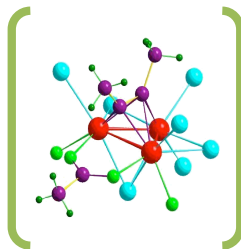


**CELEBRATING 100th ANIVERSARY of Faculty of Chemical
Engineering and Environmental Protection**



România, Iași, 28-30 November 2012

CENTENARY OF EDUCATION IN CHEMICAL ENGINEERING



<http://www.ch.tuiasi.ro/CNIC2012/index.html>

CONFERENCE PROGRAM 2012

**100th Anniversary of Faculty of Chemical Engineering and
Environmental Protection**

International Conference

CENTENARY OF EDUCATION IN CHEMICAL ENGINEERING

Romania, Iasi, 28-30 November 2012

Organized by:

**“GHEORGHE ASACHI” TECHNICAL UNIVERSITY OF IASI, FACULTY OF
CHEMICAL ENGINEERING AND ENVIRONMENTAL PROTECTION**

**DOCTORAL SCHOOL OF FACULTY OF CHEMICAL ENGINEERING AND
ENVIRONMENTAL PROTECTION**

ALUMNI ASSOCIATION OF FACULTY OF INDUSTRIAL CHEMISTRY

Foreword

History of technical education in Iași, becoming then engineering education, interlaces with that of the University born in 1860 and has its source in the Faculty of Science (1864), in which the Chemistry Department has been firstly defined. In fact, the defining role of technical education is the consequence of the need to develop a national industry, goal that became more acute after the Independence War.



As the result of its great promoters' initiatives, Moldova was destined to creating and developing the education on technical chemistry, which appeared in 1882 with the first chemistry laboratory designed by Petru Poni at the University of Iași. Anastasie Obregia joined to the efforts of Petru Poni, both creating the basis of the chemistry laboratories, which will be the germ of education on applied chemistry at Iași. Over time, this direction will acquire more and more engineering valences, the introduction of the Technological Chemistry Department and its specific courses being only a matter of time. This demarche of the two pioneers, supported also by Dragomir Hurmuzescu, Rector of the University of Iași, led to the approval in principle of the establishment of Applied Chemistry specialization by the Ministry of Religious Affairs and Public Education in 1906, which will become in 1912 the Industrial Chemistry specialization, at the University of Iași.

Since 1912, the evolution of this education direction towards the specific education on chemical engineering and further to the birth (in 1937), growth and increase of the prestige of the faculty dedicated to the training of the chemical engineers has represent one of the priorities of the academic environment, being endorsed by eminent figures of science and education: Cristea Niculescu-Otin, Neculai Costăchescu, Constantin V. Gheorghiu, Petre Bogdan, Ilie Matei, Cristofor I. Simionescu, this pleiad being completed by our great teachers of the second millennium end and also contemporary.

Now, at the centennial anniversary, our faculty, integrated more than just in space and time in one of the most prestigious universities, proves that it respects and carries forward the dreams and efforts of the former teachers who believed in the higher education on chemical engineering, becoming one of the Romanian emblems of excellence in education and research. Even in the context of the less favorable economic environment, the faculty teaching and research staff, also the

students, never cease to believe that the progress of any human society cannot be achieved without engineers and, obviously, without the chemical engineers.

The education on any field of engineering offers the most complete training. The immaterial products offered by University on the market are the knowledge and competence - under various forms: the training of specialists in different specific areas through high level education, research, projects consulting, expertise, involvement of the academic community in different aspects of social life, etc. Our university brings the fascinating horizons of education on engineering close to any dream you could imagine beyond the school doorstep. And if something can give color, flavor, fascination and trust to a such technical field as the engineering one, if something can create and perpetuate life, if something can give value and brightness to an universe, then that "something" is the chemistry.

Therefore, this centennial anniversary of education on chemical engineering is dedicated to all our former teachers who believed and built their dream, to all teachers who continue this way and to all who believe in what chemical engineering can offer to the future generations.

WELCOME to all our guests and friends from abroad and Romanian ones and thanks to all for accepting to celebrate together our wonderful anniversary. I wish to all of you to enjoy these days in Iași and I hope that you will return anytime with pleasure in our faculty.

Professor Dan Cașcaval,

Dean of the Faculty of Chemical Engineering
and Environmental Protection

SCIENTIFIC COMMITTEE

Chairman:

Professor Dr. **Dan Cașcaval**, "Gheorghe Asachi" Technical University of Iași

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Professor Dr. **Shin'ichi Nakatsuji**, University of Hyogo

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Professor Dr. **Gabriel Lucian Radu**, "Politehnica" University of Bucharest

Professor Dr. **Bogdan Simionescu**, "Gheorghe Asachi" Technical University of Iași

Professor Dr. **Alexandru Szep**, "Sapientia" University Cluj-Napoca

Professor Dr. **Carmen Teodosiu**, "Gheorghe Asachi" Technical University of Iași

Professor Dr. **Colin Webb**, University of Manchester

GENERAL PROGRAMME

Tuesday, 27.11.2012

15.00 – 18.00 Registration of the participants

Wednesday, 28.11.2012

9.00 – 10.00 Registration

10.00 - 10.30 Opening Ceremony

10.30 – 11.15 Plenary Lecture – Prof. Christoph Herwig

11.15 – 11.30 Coffee Break

11.30 – 12.15 Plenary Lecture – Prof. Wilhelm Schabel

15.00 - 17.00 Organic and Inorganic Chemistry Session (S1)

15.00 - 17.00 Innovative Processes and Technologies Session (S2)

13.00 – 18.00 Poster Sessions (S4, S5)

Bioprocesses, Biocatalysis, Biotechnologies

Environmental Management, Sustainable Development

Thursday, 29.11.2012

09.30 – 10.00 Plenary Lecture – Prof. Rédey Ákos

10.00 – 10.30 Plenary Lecture – Prof. Michael Søgaard Jørgensen

10.30 – 10.45 Coffee Break

10.45 – 11.15 Plenary Lecture – Prof. Karin Stana-Kleinschek

14.00 – 18.00 Bioprocesses, Biocatalysis, Biotechnologies Session (S4)

14.00 – 18.00 Environmental Management, Sustainable Development
Session (S5)

13.00 – 18.00 Poster Sessions (S1, S2, S3)

Organic and Inorganic Chemistry

Innovative Processes and Technologies

Polymers and Advanced Materials

20.00 Official conference dinner, Ramada Hotel

Friday 30.11.2012

9.30 - 10.15 Plenary Lecture – Prof. Tatiana Budtova

10.15-11.00 Plenary Lecture – Prof. Damien Quemener

11.00-11.15 Coffee Break

11.15 – 14.00 Polymers and Advanced Materials Session (S3)

10.00-12.00 High School Science Projects

ORGANIZING COMMITTEE

Chairman: Professor Teodor Măluțan

Associate Professor Igor Crețescu

Professor Silvia Curteanu

Professor Dan Gavrilescu

Associate Professor Eugen Horoba

Professor Ioan Mămăligă

Eng. Eduard Moisii

Professor Marcel Popa

Professor Marcel Ionel Popa

Professor Dan Scutaru

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Lecturer Nicolae Apostolescu

napostol@tuiasi.ro

Scientific and general information:

Official opening of the Conference will be held at the Technical University Aula, located on Carol I Boulevard No. 11, Iași.

The scientific communications will be presented Wednesday, 28th of November 2012 and Friday, 30th of November 2012 in the Faculty Council Room into the Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iași and Thursday, 29th of November in the Faculty Council Room of Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iași and Technical University Main Building (Rectorate) Dimitrie Mangeron Bd.. No. 67, Iași.

Posters will be displayed during full time of the Conference in the Main Hall of the Chemical Engineering and Environmental Protection Faculty. Abstracts have been published on the Conference volume (CD).

Programme

Tuesday, 27 November 2012

Venue: Faculty of Chemical Engineering and Environmental Protection, Dimitrie Mangeron Bd., No. 71, Iași
15⁰⁰- 18⁰⁰ Registration of the participants

Wednesday, 28 November 2012

Venue: Technical University Aula – Carol I Bd. No. 11, Iași

9⁰⁰- 10⁰⁰ Registration of the participants

10⁰⁰- 10³⁰ Opening Ceremony

Chairman:

Prof. Dan Cașcaval, "Gheorghe Asachi" Technical University of Iași
Prof. Teodor Măluțan, "Gheorghe Asachi" Technical University of Iași

10³⁰- 11¹⁵ Plenary Lecture: Professor **Cristoph Herwig**,
Technical University of Vienna

Data to Knowledge in Real-time - Efficient Methods for Bioprocess Understanding

Chairman: Prof. Dan Cașcaval, "Gheorghe Asachi" Technical University of Iași

11¹⁵- 11³⁰ Coffee Break

11³⁰- 12¹⁵ Plenary Lecture: Professor **Wilhelm Schabel**,
Karlsruhe Institute of Technology

Processing of thin films and its impact on morphology and structure formation

Chairman: Prof. Ioan Mămăligă, "Gheorghe Asachi" Technical University of Iași

15⁰⁰ - 17⁰⁰

**Topic: Organic and Inorganic Chemistry
Innovative Processes and Technologies**

Lecture room: Faculty Council, Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iași

**Chairman: Prof. Dan Scutaru
Prof. Sorin Costin Bildea
Dr. Gabriela Apostolescu**

1. Recent Progress in the Chemistry of Organic Functional Radicals

Shin'ichi Nakatsuji, University of Hyogo

2. Pt-Pd/CeO₂-Al₂O₃ Catalyst for VOC Treatment of Exhaust Gas

Tatiana Yuzhakova¹, József Kovacs¹, Sinka Zsófia¹, Ákos Rédey¹, Somogyi Viola¹, Domokos Endre¹, Kovács Zsófia¹, István Ráduly², Lenke Ráduly², János Lauer¹,

¹Institute of Environmental Engineering, University of Pannonia

² Faculty of Economics and Business Management, Babes-Bolyai University

3. New Palladium(II) Complexes with N- Ylide Ligands

Rodica Postolachi¹, Aurel Pui¹, Ramona Dănac¹, Niek Niklaas, J. Buurma²,

¹ "Alexandru Ioan Cuza" University of Iași, Faculty of Chemistry,

² Physical Organic Chemistry Centre, Cardiff University

4. Ring opening of methylcyclopentane on metal ion planted Mn-MCM-48 catalysts

I. Fecheté¹, D. Lutić², L. Lazar³, F. Garin¹,

¹Université de Strasbourg

²"Alexandru Ioan Cuza" University of Iași,

³"Gheorghe Asachi" Technical University of Iași

5. Ni-TUD-1 for the non selective mechanism of ring opening of methylcyclopentane

I. Fecheté¹, D. Lutić², L. Lazar³, F. Garin¹,

¹Université de Strasbourg,

²"Alexandru Ioan Cuza" University of Iași,

³“Gheorghe Asachi” Technical University of Iași

6. Permanent hard water softening using different cation exchange resins

B. Bandrabur¹, L. Lazăr², R.E. Tataru-Fărmuș², G. Gutt¹,

¹“Ștefan cel Mare” University of Suceava

²“Gheorghe Asachi” Technical University of Iași

7. Cyclic distillation – process intensification through dynamic operation

C. S. Bildea¹, I. Lita¹, C. Patrut¹, A. A. Kiss²,

¹University Politehnica of Bucharest,

²AkzoNobel Research, Development & Innovation, Process Technology ECG

8. Design and control of glycerol – tert-butanol etherification process by reactive distillation

E. Vlad, C.S. Bildea,

University Politehnica of Bucharest

9. Ultrasound and microwave assisted extraction – sustainability through efficiency

A. Alupului, I. Calinescu, V. Lavric,

University Politehnica of Bucharest

10. Solid-liquid mass transfer study in dissolution processes

C. A. Horoba, L. D. Horoba, I. Mămăliță,

“Gheorghe Asachi” Technical University of Iași

11. Artificial immune system and neural networks for modeling the removal of heavy metals from residual waters

E.-N. Dragoi, G. D. Suditu, S. Curteanu,

“Gheorghe Asachi” Technical University of Iași

13⁰⁰ - 18⁰⁰

Poster Session

Hall of Faculty of Chemical Engineering and Environmental Protection

S4. Bioprocesses, Biocatalysis, Biotechnologies

P-S4-1 STUDY OF THE INHIBITION EFFECT IN THE MICROENCAPSULATED ENZYME β -GALACTOSIDASE

Berta N. Estevinho¹, Ana M. Damas², Pedro Martins², Fernando Rocha¹,

¹ LEPAE, Departamento de Engenharia Química, Faculdade de Engenharia da Universidade do Porto

² ICBAS - Instituto de Ciências Biomédicas Abel Salazar da Universidade do Porto

P-S4-2 EXTERNAL AND INTERNAL GLUCOSE MASS TRANSFER IN SUCCINIC FERMENTATION WITH STIRRED BED OF IMMOBILIZED *A. SUCCININOGENES*

Lenuta Kloetzer¹, Alexandra Cristina Blaga¹, Marius Turnea², Anca Irina Galaction², Dan Cascaval¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² "Gr.T. Popa" University of Medicine and Pharmacy of Iași, Faculty of Medical Bioengineering

P-S4-3 REMOVAL OF THE CATIONIC DYE METHYLENE BLUE FROM AQUEOUS MEDIUM BY USING A BIOSORBENT BASED ON SEASHELL WASTES

Daniela Șuteu¹, Lăcrămioara Rusu²,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² "Vasile Alecsandri" University of Bacău, Faculty of Engineering

P-S4-4 MODELLING OF THE THERMOPHYSICAL PROPERTIES OF LIQUIDS INVOLVED IN FOOD PROCESSING

Andrei I. Simion, Cristina G. Grigoraș, Lăcrămioara Rusu, Lucian Gavrilă,
"Vasile Alecsandri" University of Bacău

P-S4-5 DEGRADATION OF CARBAMAZEPINE BY *TRAMETES VERSICOLOR* STRAIN GROWN ON VARIOUS ORGANIC SUPPLEMENTS

Samer Semrany^{1,2}, Claudia Popa^{1,3}, Lidia Favier¹, Samir Taha², Abdeltif Amrane¹,

¹Ecole Nationale Supérieure de Chimie de Rennes, Université de Rennes 1,

² Université Libanaise, Mitein st., Tripoli, Lebanon

³ Dunarea de Jos University

P-S4-6 ISOLATION AND SCREENING OF *STREPTOMYCES* STRAINS RESISTANT TO ANTICONVULSANT DRUG CARBAMAZEPINE

Claudia Popa^{1,2}, Samer Semrany^{1,3}, Lidia Favier¹, Gabriela Bahrim², Abdeltif Amrane¹,

¹Ecole Nationale Supérieure de Chimie de Rennes, Université de Rennes 1

² Dunarea de Jos University, Faculty of Food Science and Engineering

³ Université Libanaise, Mitein st., Tripoli, Lebanon

P-S4-7 HYDROLYSIS OF RAPESEED STALKS IN A BATCH SYSTEM

Adina Elena Pânzariu, Theodor Măluțan,

„Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S4-8 VOLATILE COMPOUNDS CAPTURED IN EXHAUST CO₂ FLOW DURING BUSUIOACĂ DE BOHOTIN WINE FERMENTATION

Lucia-Cintia Colibaba¹, H.-G. Schmar², V.V. Cotea³, M. Niculaua⁴,

¹ Technical University “Gheorghe Asachi”, Faculty of Chemical Engineering and Environmental Protection

² Dienstleistungszentrum Ländlicher Raum (DLR) Rheinland

³ University of Agricultural Sciences and Veterinary Medicine “Ion Ionescu de la Brad”

⁴ Oenological Research Center –Romanian Academy

P-S4-9 GRAPE PHENOLIC EVOLUTION STUDY OF CABERNET SAUVIGNON DURING THE MATURATION PERIOD IN IAȘI VINEYARD

Tudose-Sandu-Ville Ș¹, Cotea V. V.¹, Niculaua M.², Colibaba Cintia¹,

¹ University of Agricultural Sciences and Veterinary Medicine Iași,

² Research Center for Oenology – Iași Branch of the Romanian Academy of Science

P-S4-10 CATALASE ADDITION AND TEMPERATURE INFLUENCE ON THE ENZYMATIC OXIDATION OF D-GLUCOSE

Manuela Diana Ene¹, Gheorghe Maria²,

¹ Biotehnos Co. s.a., R&D Department,

² University Politehnica of Bucharest

P-S4-11 PRECIPITATION OF HYDROXYAPATITE IN A NOVEL MESO OSCILLATORY FLOW REACTOR

Filipa Castro¹, António Ferreira¹, Fernando Rocha², António Vicente¹ and José Teixeira¹,

¹ IBB – Institute for Biotechnology and Bioengineering, Centre for Biological Engineering, University of Minho

² LEPAE - Laboratory for Process, Environmental and Energy Engineering, Faculty of Engineering of the University of Porto

P-S4-12 A SEQUENTIAL ENZYMIC METHODOLOGY AS A NEW APPROACH FOR THE SYNTHESIS OF OPTICALLY PURE HETEROARYL- α -HYDROXY ACIDS

Mara Ana Naghi, Csaba Paizs, Florin Dan Irimie, Monica Ioana Toşa

University Babes-Bolyai, Faculty of Chemistry and Chemical Engineering

S5. Environmental Management, Sustainable Development

P-S5-1 WHY IS EDUCATION IN ENVIRONMENTAL SAFETY SO IMPORTANT?

Virve Siirak, Ada Traumann, Piia Tint,

Tallinn University of Technology

P-S5-2 STUDY OF SOME ENVIRONMENTALLY FRIENDLY VEGETAL FIBER SOURCES FOR PAPERMAKING

Adrian Catalin Puitel¹, Dan Gavrilescu,¹ Roxana Vatavu²,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² University of Agricultural Sciences and Veterinary Medicine of Iași

P-S5-3 BIOAVAILABILITY AND BIOACCESSIBILITY OF HEAVY METALS IN SOIL AND RISKS ON HUMAN HEALTH

Dana Luminița Sobariu, Maria Gavrilescu,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-4 INTEGRATED MULTI-CRITERIA DECISION-MAKING METHODOLOGY FOR ASSESSING THE SUSTAINABILITY OF PAPER PRODUCTION SCENARIO

Mădălina Petraru¹, Cristina Ghinea¹, Hans Th. A. Bressers², Maria Gavrilescu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² University of Twente, Faculty of Management and Governance

P-S5-5 ENVIRONMENTAL ASSESSMENT OF RECYCLABLE MATERIALS USING LIFE CYCLE ASSESSMENT AND MULTICRITERIA EVALUATION

Cristina Ghinea¹, Madalina Petraru¹, Hans Bressers², Maria Gavrilescu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² University of Twente, Faculty of Management and Governance

P-S5-6 THE HUNGARIAN RED MUD DISASTER AND ITS ONE AND A HALF YEAR ENVIRONMENTAL IMPACTS ASSESSMENT

Zsófia Kovács¹, Tatiana Yuzhakova¹, János Lakó¹, Endre Domokos¹, Róbert Kurdi¹, Erzsébet Horváth¹, Anett Utasi¹, Veronika Vincze-Csom¹, István Ráduly², Lenke Ráduly², Ákos Rédey¹,

¹ Institute of Environmental Engineering, University of Pannonia,

² Faculty of Economics and Business Management, Babes-Bolyai University

P-S5-7 PHOTOCATALYTIC DEGRADATION OF A HAZARDOUS FOOD DYE

Laura Carmen Apostol¹, Anca Florentina Caliman², Maria Gavrilescu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² S.C. Chemical Company S.A., Iași

P-S5-8 BIOREMOVAL OF Pb(II) FROM AQUEOUS SOLUTIONS BY LIVING ARTHROBACTER VISCOSUS

Raluca Maria Hlihor¹, Hugo Figueiredo², Mariana Diaconu¹, Teresa Tavares², Maria Gavrilescu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² University of Minho

P-S5-9 PRODUCTION AND COMPOSITION OF CONSTRUCTION AND DEMOLITION WASTE IN ROMANIA

Isabela Maria Simion¹, Maria Emiliana Fortuna¹, Alessandra Bonoli², Maria Gavrilescu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² DICMA University of Bologna

P-S5-10 SUSTAINABLE URBAN ENVIRONMENT: ECOLOGICAL FOOTPRINT ANALYSIS OF BUILDING CONSTRUCTION

Maria Emiliană Fortună¹, Isabela Maria Simion¹, Alessandra Bonol², Maria Gavrilăscu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² Alma mater Studiorum University of Bologna, Faculty of Engineering

P-S5-11 MODELING AND OPTIMIZATION OF A REAL TEXTILE EFFLUENT TREATMENT BY SORPTION ONTO 'LOW COST' SORBENTS (COAL ASH AND SAWDUST)

Carmen Zaharia, Daniela Suteu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-12 POTENTIAL APPLICATIONS OF WASTES FROM FORESTRY AND ENERGY INDUSTRY AS PLANTS BIOREGULATORS

Corneliu Tanase, Irina Volf, Valentin I. Popa,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-13 A SINGLE STAGE TREATMENT BASED ON SORPTION ONTO COAL ASH APPLIED FOR A REAL INDUSTRIAL EFFLUENT

Carmen Zaharia, Daniela Suteu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-14 ASPECTS OF MEDICAL WASTES MANAGEMENT IN IASI. CASE STUDY: A DENTAL SURGERY

Carmen Zaharia, Mihaela Onofrei,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-15 EFFECT OF C_r (VI) IN WASTEWATER TREATMENT BY (PORTUGUESE) MICROALGAE

M. Alzira P. Dinis¹, Berta N. Estevinho^{1,2}, Vítor J. P. Vilar³, Álvaro A. M. G. Monteiro^{1,3}, Rui A. R. Boaventura³,

¹ Universidade Fernando Pessoa

² LEPAE, Faculdade de Engenharia da Universidade do Porto

³ LSRE, Faculdade de Engenharia da Universidade do Porto

P-S5-16 Cu(II) REMOVAL FROM AQUEOUS SOLUTIONS BY ACRYLIC ADSORBENT WITH AMIDOETHYLENAMINE GROUPS

Carmen Padurar¹, Lavinia Tofan¹, Ioan Bunia², Carmen Teodosiu¹, Corina Musteret¹,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²“Petru Poni” Institute of Macromolecular Chemistry

P-S5-17 VALORISATION OF ROMANIAN MOSS PEAT FOR REMOVAL OF HEAVY METALS FROM AQUEOUS MEDIA

Laura Bulgariu¹, Catalin Balan¹, Dumitru Bulgariu^{2,3}, Matei Macoveanu¹,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²“Al. I. Cuza” University of Iași, Faculty of Geography and Geology

³ Romanian Academy, Filial of Iași

P-S5-18 USE OF AQUEOUS TWO-PHASE SYSTEMS AS A GREEN CHEMISTRY APPROACH FOR SELECTIVE EXTRACTION OF Hg(II), Cd(II) AND Zn(II) IONS

Laura Bulgariu¹, Dumitru Bulgariu^{2,3},

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² “Al. I. Cuza” University of Iași, Faculty of Geography and Geology

³ Romanian Academy, Filial of Iași

P-S5-19 A REVIEW OF THE RESEARCH FOCUSED ON THE POLLUTION WITH HEAVY METALS IN THE BLACK SEA

Oana Jitar¹, Mircea Nicoara², Gabriel Plavan², Carmen Teodosiu¹,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² “Alexandru Ioan Cuza” University of Iași, Faculty of Biology

P-S5-20 NEW TECHNOLOGY FOR TRANSPORTING OF OIL VISCOUS AND FROZEN

Timur Chis,

Ovidius University Constanta

P-S5-21 FUEL CONSUMPTION AND CO₂ MANAGEMENT IN PETROLEUM REFINERY

Mihaela Neagu, Daniela Luminița Movileanu, Ion Onuțu, Paul Roșca,

Petroleum-Gas University of Ploiesti, Faculty of Petroleum Refining and Petrochemistry

P-S5-22 AEROBIC BIODEGRADATION OF PHENOL BY ACTIVATED SLUDGE

Petronela Cozma, Raluca-Maria Hlihor, Mariana Diaconu, Maria Gavrilescu, "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-23 WATER BALANCE FOR A WATER BODY USING AN AUTOMATIC WEATHER STATION. A CASE STUDY: URBAN AREA OF BAHLUI RIVER

Igor Cretescu, Ion Mamaliga, Roxana Elena Benchea, Matei Macoveanu, "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-24 SCOPE OF ENVIRONMENTAL ENGINEERING STUDENTS' ATTITUDE TOWARDS NATURAL RESOURCES EXPLOITATION PROJECTS

*Carmen Catalina Ioan¹, Maria Ileana Carcea²,
¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection
² "Gheorghe Asachi" Technical University of Iași, Department of Teacher Training*

P-S5-25 ADSORPTION POTENTIAL AND KINETIC OF ADSORPTION PROCESSES OF HYPERCROSSLINKED POLYMERIC RESINS AND ACTIVATED CARBON FOR METHYL ETHYL KETONE (MEK) VAPORS

Adela Marilena Buburuzan, Cezar Catrinescu, Matei Macoveanu, "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S5-26 OPPORTUNITIES TO IMPROVE THE ENVIRONMENTAL QUALITY FACTORS

Mariana Mincu, Alina Trente, National Institute for Research & Development In Environmental Protection, Bucharest

P-S5-27 INTEGRATED RURAL TOURISM IN THE SMALL REGIONAL MARKETING

Ráduly István, Ráduly Lenke, Babes-Bolyai Tudományegyetem Kolozsvár

P-S5-28 URANIUM REMOVAL FROM MINING WASTEWATERS USING A GREEK NATURAL ZEOLITE

Oana Codruta Barbu¹, Igor Cretescu¹, Panagiotis Misaelidis²,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection,

² Aristotle University of Thessaloniki

P-S5-29 NEW SYNTHESIZED MATERIALS USED FOR WASTEWATER TREATMENT – CHARACTERIZATION AND APPLICATION STUDY. A CASE STUDY

Laura Dartu, Carmen Zaharia, Gabriela Carja,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

Thursday, 29 November 2012

Venue: Technical University Main Building (Rectorate)

9³⁰ - 10⁰⁰ Plenary Lecture: Professor **Rédey Ákos**, University of Pannonia

Autors: Ákos Rédey, Anett Utasi, Zsófia Kovács, Tatiana Yuzhakova, Endre Domokos, János Lauer, Viola Somogyi, István Ráduly, Lenke Ráduly

Industrial disasters, consequences and the lessons learnt

Chairman: Prof. Carmen Teodosiu, “Gheorghe Asachi” Technical University of Iași

10⁰⁰ - 10³⁰ Plenary Lecture: Associate Professor Dr h.c., **Michael Søgaard Jørgensen**, Aalborg University

The controversies over bioenergy in Denmark: 'Bio' is not the same as 'sustainable'

Chairman: Prof. Carmen Teodosiu, “Gheorghe Asachi” Technical University of Iași

10³⁰ - 10⁴⁵ Coffee Break

10⁴⁵ - 11¹⁵ Plenary Lecture: Professor **Karin Stana-Kleinschek**, University of Maribor

Cellulose Model Films: Preparation, Characterization and Application

Chairman: Prof. Nicolae Hurduc, “Gheorghe Asachi” Technical University of Iași

14⁰⁰ - 18⁰⁰ Topic: *Environmental Management, Sustainable Development*

Lecture room: Technical University Main Building (Rectorate)

Chairman Prof. Michael Søgaard Jørgensen
Associate Prof. Igor Cretescu
Dr. Brandusa Robu

1. Producers and distributors survey on green products in Romania

V.J. Inglezakis¹, V. Nedeff², M. Panainte², I. Caramar², C. Muraru², M. Dram³, L. Focariu³, V. C. Venetis¹, and P. Coutsikos¹,

¹ SC European Focus Consulting SRL, Bacau

² "Vasile Alecsandri" University of Bacau

³ Chamber of Commerce and Industry, Bacau

2. Municipal solid waste experimental studies in Romania and Bulgaria

V. Inglezakis¹, S. Dvorsak², J. Varga², C. Venetis³, A. Zorpas^{1,6}, K. Elaiopoulos¹, N. Ardeleanu⁴, L. Ilieva⁵, K. Moustakas⁷, M. Loizidou⁷, C. Cobzaru⁸,

¹ SC European Focus Consulting SRL, Romania

² Gorenje Surovina d.o.o., Maribor, Slovenia

³ Euroconsultants SA, Thessaloniki, Greece

⁴ Regional Environmental Protection Agency of Bacau

⁵ NGO, Club "Sustainable Development of Civil Society", Sofia, Bulgaria

⁶ Cyprus Open University, Faculty of Pure and Applied Sciences, Nicosia, Cyprus

⁷ National Technical University of Athens, Greece

⁸ "Gheorghe Asachi" Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection

3. Sustainability in the water use cycle: Challenges in the Romanian context

Carmen Teodosiu, Simona-Andreea Ene, Iulia Maria Comandaru, Elisabeta Pomeanu, Ioana Dascalescu, Brandusa Robu, Carmen Catalina Ioan, George Barjoveanu,

"Gheorghe Asachi" Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection

4. Challenges in implementing integrated advanced wastewater treatment processes for the removal of priority organic pollutants and enhancement of effluents biodegradability

Daniela Arsene, Daniela Cailean, Petru Apopei, Corina Petronela Musteret, Bianca Weinberg, Carmen Teodosiu,
“Gheorghe Asachi” Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection

5. Chemical industrial disaster in Hungary and environmental actions taken

Ákos Rédey¹, Zsófia Kovács¹, Tatiana Yuzhakova¹, János Lakó¹, Endre Domokos¹, Róbert Kurdí¹, Erzsébet Horváth¹, József Kovács¹, Anett Utasi¹, Viola Somogyi¹, Pál Bui¹, Veronika Vincze-Csom¹, István Ráduly², Lenke Ráduly²

¹ Institute of Environmental Engineering, University of Pannonia, Veszprém, Hungary

² Faculty of Economics and Business Management, Babes-Bolyai University, Cluj-Napoca

6. Influence of pH and redox potential on electrochemical treatment efficiency in case of soil pollution with petroleum products

Irina Aura Istrate¹, Diana Mariana Cocârță¹, Adrian Badea¹, Talida Mirona Cîrlionu²

¹ University POLITEHNICA of Bucharest, Faculty of Power Engineering, Department of Energy Production and Use

² University POLITEHNICA of Bucharest, Faculty of Power Engineering, Department of Hydraulics, Hydraulic Machinery and Environment Engineering

7. Environmental assessment of pyrolysis as ex-situ thermal treatment applied to PAHs contaminated soils

Bulmău Cora¹, Cocârță Diana Mariana¹, Neamțu Silvia^{1,2}, Cristina Dumitrescu¹,

¹ University POLITEHNICA of Bucharest, Faculty of Power Engineering

² Ministry of Environment and Forest, Bucharest

8 Impact assessment of PAHs and heavy metals from industrial pollution sources in a central Romania area

Ana-Maria Reșețar-Deac^{1,2}, Silvia Neamțu^{2,3}, Cristina Dumitrescu², Diana Mariana Cocârță²,

¹ National Institute for Research and Development in Environmental Protection – INCDPM, Bucharest,

² University POLITEHNICA of Bucharest, Power Faculty,

³ Ministry of Environment and Forests, Bucharest

9. Determination of terpene emissions and contents from stress plants using gas chromatography

Lucian Copolovici^{1,2}, Astrid Kännaste², Ülo Niinemets²,

¹ Institute of Technical and Natural Sciences Research-Development of Aurel Vlaicu University, Arad

² Institute of Agricultural and Environmental Sciences, Estonian University of Life Sciences

10. Removal of heavy metals ions from aqueous solution using low-cost sorbents obtained by different methods

Gabriela Buema, Daniel Mircea Sutișman, Igor Cretescu, Maria Harja,

“Gheorghe Asachi” Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection

14⁰⁰- 18⁰⁰ Topic: *Bioprocesses, Biocatalysis, Biotechnologies*

Lecture room: Faculty Council, Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iași

Chairman: Prof. Florin Dan Irimie
Prof. Emil Dumitriu
Dr. Alexandra Blaga

1. Fish freshness monitoring using chemical modified voltammetric electrodes

I. M. Apetrei¹, D. Tutunaru¹, C. V. Popa (Ungureanu)², C. Apetrei³,

¹ “Dunarea de Jos” University of Galati, Faculty of Medicine and Pharmacy,

² “Dunarea de Jos” University of Galati, Faculty of Food Science and Engineering

³“Dunarea de Jos” University of Galati, Faculty of Sciences and Environment,

2. The influence of some essential oils of aromatic plants on cell division

Veronica Steluța Mincior, Vasilica Barbu,

“Dunarea de Jos” University, Faculty of Food Science and Engineering

3. Enhancement of oxygen mass transfer in pneumatical bioreactors using n-dodecane as oxygen-vector

Elena Folescu¹, António Ferreira^{2,3}, Fernando Rocha³, Jose A. Teixeira²,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² IBB-Institute for Biotechnology and Bioengineering, Centre for Biological Engineering, Universidade do Minho

³LEPAE, Departamento de Engenharia Química, Faculdade de Engenharia da Universidade do Porto

4. Interfacial mass transfer in direct extraction of propionic acid from *Propionibacterium acidipropionici* broths with tri-n-octylamine

Alexandra Cârlescu¹, Alexandra Cristina Blaga¹, Marius Turnea², Anca-Irina Galaction², Dan Cașcaval¹,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²“Gr.T. Popa” University of Medicine and Pharmacy of Iași, Faculty of Medical Bioengineering

5. Modeling of selective pertraction of carboxylic acids produced by *Actinobacillus succinogenes* fermentation,

Mădălina Poștaru¹, Marius Turnea², Anca-Irina Galaction², Lenuța Kloetzer¹, Alexandra Cristina Blaga¹, Anestis Vlysidis³, Colin Webb³, Alexandra Cârlescu¹, Dan Cașcaval¹,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²“Gr.T. Popa” University of Medicine and Pharmacy of Iași, Faculty of Medical Bioengineering

³Satake Center for Grain Process Engineering, University of Manchester

6. Kinetics of lipids biodegradation with free and immobilized *Bacillus* sp. cells,

Ramona Matran¹, Anca Marcela Lupasteanu¹, Marius Turnea², Anca-Irina Galaction², Dan Cascaval¹,

¹"Gheorghe Asachi" Technical University of Iasi, Faculty of Chemical Engineering and Environmental Protection

² "Gr.T. Popa" University of Medicine and Pharmacy of Iasi, Faculty of Medical Bioengineering

7. Steam reforming of bio-ethanol over Pt/SBA-15 catalyst

Danuta Ghita, Paul Rosca, Dorin Stanica Ezeanu,
Petroleum-Gas University of Ploiești

8. New monolith configuration for the immobilization of lipase from *Candida Antarctica*

Anca Marcela Lupasteanu¹, Enzo Laurent²

¹"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² Università degli Studi di Torino, Dip. Chimica IFM

9. Eugenol

Violeta Andronic, Corina Cernatescu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

10. Raspberry ketone

Oana-Maria Munteanu, Corina Cernatescu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

11. Vanillin

Diana Blanita, Violeta Andronic, Corina Cernatescu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

12. Lipases in organic synthesis,

Florin Dan Irimie,

University Babes-Bolyai, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca

13⁰⁰ - 18⁰⁰

Poster Session

Hall of Faculty of Chemical Engineering and Environmental
Protection

S1. Organic and Inorganic Chemistry

P-S1-1 THE RESEARCH RESULTS OF ADSORPTION OF VITAMIN C ON THE CLINOPTILOLITE

C. Cobzaru^{1*}, *A. Marinoiu*² and *V. Inglezakis*³,

¹"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²S.C. OLTCHIM, Râmnicu Vâlcea ,

³SC European Focus Consulting SRL

P-S1-2 SILVER DOPED HYDROXYAPATITE-COATED POLYURETHANE SURFACES

Simona Ilisei, Ana Maria Bargan, Gabriela Ciobanu, Constantin Luca,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-3 SYNTHESIS AND CHARACTERIZATION OF CALCIUM PHOSPHATES BIOMATERIALS

Ana Maria Bargan, Simona Ilisei, Gabriela Ciobanu, Constantin Luca,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-4 Ag/MgAILDH NANOSTRUCTURED ENSEMBLES: STUDIES ON THEIR PHYSICAL-CHEMICAL PROPERTIES

Sofronia Bouariu, Eugen Horoba, Gabriela Carja,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-5 COPPER BASED CATALYSTS OBTAINED BY INTERCALATION OF Cu-EDTA COMPLEX IN MgAl-LDH FOR SELECTIVE HYDROGENATION OF CINNAMALDEHYDE

Alina Moscu-Corcodei^{1*}, *Brindusa Dragoi*¹, *Alexandru Chiriac*¹, *Adrian Ungureanu*¹, *Vasile Hulea*², *Emil Dumitriu*¹,

¹"Gheorghe Asachi" Technical University, Faculty of Chemical Engineering and Environmental Protection

²Institut Charles Gerhardt, UMR 5253, CNRS-UM2-ENSCM-UM1

P-S1-6 NEW SULPHONAMIDATED DERIVATIVES OF PHENOXYALKYL-CARBOXYLIC ACIDS WITH POTENTIAL BIOLOGICAL ACTION

Anca Mihaela Mocanu, Bologan Diana, Anca Crețu, Dana Balan,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environment Protection

P-S1-7 MONOMETALLIC Cu-BASED CATALYSTS DISPERSED ON MESOPOROUS SBA-15 SILICA BY DIFFERENT METHODS FOR THE CINNAMALDEHYDE HYDROGENATION

Chirieac Alexandru¹, Dragoi Brindusa¹, Ungureanu Adrian¹, Carmen Ciotonea¹, Sébastien Royer², Daniel Duprez², Dumitriu Emil¹,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² LACCO, UMR 6503 CNRS, Université de Poitiers Poitiers

P-S1-8 STUDIES REGARDING SYNTHESIS AND CHARACTERIZATION OF Zn-Ce OXIDE COMPOSITE NANOPARTICLES

Gabriela Apostolescu, Mihaela Vizitiu, Nicolae Apostolescu,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-9 SYNTHESIS METHODS INFLUENCE ON CERIUM OXIDE NANOPARTICLE SIZE AND MORPHOLOGY

Gabriela Apostolescu, Mihaela Vizitiu, Nicolae Apostolescu,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-10 SYNTHESIS AND CHARACTERIZATION OF SOME NEW 3,4'-BIPHENYL DERIVATIVES CONTAINING A CHOLESTERYL UNIT WITH LIQUID CRYSTALLINE PROPERTIES

Cosmin Constantin Huzum, Dan Scutaru,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-11 ASYMMETRIC BENT CORE LIQUID CRYSTALS BASED ON AN ISOPHTHALIC ACID CORE

Aurel Simion, Dan Scutaru,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S1-12 COORDINATIVE COMPOUND WITH BIOLOGICAL ACTIVITY

R. Postolachi¹, M. Puř², N. Vranceanu¹, A. Pui¹

¹"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry

²"Otilia Cazimir" School, Iasi

S2. Innovative Processes and Technologies

P-S2-1 KINETICS OF CARBON DIOXIDE ABSORPTION INTO AQUEOUS SOLUTIONS OF ETHYLENEDIAMINE AND TRIETHYLENETETRAMINE

S. Muraru, R.-E. Tataru- Farmus, I. Siminiceanu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-2 EQUILIBRIUM AND KINETICS OF PERMANENT HARD WATER SOFTENING BY PUROLITE GEL TYPE STRONG ACID CATION EXCHANGE RESIN

B. Bandrabur¹, L. Lazăr², R.-E. Tataru-Fărmuș², L. Bulgariu², G. Gutt¹,

¹"Ștefan cel Mare" University of Suceava,

²"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-3 EFFECT OF BATH TEMPERATURE ON ANODIC ELECTRODEPOSITION OF MANGANESE DIOXIDE ON LEAD-ALLOY ANODES

L. Lazăr, N. Apostolescu, F. Bandrabur,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-4 KINETICS OF THERMAL DEGRADATION OF SOME FERROCENE DERIVATIVES

G. Lisa¹, D. Apreutesei-Wilson^{1,2}, N. Hurduc³, D. Scutaru¹,

¹"Gheorghe Asachi" Technical University of Iași,

²Institute for Molecules and Materials - Radboud University Nijmegen,

³"Alexandru Ioan Cuza" University of Iași

P-S2-5 PRODUCTION OF PROPYLENE GLYCOL BY GLYCEROL HYDROGENOLYSIS CATALYZED BY HETEROGENEOUS CATALYSTS IN BASIC AQUEOUS SOLUTIONS

A. Marinoiu¹, C. Cobzaru², I. Iordache³, D. Marinescu¹, C. Teodorescu¹,

¹S.C. OLTCHIM S.A.- Research Center,

²"Gheorghe Asachi" Technical University of Iași,

³National RD Institute for Cryogenics and Isotopic Technologies

P-S2-6 SELECTIVE HYDROGENOLYSIS OF GLYCEROL TO PROPYLENE GLYCOL. EFFECT OF BASE ADDITIVES

A. Marinoiu¹, C. Cobzaru², I. Iordache³,

¹S.C. OLTCHIM S.A.- Research Center,

²“Gheorghe Asachi” Technical University of Iași,

³National RD Institute for Cryogenics and Isotopic Technologies

P-S2-7 LAYERED DOUBLE HYDROXIDES AS CATALYSTS IN WATER SPLITTING PROCESS

C.-M. Puscasu, M. Barsanu, C. Gherasim, G. Carja,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-8 NANOSTRUCTURED ASSEMBLIES OF LAYERED DOUBLE HYDROXIDES WITH SPECIFIC TEXTURAL PROPERTIES

L. Bibire, C. Gherasim, D. Mardare, G. Carja,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-9 DIFFUSION AND EQUILIBRIUM IN A BINARY POLYMER-SOLVENT SYSTEM – A COMPARATIVE STUDY

C. Negoescu, N. Bunduc, I. Mămăligă,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-10 MASS TRANSFER COEFFICIENTS FOR A MODIFIED RASCHIG RING PACKED COLUMN

C. Condurat, D. Sidor, E. Iacob-Tudose, I. Mămăligă,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-11 AN EXPERIMENTAL STUDY OF LEACHING IN A FIXED BED COLUMN

M. Popa, E. T. Iacob-Tudose, M. Nechita, I. Mămăligă,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-12 CARBON DIOXIDE SORPTION ON SOME SELECTIVE COMPOSITES: EQUILIBRIUM AND KINETICS

O.-R. Haută¹, B. Cagnon², M.-S. Secula¹, I. Mămăligă¹,

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²CRMD - Centre de Recherche sur la Matière Divisée, Orléans

P-S2-13 RESEARCHES REGARDING TO DIFFUSION IN DIFFERENT COMPOSITE MATERIALS

S. Gelu, C. Măluțan, I. Mămăligă,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S2-14 COUPLING EXOTHERMIC AND ENDOTHERMIC REACTIONS - APPLICATION TO COMBINED NITROBENZENE HYDROGENATION / METHYL-CYCLOHEXANE DEHYDROGENATION

A. Javaid, C. S. Bildea,

University Politehnica of Bucharest

P-S2-15 CONTROL AND REDUCTION OF MERCURY EMISSIONS BY CATALYTIC OXIDATION MEANS

B. A. Dranga^{1,2}, L. Lazar¹, H. Koeser², I. Balasanian¹

¹“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

²Martin-Luther University Halle-Wittenberg

S3. Polymers and Advances Materials

P-S3-1 THE INFLUENCE OF DEUTERIUM DEPLETED WATER (DDW) AND SPRUCE BARK POLYPHENOLS ON ZEA MAYS L. GROWTH AND DEVELOPMENT

Corneliu Tănase, Irina Volf, Valentin I. Popa,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S3-2 ANTIMICROBIAL POLYMER FILMS FUNCTIONALIZED WITH CYCLODEXTRINS

Ana-Maria Grigoriu¹, Constantin Luca¹, Eugen Horoba¹, Simona Dunca²,
¹ "Gheorghe Asachi" Technical University, Faculty of Chemical Engineering and Environmental Protection
² "Al. I. Cuza" University, Faculty of Biology

P-S3-3 STUDY CONCERNING THE UTILIZATION OF CELLULOSE DERIVATES AS DEVELOPMENT SUPPORT FOR MICROORGANISMS

Farkas Andrea-Eliza¹, Scutaru Dan², Miron Doru Neculai¹, Roșu Ana-Maria¹, Tebrencu Carmen Elena³, Nistor Ileana Denisa¹,
¹ "Vasile Alecsandri" University of Bacău
² "Gheorghe Asachi" Technical University, Faculty of Chemical Engineering and Environmental Protection
³ Plantavorel, Piatra-Neamt

P-S3-4 PREPARATION AND STRUCTURAL CHARACTERIZATION OF MALEIC ANHYDRIDE-MODIFIED HYALURONIC ACID DERIVATES

Ana Maria Vasi¹, Marcel Ionel Popa¹, Liliana Vereștiuc²,
¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection
² University of Medicine and Pharmacy 'Gr. T. Popa' of Iași

P-S3-5 QSPR MODELS USED TO PREDICT THE THERMAL STABILITY OF SOME FERROCENE DERIVATIVES

Cătălin Lisa, Alexandra Zaharia, Oana Onișoru, Gabriela Lisa,
"Gheorghe Asachi" Technical University, Faculty of Chemical Engineering and Environmental Protection

P-S3-6 DIELECTRIC CHARACTERIZATION OF NANO-STRUCTURED ADHESIVES AT TEMPERATURE AND FREQUENCY VARIATION

Vasilica Alina Neamțu, Cristina Brătescu, Ramona Burlacu,
"Gheorghe Asachi" Technical University of Iași, Faculty of Electrical Engineering

P-S3-7 ULTRASOUND-ASSISTED EXTRACTION OF POLYPHENOLS FROM SPRUCE BARK

Roxana-Elena Ghițescu, Irina Volf, Valentin I. Popa,
"Gheorghe Asachi" Technical University, Faculty of Chemical Engineering and Environmental Protection

P-S3-8 HYPERBRANCHED POLYESTERS A TOOL TO OBTAIN POLYMERS WITH TAILORED PROPERTIES

Adina Dumitrașcu, Jianfang Chai, Patrick Smith, Robert Bubeck, Steven Keinath, Abhijit Sarkar,
Michigan Molecular Institute

P-S3-9 BIODEGRADABLE CELLULOSE-BASED MATERIALS: ANALYSIS OF CELLULOSE CRYSTALLINITY

Suzana Leițoiu, Teodor Mălușan,
“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S3-10 OBTAINING NANOPARTICLES CONTAINING LIGNIN AND METAL IONS AND THEIR APPLICATION AS BIOCIDES SYSTEMS USED IN WOOD PROTECTION

Iulian Andrei Gilcă, Valentin. I. Popa,
“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S3-11 MODIFICATIONS OF AZOPOLYMERIC SURFACES USED FOR BIOLOGICAL APPLICATIONS

Cristina-Maria Păiuș¹, Licinio Rocha², Nicolae Hurduc¹,
¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection
² CEA, LIST Saclay, Laboratoire Capteurs et Architectures Électroniques, F-91191 Gif-sur-Yvette Cedex, France

P-S3-12 STABILITY OF NiCr DENTAL ALLOY AFTER 15 YEARS OF SERVICE

Daniel Mareci¹, Sorin Claudiu Iacob Strugariu², Georgiana Bolat¹, Corneliu Munteanu², Carmen Păduraru¹,
¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection
² “Gheorghe Asachi” Technical University of Iași, Faculty of Mechanical Engineering

P-S3-13 ELECTROCHEMICAL BEHAVIOUR OF THE B-TYPE TI ALLOYS CONTAINING Mo AND Ta AS B-STABILIZER ELEMENTS FOR DENTAL APPLICATION

Daniel Mareci¹, Romeo Chelariu², Georgiana Bolat¹, Adrian Căilean¹, Daniel Sutiman¹,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² “Gheorghe Asachi” Technical University of Iași, Faculty of Materials Science and Engineering

P-S3-14 POSSIBILITIES FOR OBTAINING CELLULOSIC FIBER PACKAGING WITH BIO FUNCTIONAL PROPERTIES

Anca-Mariana Axinte, Violeta Negreanu, Teodor Măluțan, Petronela Nechita,
“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S3-15 CHEMICAL AND SPECTRAL CHARACTERISTICS OF ANNUAL PLANTS LIGNINS MODIFIED BY EPOXYDATION REACTION

Iulian Andrei Gîlcă, Adina-Mirela Căpraru, Elena Ungureanu, Lucia Carmen Trincă, Teodor Măluțan, Valentin I. Popa,
“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

P-S3-16 THINKING ABOUT HELPING THE ENVIRONMENT DESIGN FOR RECYCLING @ RENAULT

Petrică Heroiu, Georgiana Enache, Oana Gradin,
Department of Materials Engineering, Renault Technologie Roumanie

P-S3-17 DRIVE YOUR FUTURE @ RENAULT – INNOVATIVE PLASTICS

Marius Rusu, Oana Gradin,
Department of Materials Engineering, Renault Technologie Roumanie

P-S3-18 MULTIFUNCTIONAL MAGNETIC NANOPARTICLES

D. Gherca, R.G. Ciocarlan, C. Varlan, V. Nica, G. Carja, A. Pui
“Alexandru Ioan Cuza” University of Iasi, Faculty of Chemistry

Friday, 30 November 2012

Lecture room: Faculty Council, Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iași

9³⁰ - 10¹⁵ Plenary Conference: Professor **Tatiana Budtova**, Center for Material Forming, Mines ParisTech

Aerocellulose: a new class of aerogel-like ultra-light and highly porous cellulose materials

Chairman: Prof. Nicolae Hurduc, "Gheorghe Asachi" Technical University of Iași

10¹⁵ - 11⁰⁰ Plenary Conference: Professor **Damien Quemener**, University of Montpellier

Dynamic Interactive Materials – Application in Membrane Science

Chairman: Prof. Nicolae Hurduc, "Gheorghe Asachi" Technical University of Iași

11⁰⁰ - 11¹⁵ Coffee Break

11¹⁵ - 14⁰⁰ **Topic: *Polymers and Advances Materials***

Chairman: Prof. Nicolae Hurduc
Associate Prof. Constanta Ibanescu
Dr. Iulian Nor

1. Self-assembly: a tool for the construction of stomatocyte nanomotors

Daniela A., Wilson, J. M. Nolte Roeland, Jan C. M. van Hest,
Radboud University Nijmegen, Institute for Molecules and Materials (IMM), Cluster for Molecular Chemistry

2. Combined chemical/ cold plasma treatment for functionalization of some polymeric films

Constantin Luca¹, Ana-Maria Grigoriu¹, Emil Ghiocel Ioanid², Dorina-Emilia Rusu³,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² "Petru Poni" Institute of Macromolecular Chemistry, Iași

³ Center for Restoration and Conservation of Mobile Patrimony, Iași

3. Chitosan derivatives as sustainable alternative of conventional papermaking additives

Mihail Lupei, Raluca Nicu, Tudor Balan, Elena Bobu,

"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

4. Preparation and characterization of a new type of micro and nanoparticles based on chemically modified chitosan and gelatin for potential applications in ophthalmology

Lupescu (Andrei) Gabriela^{1,3}, Jacques Desbrières², Dănuț Costin³, Marcel Popa¹, Cătălina Anișoara Peptu¹,

¹ "Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² Université de Pau et des Pays de l'Adour, Institut Pluridisciplinaire de Recherche sur l'Environnement et les Matériaux

³ "Gr. T. Popa" University of Medicine and Pharmacy Iași, Faculty of Medicine, Department of Ophthalmology

5. Chitosan/tannic acid and chitosan/pva/tannic acid networks for biomedical applications

Bogdan Constantin Ciobanu^{1,2}, Anca Niculina Cadinoiu (Jătariu)¹, Cătălina Anișoara Peptu¹, Jacques Desbrières², Marcel Popa¹,

¹"Gheorghe Asachi" Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² Université de Pau et des Pays de l'Adour, Institut Pluridisciplinaire de Recherche sur l'Environnement et les Matériaux

6. Chitosan-tannic acid particles as potential system for controlled drug release

Anca Niculina Cadinoiu, Bogdan Constantin Ciobanu, Cătălina Anișoara Peptu, Marcel Popa,

“Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

7. Amphiphilic graft polysiloxanes capable of self-assembling into thermo-sensitive micelle

Anca Daniela Rusu¹, Maricel Danu², Constanța Ibănescu^{2, 3}, Nicolae Hurduc³, Licinio Rocha¹,

¹ CEA, LIST Saclay, Laboratoire Capteurs et Architectures Electroniques

² Petru Poni Institute of Macromolecular Chemistry

³ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

8. Optical photosensitive surfaces for biological application

Cristina-Maria Păiuș¹, Licinio Rocha², Nicolae Hurduc¹,

¹ “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

² CEA, LIST Saclay, Laboratoire Capteurs et Architectures Electroniques

9. Gluten content influence on rheological behavior of starch-gluten networks

Maricel Danu¹, Iulian Rotaru², Constanța Ibănescu^{1,2}, Nicolae Hurduc², Sorin Alexandru Ibănescu¹, Bogdan C. Simionescu^{1,2},

¹ Petru Poni Institute of Macromolecular Chemistry

² “Gheorghe Asachi” Technical University of Iași, Faculty of Chemical Engineering and Environmental Protection

10. The effect of surfactants on co-precipitation synthesis of capped cobalt ferrite nanoparticles

Daniel Gherca, Aurel Pui

“Alexandru Ioan Cuza” University of Iasi, Faculty of Chemistry

10⁰⁰ - 12⁰⁰ Topic: *High School Science Projects*

Lecture room: Sala 7S, Faculty of Chemical Engineering and Environmental Protection Building, Dimitrie Mangeron Bd., No. 71, Iasi

**Chairman: Dr. Laura Bulgariu
Dr. Gabriela Apostolescu
Dr. Mircea Nechita**

1. Iradierea produselor alimentare

I. M. Luca, G. Stoian, Liceul Tehnologic "Ion Mincu" Vaslui

2. Științele sunt pretutindeni

L. L. Mînză, Colegiul Național „Vasile Alecsandri” Galați

3. Rezervația floristică Ponoare – izvor nesecat de informații științifice. Exemple de bune practici

Ș. Amos, M. Drob, Școala Gimnazială Bosanci – Suceava

4. Controlul calității apelor uzate din municipiul Roman

D. Ungureanu, G. Bordeianu, Colegiul Tehnic „Danubiana” Roman

5. Obținere biodiesel din uleiuri vegetale uzate

A. Pricop, A. Fofici, A. I. Balan, Liceul Tehnologic „Ion Mincu” Vaslui

6. Necesitatea parteneriatului educațional între învățământul universitar și cel preuniversitar

G. Mătășaru, Liceul Tehnologic „Victor Mihăilescu-Craiu” Belcești – Iași, Centrul Județean de Resurse și Asistență Educațională Iași

7. Poluarea aerului în Iași

G. Gavriluță, C. Asiminei, G. Bradu, Liceul Tehnologic Holboca – Iași

8. Coloranți naturali

J. Cozma, G. Chelărașu, Colegiul Național „Garabet Ibrăileanu” Iași

9. Modalități alternative de evaluare la disciplina chimie

E. D. Cazan¹, D. I. Gavriloaie², M. Bitiușcă²,

¹Colegiul Tehnic „Mihail Sturdza” Iași,

²Colegiul Tehnic de Electronică și Telecomunicații Iași

S6. High School Science Projects - posters

P-S6-1 STIMULAREA CREATIVITĂȚII ELEVILOR ÎN CADRUL ORELOR DE CHIMIE DIN CICLUL LICEAL PRIN EXPERIMENTE CHIMICE,

I. C. Luchian, I. Timofte, M. Filip, E. Achirei, R. Vintia, G. Timofte, Ș. Bălățescu, G. Matasariu,

Colegiul Național "Ștefan cel Mare" Târgu Neamț

P-S6-2 STOP INDIFERENȚEI, SALVAȚI PĂDUREA, SALVAȚI-VĂ PE VOI,

E. Vasilescu-Simion

Liceul Tehnologic „1 Mai” Ploiești

P-S6-3 MAGIE SAU UIMITOAREA NATURĂ

D. C. Humelnicu, P. I. Chirilă, V. Sînpetru

Liceul Tehnologic „Ștefan Procopiu” Iași

P-S6-4 CHIMIA APLICATĂ – INDICATORI NATURALI DE pH

S. Pop, F. Neagran

Liceul Tehnologic „Mihai Viteazu” Zalău, Sălaj