antiinfection properties. The fungal biomass with immunomodulatory, antitumor and infectious properties is produced by *in vitro* cultivation of mushroom species *Lentinula edodes*, in a liquid nutrient medium, consisting of the following natural ingredients: rice bran at a rate of 10 ... 15% rye seed, shelled, germinated for 24 ... 48 h and then ground very fine 15 ... 20%, soy peptone 5 ... 10%, yeast extract 1 ... 5% deionized water the appropriate volume to achieve 100% total percentage of the final solution based on the equivalent volume-weight ratio. The invention presents the following specific advantages: - the significant reduction of the period of necessary time to acquire the fungal biomass comparing to another cultivation methods that are already known; - the concentration increasing of the active biological compounds, particularly of β-glucans by using a nutritive media of very specific culture for this kind of eatable mushrooms which has pharmaceutical remarkable qualities. The mycelia biomass produced through this biotechnological proceeding contains active biological compounds, such as exo-polysaccharides, respectively, β-glucans and, also glycol-proteins and ergosterols. This biomass can be used for food supplements producing having the property to modulate the human immunity of organism and heal tumors and infections.
Class no.	**3. Agriculture and Food Industry**
Image/ Photo	

"Lucian Blaga" University of Sibiu

25.1

Title EN	**VERTICAL AXIS HYDRAULIC MOTOR WITH BACK-FOLDING PALLETS ANCHORED ON UNDEVELOPED STREAMS**
Authors	OPREAN Constantin, ŢÎŢU Aurel Mihail, MĂRGINEAN Ioan, RENTEA Cornel
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	Patent application No. A 2010 00720
Description EN	The invention refers to a mechanical and/or electrical energy generator; kinetic charged by the undeveloped streams, starting with creeks and small rivers and finishing with big rivers, on which it is set floating and anchored to its shores.
Class no.	2. Energy and sustainable development

25.2

Title EN	**REVERSABIL PHOTOVOLTAIC CELL WITH HALOGEN**
Authors	OPREAN Constantin, ŢÎŢU Aurel Mihail, MĂRGINEAN Ioan, ISARIE Claudiu, MOLDOVAN Alexandru Marcel
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	Patent application No. A 2011 01140
Description EN	The invention refers to a pulsed electric power electrochemical cyclic generator, using the sun for sequential reset of the reacting substances to their initial state.
Class no.	2. Energy and sustainable development

25.3

Title EN	**HYDRO-ELECTRICAL TURBINE LINEAR UNFOLDED ON THE STREAMS**
Authors	ŢÎŢU Aurel Mihail, OPREAN Constantin, MĂRGINEAN Ioan, MOLDOVAN Alexandru Marcel, BOGORIN-PREDESCU Adrian
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	Patent application No. A 2011 01139
Description EN	The invention refers to a hydro-generator structural and functional unfolded on linear dimensions, which converts the moving kinetic energy into electric energy specific to the streams on which it is set floating, anchored to the shores.
Class no.	2. Energy and sustainable development

25.4

Title EN	**DEVICE FOR THE ACCURATE POSITIONING OF THE ELECTRODE-TOOL AND THE PART DURING ELECTRICAL EROSION PROCESSING**
Authors	NANU Dan, ŢÎŢU Aurel Mihail, OPREAN Constantin, ŢÂŢU Gh. Aurel
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	RO118574 B
Description EN	The patent describes a device for the accurate positioning of the electrode-tool and the part whose primary aim is to be used for experimental scientific research, by means of single-pulse electrical discharge method, or by means of repeated striking-pulse between the electrode-tool and the processed part, thus enabling the study and definition of the intimate phenomenon of material sampling during electrical erosion processing with a copy of the shape. Secondly, the device for the accurate positioning can also be used for performing some micro-processing by electrical erosion in the field of tools and fine mechanics, for a range of hundreds of millimeters, single series manufacturing, which might thus replace other types non-conventional processing.
Class no.	5. Industrial and laboratory equipments

25.5

Title EN	**DEVICE FOR ASPIRATION HIDATIC CYST OF LIVER OR OVARY CYST**
Authors	Dan SABĂU
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	RO120809
Description EN	The invention relates to a device for hidatic cyst of liver or ovary cyst aspiration used in laparoscopic surgery. The device is constructed from a body connected to a source of suction through a flexible tube that is inserted and is fixed axially inside a trocar between the two components is made a peripheral camera where are introduced some fixing rods of a detachable anchoring device. The device is fixed by suction on the cyst, with aspirations by peripheral camera, and also set it with some extra hooks formed at distal ends of mounting rods. A central tube is inserted through the inside trocar by sliding and conected through a flexible tube to the source of aspiration for the evacuation of cystic contents. Accidental sparkle of liquid are collected by suction and discharged by the board peripheral, outside.
Class no.	6. Mechanical Engineering - Metallurgy

25.6

Title EN	**METHOD AND DEVICE FOR FLUIDIFY OF HIDATIC LIVER CYST**
Authors	Dan SABĂU
Institution	**"Lucian Blaga" University of Sibiu**
Patent no.	RO120810
Description EN	Invention relates to a method and a device for fluidify, by mechanical content hidatic liver cyst, the invention is intended to open surgery, laparoscopic and miniinvazive. Method is to introduce into the hidatic cyst, sticks to the end of a rotary device, like a "mixer" on the edge of a rod being articulated collapsible palette. Rod device is involved in the circle at a speed of 500 ... 1000 rpm, for a period of 3 ... 5 min so that large folding performed mechanical fragmentation and flow cystic content, facilitating evacuation outside the peritoneal cavity, with a means of suction. In laparoscopic surgery, a guiding rod rotating device is fluidity with a suitable trocar. The device of fluidity consists of a rotating rod, trained in the circle by an elastic sleeve, a set of electrically actuated motoreductor. The distal end of the rotating rod is collapsible articulated a palette that, under the centrifugal forces is going at different angles achieving mechanical fragmentation and flow hidatic cyst contents.
Class no.	6. Mechanical Engineering – Metallurgy 4. Medicine - Health Care - Cosmetics

Stefan cel Mare University of Suceava

26.1	
Title EN	**Electric motor with limited displacement**
Authors	CERNOMAZU Dorel, GRAUR Adrian, MANDICI Leon
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent No. RO122946/2011
Description EN	The invention relates to an electrical motor realized through some acting modules with electromechanical actuators with paraffin arranged consecutively by means of some guiding rods and acting rods. Summed displacement of actuators excited by means of Peltier batteries can be found on an active element positioned using the guide rods and an acting rod at the end of the four modules. Applications: can be used in electrical drives and in sun tracking devices. Advantages: high power, constructional simplicity.
Class no.	2. Energy and sustainable development
Image/ Photo	

26.2	
Title EN	**Thermomagnetic engine**
Authors	Dorel CERNOMAZU, Adrian GRAUR, Constantin UNGUREANU, Ilie NIȚAN, Nicolae SOREA, Cristina DAVID, Mihai RAȚĂ, Mariana MILICI, Dan MILICI
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/00139/2011
Description EN	The invention relates to an engine based on thermo-magneto-mechanical conversion and where the operation is possible by magnetic field distortion under the influence of temperature. The motor consists of a rotor made of insulating material, resistant to temperature, and where, on a peripheral route, are embedded more pills of gadolinium. A narrow zone of the peripheral route is subject to heat generated locally, by some electrical resistors, while the remaining peripheral portion is subject to cooling by Peltier elements.
Class no.	2. Energy and sustainable development

26.3	
Title EN	**Magnetostrictive vibromotor**
Authors	CERNOMAZU Dorel, MANDICI Leon, GRAUR Adrian, Romaniuc Ilie, Mihai RAȚĂ, Dan MILICI, Mariana MILICI, Ilie NIȚAN, Elena OLARIU
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/01427/2011
Description EN	The invention concerns a vibromotor whose operation is based on the phenomenon of magnetostriction. Operation and performance of the magnetostrictive vibromotor is due to an material called *terfenol* which are under the action of magnetic field generated by a coil supplied with alternating current.
Class no.	2. Energy and sustainable development

26.4	
Title EN	**Thermobimetallic solar actuators**
Authors	Dorel CERNOMAZU, Leon MANDICI, Adrian GRAUR, Nicolae SOREA, Ilie NIȚAN, Dan Milici, Mariana MILICI, Mihai RAȚĂ, Crisina PRODAN, Ilie ROMANIUC, Corneliu BUZDUGA
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent applications No. A/01102/2011; A/01164/2011; A/01166/2011; A/01168/2011
Description EN	The inventions relate to some actuators made on the principle of helio-thermo-mechanical conversion of solar energy. The thermobimetallic solar actuators are characterized by considerable value of forces and couples being realized in several different shapes.
Class no.	2. Energy and sustainable development

26.5	
Title EN	**Device for measuring electric charge of the electrets**
Authors	RAȚĂ Mihai, ROMANIUC Ilie, NIȚAN Ilie, CERNOMAZU Dorel, GRAUR Adrian
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent applications No. A/00676/2012; A/00657/2012

Description EN	The invention relates to a device for measuring electret electric charge, based on a oscilomotor with bilaterally action. The device for measuring electret electric charge consist mainly of a terfenol bar embedded at one end to a fixed support and at the free end is provided with a metallic electrode. Terfenol bar is under the action of magnetic field produced by an electromagnet. Advantages: simultaneous checking of two electrets, constructive simplicity etc.
Class no.	2. Energy and sustainable development

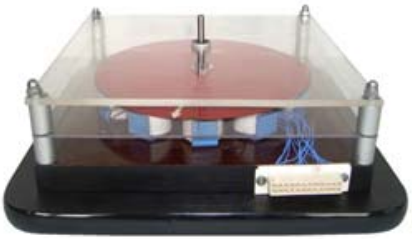
26.6

Title EN	**Electrochemical pump**
Authors	POPA Valentin, MILICI Mariana, MILICI Dan, NIȚAN Ilie, ROMANIUC Ilie
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/00661/2012
Description EN	The invention relates to an electrochemical pump with liquid whose operation is based on the decomposition of water in the two component gases by electrolysis. Advantages: the power supply is made based on solar energy, constructive simplicity, extending the opportunities to use etc.
Class no.	2. Energy and sustainable development

26.7

Title EN	**Magnetostritive vibromotor with eccentric and rolling rotor**
Authors	RAȚĂ Mihai, PRODAN Cristina, MILICI Mariana, MILICI Dan, CERNOMAZU Dorel
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent applications No. A/00259/2012; A/00300/2012
Description EN	The invention relates to an magnetostrictive vibromotor with eccentric and rolling rotor for obtaining low speeds to a few revolutions per minute at great couples, under-frequency power supply without using mechanical gearboxes. Advantages: design simplicity, high reliability, etc
Class no.	2. Energy and sustainable development

26.8

Title EN	**Solar engine with rolling flexible rotor**
Authors	CERNOMAZU Dorel, MANDICI Leon, UNGUREANU Constantin
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent No. RO122758/2009
Description EN	The invention relates to a solar engine with flexible rotor-shaped glass, which by deformation under the action of opposite forces rests on a circular guide track mounted on the stator and get through friction forces a rotating motion characterized by low rotational speed and torque of high value. Advantages: increased shaft torque, reduced complexity, reduced size, etc.
Class no.	2. Energy and sustainable development
Image/ Photo	

26.9

Title EN	**Automated stacking system for paving stones on a stacking conveyor**
Authors	FILOTE Constantin, Mihai-Cristian TIRON, Ilie MIRAUTA
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/00204/08.03.2011
Description EN	The patent consists in an automated stacking conveyor that is formed of two band conveyers, an extracting system, and a carrier fitted with an elevator, which stacks the items on a staking conveyor using mainly the gravitation force as driving principle for final stacking of items, which represents the most difficult part of the job. Advantages: design simplicity, high reliability, energy efficiency, etc.
Class no.	7. Buildings and Materials

26.10

Title EN	**DOLL**
Authors	JIANU Mihaela Dana
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent No. RO121177/2007
Description EN	This invention refers to a basic doll with human shape and adult proportions, which has no characteristic features of body and face, composed of head (removable), body, articulated limbs, made of one or more textiles, having as fixing devices Velcro fasteners. We add groups of removable and interchangeable pieces representing characteristic anatomic parts of the doll, depending on sex, race, age, dimensions, mood etc.: ■ **for the face** 1) ears, nose, eyes, eyelashes, eyebrows, lips, etc. 2) hair, moustache, beard, etc. ■ **for the body** 1) typically masculine look: muscles of chest, belly (abdominal), sholders etc. 2) typically feminine look: breasts (different sizes), hips, thighs, buttocks etc. **pieces of clothes according to sex, race, age, models and fashion**
Class no.	14. Other

26.11

Title EN	**System for locating victims of disasters**
Authors	CIUFUDEAN Călin, BUZDUGA Corneliu, CHIȚA Cosmin
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/00362/2010
Description EN	This invention refers to an automated system which locates victims of disasters and depicts their inside location (± 1.5 m). The victims are located using an electrostatic sensor which is activated together with a transmitter only in case of disaster for ensuring autonomy of system. Information can be delivered wireless and/or by telephone to life saving dispatcher. Advantages: design simplicity, high reliability, etc.
Class no.	12. Safety, protection and rescue of people

26.12

Title EN	**Human eye mechanism study aparatus**
Authors	Mariana Daniela MANU, Gheorghe COHAL, Constantin FILOTE, Nicolae NACIOIU
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/01414/19.12.2011
Description EN	The holographic BioPhotonic laser model of the ocular globe removes from competition the old model of eye camera, updating and using data from laser science, holography, liquid crystals, biophotonics and electronics. Technically, it can result in several technical versions of Romanian Bionic Eye (RBE). The proposed model shows that the eye is a bifocal laser system with intermediate holographic system. Regardless of the rotation degree of the eye around its optical axis, the image remains in the same position as the concerned actual object. Propagation of light between the poles of the system takes place in one direction during the day, and in the opposite direction at night. Advantages: medicine, power plant, photoelectrochemical cells, etc.
Class no.	4. Medicine - Health Care - Cosmetics 14. Other

26.13

Title EN	**System for monitoring the quality of drinkable water sources**
Authors	CIUFUDEAN Călin, FILOTE Constantin, BUZDUGA Corneliu, PAȚA Sergiu, ORHEI Liviu, TORAC Abel, MARUSIC Galina
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent application No. A/00922/2012
Description EN	This invention refers to an automated system which verifies continuously the quality of drinkable water and collect data at a central dispatcher alarming the authorities and consumers when one or more of the investigated parameters are below standards. Advantages: design simplicity, high reliability, etc.
Class no.	1. Environment - Pollution Control

26.14	
Title EN	**Electromagnetic motors wheel drive**
Authors	Radu PENTIUC, Lorin CANTEMIR, Leon MANDICI, George MAHALU, Dorel CERNOMAZU
Institution	**Stefan cel Mare University of Suceava**
Patent no.	Patent No. RO114390
Description EN	Wheel actuators is mounted on an axle, the center of which is attached together with this an induced in the form of circular crown plate of electrically conductive material, plated over solid wheel center. Inductor is silicon sheet, arranged around a bearing boxes, backed by a driving axle bearing.
Class no.	5. Industrial and laboratory equipments

Banat University of Agricultural Science and Veterinary Medicine, Timisoara

27.1

Title EN	**Pharmaceutical ointment based on *Zea mais* carotenoidic extract.**
Authors	Dumbravă Delia, Ianculov Iosif†, Palicica Radu, Moisuc Alexandru, Butnariu Monica
Institution	**Banat's University of Agricultural Science and Veterinary Medicine from Timisoara**
Patent no.	RO 122893 B1
Description EN	The invention refers to an therapeutic ointmen based on maize (*Zea mais*) grains carotenoidic extract, for the treatment of some dermatological diseases (basocellular epithelioma, lupus erythematosus, chronic eczema, psoriasis, photodermatosis).
Class no.	**4. Medicine - Health Care – Cosmetics**

27.2

Title EN	**TPA DIET – Cozohipogluc**
Authors	Alexa Ersilia Călina, Traşcă Teodor Ioan, Poiană Mariana Atena, Pop Georgeta, Stoin Daniela, Negrea Monica, Cocan Ileana
Institution	Banat`s University of Agricultural Science and Veterinary Medicine Timisoara
Patent no.	**Registred TM RO 112402/05.08.2010**
Description EN	The dietary product is the low sugar sponge cake with fruit jelly characterized by high nutritional value and low glycemic index and is designed for people suffering from diabetes.
Class no.	**3. Agriculture and Food Industry**

27.3	
Title EN	**The growing corn (*Zea mais)* technology in "permanent vegetation cover" system**
Authors	Pirsan Paul, David Gheorghe, Petanec Doru Ion, Imbrea Florin, Botos Lucian
Institution	**Banat's University of Agricultural Science and Veterinary Medicine from Timisoara**
Patent no.	Patent application No.A 00594 /22.06.2011
Description EN	The invention refers to a process of growing corn (*Zea mais*) for agricultural areas with annual precipitations between 500-650 mm. Process consists in clean soil after harvesting prior grain crop followed by plowing and seedbed preparation by one pas, sowing of intermediate plants with double standard seed, freezing in winter and finally, sowing corn in dead vegetation cover that remains on the ground until harvest.
Class no.	**3. Agriculture and Food Industry**

27.4	
Title EN	**Antifungal ointment external and use in the external treatment of dermatomycosis**
Authors	DĂRĂBUȘ Gheorghe, OLARIU Lucia Ileana†, ILIE Marius Stelian
Institution	**Banat's University of Agricultural Sciences and Veterinary Medicine from Timisoara**
Patent no.	Decision no. 3/109/28.09.2012
Description EN	The invention refers to an antimicotic, therapeutic ointmen based on garlic (*Alium sativum*) apous extract, for the treatment of some dermatological diseases (fungal infecțions - dermatomycosis) in animals, on surfaces coat.
Class no.	4. Medicine - Health Care - Cosmetics

27.5

Title EN	**Fusarium strain identification in different wheat samples, collected from different regions from the West part of Romania**
Authors	Popescu Sorina, Botau Dorica, Alexa Ersilia, Boldura Oana Maria, Negrea Monica, Bozac Petru
Institution	**Banat's University of Agricultural Science and Veterinary Medicine from Timisoara**
Description EN	In Romania as well as worldwide, Fusarium head blight (FHB), also known as scab, is a devastating disease of small grains causing serious yield losses and low grain quality. The disease commonly occurs in wheat, barley, rye and less in oats. The main causal agents of FHB in Europe are Fusarium graminearum and Fusarium culmorum, but Fusarium proliferatum or Fusarium verticiliodes could be also present. Although FHB may cause wheat yield losses, the interest in FHB is primarily fuelled by the ability of Fusarium species to produce mycotoxins. The aim of this work was the Fusarium species identification based on molecular anaylisis as well as mycotoxin quantification, correlated with the climatic conditions. Among the wheat samples collected from Arad and Timis counties, 5 were totally free of Fusarium infection, 2 samples were infected only with Fusarium graminearum, 5 samples were infected with Fusarium culmorum, 5 samples were infected with both species, Fusarium graminearum and Fusarium culmorum. Taking in account the chemotype, 4 samples were infected with DON chemotype, 1 sample was infected with NIV chemotype and 7 samples contained both DON and NIV chemotype. Applications agriculture, food industry
Class no.	**Innovative Researches**

27.6

Title EN

RESEARCHES CONCERNING THE INFLUENCE OF SEL PLEX ® 1000 AND MYCOSORB ® ON SOME BLOOD BIOCHEMICAL CONSTANTS IN YOUNG RABBITS

Authors

CORNEL BALTĂ, OANA-MARIA BOLDURA, SORINA POPESCU, DORICA BOTĂU

Institution

Banat's University of Agricultural Science and Veterinary Medicine from Timisoara

Description EN

The use of prebiotics in zooculture as growth stimulators has impose itself as an good alternative compared with the use of antibiotics - practiced in the last decades. In the case of antibiotic use it was observed the fact that in time micro organisms develops resistance to antibiotic drugs (anti-bioresistance). Experimental it was demonstrated that prebiotics have positive effects when used as growth stimulators and therefore they were recommended as possible substitutes for antibiotics. A prebiotic is a non-digestible food ingredient, which beneficially affects the host by selectively stimulating the growth and/or activity of one or a limited number of bacteria in the colon. In this context it was studied on leporides the effects of two prebiotics (Sel-Plex®1000 and Mycosorb®). Leporides are considered laboratory animals but they are also farm animals, and when used in scientific research can provide information of both theoretic and applicative interest. The animals were divided in a control group (C) and in two experimental groups (E_1, E_2). Each group was composed of 8 animals. The experiment lasted for 60 days. Blood samples were prelevated in three stages: at the beginning of the experiment, after 30 days and after 60 days of prebiotic administration. Various biochemical parameters were investigated. The present paper discuss about the data regarding the investigation of cholesterol, triglycerides, glycaemia, aspartate aminotransferase, gamma glutamyl transferase, glutamate pyruvate transaminase. The parameters were measured using a automated multiparametric analyzer EOS Bravo Forte made by Hospitex Diagnostics.

Class no. **Innovative Researches**

"Alexandru Ioan Cuza" Police Academy of Bucharest

28.1.

Title EN	**The procedures used on counterfeiting travel documents**
Authors	Daniel Potolinca, Ion Sandu, Cristi Ioan Negru
Institution	**"Alexandru Ioan Cuza" Police Academy of Bucharest** **" Alexandru Ioan Cuza" University of Iasi** **Iasi Border Police Territorial Inspectorate**
Description EN	The abolition of border control at internal border of EU Member States has led to the increasing number of counterfeit documents. The ones who use counterfeit documents are part of very well-organized criminal networks. These groups deal with human trafficking, stolen cars, heritage goods, counterfeit money and other crimes with a cross-border character, making huge profits from these crimes in a short time. At the European level it is required good cooperation between all Member States to counteract these phenomena. To reduce the number of counterfeit documents, it is used printing machines and special apparatus for creating safety elements that are very difficult to reproduce using common counterfeiting techniques. However, in practice false-document effects can be achieved in many ways. The paper focuses on the counterfeiting of travel documents by identifying the methods used to analyse the counterfeit documents and it is revealed the differences between genuine and fake documents.
Class	Innovative Research

28.2.

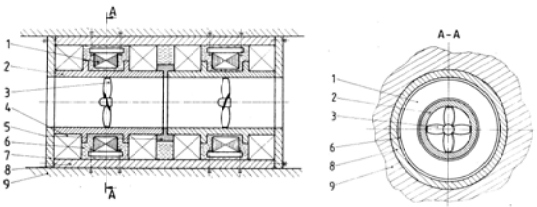
Title EN	**Printing techniques used on travel documents**
Authors	Cristi Ioan Negru, Ion Sandu, Daniel Potolinca
Institution	**Iasi Border Police Territorial Inspectorate** **" Alexandru Ioan Cuza" University of Iasi** **"Alexandru Ioan Cuza" Police Academy of Bucharest**
Description EN	Travel documents can be exposed at risk of counterfeiting and criminal activity. Safeguarding and protecting them require specialized knowledge and an on-going effort of being up to date with male practices which pose a threat to their security. This appears to be an international current issue that needs to be tackled by authorities.

Living nowadays where anything is possible and science and technology open new doors for anyone means that these are applied for illegal purposes too. Some of the criminals could reach "the perfection" when counterfeiting documents yet not known to professionals. The difference between genuine documents and counterfeits lies in high quality and security elements enclosed. Due to "competence" and devices used in falsification, counterfeited documents are being produced in detriment of those legal. Scanners, photocopiers and printing machines are devices which make counterfeiting widespread. An increasing number of cases indicate that the authorities have a difficult task in stopping this phenomenon. Sometimes it is almost impossible to tell which documents are genuinely issued by designated authorities and which have actually been counterfeited. Technology has to be used in protecting travelling documents and not the other way around. It is on this basis that this paper aims to discuss types of printing used, focusing especially on the making process and ways of obtaining them. There will be outlined particular features of each printing type which are assessed by means of magnifying devices and others described in the body of this paper.

Class Innovative Research

Naval Academy "Mircea Cel Bătrân" Constanta

29.1.

Title EN	**Active steering system contrarotating propellers driven by asynchronous induction motor and induced toroidal drive**
Authors	DOBREF VASILE, POPA IONEL, TARABUTA OCTAVIAN,
Institution	**Naval Academy "Mircea Cel Bătrân" Constanta**
Patent no.	Patent application
Description EN	The solution proposed refers to the active steering system with transverse tunnel for ships, boats and submersible vehicles characterized by direct electric drive propeller, using induction motors and induced toroidal disc. The purpose of the new drives steering is direct drive of contrarotating propellers (eliminating mechanical transmission) rated rotation speed. The technical problem solved by the new system is to reduce extra weight and gauge active steering, increasing overall efficiency, reducing additional maintenance costs, since power is directly transmitted from the engine to the propeller without mechanical transmission. Advantages gained are obvious: transmit motion between toroidal inductor and induced whole channel - propeller is made directly to the nominal rotation speed; to eliminate mechanical transmission between the engine and propeller that increases the gauge, weight and reduces plant efficiency; plant maintenance is easy and does not cost much;significantly increase system reliability.
Class no.	8. Aviation, car industry and transportation
Image/ Photo	

Romanian Inventors Forum

30.1.	
Title EN	**Procedure for Anticorrosive Protection of Iron Objects**
Authors	SANDU A.V., BEJINARIU C, SANDU I.G., IONITA I., SANDU I., VASILACHE V.
Institution	**Romanian Inventors Forum**
Patent no.	Pending
Description EN	The inventions refers to a procedure of anticorrosive phosphatation of iron objects, in order to obtain a ceramic layer, with dendritic crystalline structure, which are uniform, compact and have good adherence to the substrate.
Class no.	8. Aviation, car industry and transportation 9. Chemical and Textile Industry

30.2.	
Title EN	**Procedure for Anticorrosive Protection of Iron Objects**
Authors	SANDU A.V., BEJINARIU C, SANDU I.G., VIZUREANU P., SANDU I, VASILACHE V
Institution	**Romanian Inventors Forum**
Patent no.	Pending
Description EN	The inventions refers to a procedure of anticorrosive phosphatation of iron objects by phosphatation in aqueous system using a solution containing 9…12 mL H_3PO_4 85%, 5…6g Zn powder, 2…4 mL HNO_3 70%, 0,80…1,00 g NaOH, 0,4…0,5g NaNO2 şi 0,04…0,08g $Na_3P_3O_{10}$, 2g hexametilentetramine.
Class no.	8. Aviation, car industry and transportation 9. Chemical and Textile Industry

30.3.	
Title EN	**Process for the obtaining of oil silver nanodispersion injection**
Authors	HAGIU B.A., SANDU I., LUPASCU T., VASILACHE V., TURA V., MANGALAGIU I., SANDU A.V., GONCIAR V.
Institution	**Romanian Inventors Forum**
Patent no.	MD4106/2011
Description EN	The invention refers to a procedure for obtaining on oil nanodispersion with regenerative capacity for tissues, by stimulation of Menzenchimal and hair folicle STEM cells. The procedure uses sunflower oil (refined, neutralized and

sterilized) for injection use, in which is dispersed coloidal silver (5-10 nm at 2,5,…5,0 ppm). The mixture is poured in glass ampoules of 1,2 or 3 grams.

Class no. 4. Medicine - Health Care - Cosmetics

30.4.

Title EN **Artificial halochambers**

Authors SANDU I., STIRBU C., CANACHE M., CHIRAZI, M., STIRBU C., SANDU A.V., VASILACHE V., LUPASCU T.,

Institution **Romanian Inventors Forum**

Patent no. Patents RO126283-A2/2011, RO126284-A2/2011, RO126285-A2/2011, MD4089(B1)/2011

Description EN The invention refers to a artificial halochambers for multiple users, which uses dry aerosols of NaCl and other salts with prophylactic purpose and for treatment of respiratory diseases, but also for improvement of respiratory/cardiac apparatus and neuro-psiho-motric parameters, of persons with intense physical activity. The invention uses diaphragms that cover the walls of the room. The room is airtight and the climatic parameters are monitorized.

Class no. 4. Medicine - Health Care - Cosmetics

30.5.

Title EN **Method for potabilisation of ground and surface water**

Authors Sandu Ion, Cretu Anca Monica, Lupascu Tudor, Sieliechi Joseph-Marie, Kouame Innocent Kouassi, Guifo Kayem Joseph, Sandu Andrei Victor, Vasilache Violeta, Sandu Ioan Gabriel, Vasilache Viorica

Institution **Romanian Inventors Forum**

Patent no. Pending

Description EN The invention relates to a process for obtaining potable water from ground and surface water sources, which is intended to remove traces of chlorine, arsenic, aluminum, iron and other heavy metals, and microbiological agents in order to obtain drinking water with high organoleptic features and to meet European quality standards. The invention consists in the use of additional steps of filtration with ceramic granules in the form of four varieties and particle sizes.

Class no. 1. Environment - Pollution Control

Romanian Inventors Forum
Bacău Brench

31.1

Title	**Autonomous Energy Supply System**
Authors	Laschi Mihai, Gavrilas Dumitru-Gabriel
Institution	**Romanian Inventors Forum – Bacau Brench**
Patent no.	Patent Application RO **00838/2012**
Description	It's about 10-15 meter high tank, a group turbo-generator which is coupled to a water circulation pump mechanical work performed by converting kinetic energy into electrical energy, sending water tank pump installation. This system is autonomous energy supply in remote areas rcomandat as to predict a photovoltaic cell, a wind group and accumulator battery which inmagazioneaza extra energy produced, and will convey the system as needed. Optimal Operation of the system will have to highlight the weather conditions for each system.

31.2

Title	**Snow cleaning aggregate**
Authors	Laschi Mihai, Laschi Stefan
Institution	**Romanian Inventors Forum – Bacau Brench**
Patent no.	Pending
Description	The unit aims to execute Snow operation and cleaning of roads, streets and sidewalks by melting snow and dry roads and icy sidewalks to avoid creating. The unit is self-propelled, fusion will be performed using controlled heat sources on a range of 1.5-3 meters and a source of hot air to disperse water and dry road or sidewalk.

31.3

Title	**UNIVERSAL agricultural fertilizers**
Authors	Mihai LASCHI
Institution	**Romanian Inventors Forum – Bacau Brench**
Patent no.	Pending
Description	The invention relates to a universal fertilizer used in agriculture for cereal crops, vegetables, pomucole, wine, etc.. In order to achieve higher production, higher quality, to increase plant resistance to pests, drought and reduce the amount of water used for irrigation.

31.4

Title	**Device for Dialysis**
Authors	Laschi. A. Mihai
Institution	**Romanian Inventors Forum – Bacau Brench**
Patent no.	RO 122077
Description	The invention refers to a device for dialysis, used to produce a magnetic field, used for the treatment of the blood and of the liquid in the infusions, surgical procedures of transplant, limiting the effects of rejecting in the process of cleaning the organism of toxic substances, but also for the equilibration of the organism.

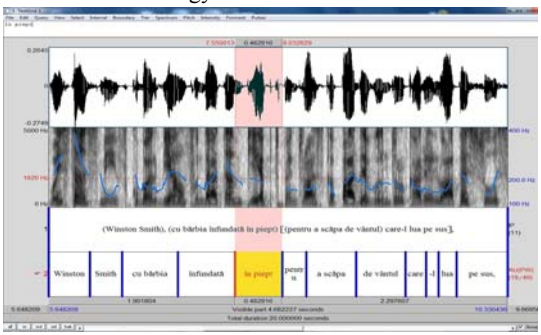
31.5

Title	**Installation for magnetic treatment of fluids**
Authors	Mihai LASCHI
Institution	**Romanian Inventors Forum – Bacau Brench**
Patent no.	RO119535
Description	The invention is based on the effects of a magnetic field on a fluid, which has specific intensity, speed and temperature. In zootechnics: increases the imunity, high quality. In agriculture: increase of productivity, soil structuration

Institute of Computer Science
Romanian Academy Iaşi

32.1.

Title EN	**Database for Discursive-Prosodic Patterns of Romanian Narrative Text**
Authors	Neculai Curteanu, Cecilia Bolea
Institution	**Institute of Computer Science / Romanian Academy, Iaşi Branch**
Patent no.	O.R.D.A. Registration Number: 1207/11.02.2013
Description EN	This is an original collection of databases containing audio recordings devoted to the analysis of prosodic information for the Romanian contrastive Focus. This corpus of discursive-prosodic patterns comprises the following three components: (1) Database of audio recordings; (2) Database of TextGrid for intonational units; (3) Database of Txt and Excel numerical data for the features of the audio recordings. The audio database contains 300 audio recordings (*wav* files), which include 1090 affirmative clauses / sentences, 103 interrogative clauses / sentences, and 67 exclamatory clauses / sentences.
Class no.	10. Information Technology and Communication



32.2.

Title EN **Parameterized Grammars for Dependency Hypergraphs in Thesaurus-Dictionaries**

Authors Neculai Curteanu, Alex Moruz, Andrei Scutelnicu

Institution **Institute of Computer Science / Romanian Academy, Iaşi Branch**

Patent no. O.R.D.A. Registration Number: 1484/18.02.2013

Description EN

This is a novel approach to the design of a new DTD (Document Type Description) for large thesaurus-dictionaries, including for the **DLR** thesaurus-dictionary (Dicţionarul-tezaur al Limbii Române). The current DTD, in the standard TEI P5 2007, consists of a large package of formal grammars describing the various syntactic and semantic structures that are encoded within the dictionary entries. In the course of lexicographic modeling and parsing of six Romanian, French, German, and Russian largest dictionaries, based on the *new parsing method* of SCD (Segmentation-Cohesion-Dependency) configurations, there are defined the Dependency Hypergraphs, a computational device which describes the hierarchies of sense markers established between the lexicographic units in the dictionary entries. The new methodology that we propose in the present approach is to define *parameterized grammars* for the formal representation of Dependency Hypergraphs assigned to thesaurus-dictionaries and their entry parsing levels (Curteanu & Moruz, 2012). The formal tool of parameterized grammars characterizing the Dependency Hypergraphs of thesaurus-dictionaries opens the effective possibility of standardization the dictionary parsing technology, to introduce a *new*, *procedural* DTD *for dictionaries*, and to define a *general, efficient, and portable parser* of entry text for la very large class of thesaurus-dictionaries.

Curteanu, N., Moruz, A. (2012). *A Procedural DTD Project for Dictionary Entry Parsing Described with Parameterized Grammars*. CogALex-3 Proceedings, COLING-2012, Bombay, India, pp. 127-136, http://aclweb.org/anthology-new/W/W12/W12-5110.pdf.

Class no. 10. Information Technology and Communication

```
primary_sense → entry | LatCapLetA | LatCapLetB |
                LatCapLetC
entry → newPrg e LatCapLetA;
    parent(LatCapLetA) = e; item(LatCapLetA) = 0
entry → e
entry → e LatSmallLet;
                parent(LatSmallLet) = e; item(LatSmallLet) = 0
------------------------------------------------------------------ 1 --
LatCapLetA → LatCapLetA_Mrk LatCapLetB;
    parent(LatCapLetA_Mrk) = parent(LatCapLetA);
                item(LatCapLetA_Mrk) = item(LatCapLetA) + 1;
    parent(LatCapLetB) = LatCapLetA_Mrk;
... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ...
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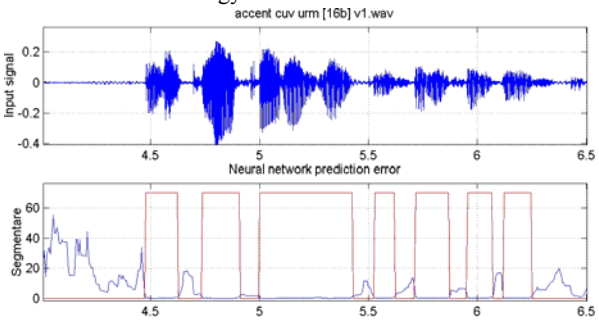
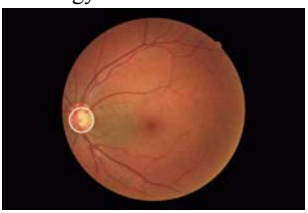
32.3.

Title EN	**Speech segmentation method based on predictive neural networks - SROL_SegmRN**
Authors	Zbancioc Marius, Feraru Monica
Institution	**Institute of Computer Science, Romanian Academy, Iasi Brach**
Patent no.	ORDA Registration no. 3255/08.04.2013
Description EN	The proposed method uses a predictive neural network for speech segmentation of the vocal signal in order to extrac the prosodic features, the Mel Frequency Cepstral coefficients - MFCC, the Linear Predictive Cepstral coefficients - LPCC, etc.. The user can change the overlapping of the analysis windows, which affect the running times. During the trainning of the neural network is displayed in percent the stage of the file processing. The vocal signal applied to the input network and the neural network prediction error is graphically displayed with the boundaries of the interest areas. It was applyed a median filter to "smooth" the prediction error signal in order to easily extract the threshold value used in segmentation. The methods included in our current tool for determining the threshold of the segmentation is based on clustering algorithm FCM (fuzzy c-means), and the analysis of the prediction error histogram. When the prediction error is small, the signal is in a vowels areas and when the prediction error is high, the signal is consonantic or is corresponding to the pause between utterances. Only for the vowels areas will be extracted the prosodic features or other features used in emotion recognition, speaker identification, speech recognition etc.
Class no.	10. Information Technology and Communication



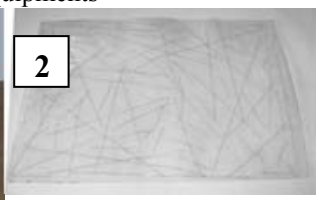
32.4.

Title EN	**Retinal-DetDO – Optic Disk detection in retinal images**
Authors	Florin Rotaru, Bejinariu Silviu-Ioan, Cristina Diana Niţă, Ramona Luca
Institution	Institute of Computer Science, Romanian Academy Iasi Branch
Patent no.	ORDA Registration no. 2986 / 01.04.2013
Description EN	The software is an improved optic disc localisation method implementation for color retinal images. Tests were done on RGB retinal images of 720x576 and 2592x1728 resolutions. First, using a voting procedure, an approximate optic disc area is identified. Then on a window centered on this area an opening is applied using as structuring element a line of 12 orientations. Choosing for each pixel in this area the minimum intensity pixel of twelve results the blood vessels are erased. In the next step a Canny filtering followed by binarization to obtain the disc edges is performed. Using a Hough procedure the circle with the best fitting score is detected. The Canny and Hough procedures are iteratively applied, using a variable threshold for Canny approach, until a desirable fitting score is obtained. While Canny filtering was performed using the OpenCV function for Hough transform we implemented our own method. We opted for our own Hough transform implementation in order to get more control on the distribution of the fitting points. This way some configurations can be rejected even there are generated by an acceptable number of fitting points if the points are not equally distributed around circle centre. The proposed method is implemented as a Windows application, in C++ using Microsoft Visual Studio. For image manipulation and some processing functions, the OpenCV library is used.
Class no.	10. Information Technology and Communication



National Institute of Research & Development for Technical Physics, Iasi

33.1.

Title EN	**Selective shielding system for high frequency electromagnetic radiation**
Authors	CHIRIAC Horia, ÓVÁRI Tibor-Adrian, ABABEI Gabriel.
Institution	National Institute of R&D for Technical Physics
Patent no.	Patent application No. a 2010 01173/25.11.2010
Description EN	The invention refers to one ***selective shielding system*** which allows the selective shielding of the electromagnetic radiation in the 500 MHz-20GHz range, simultaneously and selectively for several frequency bands, with the central radiation frequency controlled through the lengths of the microwires by combining the magnetic properties of the wires with their geometrical distribution. The selective shielding system consists in CoFeSiB or FeSiB amorphous magnetic glass-coated microwires with diameters ranging between 10 μm and 30 μm and different lengths, in the centimeter range, parallel aligned in successive rows or randomly disposed on a nylon foil impregnated with an adhesive superficial layer, or dispersed in a dielectric matrix. **Applications:** • electromagnetic shielding • smart composite materials industry • security applications.
Class no.	5. Industrial and laboratory equipments
Image/ Photo	 

1. Miniature electromagnetically shielded room.
2. Selective shielding system for the simultaneous shielding of several frequencies of the GSM electromagnetic field F = 0.8MHz; F = 0.9GHz; F = 2.1GHz.

National Institute for Research & Development „URBAN-INCERC" Cluj-Napoca

34.1.

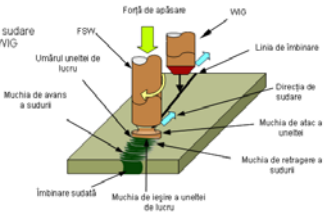
Title EN	**Production and use of concrete with lightweight aggregate**
Authors	Henriette Szilagyi, Liana Terec
Institution	**N.I.R.D. „URBAN-INCERC" Cluj-Napoca Branch**
Patent no.	Pending
Description EN	The pre-normative research on concrete with lightweight aggregate is performed in order to update the norm regarding the production and use of lightweight concrete. The selected lightweight aggregates used in the experimental studies were: expanded clay, volcanic tuff, recycled bricks, basaltic scoria and expanded perlite. Insulation and structural lightweight concrete was obtained with mix design based on absolute volume method.
Class no.	7. Buildings and Materials

National Research & Development Institute for Welding and Material Testing, ISIM Timişoara

35.1.

Title EN	**Friction stir welding process and welding device**
Authors	Dehelean Dorin, Cojocaru Radu, Ionescu Dan, Ţurcanu Dorel
Institution	**National R&D Institute for Welding and Material Testing, ISIM Timişoara**
Patent no.	RO123349
Description EN	Friction Stir Welding (FSW) is an innovative method of joining in solid state of materials at low temperatures, below the melting temperature. TIG assisted friction stir welding method is a new FSW technique proposed by team of authors. TIG assisted friction stir welding, represent a development of FSW technique and create an hybrid welding process, in solid state, that integrates the preheating of plates through TIG welding process. The process is applicable to materials that have difficulties at classic friction stir welding: hard aluminum alloys, steel and copper. From point of view of proposed objectives through FSW-TIG welding procedure, comparatively with classical FSW, were obtained: - increase of productivity through increasing of welding speed (e.g. at EN AW 7075 alloy with ~67 %, at S 235 steel with ~500% and copper Cu 99 with ~200%) - more stable welding process (without vibrations) that ensure a better protection for machine and welding tools - welding tools wear has a significant decrease at FSW-TIG hybrid welding, compared with classical FSW.
Class no.	6. Mechanical Engineering - Metallurgy

Hybrid welding FSW- TIG



Scheme FSW-WIG

35.2.

Title EN	**Method for determining the opportunity to apply the post-welding stress relieving heat treatment to thermo-resistant alloyed steels**
Authors	Pascu Doru Romulus, Cosma Eugen
Institution	**National R&D Institute for Welding and Material Testing, ISIM Timisoara**
Patent no.	RO123100/29.10.2010
Description EN	In order to determine the opportunity to apply the post-welding stress relieving heat treatment, they are used the simulated samples with thermal cycles of welding at the specific temperatures for thermo-resistant alloyed steels. The mechanical characteristics of resistance to fracture are determined. Finally, the correlations defining the optimum variant for post-welding heat treatment are established. The method can be used in the laboratories for technical control within the companies manufacturing the welded structures made from thermo-resistant alloyed steels.
Class no.	6. Mechanical Engineering - Metallurgy

Institute of Biological Research, Iasi

36.1.

Title EN	**Obtaining process of planting material in currant**
Authors	Iurea Dorina, Mangalagiu Ionel, Chintea Pavel, Caulet Raluca Petronela, Morariu Aliona, Gradinaru Gica, Chirilov Eleonora, Cotenco Eugenia, Iurea Roxana Ionela
Institution	**Institute of Biological Research, Iasi** **Al. I. Cuza University, Iasi** **Institute of Genetics and Plant Physiology, Chisinau**
Patent no.	**Pending**
Description EN	The invention relates to agriculture, particularly to horticulture and can be used to estimate the effect of furostanol glycoside treatments on quality of the planting material in currant. The experiments established the optimum concentration of treatment solution and its effect on rooting process and studied the influence of furostanol glycoside treatments on foliar apparatus growth and development related with the treatment application method. The results showed that the treatment application method influenced the growth parameter in relation with the cultivar and glycoside type. Treatment with furostanol glycosides led to an increase in the number of roots with 13-15%, as well as the creation of more qualitative currant seedlings. **Applications:** Agriculture - vegetable growing
Class no.	3. Agriculture and Food Industry

36.2.

Title EN	**Method of treating grapes vine**
Authors	Iurea D. Dorina, Mangalagiu Ionel, Munteanu Neculai, Mustea Mihai, Chintea Pavel, Chirilov Alexandru, Contenco Eugenia, Iurea Pavel, Iurea Roxana-Ionela
Institution	**Institute of Biological Research, Iasi/ Al. I. Cuza University, Iasi/ Institute of Genetics and Plant Physiology, Chisinau**
Patent no.	Patent Md, No. 235/2010
Description EN	The invent_is related to the bioorganic chemistry, in particular to steroidic glycoside [Tomatozid - (5α – furostan - 3β, 22, 26 –triol -3 (O- β –D-glucopyranosyl (1- 2) - β –D –

glucopyranosyl (1- 4) - β –D- galactopyranosyd – 26 –O- β – D-glucopyranosyd)], biological active compounds of potential interest in agriculture (horticulture).
The problem that the invention is solving resides in broading area of natural bioactive agents used for grape vine growth and development regulator, through the discovery of a new class of steroidic compound of vegetal origin, with significantly antiviral and biostimulator properties.
This new compound is much cheaper then other products known up to now, non-toxic, easy to be obtained, highly effective in minor concentration and doesn't manifest side effects.
Applications: agriculture (horticulture).

Class no. 3. Agriculture and Food Industry

36.3.

Title EN **Process for extraroot treatment of tomato plants**

Authors Iurea D. Dorina, Munteanu Neculai, Mangalagiu Ionel, Chintea Pavel, Contenco Eugenia, Siromeatnicov Iulia

Institution **Institute of Biological Research, Iasi/ Al. I. Cuza University, Iasi/ Institute of Genetics and Plant Physiology, Chisinau**

Patent no. Patent Md, No. 271/2010

Description EN

The invention refers to a bioorganic chemistry application, respectively to a steroidic glycoside of vegetal origin, with biological active effect, which could be applied in agriculture for growing tomatoes.
The process, according to the invention, includes the extraroot treatment of tomato plants before and after flowering and in the fruit growth phase, with 0.001...0.05% aqueous solution of oxidized Tomatoside with the chemical formula: $C_{49}H_{74}O_{31}$, obtained from the oxidation of the polysaccharide chain in the initial Tomatoside (a vegetal origin steroidic compound) molecule, with a total consumption of the solution of 0.5 L/ m^2. Preparation is applied in small amounts (0,001%. 0,01%), is cheap and easily to be obtained.
The technical result of the invention is to optimize the physiological processes in plants and to increase the productivity - using oxidized Tomatoside resulted an increase of 18-20% in production.
Applications: agriculture (vegetable cultures).

Class no. 3. Agriculture and Food Industry

36.4.

Title EN	**Biostimulation procedure of pepper crop**
Authors	Iurea Dorina, Chintea Pavel, Mangalagiu Ionel, Munteanu Neculai, Istrate Mihai, Cotenco Eugenia, Iurea Roxana-Ionela
Institution	**Institute of Biological Research, Iasi/ Al. I. Cuza University, Iasi/ Institute of Genetics and Plant Physiology, Chisinau**
Patent no.	Patent Md, No. 342/2010
Description EN	The invention relates to agriculture, especially vegetable growing and may be used for pepper cultivation. The process, according to the invention consists in treating the foliage of pepper plants before flowering, after flowering and fruit setting stage with steroid glycoside Tomatoside aqueous solution in concentrations of 0.001% - 0.08%, with a total consumption of 0.25 to 0.30 L / plant. Result consists in optimizing the physiological processes in plants, leading to increased production up to early 23 to 28% and total production by up to 14%. Crop quality is not impaired in any way after applying Tomatoside to the product. **Applications:** Agriculture - vegetable growing
Class no.	3. Agriculture and Food Industry

36.5.

Title EN	**Treatment process of apple tree**
Authors	Iurea Dorina, Chintea Pavel, Mangalagiu Ionel, Munteanu Neculai, Chirilov Eleonora, Cotenco Eugenia, Iurea Roxana-Ionela
Institution	**Institute of Biological Research, Iasi/ Al. I. Cuza University, Iasi/ Institute of Genetics and Plant Physiology, Chisinau**
Patent no.	Patent Md, No. 383/2010
Description EN	The invention relates to agriculture, particularly to fruit – growing and can be used for cultivation of apple trees. The process, according to the invention, consists in the extraroot treatment of apple trees in 2 weeks after flowering with an aqueous solution of oxidized tomatozide of chemical formula $C_{49}H_{74}O_{31}$, in a concentration of 0.001% with a total consumption of 800…1000 l/ha. The result of the invention consists in optimizing the physiological processes in plants and increasing the yield. **Applications:** Agriculture - vegetable growing.
Class no.	3. Agriculture and Food Industry

"Petru Poni" Institute of Macromolecular Chemistry, Iasi

37.1.

Title EN

New Partially Aliphatic Copolyimides Films Modified by Plasma Treatment for High Performance Applications

Authors

Dumitru Popovici[(1)], Irina Andreea Barzic[(1)], Maria Butnaru[(2)], Iuliana Stoica[(1)], Camelia Hulubei[(1)], Ghiocel Emil Ioanid[(1)], Stelian Vlad[(1)]

Institution

[(1)] **"Petru Poni" Institute of Macromolecular Chemistry, Iasi**

[(2)] **"Gr. T. Popa" University of Medicine and Pharmacy, Iasi**

Description EN

Polyimides are characterized by some outstanding properties, such as superior thermal and chemical resistant, excellent mechanical strength and good adhesion to surfaces. As a result, they have been extensively used in aerospace, microelectronics, optoelectronics, composites and membranes. Also, polyimides have been proved to be biocompatible, with applications in biomedical fields as substrate/ encapsulation materials in bio-micro-electromechanical-systems (Bio-MEMS) or as micro-structured substrates for contact guidance of osteoblast cell growth.

Novel copolyimides based on 3,3',4,4'-benzophenontetracarboxylic dianhydrides, 4,4'-diaminodiphenylmetane and 1,6-diaminohexane were synthesized and their corresponding films were obtained. By cold plasma treatment the films surfaces wettability has been improved. Polar component contribution to surface tension have been enhanced from 10 to 50%, increasing the surface hydropho-bicity characteristics and decreasing interfacial tension with blood in the range of 2.07–2.95 mN/m, in accord with the biocompatibi-lity criteria. The results have reflected the capacity of aliphatic moieties to lower the electron-donor character of polar contribution to surface tension, while maintaining a small adhesion of polymer films to red blood cells and a proper cohesion to platelets, albumin, fibrinogen and immunoglobulin. By increasing aliphatic content in polyimides chains, the rejection of platelets has been increased, prohibiting thrombosis and favoring cohesion with plasma proteins.

Atomic force microscopy data have revealed a uniform and flat surface morphology for untreated samples (Sq = 0.31–0.48 nm), changing into a granular structure after plasma treatment with surfaces roughness Sq < 8 nm for all polyimides films, being favorable for laminar blood flow, preventing poststenotic turbu-lence and clot formation.

Acknowledgements. This work is financially supported from PN-II-ID-PCE-2011-3-0937, Project No. 302 / 5.10.2011, Stage 2013

Class no. Innovative Researches

National Research&Development Institute for Chemistry and Petrochemistry - ICECHIM Bucharest

38.1

Title	**Use of Tetrasulphonated Porphyrin for Manufacturing a Photosensitization Agent to be Used in Dermatologic Therapy**
Authors	Rodica-Mariana Ion, Monica Teodora Neagu, Carolina Constantin, Daniel Boda
Institution	**ICECHIM – Bucharest** **INCD "Victor Babes" Institute, Bucharest** **Colentina Hospital, Bucharest**
Patent no.	RO125082/2010
Description	The invention relates to the use of porphyrins - 5,10,15,20-tetra-kis-p-sulfonato-phenyl-porphyrin (TPPS4) in acid form, for the manufacture of a photosensitizing agent for the treatment of actinic keratoses. There are various known photosensitizing agent in the treatment of several dermatological disorders (benign or malignant), the most known being 5-aminolevulinic acid (5-ALA). However, anti-tumor therapy with 5-ALA photodynamic reduces moderately (45%) the tumor volume and recorded numerous adverse effects: thermal and photochemical instability, temporal effect of up to two years, local edema, erythema, ulceration and reactions photosensitivity skin about 1-2 weeks low penetration of the epidermis and moderate tumor selectivity. Photosensitizing agent according to the invention TPPS4 has photodynamic action in actinic keratoses, can replace 5-ALA, is thermally stable in both acidic and basic environments, and is able to produce tumor necrosis in the affected areas, do not show adverse effects and have not toxicity. Also there is no mention of literature on the use of TPPS4 in actinic keratoses. Actinic keratoses are also known as solar keratoses. Spots are characterized by small red, with sizes between 2 and 6 mm in diameter, which appear on the skin after prolonged exposure to sunlight and dissapear after topically administered TPPS4 at the patients.
Class	4. Medicine - Health Care - Cosmetics

38.2

Title **Composition and Treatment Procedure with Hydroxyapatite Nanoparticles for Chemical Restoration and Biological Desinfection of Historical Paper's Surface**

Authors Rodica-Mariana Ion, Sanda Maria Doncea
Institution **ICECHIM, Bucharest**

Patent no. RO126570 (A2) / 2012

Description

The present invention deals with a treatment method, a chemical restoration and biological disinfection of the degraded historical paper surface using hydroxyapatite nanoparticles suspension in alcoholic solution. It is shown both the nanoparticles suspension preparation and the device and spraying method of this suspension on the paper undergone. Some details about the chemical and biological composition of the paper samples, before and after treatment are evaluated, too.

The novelty and the advantages offered by this invention are:

- the application of hydroxyapatite nanoparticles suspension prepared in the laboratory and sprayed on the surface of damaged paper;
- the treated paper is left to dry in air, at room temperature, in order to allow the interaction between the powdered nanoparticles and the degraded cellulose fibres gaining consistency and strength.
- hydroxyapatite nanoparticles are less aggresive;
- the method shows minor disadvantages in terms of used solvent (isopropanol, environment friendly solvent (Wei t'O method uses CFC (chlorofluorocarbon = freon);
- the treatment is simple and requires no special equipment;
- the treatment with hydroxyapatite nanoparticles of the paper allows concomitantly chemical restoration and biological disinfection (inactivation of fungi from Aspergillus şi Penicillium classes.

Class 11. Printing and advertising

38.3

Title **Multifunctional Bicomponent Acrylic Membranes and Process for their Obtaining**

Authors Sârbu Andrei, Sandu Teodor, Sârbu Liliana, Lungu Anamaria

Institution **ICECHIM, Bucharest**

Patent no. A/00139/ 08.02.2013

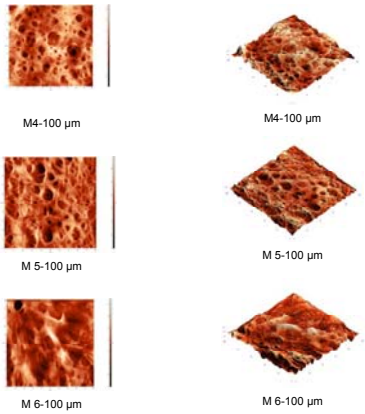
Description

The invention presents the obtaining of multifunctional bicomponent acrylic membranes, having micro and ultrafiltration uses, having good mechanical properties and on which are covalently immobilized enzymes, with application in the filtration of waste waters and in biotechnology, as well as the process for their obtaining.

The invention is based on wet phase inversion of a solution of 2 polymers: the first is an acrylic copolymer and the second is polyvinyl alcohol (PVA).

The phase inversion takes place in a bath containing 2 nonsolvents for the acrylic copolymer but a nonsolvent and a solvent for the PVA, the difference in the coagulation rate leading to the pore formation and polyvinyl alcohol leading to an increase of the hydrophilicity of the membrane. After the membrane functionalisation an enzyme is covalently bounded.

Class 1. Environment - Pollution Control



AFM Images of 3 membranes at various ratios Copolymer: PVA

38.4

Title **Microbial Composition useful for Agriculture and Preparation Process**

Authors Velea Sanda, Popescu Mariana, Oancea Florin
Institution **ICECHIM, Bucharest**
Patent no. **RO123027/30.07.2010**

Description

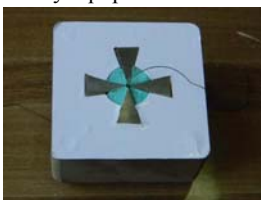
The invention relates to a microbial composition used in the organic agriculture practice and to a process for preparing the mentioned composition. According to the invention, the product is represented by a microbial composition based on antagonistic viable micro-organisms immobilized in bio-polymeric matrices, consisting of 10...15 parts of pre-jellified bio-polymeric matrix, 0.5...3 parts of concentrated aqueous suspension of viable microbial cells, 1...5 parts of emulsifier, 0.1...0.5 parts of milk powder as stabilizer, nutritive and antioxidant supplement, the parts being expressed by weight. According to the invention, the process consists of three main stages of processing the bio-materials, namely: hydrothermal pre-jellification of bio-polymers, at temperatures ranging between 80...100°C, the emulsification of the useful aqueous micro-organism suspension and the determination of the suspension-emulsion by jell-immobilization, with the maintenance of the comfort parameters of the viable cell: the temperature ranging between 25...60°C, pH ranging between 6.8...7.5. The product of the invention can be formulated as a gel, paste, wetable powder, granules, pellets or can be used as inoculum on lignocellulosic absorbent substrates for the manufacture of repressive mulch needed for nutrition and protection crops in conservation farming system. This invention has the advantage of achieving a bioactive microbial composition intended as controlled release system of active ingredients antagonistic microbial for crop diseases and pests, using non-toxic, biodegradable, accessible and inexpensive raw biomaterials from renewable natural resources.

Class 3. Agriculture and Food Industry

National Research & Development Institute for Textile and Leather

39.1

Title	**Handheld magnetizing device of composite magnetic yarns**
Authors	Grosu Marian-Cătălin, Hanganu Radu, Hossu Ioan, Simion Alecsandru, Avram Dorin, Horga Gheorghe
Institution	**National Research & Development Institute for Textile and Leather**
Patent no.	Patent application No. A/00566 / 30.07.2012
Description	The invention means a new smart and easy to use device for multi-polar magnetization of magnetic yarns obtained by coating with magnetic materials or by spinning of magnetic filaments/fibers. The multi-polar magnetizing device contains a number of Neodymium-Iron-Boron (Nd-Fe-B) permanent trapezoidal magnets, each of this heaving a number of two polar peaks. The composite magnetic yarn is conducted through the polar peaks that concentrate the magnetic field lines produced by Nd-Fe-B permanent magnets. Thereby the composite magnetic yarn is magnetized on multi radial directions.
Class	5. Industrial and laboratory equipments



Military Equipment and Technologies Research Agency Armaments Test & Evaluation and Scientific Research Centre

40.1

Title	**AUTONOMOUS VEHICLE SYSTEM COMMON PLATFORM FOR TRACKING, GUIDANCE, OBSERVATION AND MEASUREMENT LOCATION**
Authors	Plesa Cornel, Lapadat Daniel, Alexei Adrian, Axente Corneliu, Codrea Sabin, Gustil Dumitru
Institution	**Military Equipment and Technologies Research Agency Armaments Test & Evaluation and Scientific Research Centre**
Patent no.	Pending
Description	The system is composed of autonomous ground and air vehicles, to be extended to naval vehivule Vehiculelele designed modular and can be configured according to user requirements
Class	8. Aviation, car industry and transportation

40.2

Title	**MOBILE EQUIPEMENT FOR POLITRAUMA TREATMENT**
Authors	Țigleanu Laura, Mazăre Camelia, Năcioiu Nicolae, Șuteu Daniel, Gherghina Ion, Dumitru Marin
Institution	**Military Equipment and Technologies Research Agency Armaments Test & Evaluation and Scientific Research Centre**
Patent no.	Pending
Description	The equipment ensures the treatment in case of emergency for the under-jaw fractures, with or without osseous fragment dislocation and controls the direction of osseous development/regeneration
Class	12. Safety, protection and rescue of people

Biotehnos S.A.

41.1.

Title	The development of phytotherapic products with action against cutaneous inflammatory disturbances – a genuine application of the new biotechnological infrastructure of R&D from Biotehnos
Authors	Olariu Laura Zglimbea Lenuta, Dumitriu Brandusa, Ene Manuela Diana, Nita Roxana Andreea, Dinca Gabriela
Institution	**Biotehnos S.A.**
Patent no.	A00618/ 23.08.2012, 922/ 22.08.2012
Description	Biotehnos - a Romanian company - has managed to develop in three years a R&D infrastructure at international standards, thus implementing its own original concept of interrelationships: Research - Application - Capitalization. As a consequence of Biotehnos R&D infrastructure development (acquisitions of LC-MS, RT-PCR, analysing system for transdermal preparations, irradiation system for bioanalysis, among others) there were obtained several phytherapic products with cumulative dermal restructuring and antiinflammatory actions for treatment of various pathophysiological manifestations such as cutaneous tissue cellulitis, peripheral edema, dark circles. Original combination of bioactive components from various plants meant for these phytherapic products' development determined the integration of the obtained results into a patent that brings in the pooling of **stimulating dermal restructuring actions** given by the cellular and protein turn-over and the adhesion process cell - extracellular matrix, the **sunscreen effect** by inducing cellular protection against apoptosis, together with antioxidant, anti-inflammatory and anti-angiogenic effects against UV radiation, **anti-vascular inflammation** through the inhibition of pro-inflammatory cytokines IL6 and IL8 and monocyte - endothelium adhesion molecules overexpression (ICAM and VCAM) and, finally, the **anti-vascular permeability** through VEGF factor inhibition. All these effects are evidenced by specific tests for each one in part. The input in Biotehnos' biotechnology research infrastructure was made on the basis of the project POS 275 / CNRS 6009 CTR 74/2009, while the patent development was made in the frame of the project POS 383 / CNRS 6009 CTR 107/2010.
Class	4. Medicine - Health Care - Cosmetics

SC Erika Power Systems SRL

42.1.

Title	**Vision 1712-Communication and underwater inspection system**
Institution	**SC Erika Power Systems SRL** **SC Atlantis Mar Group SRL**
Patent no.	**Pending**
Description	**VISION 1712** is a video and communication system designed to be used by diving teams. The equipment can be easily operated and its supports both video and voice communication by one diver and also fitted with internal and external recording devices. Additionally the system supports wireless communications that could prove very useful for tender or any other third party operator. The underwater camera is fitted with panel adjustable LED array designed to enhance visibility when needed. The state of the art video camera is incorporated in a watertight housing which is fitted in a special glass with very high resistance and clearance. The camera has auto image adjustment, autofocus, light compensation and also zoom in/out functions which can be adjusted from the control station. The cable design allows the equipment to be operated for video and audio transmission simultaneously and separately. The display is a 17' daylight viewable with high brightness and wide viewing angles which offers excellent clear image of underwater operations. **VISION 1712** offers up to 72 hours of continuous inbuilt audio and video recording. The system is equipped with on internal DVD-RW and also USB 2.0 port for external devices. The system is powered with 220V a.c., 50 Hz and has internal rechargeable batteries that can keep the equipment powered up to 4 hours. The surface control station incorporates audio and video controls and also fitted with trackball that makes the intuitive on screen menu very easy to operate.
Class	8. Aviation, car industry and transportation

SC HIDROELECTRICA SA

43.1	
Title	**Automatic float deviation facility**
Authors	Raicu Ticusi Pantelie, Nemtoiu Simona Greta, Poenaru Dragos Andrei, Grecu Marius Cristian
Institution	**SC HIDROELECTRICA S.A.**
Patent no.	A / 00626 / 28.08.2012
Description	The invention refers to an automatic float deviation facility that equips the reservoirs of hydroeletric plants plants and it is mounted upstream the hydroelectric dam. The float means: root caps, twigs, cans, plastic recipients. The installation, according to the invention, has the following advantages:-ensures the automatic float deviation, safe for the dam -reduced complexity
Class	2. Energy and sustainable development

SC HOFIGAL EXPORT -IMPORT SA

44.1.

Title	**Cosmetic composition based on fresh plant juices, designed to delay skin aging process. (CIULEANDRA)**
Authors	S. Manea, V. Tamas, A.D. Raiciu, N. Radulescu
Institution	**SC HOFIGAL EXPORT –IMPORT SA**
Patent no.	12.3484/2009
Description	The invention is a range of 3 products (face cream / day / night, body lotion) designed to nourish the skin beauty and wrinkling delay. As a result, the active substances are with great complexity and effectiveness with essential nutrients and antioxidants from: gemoderivate, barley, Mallow, Amaranth, Milk Thistle, hemp, Blackseeds, Echinacea.
Class	4. Medicine - Health Care - Cosmetics

44.2.

Title	**Natural herbal product with biotrophic properties, energizing and vitalizing and process for obtaining it. (Larvalbina)**
Authors	Manea Stefan
Institution	**SC HOFIGAL EXPORT –IMPORT SA**
Patent no.	A 201200103/16.02.2012
Description	It is a bee product made in the form of capsules, for an oral easy administration. Has remarkable biotrophic, energizing, revitalizing and delay the aging process effects. It contain the active substance like essential nutrients complex from bee larvae, collected and processed under special conditions, in combination with Spirulina biomass.
Class	4. Medicine - Health Care - Cosmetics

44.3.

Title	**Natural herbal product for the prevention and treatment of chronic constipation (Comprilax)**
Authors	Viorica Tamas, Manea Stefan, Gabriela Denisa Rizea
Institution	**SC HOFIGAL EXPORT –IMPORT SA**
Patent no.	2009003711/ 13.04.2009
Description	It is a natural phytoterapic tablet form for an oral administration for the prevention and treatment of constipation due to various causes by rebalancing the secretion and the discharge functions of the large intestine. Contains beneficial substances from: Prunes, Aloe arb., Cassia ang., Helianthus tube. and certain essential oils
Class	4. Medicine - Health Care - Cosmetics

44.4.

Title	**Gel for burns and process for obtaining it (Arsutrat-Plagotrat)**
Authors	Manea Stefan, Viorica Tamas, Catalin Iordachel
Institution	**SC HOFIGAL EXPORT –IMPORT SA**
Patent no.	125505/2011
Description	Topical gel product with healing properties, cleansing, soothing and powerful dermorestitutive, and dermoregenerative. The product is obtained by adsorption of collagen powder with natural compounds hydro and lipo-soluble (ω 3 fatty acids, lipoproteins, glycoproteins, lecithin, carotenoids, hiperozides, triterpene acids, vitamins, etc.), who are high efficacy compounds in restoring normal epithelial tissue without keloids.
Class	4. Medicine - Health Care - Cosmetics

SC SHUNGIT COM SRL

45.1

Title	**Slippers or shoes for bio-energizing**
Authors	Cristian SANDU, Marius ARGHIRESCU, Gheorghe NEDELCU, Nicolae NĂCIOIU
Institution	**SC SHUNGIT COM SRL**
Patent no.	Pending
Description	The vital processes of survival and interaction with the environment, organisms produce many changes you physico-chemical properties. On live next body processes referred produce useful substances and substances unnecessary and often harmful. Most of these substances are harmful free radicals. They are produced either in the metabolism and interactive environment, as well as on various diseases and their therapy. A device that can help to reduce, neutralize and remove excess free radicals is described below. It comprises the following layers arranged in the following alternative (copper, steclotextolit, copper, Sung, copper). The assembly is connected firmly to a ground terminal. The structure is similar to a circuit described RLC (resistance, inductance, capacitance) or (resistor, coil, capacitor). Classic coil being replaced by special shungit structure.
Class	14. Other

45.2

Title	**Electromagnetic deprivation camera built-based compositions Shungit**
Authors	Cristian SANDU, Gheorghe NEDELCU, Nicolae NĂCIOIU
Institution	**SC SHUNGIT COM SRL**
Patent no.	Pending
Description	(Shungitul is a polymorphic mineral rock, which received this name from the village of Shunga in Karelia where it was discovered) The invention relates to a modular construction of mineral-based material contained in Shung with beneficial effects in the treatment of conditions such as: * Improve sleep; * Eliminate stress reactions in the body; * Improved functional status of the central nervous system; * Increased efficiency and quality treatment of cardiac patients; * Increased effectiveness of preventive and therapeutic vaccines; * Stabilizing function vegetovasculare;

	* Increase the efficiency of treatment of degenerative disc disease and osteoarthritis; * Activation of the immune system of the human body etc
Class	14. Other

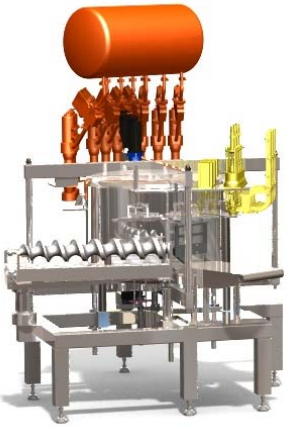
45.3

Title	**Shungit-based products using bioterapy and energy**
Authors	Cristian SANDU, Gheorghe NEDELCU
Institution	**SC SHUNGIT COM SRL**
Patent no.	Pending
Description	The above products have special compositions in their composition based Shung (Shungitul is a polymorphic mineral rock, which received this name from the village of Shunga in Karelia where it was discovered). Shungitul of their composition and structures present in concentrations gives them therapeutic properties to use in a lot of affections. Use and conditions that can benefit or total elimination were pretty good improvement are detailed in the individual product.
Class	14. Other

Venqo Engineering SRL Romania
Venqo Eurl France

46.1

Title	**Mechanism for the transport and positioning of containers by independent and re-circulating trolleys**
Authors	Thomas Cocirta
Institution	**Venqo Engineering SRL Romania** **Venqo Eurl France**
Patent no.	FR2933681
Description	High speed, neck transfer mechatronic system including containers infeed, positionning in front of filling and capping stations and out-feed. This independent module is designed as a platform ready to host filling kits, capping kits and cabin. The result is a complete filling-capping equipment, two times smaller and two times faster than conventional in-line machines, and offering the best price / performance ratio on the market.
Class	6. Mechanical Engineering - Metallurgy



SC EnviroScopY SRL Romania
EnviroScopY SA Switzerland

47.1

Title	**^{ESY}LIDAR - a new powerful configuration for 3D monitoring of tropospheric aerosols and clouds**
Authors	Ovidiu-Gelu Tudose, Ioan Balin
Institution	**SC EnviroScopY SRL Romania** **EnviroScopY SA Switzerland**
Patent no.	Pending
Description	In the present context of efforts to develop accessible cost effective high-tech techniques for Earth Atmospheric observations of relevant parameters for climate triggering as aerosols and clouds or temperature and water vapor this paper is presenting the status of a LIDAR system development for profiling with high temporal (min) and spatial (m) resolution of aerosols and clouds properties. The new up-gradable configuration of ^{ESY}LIDAR is based on a powerful Nd:YAG 30 Hz pulsed laser (35 mJ at 355 nm, 100 mJ at 532 nm, 200 mJ at 1064 nm), a 40 cm Newtonian telescope and on an new opto-mechanics detection module built in an “eye geometry” considerations. As applications, temporal and vertical variation of mixed aerosol mass concentration, 3D monitoring of clouds, Saharan dust or volcanic ash, Planetary Boundary Layer (height, dynamics, structure), depolarization study (aerosols shape), anti-hail and fight against fire and droughts complementary tool or meteorological forecasting (i.e. using PBL).

Class 5. Industrial and laboratory equipments

48.1

Title **Barbeque whit sliding valve**

Authors BERDILA OCTAV

Institution **S.C. MIC IND S.A.**

Patent no. Pending

Description Grill whith cast iron cooking surface and tray to feed the fire. Grill is equipped with removable legs

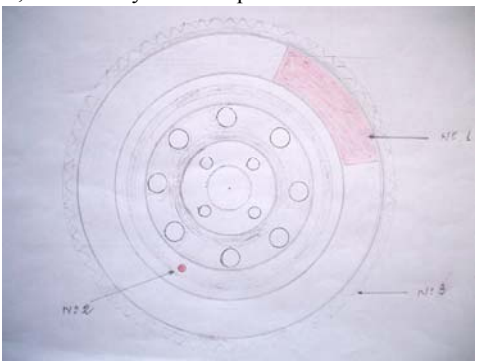
Class 14. Other

48.2.

Title EN	**Miniportable container for therapy salt**
Authors	Lupu Vasile
Patent no.	Pending
Description EN	The invention relates to a portable container of salt based on therapy which has a healing effect on the body. The problem solved by this invention is the outpatient treatment of all stakeholders. The device is constructed from a container lined with insulating material and condensation, feedstock solid NaCl is inserted in the filter paper. This device can be transported easily by people interested in this therapy which has healing effects on ORL diseases (tonsillitis, sinusitis, pharyngitis, rhinitis, respiratory disinfects). Also it has influence on sleeplessness. Breathing in the presence of the container vent lungs, being beneficial during sleep when the body is at rest, helping in disappearance of the person snoring . Container can be placed near the bed when the person is resting in order to disinfect the airways, reducing fatigue and risk of cardiovascular disease. This invention has the advantage of widespread use because it has a poratable character and especially home treatment of persons who suffer.
Class no.	4. Medicine - Health Care - Cosmetics
Image/ Photo	

48.3.

Title EN	**Tire full of polyurethane foam**
Authors	Lupu Vasile
Patent no.	Pending
Description EN	The invention relates to fill tire with polyurethane foam which has fire resistance class B3 harmless to the ozone layer. It is used for filling and rapid isolation tires of tractors, trailers, mowers. The resistance temperature after filling and curing is 40-90 C. Inside the tire must be dry and clean. The material is inserted directly in tubeless tires. The tire must be without valve. Curing time is 5-24 hours and depends on the ambient temperature and humidity. The advantages of this inventions would be: • Save money and time by excluding flat tire ;

	• The invention is accessible to anyone because is cheap an very efficiency; • Easy operation and maintenance.
Class no.	8. Aviation, car industry and transportation
Image/ Photo	

48.4.

Title	**Installation of water quality improvement using pyramid effect**
Authors	Lăzăreanu Mircea
Institution	**College P.P.Carp Ţibăneşti - Iaşi**
Patent no.	Pending
Description	Own contribution in the pyramid effect is the use of quartz crystals that are positioned on steel wire network as the north-south magnetic field. After a residence time of water in the plant pyramid there is a clear improvement of gustatory and achieving a comforting effect. Residence times and the number of crystals relative to their volume or quantity of water has been determined experimentally.
Class	1. Environment - Pollution Control

48.5.

Title EN	**Autonomous Energy Supply System**
Authors	Gavrilas Dumitru Gabriel
Patent no.	A/00838 / 19-11-2012
Description	This is one attachment for generation clean energy.
EN	Energy and sustainable development
Class no.	2. Energy and sustainable development

B-dul Carol I, nr. 2 Iasi
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THE PALACE OF CHILDREN, IAȘI

"The Palace of children is an educational institution which deals specific instructive- educational activities outside school classes, where children complete their knowledge and go thoroughly into some domains, develop skills according to their calling and options and where their spare time may be organized in educational programs. These free activities may be attended, according to their own choice by children under the school-age, elementary school children, middle school, vocational school and high school students as well as children coming from orphanages, irrespective of nationality, sex and religion, according to their interest, skills and preferences." (Excerpt from the Regulations of organisation and functioning of Clubs and Palaces of Children)

Founded in 1953 under the denomination of the House of Pioneers with only seven clubs, the present Palace of Children has undergone dramatic changes as far as the number of clubs and their diversity is concerned.

Nowadays the Palace of Children functions with sixty clubs focused on cultural, artistic, technical, practical, scientific, sportive and touristic domains. They appeal to the 76.154 children in kindergardens, elementary schools, middle schools, vocational schools and high schools in Iași.

The institution owns the apparatus and materials necessary for the good working of the clubs. At present, the Palace of Children has connections with similar institutions in 12 countries on 3 continents.

B-dul Carol I, nr. 2 Iasi
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PALATUL COPIILOR, IAŞI

"Palatul Copiilor este o instituţie de învăţământ în care se desfăşoară activităţi instructiv-educative specifice, în afara cursurilor şcolare, prin care se aprofundează şi se completează cunoştinţe, se dezvoltă aptitudini potrivit vocaţiei şi optiunilor copiilor, se organizează petrecerea timpului liber prin programe educative.

La activităţi pot participa în mod gratuit şi la libera alegere, copii preşcolari şi elevi din ciclul primar, gimnazial, profesional, liceal şi din casele de copii, fara deosebire de nationalitate, sex şi religie, corespunzator intereselor, aptitudinilor şi preferinţelor lor."

(Extras din Regulamentul de organizare şi funcţionare a cluburilor şi palatelor copiilor)

Înfiinţat în anul 1953, sub denumirea de Casa Pionierilor, având un număr de 7 cercuri, actualul Palat al Copiilor a cunoscut o dinamica puternică în ceea ce priveşte numărul de cercuri şi diversitatea lor.

În prezent la Palatul Copiilor functionează un număr de 60 de cercuri cu profile din domeniile cultural-artistice, tehnico-ştiintifice, tehnico-aplicative şi sportiv-turistice. Acestea se adresează celor 76,154 de copii din grădiniţe, şcoli primare, gimnaziale, profesionale şi liceale din municipiul Iaşi.

Activităţile sunt conduse de o echipa de cadre didactice calificată şi specializată pentru activitatile de timp liber, formată din profesori, ingineri, maiştri coregrafi şi antrenori.

Unitatea este dotată cu aparatură şi materialele necesare unei bune desfăşurări a activităţii specifice din cercuri. În prezent, Palatul Copiilor întreţine legături cu unităţi de profil similar din 12 ţări, de pe 3 continente.

Palatul Copiilor
IAŞI
O POARTĂ CĂTRE VIITOR
Bd. Carol I nr. 2
Iasi, jud. Iasi, cod 700506
Tel/Fax: +40 232 410.802
Email: pciasi@gmail.com

MINISTERUL EDUCAȚIEI CERCETĂRII TINERETULUI ŞI SPORTULUI

THE PALACE OF CHILDREN, IAŞI

1. Senzor de prezenţă cu raze infraroşii

BALAN GHEORGHIȚĂ - cl. a X – a

PÎRÎU ADRIAN IOAN – cl. a X – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

2. Sursă de inaltă tensiune pentru laborator

ILIESCU ALEXANDRU - cl. a VII – a

COVACI ADRIAN – cl. a IX – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

3. Robot experimental – „Sumo”

COVACI ADRIAN – cl. a IX – a

POPESCU ANDREI – cl. a IX – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

4. Sistem energetic neconvenţional

MIHALACHE MIHAI – cl. a VII – a

ILIEVICI ALEXANDRU – cl. a VII – a

AVADANEI DANIEL – cl. a VI – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

5. Vehicul de agrement solar

ILIEVICI ALEXANDRU – cl. a VII – a

COVACI ADRIAN – cl. a IX – a

GHIAŢĂ SORINA – cl. a XII – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

6. Tablă magnetică – şah - pentru demonstraţii

COHAL ALEXANDRU – cl. a XII – a

MOTOC SMARANDA – cl. a VI – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

7. Anemoscop – vant, intensitate, direcţie **-**

AXINTE ANDREI – cl. a VII – a

POPESCU ANDREI – cl. a X – a

prof. PANTELIMONESCU REMUS, Palatul Copiilor Iaşi

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

8. Ou rotitor cu LED–uri

ROMANIUC RADU – cl. a XII – a

prof. PERJU CONSTANTIN- Palatul Copiilor Iaşi

9. Navă de agrement

HARIGA CODRIN – cl. a VIII-a

BALAN PETRU –cl.a XII-a

prof. MIHAI STRATULAT, Palatul Copiilor Iaşi

prof. CARMEN SANDU, Palatul Copiilor Iaşi

10. Casa "ECO"

POPESCU IRINA– cl. a IV – a

NICULAITA TEODORA – cl. a IV – a

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

11. Locuinţă de vacanţă –cu sistem energetic independent-

MOTOC SMARANDA cl. a VI – a

POPESCU ANDREI – cl. a X– a

prof. COLBU GHEORGHE, Palatul Copiilor Iaşi

***

12. „Compoziţii"

VIERU ALEXANDRU – cl. a X-a

MARIAN BIANCA-MARIA – cl. a VIII-a

DAMIAN DRAGOŞ – cl. a VII-a

AMARANDI LIDIA – cl. a X-a

prof. MADALINA TOMA Palatul Copiilor Iaşi

13. „Compoziţii"

POPA COSTEL – cl. a X-a

MAXIM ANCA – cl. a XII-a

STOICA ALEXANDRU SILVIU – cl. a XII-a

prof. COLBU DUMITRU-EUGEN Liceul Tehnologic "Oltea Doamna" jud. Suceava

Agenţia de Stat pentru Proprietatea Intelectuală a Republicii Moldova (AGEPI)
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Fax: +373 (22)440119
E-mail: office@agepi.gov.md
URL: www.agepi.gov.md
Program: luni-vineri: 8:00-16:30
Director general - dr. Lilia BOLOCAN

Agenţia de Stat pentru Proprietatea Intelectuală (AGEPI) este oficiul naţional şi unica autoritate care realizează protecţia juridică a proprietăţii intelectuale sub formă de *proprietate industrială, drept de autor şi drepturi conexe* pe teritoriul Republicii Moldova. AGEPI înregistrează şi eliberează titluri de protecţie juridică a obiectelor de proprietate industrială (OPI): invenţii, mărci, indicaţii geografice, denumiri de origine şi specialităţi tradiţionale garantate, desene şi modele industriale, soiuri de plante, topografii ale circuitelor integrate, înregistrează obiecte ale dreptului de autor şi drepturilor conexe, rezultatele cercetărilor ştiinţifice.

De asemenea, AGEPI înregistrează contracte de transmitere a drepturilor asupra OPI (cesiune, licenţă, franchising), atestă şi înregistrează mandatarii autorizaţi în proprietate intelectuală, implementează programe de formare şi perfecţionare a specialiştilor în domeniul proprietăţii intelectuale, editează Buletinul Oficial de Proprietate Industrială (BOPI), acordă consultanţă şi prestează servicii de cercetări documentare în domeniul protecţiei PI solicitanţilor naţionali şi celor de peste hotare, etc.

The State Agency on Intellectual Property of the Republic of Moldova (AGEPI)
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Tel.: (+37322) 400525, 400592, 400593
Fax: (+373 22) 440119
E-mail: office@agepi.gov.md
URL: www.agepi.gov.md
Working Program: Monday-Friday 8:00-16:30
Director General: Dr. Lilia BOLOCAN

The State Agency on Intellectual Property (AGEPI) is the National Office and the only authority which carries out legal protection of the intellectual property in the form of industrial property, copyright and related rights on the territory of the Republic of Moldova. AGEPI registers and issues titles of legal protection for industrial property objects: inventions, trademarks, geographical indications, appellations of origin, traditional specialties guaranteed, industrial designs, utility models, plant varieties, topographies of integrated circuits, registers copyright and related rights objects, and scientific results.

AGEPI, also, registers assignment, license and franchising agreements concerning the rights of industrial property objects, certifies and authorize the activity of patent attorneys, implements training and upgrading programs for the specialists in the field of intellectual property, publishes the Official Bulletin of Industrial Property (BOPI), provides consulting and renders search services on issues of intellectual property protection to national and foreign applicants, etc.

BURSE DOCTORALE PENTRU PERFORMANŢA ÎN CERCETARE LA NIVEL EUROPEAN (EURODOC)

Contract nr. POSDRU/88/1.5/S/59410

Proiectul, finanţat din fonduri europene şi de Guvernul României are ca **obiectiv general** dezvoltarea capitalului uman pentru cercetare prin programe doctorale pentru îmbunătățirea participării, creșterii atractivității şi motivaţiei pentru cercetare. Realizarea activităţilor proiectului a contribuit esenţial la formarea şi dezvoltarea tinerilor cercetători la nivel european, adoptând o abordare interdisciplinară în domeniul cercetării, dezvoltării şi inovării.

Caracterul inovativ al proiectului EURODOC se remarcă prin următoarele:

- ***Tematica inovativă a tezelor de doctorat*** punctată prin aceea că tezele au fost realizate în laboratoare performante din cadrul Universităţii Tehnice „Gheorghe Asachi" din Iaşi/ Universităţii „Babeş Bolyai" din Cluj Napoca (dotate cu sprijinul financiar al proiectului EURODOC) precum şi în Universităţi/Centre de cercetare de prestigiu din Uniunea Europeană.
- ***Cereri de brevet de invenţie*** realizate de către doctoranzi în colectivul de cercetare al Departamentului sau în colective interdisciplinare de cercetare.
- ***Lucrări ştiinţifice publicate*** în număr de aproximativ **600** şi ***lucrări ştiinţifice prezentate*** în număr de aproximativ **370**.
- ***Recunoaşterea internaţională a tezelor valoroase*** prin realizarea unui număr de **25** Acorduri cadru de colaborare/Acorduri de cotutelă.
- ***Titlurile de doctor în ştiinţe*** obţinute de **116 doctoranzi**.

Director proiect: Prof. univ. dr. ing. Mihaela-Luminiţa LUPU

European Social Fund
Investing in people!

"DOCTORAL STUDIES FOR EUROPEAN PERFORMANCES IN RESEARCH AND INNOVATION (CUANTUMDOC)"

POSDRU/107/1.5/S/79407

strategic project funded for period: 2010 – 2013

Beneficiary: "Gheorghe Asachi" Technical University of Iasi, Romania
Partner: "Babes Bolyai" University of Cluj-Napoca, Romania

Target group: 101 PhD students

Project funding: 15.723.065,47 RON

Main project objective is

the application of management, research and teaching strategies to improve the initial training of future scientists through doctoral studies program, according to the Bologna process, the development of specific research skills, but also general skills: research management, language and communication skills, research, writing, publishing and scientific communication, the use of modern means of ICT, entrepreneurship transfer of research results. Developing the human capital for research and innovation will contribute to long-term doctoral training at European level with interdisciplinary concerns. PhD financial support will ensure participation in national doctoral programs and Research Internships in research centers and universities in the EU.

The project mission is a young researcher training tailored to the market economy and new technologies, with theoretical, practical, economic and international management knowledge, which will promote sustainable development and environmental protection principles.

Project Manager:

Professor Mihai BUDESCU, Ph.D eng.

Proiect cofinantat din Fondul Social European prin Programul Operational Sectorial pentru Dezvoltarea Resurselor Umane 2007 - 2013
Axa prioritară: 1 "Educatia si formarea profesională în sprijinul cresterii economice si dezvoltării societătii bazate pe cunoastere"
Domeniul major de interventie: 1.2. "Calitate în învătământul superior", Cod Contract :POSDRU/86/1.2/S/62307
Beneficiar: Academia de Politie "Alexandru Ioan Cuza" Partener: Universitatea "Alexandru Ioan Cuza" Iasi

Promovarea cercetării științifice din domeniul criminalisticii în activitatea judiciară

Obiectivul proiectului

Proiectul este conceput să dezvolte, ca obiectiv principal, un program de MASTER care să asigure o pregătire complexă specialistilor ce își desfăsoară activitatea în domeniul criminalisticii - în fapt Criminalistica acoperă cea mai mare parte a activitătilor cu caracter aplicativ care se desfăsoară în domeniul judiciar.

Master in Criminalistica

Programul de master in criminalistica are rolul de a educa participantii pentru a deveni cercetatori in forensic, oferindu-le posibilitatea de a acumula cunostinte deosebite de specialitate. Absolventii sunt incurajati astfel sa isi continue educatia si cu studii de doctorat.

Master-ul in forensic isi propune sa formeze absolventii pentru cariere in cercetare la institute de prestigiu cum ar fi institutele de medicina legala, de criminalistica din cadrul inspectoratelor de politie, dar si a altor centre de cercetare-investigare.

www.cercetaricriminalistice.ro

Obiective operationale

- Îmbunãtãtirea managementului universitar si cresterea capacitãtii universitãtilor partenere de a furniza, un program de master pentru pregãtirea corespunzãtoare a specialistilor criminalisti;
- Plan de învãtãmânt si programe analitice adecvate competentelor necesare masteranzilor pe piata fortei de muncã;
- Extinderea oportunitãtilor de învãtare si promovare a inovãrii în domeniul criminalisticii;
- Consolidarea cooperãrii dintre cele douã universitãti;
- Cooperarea cu principalele institutii din mediul profesional pentru implementarea cerintelor standardelor ocupationale din domeniu în programul de master.
- Dezvoltarea unor activitãti de cercetare stiintificã care sã implice si masteranzii;
- Elaborarea de cursuri si alte materiale documentare cu înaltã valoare stiintificã;

- Dezvoltarea si îmbunãtãtirea mobilitãtii cadrelor didactice si masteranzilor prin desfãsurarea de vizite de documentare în institutii de prestigiu din Austria, Franta, si Marea Britanie;
- Organizarea si desfãsurarea de manifestãri stiintifice cu participare internationalã;
- Extinderea utilizãrii TIC în activitãtile de predare/învãtare, management si planificare a activitãtilor prevãzute în program;
- Promovarea unei înalte interdisciplinaritãti stiintifice si tehnologice, o diversitate a cazuisticilor abordate ca bazã practicã;
- Impunerea si mentinerea standardelor academice în toate activitãtile prevãzute în program;
- Recunoasterea si valorificarea competentelor personalului didactic si potentialului de învãtare al masteranzilor;
- Acceptarea diversitãtii organizationale si culturale;
- Dezvoltarea si impunerea unui sistem de evaluare complex si flexibil;
- Îmbunãtãtirea serviciilor de documentare stiintificã si bibliotecã;
- Promovarea programului de master la nivel national si european;
- Realizarea si publicarea unui periodic al programului de master numit "International Journal of Criminal Investigation".