

SCIENTIFIC REPORT

1. Scientific content of the event (achieved objectives, presented themes, conclusions/obtained results, contribution to development of the future directions in the approached scientific field);

Exploratory Workshop WE6 “Environment, energy and clean technologies in obtaining of materials and advanced electrical products” approaches a thematic, which identifies new demarches in the approaching of some research directions with utilizations acknowledged by the international scientific community. The main objective of the organized manifestation consists of promotion of scientific collaborations between science peoples, researchers from different countries of the world with various preoccupations and professional experiences, for consolidation of collaboration and promotion of common participations to international projects. The thematic of this exploratory workshop aims the debate of new tendencies in domains of large actuality: environment, energy, clean technologies.

The themes presented in the conference frame have key-subjects, of major interest for national system of RDI. In the event program, were included 13 papers sustained by lecturers from Italy, Moldova Republic, Belgium, Germany, Canada, France and Finland with various thematics regarding the concept of sustainable development and recycling of some materials, necessity for creation of some integrated platforms for scientific computation of high performance, opportunity for application of some electrophysical technologies friendly with environment, the automatic control of the trains, development of new semiconductor materials, some experiences resulted from activity of a researches centres from Finland, Belgium and Romania (Galati and Bucharest).

Two synthesis materials about the problem of defiances on which the XXI century exposes to the society and for which expect an answer and interdisciplinarity between life sciences and exact sciences, aimed on communication between organisms, involved interesting positions regarding the researcher responsibility towards the communicated result.

Also, the energetic efficiency, necessity for energy saving and development of new sources was the object of the second presentation.

In the following, we present a short summary of thematics debated in those two days of the workshop:

“Scientific computation of high performance – an integrated platform” - Dr. Bogdan CRAMARIUC, IT Centre for Science and Technology, Bucharest, Romania and Digital Media Institute and Signal Processing Laboratory at Tampere University of Technology, Finland

High Performance Computing (HPC) represents an essential pillar of a modern society based on informational technology. On infrastructure level, HPC appeared and developed as result of necessities for computation applications from entire world. These applications become on every day more complex and with bigger requirements, both from point of view of necessary computation resources, and from point of view of interdisciplinary structure. In this context, HPC platforms represent an environment which facilitates collaboration between researchers from different domains that require scientific computation and facilities with high power of computation. By this HPC stimulates the advanced and interdisciplinary research, representing a step towards the integration in European and international networks of excellence. HPC platforms offer the possibility of a significant progress in a various domain of scientific and technological areas, like medicine, genomics, nuclear physics, aeronautics, communications, bio-informatics, pharmaceutical research, economic research, financial analysis etc.

"Defiance of the XXI century and technological answer" - Prof.dr.eng. Dumitru Felician LAZAROIU, Consultance DFL – Paris, France

XXI century has a series of indeterminate problems for humanity progress, from which many with social, political and humanitar character. As XXI century do not repeat the wars periods and other conflicts, which bring many suffering to humanity, there are possible solutions, by technological progress and access to these technologies, as well as to other social conquests of the humanity. Regarding the technological solutions, specialists contribution, electrician specialists contribution, beside other specialists, supported by international societies, is one of the most important, by assurance of new efficiency criteria of technical judgement and utilization of the newest conquests of the science.

"Researches regarding new possibilities for recovery, rehabilitation and efficient valorification of the iron and steel cinders- Prof.dr.eng. Maria NICOLAE, Politehnica University of Bucharest, Romania

Iron and steel industry, by its products, is one of the very important industries for all social life sectors, but in the same time, by its nature, large consumer of material resources and energy with high degree of pollution in any country. From this reason, the preoccupations for consumptions reduction, for resources protection, and for reduction of environment pollution made the object for researches of all social, economical and political factors in the last centuries. In this context, all countries conceived and put in practice priority programs in the Sustainable Development Domain. An important role in Sustainable Development of a country is of the education. Iron and steel higher education, generally our faculty, especially made and make important efforts for preparing of iron and steel engineers for reduction of raw materials and materials consumptions and of environment pollution degree. Activities developed in this domain by the ferrous metallurgy collective of the faculty consist on discovery of the most adequate technologies for production of ferrous metallic materials (cast iron, steel, ferroalloys) on the one hand and valorification of the iron and steel subproducts, cinder, powders, slurries, noxes, on the other hand. All these activities concretized by modernization of the existing disciplines, introduction of new disciplines in education plan, improvement and modernization of the research laboratories, development of base and technological scientific research, on base of contract, of students from licence, master and PhD students, also teachers. The results were the achievement of licence projects, dissertations and doctoral thesis, papers published in scientific journals and scientific sessions from country and foreign, publishing of handbooks and treatises.

In the same time with increasing without example of the steel quantity produced on global level, over 1.3 billions tones, the quantities of iron and steel subproducts increased proportional, which occupy by storage large agricultural surface and risk to pollute the environment in all components, water, air, soil.

The paper proposes to present new possibilities for recovery, rehabilitation and efficient valorification of the iron and steel cinders. Therefore, will be presented aspects related to the storage, characterization, rehabilitation and valorification of the iron and steel cinders from the elaboration of usual ferroalloys (with silica, manganese and chrome), from elaboration of the furnace cast iron and elaboration and refinement of steels.

"Electro-physical technologies: achievements and perspectives" - Prof.dr. Mircea BOLOGA, Institute of Applied Physics of the Sciences Academy from Moldova, Chisinau, Moldova Republic

Will be presented some elaborations and achievements, especially of the Institute of Applied Physics, regarding the electro-physical technologies and equipment. Are exposed results of the electrical actions researches for improvement of transfer processes, argumentation of some new technological processes and theirs achievement possibilities. Will be underline perspectives based on interaction of field, current and electrical discharges with homogenous and dispersed systems regarding the transfer of heat and mass by convection, boiling and condensation; particularities and possibilities for utilization of electrical fusion; electrical discharges for materials processing,

electroplasmolysis and electrofloat, dispersal and cavitation homogenization. Will be presented some achievements, possibilities and technological and technical perspectives.

“Social responsibilities of the enterprises, concrete expression of the sustainable development concept. Considerations upon development stage, performances and domain for utilization of photovoltaic panels for production of clean electrical energy”

- Prof.dr.ing. Liviu MASALAR, University from Liège, Belgium

The lecture begins with a short incursion in the history and definition of the concepts of Sustainable Development, Social Responsibility of the Enterprises, clean energies followed by the comparative presentation of the CSR evolution in USA, Europe, UK, Russia and Romania.

In the second part of the presentation, present some considerations upon the development stage, performances and domain for utilization of photovoltaic panels for production of clean electrical energy in the Europe west, in general, and the strategy adopted by the Belgium, especially.

“Development of some education and research plans in the echo-metallurgy domain to Faculty for Science and Environment Engineering (FSIM) from Bucharest” - Prof.dr.eng. Avram NICOLAE, Politehnica University of Bucharest, Romania

The paper refers to achievements and perspectives that are at FSIM, where, in the spirit of sustainable development dimensions, a new scientific branch, echo-metallurgy operates. Are presented the preoccupations and achievement of SIM Faculty in the Environment Engineering (EE) domain. The paper plan contains:

- structure of objectives from SIM Faculty according with Sustainable Development principles;
- scientific underlying of the EE objectives in formative-educational domain and RDI;
- content of education plan for EE.

“Automated control of trains for urban transport” - Dr.eng. Aurelia RUSU-PETROAIA, Thales Rail Signalling Solutions, Canada

Urban automobile congestion is now a reality in many cities of the world. With a estimation of 1 billion of cars on entire earth, and the cars number is in continuous increasing, soon the big cities will be confront with acute problem of urban transport. Reduction of agglomerations involves the reduction of gases emissions and improvement of air quality. The subways and trains networks for urban transport are huge consumers of energy. Multitude of complex subsystems as advanced signaling systems and intelligent communications can create new barriers for operators. In place of have a multitude of subsystems, Thales offers a communications system centralized for all subsystems, data being concentrated in a single point of man-machine interface. The correct choice of signaling system, also of system for trains control plays an important role in reduction of energy consumption. Modern trains are more rapidly, better equipped and more comfortable. With all these, new improvements can contribute to increasing of energy consumption. Advanced systems of signaling and control for urban trains supplied by Thales help to reduction of energy costs and help to maintaining of environment quality. Automated systems offer the possibility for regulating and optimization of traffic, automated reduction of delay times in stations, optimization of energy consumption.

“Impact studies, environment balance and Romanian strategy for sustainable development” - Dr.eng. Puiu Lucian GEORGESCU, “Dunarea de Jos” University, European Centre of Excellence on Environment Problems, Galati, Romania

Quality of UE member attained of Romania in 2007, assumes rights and clear responsibilities including the observance of European strategies and politics in the environment field. The increasing of investments level with potential impact upon the environment involves the implementation of a specific legislation regarding the control and reduction of impact of socio-economical activities on environment. Interacting expertize, scietific and technical, academic and industrial is a base component of the good practice in the sustainable development field. It is necessary a politics on medium and long time for development of scientific capacities and human resources capable to use international experience and assimilate to specific of Romanian society. European centre of excellence on environment problems developed from 1999 a collaboration

active at national and European level, both with academic and scientific partners, and with economic environment and civil society. These partnerships include experiences, opinions of participants and assure the components of sustainable development.

„SiC and AlN, new semiconductor materials with large forbidden band for power electronic devices and lighting systems with high efficiency” - Dr. Octavian FILIP, University of Erlangen-Nuernberg, Germania

In actual trend of activities for energy saving, for reduction of CO₂ emissions for improvement of global warming problem, one from the base targets would be the more efficient using of the energies. In this way, power electronic devices, which are used on the large scale in communications and transport system, systems for electrical energy production, cars, lighting systems, domestic appliance, must have more increased efficiency. However, classic power electronic devices based on silica (Si), in the most cases are not capable to have necessary properties, because the limited physical properties of this material. Therefore, new semiconductor materials, with large forbidden band as SiC and AlN are attractive as materials with potential which might replace with success the silica. Power electronic devices based on SiC and AlN were with success developed and demonstrated. In comparison with devices based on Si, these can operate at frequencies of ten times bigger, with power losses of 100 times smaller and operation temperatures of 3 times bigger. Using more efficient converters and rectifiers based on SiC and AlN, a reduction of actual necessary of energy until 50%, can be imagined. In this paper is presented shortly an introduction in the field of production and processing of these new semiconductor materials.

“Communication between microorganisms and challenge of interdisciplinarity between life science and exact science” - Prof.dr. Szabolcs LANYI, Sapientia University, Miercurea Ciuc, Romania

Behaviour of different species groups fascinates on researchers, but many centuries they couldn't answer scientifically to causes and observed communication ways. Last century served some surprises in this way, regarding the communication by chemical signals. Therefore, were recognized the feromons, chemical substances responsible of a series of interactions among animals, from the challenge of sexual instincts (libido) of some animals until mutual identification of the community members (bees family). From communication on chemical way field one of the last sensations consists on the phenomenon named Quorum sensing, important for the group strategy of the microorganisms. This phenomenon induces an individual behaviour adequate for collective strategy, like mechanisms of defence and aggression, function of effective quorum of the population. The last revelation in communication among species, represents the signaling between microorganisms by waves of electromagnetic nature. This communication way suggests the establishment of a resonance phenomenon, offering a new chance to researchers to be challenged to decoding some magnificent secrets, having as objective the possibility for metabolic mechanisms control in bio-technologies setting. It is clearly that the answer at these challenges will result only by filling of the goals that are in interdisciplinary space between biology and chemistry, between biology and physics using the entire arsenal of actual informatics.

„Technologies of electrostatic separation used to recycling of plastic metals and materials from wastes from informatic equipment - Eng. Ciprian DRAGAN, PhD student of University from Poitiers, France

Methods of electrostatic separation of granular materials use forces that are applied on charged and polarized bodies in intense electrical field. Recirculation of metals and plastic materials represents a new and very promising domain for applying of these methods. Exposure will be aimed on presentation of some innovative solutions, achieved in the frame of many research programs, at which collaborated research teams from University from Poitiers, from Technical University from Cluj-Napoca and from some universities and research institutes from France and Romania.

“Multidisciplinarity and infrastructure: Aspects of research for investigation and conservation of European cultural patrimony” - Dr. Elena BADEA, Università degli Studi di Torino, Italy

Research of cultural patrimony represents one of the research domains which known an increased interest and a significant development in the last centuries. Complex nature of the cultural goods

and the way in which they interact with environment and socio-cultural environment requires a multidisciplinary approach and research infrastructure capable to act in the same time and to answer to requirements imposed by ethic-social criteria involved by evaluation, conservation and rehabilitation of cultural goods.

This presentation illustrates an unique example in European panorama, namely creation of a specialists pole, a research infrastructure and an end-users networks for research and monitoring of degradation level of cultural goods from parchment. This thing represents the premises for development of conservative strategies and monitoring systems adequate for introduction of a standardized program for evaluation, harmonization of terminology, analytical methods and quality tests and for promotion of knowledges and technology transfer to direct users.

“Energy saving in „faucet” politics - Prof.dr.eng. Florin Teodor TANASESCU, CER-president, INCDIE ICPE-CA Bucharest, Romania

A civilization and a society, having as motor the electricity is complied due to resources depletion – oil, water, gas, coal – to some conformations at new conditions in which energy saving in industrial or domestic process, of services, becomes an element of maximum importance.

The paper presents the followed politics in this “faucet civilization” in which consumptions are “reduced”.

In the lighting domain are presented followed solutions, electrical machines and domestic appliance echo-designing, electrical driving in industrial processes, traction.

The experience of Romanian research in this domain and actual preoccupations are presented in communication, having as purpose the decreasing of “energetical intensity”, of energetic consumptions

Participants to this event appreciated the presented papers, scientific level and problems related to the transfer of a result, assessing the organization of this conference, the impact which can be generated by the results of this event in the future collaboration, establishment of some interdisciplinary teams, the necessity for permanent contacts.

Among more important ideas from papers presentation or from discussions, we mention the following:

- **the conference achieved the purpose**, in the way of achievement of a useful exchange of ideas, personal experiences in scientific plan and in European practices in developing of some projects, becoming useful for our researchers in the projects developing from intern and international plan.

In unanimity, specialists declared that the permanent organization of this conference can constitute a very efficient instrument in approaching of some future projects, establishment of some international teams integrated in European technological platforms.

- In the field of personnel formation, experience of some firms and institutions from France, Belgium, Finland which **by support of scholarships, masters and doctorates assures human resources of high qualification, must be more intense promoted in Romania**

- **Experience of some Romanian researchers, which come back in country after many years worked in laboratories of high technical performance, must be strong supported because can make shorter stages of transition by certain stages of research.** Utilization of some strong computation means for processes modeling – exemplified by communication of a Romanian which worked at NOKIA, it impose to be developed in numerous research domains: infrastructures, storages and images processing in various activity domains etc.

- **Concepts of sustainable development** applied in numerous European countries, should find a more important place in our society, in creation of a social responsibility of enterprises. Belgian and French experience, offers interest solutions for Romania

- Presentation of some electro-technologies developed and applied with success in industry and with important economic effects **must take part from the projects portfolio approached in the next stage**

- The conference secretariat **constitutes a data base of participants, a link to a existent SITE, for a rapid and efficient circulation of informations**

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- **The results achieved of our researchers justify a stronger involving in the process for decision assumption**

- Regarding the projects evaluation, it shown the practice of this activity in countries in which invited people act, presenting some important things which must be respected: **technical culture and assessor integrity; his notification is only technic, but decision for financing results from political directions of respective country development or international agreements**

Due to the exploratory character of the Workshop, from discussions resulted from analysis of papers included in program, resulted a series of thematics which could make the object of common researches. These themes are presented below:

- Development of some new semiconductor materials, based on SiC
- Development of some modern systems for electrical traction, including the automated driving
- Technologies for recycling of useful materials from cinders resulted from metallurgical processes
- Storage and processing of images in various processes; approaching of this method in the road state control
- Application of an electro-physical processes in efficiency increasing and perfect preservation of the vital characteristics of alimentary compounds

Participants thank for organization of this event, for useful ideas exchange and hope in a future collaborations between research teams. Romanian scientific world from foreign, valorification of this considerable research resource can become reality already being created the mechanisms of collaboration between Romanian researchers regardless of the country in which they are living.

2. **Informations regarding the event organization (summary) - max 2 pages**

National Authority for Scientific Research and Romanian Academy, under high auspices of the Then Premier of Romania organized the Conference “*Diaspora in Romanian Scientific Research*” in period 17 – 19 September 2008, in Bucharest. From 21 organized exploratory workshops, WE6, “Environment, energy and clean technologies in obtaining of materials and advanced electrical products” was organized by authorities mentioned above and in collaboration with INCDIE ICPE-CA Bucharest. This exploratory Workshop WE6 developed in period 17 – 18 September 2008.

The thematic of this exploratory workshop aims the debate of new tendencies in domains of large actuality: environment, energy, clean technologies and it was selected because in this domain there is potential and Romanian expertise.

The main purpose of the conference was that to create the premises for achievement of international inter- and trans-disciplinary collaborations and to contribute at increasing of visibility and international impact of the Romanian scientific results. The location was selected, thus the entire event develops in an adequate environment. Was selected the RIN GRAND hotel endowed with proper halls for conferences development.

3. The final program of the workshop: 17 and 18 september 2008

First day	
Morning session	Afternoon session
09:00 – 09:30 registration	11:30 – 12:15 Nicolae Maria
09:30 – 09:45 open word	12:15 – 13:00 Bologa Mircea
09:45 – 10:30 Bogdan Cramariuc	13:00 – 14:30 lunch break
10:30 – 11:15 Dumitru Felician Lazaroiu	14:30 – 15:15 Liviu Masalar
	15:15 – 16:00 Nicolae Avram

11:15 – 11:30 coffee break	16:00 – 16:15 coffee break 16:15 – 17:00 discussions and conclusions
Second day Morning session 09:00 – 09:45 Aurelia Rusu-Petroaia 09:45 – 10:30 Puiu Lucian Georgescu 10:30 – 11:15 Octavian Filip 11:15 – 11:30 coffee break	Afternoon session 11:30 – 12:15 Szabolcs Lanyi 12:15 – 13:00 Ciprian Dragan 13:00 – 14:30 lunch break 14:30 – 15:15 Elena Badea 15:15 – 16:00 Florin Teodor Tanasescu 16:00 – 16:15 lunch break 16:15 – 17:00 discussions and conclusions

4. Final list of key speakers – scientific title, last name, first name, signature, origin country, institution, address, phone, fax, email, short presentation of professional experience;

Dr. Bogdan CRAMARIUC – 1968 (birth year)

IT Centre for Science and Technology, Str. Av. Radu Beller, 25, Bucharest

Phone: 0724631804, Fax : 0213147249, E-mail: bogdan.cramariuc@citst.ro

1993-1994: Teaching assistant at Politehnica University of Bucharest, Faculty of Electronics and Telecommunications, Bucharest, Romania.

1994-2006: Researcher with Digital Media Institute and Signal Processing Laboratory at Tampere University of Technology, Finland.

Since 2007 with the “IT Center for Science and Technology” (CITST) as co-founder and managing director of the company.

Prof.dr.eng. Dumitru - Felician LĂZĂROIU – 1926 (birth year)

Consultance DFL – Paris, France

Address : 19, rue de Penthièvre, 75008 Paris, France, phone. (33)1.47.42.80.08, e-mail : df.lazaroiu@wanadoo.fr

Has 9 patents (in collaboration), the most part in servo-motors field for automatic driving, recorded also in France, USA, Germany, Japan; assistance in problems of quality assurance and European certification, with MCT and ICPE 1990–1992; mission ONU/PNUD – Program TOKTEN in quality assurance for European integration with MCT and other ministries with economic character, 1993-1995; assistance in creation of national system of quality, in the frame of European integration, with MCT and ICPE, 1996–1998.

Author or co-author of over 100 articles and technico-scientific communications, published in country and foreign; author or co-author of numerous books in domains: electrical machines; electronic components, electronic apparatus; technology of fabrication in electrotechnics, automatic electrotechnics; reliability and quality of components and systems, including of computation systems; theory of automatic systems; among these, 2 books were translated by Publishing Houses from foreign, in modified and added shape: „Elektrische Maschinen kleiner Leistung”; „Sum elektriceskih masini transformatorov”, Moscow.

Rewarded with premium „Traian Vuia” of Romanian Academy 1973; Médaille d’or to Trade from Caen (France), 1972, Geneva etc.

Prof.dr.eng. Maria NICOLAE – 1950 (birth year)

Politehnica University of Bucharest

Department of Engineering and Management of Metallic Materials Elaboration, Faculty of Science and Materials Engineering, 313 Splaiul Independentei, District 6, Bucharest

Phone: 0721 80 33 55

nicolae_maria@yahoo.com

Granted with the Big Award of Romanian Society of Metallurgy at National Symposium SRM, Braşov, România, 2000 for paper „Expert systems of diagnosis and on-line prediction for faults of semi-products continuous moulded on MTC1 from S.C. SIDEX Galati”, Medaille d'or la BRUSSELS EUREKA 2002 for patent „Lance pour post-combustion”.

Biography included in « Personalities dictionary », Tehnica Publishing House, Bucharest, 1996, pag. 252-WHO'S WHO in Science and Romanian Technique, 2000.

Researches regarding new possibilities of recovery, rehabilitation and efficient practical application of iron and steel cinders, research in the environment protection field

Prof.dr. Mircea BOLOGA -1935 (birth year)

Institute of Applied Physics of Sciences Academy from Moldova, Chisinau, str.Academiei 5, MD-2028, phone:738184, fax-738149, E-mail mbologa@asm.md; mbologa@phys.asm.md

Thermo- and electro-physics; enhancement of heat and mass transfer processes by electrical and magnetic actions; scientific underlying of advanced electro-technologies and technical means for their implementation.

Prof. dr.eng. Liviu MASALAR – 1945 (birth year)

University from Liège, Belgium

Department "Aérospatiale & Mécanique", Faculté des sciences appliquées,

Address: Chemin des Chevreuils, 1 - B52, B - 4000 Liège

phone & fax: 00-32-4-3669166

email: L.Masalar@ulg.ac.be

Professional experience: Professor to University from Liège, Belgium, Department of "Aérospatiale & Mécanique", Faculté des sciences appliquées

Head of department of "Systems of Mechanical Production and Metrology"

Titular of disciplines – *Management of Total Quality*, - *Analysis of risks and Work Security*, - *Machines-Tools with Numerical Control and Flexible Manufacturing*, - *Uncertainties of Measure and Dimensional Metrology*, - *Hydraulic and Pneumatic Systems*.

President of Administration Council of CQLL (Centre de gestion de la Qualité Liège- Luxembourg).

Preoccupations regarding the Social and Societal Responsibility of Enterprises, concrete expression of the Sustainable Development concept. Considerations on development stage, performances and utilization field of photovoltaic panels for production of “clean” electric energy.

Prof.dr.eng. Avram NICOLAE – 1941 (birth year)

Politehnica University of Bucharest

Department of Engineering and Management of Metallic Materials Elaboration, Faculty of Science and Materials Engineering, 313 Splaiul Independentei, District 6, Bucharest

phone: 021 402 95 92

ecomet@ecomet.pub.ro

Important activity in pollution field, contribution to creation of a current base for reporting of real pole level to harmonized norms to international legislation, research activity regarding the eco-efficiency and hipolluting technologies from industrial field.

Dr.eng. Aurelia RUSU-PETROAIA – 1958 (birth year)

Thales Rail Signalling Solutions, Canada, Software Engineering

1235 Ormont Drive, Toronto, Ontario, M9L 2W6, Canada

Phone: +1-416-748.4424/ ext 5211, e-mail: Aurelia.Rusu-Petraoia@thalesgroup.com

Experiences in SW field for process computers, systems in real time and industrial automations as result of works from FEA si ICPE works for automation of data acquisition processes, systems for temperatures regulation, other industrial applications using process computers. Almost 10 years of experience in magnetic materials field and theirs applications. Contributions at numerous research contracts for magnetic materials, research applied for permanent magnets and theirs applications (for example separator with permanent magnets). In the last years of experience in SW field for systems in real time for automat control of passengers trains for urban transport, optimization of energy consumption in frame of Thales Rail Signalling Solutions, Canada (part from Alcatel Transport Automation Sollusions until 2 years)

Dr.eng. Puiu Lucian GEORGESCU – 1960 (birth year)

“Dunarea de Jos” University, European Center of Excellence on Environment Problems

47 Domneasca Street., Galati, phone/fax + 40 236 319 329, e-mail: lucian.georgescu@ugal.ro, georgescul@appstate.edu

mobile: 0721 100 503, 0740 272 552

2007 – Expert, International Francophone Universities Agency, evaluator for Life sciences

2007 – Expert, United Nations for Development Program/Global Environmental Fund (UNDP/GEF), Environmental management

2007 - 2008, expert, FWC request No. 2007/145237 “Pre-feasibility studies of implementing biohazardous waste management schemes in BiH and development of programmes for introduction of biohazardous waste management under IPA programme“

"Researches and contributions regarding impact studies, environment balances and Romanian strategy for sustainable development"

Dr. Octavian FILIP – 1970 (birth year)

University of Erlangen-Nuernberg, Department of Materials Science

Martensstr. 7, 91058 Erlangen, Germany, phone: 0049 (0) 9131 8528157, fax: 0049 (0) 9131 8528495, e-mail: octavian.filip@ww.uni-erlangen.de

From 2003 Scientific Researcher (post-doctoral employee), Department of Materials Science 6, University of Erlangen-Nurnberg, Germany (<http://www6.ww.uni-erlangen.de/willkommen.html>)

□ Growth and characterization of bulk SiC and AlN crystals by Physical Vapor Transport (PVT) method.

□ Liquid Phase Epitaxial (LPE) growth of SiC from high temperature silicon based melts (SiGe, SiAl) under pressurized atmosphere.

Tasks: - defects (microipes) elimination by LPE on PVT grown SiC wafers,

- growth of highly doped p-type SiC thin layers.

- wafer processing

1999-2003 Scientific Researcher, Department of Metastable and Nanostructured Materials, Leibniz Institute for Solid State and Materials Research (IFW) Dresden, Germany (<http://www.ifw-dresden.de/>)

□ Solidification behavior of electromagnetically levitated and undercooled Nd-Fe-B melts. In-situ observation of the solidification kinetics.

□ Effect of the flow driving forces generated by alternating magnetic fields on the phase selection in solidifying metallic melts. Melt flow is contactlessly controlled by specially designed magnetic fields (two-phase stirrer), using the RF-floating-zone technique.

1995-1999 Scientific Researcher, Department of Magnetic Materials, Research Institute for Electrotechnics - Bucharest (www.icpe-ca.ro)

□ Application department – Design and development of magnetic devices with permanent magnets; magnetic circuits; magnetic couplings; magnetic bearings.

□ Development and characterization of Nd-Fe-B based magnetic materials.

□ Micro-production of Sintered and Bonded Nd-Fe-B permanent magnets.

Prof.dr. Szabolcs LANYI – 1944 (birth year)

Sapientia University of Miercurea Ciuc, Faculty of Technical and Social Sciences, Libertatii Piata no. 1, phone: 0266 314657, mobile 0745 100924, e-mail- lanyisyabolcs@sapientia.siculorum.ro

Diploma Academic Virtue from Romanian Academy, National Order South Cross, Brazil, Médaille d’argent, SALON INTERNATIONAL des INVENTIONS, Geneva

Didactic contributions and research activities in environment field, modelling and simulation of recovery processes

Eng. Ciprian DRĂGAN – 1982 (birth year)

2006 – graduate of Faculty of Electrical Engineering from Technical University from Cluj-Napoca

- diploma project in quality of student, ERASMUS at University Institute of Technology from Angoulême, France

Beneficiary of a scholarship offered by the Poitou-Charentes regional Council, obtained a Master diploma in Engineering Science at University from Poitiers, June 2007

- Since September 2007 is PhD student in Laboratory of Aerodynamics studies of University from Poitiers, under scientific leading of prof. Lucian DASCALESCU, responsible of research unity « Electrostatics mediilor disperse » from the University Institute of Technology from Angouleme

Dr. Elena BADEA – 1967 (birth year)

Università degli Studi di Torino, Departament: Chimica IFM (inorganic, physical chemistry and material science)

Adresa: Via Pietro Giuria 9, 10125 Torino, TO, Italia, tel: +39 011 670757, Fax: +39 011 6707855

E-mail: elena.badea@unito.it

HYDROPHOBIC-HYDROPHILIC SOLVATION OF *N*-ALKYLUREAS AND *N*-ALKYLTHIOUREAS IN DILUTE AQUEOUS SOLUTION

SEP 2005- Determined-time research contract at the Dept of Chemistry I.F.M., Univ. of Torino

"Physico-chemical and structural study of nanostructured materials"

MAR 2002–AUG 2005 EU post-doc research contract at the Dept of Chemistry I.F.M., Univ. of Torino in the compass of EU Project no EVK4-00061: "Improved damage assessment of parchments" (IDAP)

MAR-SEPT 2004, 2005, 2006, 2007

Teaching contract for the Pharmaceutical Chem. & Technol. Degree Course, Fac. of Pharmacy, Univ. of Torino

Tutoring Course in Physical Chemistry (Thermodynamics, Chemical Bond, Kinetics)

DEC 2000- Lecturer in Biochemistry (open-end contract)

FEB 1996–DEC 1999 Assistant (open-end contract)

OCT 1994–JAN 1996 Researcher (open-end contract) Fac. of Chemistry, Univ. of Craiova, Romania

On leave at Univ. of Turin, Dept of Chemistry I.F.M., since March 2002.

SEP 1992–SEP 1994 Teacher of Biochem. and Chemistry (open-end contract)

Senior High School for Food Chemistry, Craiova

Prof.dr.eng. Florin Teodor TĂNĂSESCU -1932 (birth year)

CER, 313 Splaiul Unirii, district 3, Bucharest, phone: 346.72.18, e-mail: comisia6@icpe.ro, Politehnica University of Bucharest- Faculty of Electrical Engineering, 313 Splaiul Independentei, Bucharest

Activity in electrical engineering field, electrical measurements and measurements techniques, non-conventional technologies, new energy sources, tests and normalization stands, programs coordination, new electrotechnical equipment, complex techniques of measuring, electrotechnical devices of high voltage, technologies and equipment of scientific research, containing originality elements and being the object of some patents. Honor member of Science Academy of Moldavia, member of International Society of Electrical Engineers (IEEE-New York), president of Romanian National Committee of International Electrotechnical Commission (CEI Geneva), General secretary of Academy of Technical Sciences from Romania (ASTR), member of Association for Electrostatica, rewarded with Order "For virtue" in officer degree (2000)

Conf. Dr.eng. Daniel RACOCEANU – 1968 (birth year)

French National Centre of Scientific Research (CNRS - Centre National de la Recherche Scientifique), Director of IPAL – Image Perception, Access & Language, International Research Unit (CNRS, NUS, I2R A*STAR, UJF), Centre National de la Recherche Scientifique (CNRS), Université Joseph Fourier, Grenoble, France (UJF), National University of Singapore (NUS), Institute for Infocomm Research, Agency for Science, Technology and Research, Singapore (I2R, A*STAR) A/Prof, Université de Franche-Comté, Besançon, France, <http://ipal.i2r.a-star.edu.sg/>

Phone: (65) 6516 2909 Fax:(65) 6779 4580, E-mail: danielr@comp.nus.edu.sg; daniraco@gmail.com

His actual researches in IPAL (starting from 2006) are related to the medical diagnostic and assessment using Medical Images, in context of searching based on content and context in large bases of medical images (Content/Context Based Medical Image Retrieval), of operational Medical Knowledge Modeling and of Medical Multimedia/Intermedia Fusion. Also, he approached researches in domain of industrial e-maintenance and dynamic systems of diagnostic/assessment.

5. Final list of participants – scientific title, last name, first name, signature, origin country, institution, address, phone, fax, email;

6.

Last name	First name	Institution	Email	Country	Invitee/participant
Alecu	Georgeta	National Institute for Research and Development in Electrical	alecu@icpe-ca.ro	Romania	Participant

		Engineering, ICPE-CA Bucharest			
Badea	Elena	Universita degli Studi di Torino, Dipartimento di Chimica IFM	elena.badea@unito.it	Italy	Invitee
Bologa	Mircea	Institute of Applied Physics of Sciences Academy from Moldova	mb@phys.asm.md	Moldova	Invitee
Cramariuc	Bogdan	IT Centre for Science and Technology Bucharest	bogdan.cramariuc@citst.ro	Romania Finland	Invitee
Dragan	Ciprian	University of Poitiers, France, Technical University from Cluj-Napoca	cipri.dragan@gmail.com	France Romania	Invitee
Kappel	Wilhelm	National Institute for Research and Development in Electrical Engineering, ICPE-CA Bucharest, Professor at Politehnica University of Bucharest	kappel@icpe-ca.ro	Romania	Participant
Lazaroiu	Dumitru - Felician	Consultance DFL - Paris, France	df.lazaroiu@wanadoo.fr	France	Invitee
Masalar	Liviu	University from Liege, Belgia	L.Masalar@ulg.ac.be	Belgium	Invitee
Nicolae	Avram	Politehnica University of Bucharest	ecomet@ecomet.pub.ro	Romania	Invitee
Nicolae	Maria	Politehnica University of Bucharest	nicolae_maria@yahoo.com	Romania	Invitee
Nicolau	Margareta	National Research Development Institute for Industrial Ecology INCD ECOIND Bucharest	ecoind@incdecoind.ro	Romania	Participant
Peculea	Marius	Member founder of Academy of Technical Sciences from Romania	004021 321.40.68	Romania	Participant
Racoceanu	Daniel	French National Centre of Scientific Research (CNRS - Centre National de la Recherche Scientifique)	daniraco@gmail.com	Singapore	Invitee
Rusu-Petroaia	Aurelia	Thales Rail Signalling Solutions Inc.	aurelia_rusu@yahoo.com	Canada	Invitee

Stanciu	Valerius Mihail	CER	office@srac.ro	Romania	Participant
Tanasescu	Teodor Florin	National Institute for Research and Development in Electrical Engineering, ICPE-CA Bucharest	comisia6@icpe.ro	Romania	Participant
Vasile	Nicolae	Chamber of Commerce and Industry of Bucharest	nicolae.vasile@ccib.ro ; nvasile@icpe.ro	Romania	Participant
Georgescu	Puiu Lucian	“Dunarea de Jos” University Galati	lucian.georgescu@ugal.ro ; georgescul@appstate.edu	Romania	Invitee
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Lanyi	Szabolcs	Sapientia University of Miercurea Ciuc	lanyiszabolcs@sapientia.sic <ulorum.ro< td=""> <td>Romania</td> <td>Invitee</td> </ulorum.ro<>	Romania	Invitee
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Petica	Aurora	National Institute for Research and Development in Electrical Engineering, ICPE	petica@icpe-ca.ro	Romania	Participant
Sbarcea	Gabriela Beatrice	National Institute for Research and Development in Electrical Engineering, ICPE-CA Bucharest	gabi@icpe-ca.ro	Romania	Participant
Scheiler	Ovidiu	PensionerBucharest	-	Romania	Participant

7. Statistic informations regarding the participants (ages structure, geographic distribution etc);

The number of participants at We6 was 28, from which 17 men and 11 women. Structure on ages are:

- Participants with age over 60 years: 10
- Participants with age between 50 and 60 years: 5

- Participants with age between 40 and 50 years: 7
- Participants with age between 30 and 40 years: 4
- Participants with age under 30 years: 2

Participants at the workshop came from countries as Italy, Moldova Republic, Belgium, Germany, Canada, Singapore, France and Finland.

8. Materials presented at workshop, web page of the event (print), poster, pictures, any other materials gived at event(will be presented at raport on CD)







Manager General,
Prof.dr. Wilhelm Kappel



Project manager,
Dr.eng. Georgeta Alecu