

**Innovative Materials and Processes for a Sustainable  
Development**

**CONFERENCE PROGRAM**

**4<sup>th</sup> International Conference on  
Chemical Engineering**

**Romania, Iași, 31 October – 02 November 2018**

**ICCE 2018**

***Organized by:***

**“GHEORGHE ASACHI”  
TECHNICAL UNIVERSITY of IAȘI**



**“CRISTOFOR SIMIONESCU”  
FACULTY OF CHEMICAL ENGINEERING  
and ENVIRONMENTAL PROTECTION**



**„GHEORGHE ASACHI” UNIVERSITARY  
FOUNDATION of IAȘI**



**Under the auspices of ROMANIAN ACADEMY**

## SCIENTIFIC COMMITTEE

**Honorary Conference Chairman:** **Prof. Dan Cașcaval**, “Gheorghe Asachi”  
Technical University of Iasi

**Conference Chairpersons:** **Prof. Nicolae Hurduc**, “Gheorghe Asachi”  
Technical University of Iasi  
**Prof. Irina Volf**, “Gheorghe Asachi”  
Technical University of Iasi

**Prof. Victor David**, University of Bucharest  
**Prof. Agregato Davide Fissore**, “Politecnico” University of Torino  
**Prof. Berta Estevinho**, University of Porto, Portugal  
**Prof. Renato Froidevaux**, University of Science and Technology of Lille 1  
**Prof. Anca-Irina Galaction**, “Gr. T. Popa” University of Medicine and  
Pharmacy of Iasi  
**Prof. Lucian Gavrilă**, “V. Alecsandri” University of Bacău  
**Prof. Maria Gavrilescu**, “Gheorghe Asachi” Technical University of Iasi  
**Prof. Christoph Herwig**, Vienna University of Technology  
**Prof. Horia Iovu**, University Politehnica of Bucharest  
**Prof. Ionel Mangalagiu**, “Alexandru Ioan Cuza” University of Iasi  
**Prof. Alice Mija**, University of Nice-Sophia Antipolis  
**Prof. Shin'ichi Nakatsuji**, University of Hyogo  
**Prof. Francisc Castells Piqué**, University Rovira i Virgili  
**Prof. Aurel Pui**, “Alexandru Ioan Cuza” University of Iasi  
**Prof. Licinio Rocha**, Saclay Nuclear Research Centre  
**Prof. Fernando Rocha**, University of Porto, Portugal  
**Prof. Wilhelm Schabel**, Karlsruhe Institute of Technology  
**Acad. Bogdan C. Simionescu**, Romanian Academy  
**Prof. Alexandru Szep**, “Sapientia” University Cluj-Napoca  
**Prof. Nicolas Szita**, University College London  
**Prof. Carmen Teodosiu**, “Gheorghe Asachi” Technical University of Iasi  
**Prof. Nicolae Vaszilcsin**, University Politehnica of Timisoara  
**Prof. Colin Webb**, University of Manchester

## INDUSTRIAL PARTNERS



## GENERAL PROGRAM

### Wednesday 31.10.2018

- 8<sup>30</sup> - 10<sup>00</sup> Registration
- 10<sup>00</sup> - 10<sup>30</sup> Opening Ceremony, Conference Room of the University
- 10<sup>30</sup> - 11<sup>10</sup> Plenary Lecture - Acad. Bogdan C. Simionescu
- 11<sup>10</sup> - 11<sup>30</sup> Coffee Break
- 11<sup>30</sup> - 12<sup>00</sup> Plenary Lecture - Prof. Antonio Marzocchella
- 12<sup>00</sup> - 12<sup>30</sup> Plenary Lecture - Prof. Wilhelm Schabel

13<sup>00</sup> - 14<sup>00</sup> Lunch

14<sup>00</sup> - 15<sup>30</sup> Posters Display

14<sup>30</sup> - 18<sup>00</sup> Oral Presentations:

Advanced materials, manufacturing and processes (S1) and  
Biotechnology and bio-based industries (S2)

### Thursday 01.11.2018

- 09<sup>30</sup> - 10<sup>00</sup> Plenary Lecture - Prof. Sebastien Royer
- 10<sup>00</sup> - 10<sup>30</sup> Plenary Lecture - Dr. Gheorghe Fundueanu
- 10<sup>30</sup> - 10<sup>50</sup> Coffee Break
- 10<sup>50</sup> - 11<sup>20</sup> Plenary Lecture - Prof. Alice Mija
- 11<sup>20</sup> - 11<sup>50</sup> Plenary Lecture - Prof. Horia Iovu

Optional visit to the Library of „Gheorghe Asachi” Technical University (*UNESCO Heritage, selected among the most beautiful 25 libraries in the world*)

13<sup>10</sup> - 14<sup>30</sup> Lunch

14<sup>30</sup> - 17<sup>30</sup> Oral Presentations:

Environmental engineering and management (S3)

14<sup>30</sup> - 17<sup>30</sup> Poster Sessions (S1, S2)

Advanced materials, manufacturing and processes (S1) and  
Biotechnology and bio-based industries (S2)

19<sup>00</sup> Conference dinner, Unirea Hotel, Panoramic Ballroom

### Friday 02.11.2018

- 10<sup>00</sup> - 10<sup>30</sup> Plenary Lecture - Prof. Jean-François Lamonier
- 10<sup>30</sup> - 11<sup>00</sup> Plenary Lecture - Prof. Florica Manea
- 11<sup>00</sup> - 11<sup>30</sup> Plenary Lecture - Dr. Carmen M. Torres
- 11<sup>30</sup> - 11<sup>50</sup> Coffee Break
- 11<sup>50</sup> - 13<sup>30</sup> Poster Session (S3)  
Environmental engineering and management Session

13<sup>30</sup> Conference Closing

## About "GHEORGHE ASACHI" TECHNICAL UNIVERSITY

"Gheorghe Asachi" Technical University of Iasi (TUIASI) is a prestigious Romanian university, classified as a *university for advanced research and education*, according to the Ministry of Education and Research Order (MECTS nr. 5262/2011) being a relevant component of the research and development system of national interest. TUIASI develops programs for undergraduate, master, doctoral, postdoctoral studies and scientific research in 14 research areas, out of which 10 areas were classified in the category A, according to Law 1/2011 and HG 789/2011. The doctoral activity is organized within 13 doctoral fields developed according to national and international research priority areas, with a total of 478 doctoral students co-ordinated by 85 doctoral Ph.D. supervisors.

TUIASI participated in last years as coordinator or partner in several structural funded programs such as: 38 POSDRU projects (doctoral, post-doctoral, improvement of B.Sc. or M.Sc. curricula, etc), 5 POSCCE projects and 1 POR project.

TUIASI has an important research dimension, with 23 accredited research/excellence centers and laboratories focused on creating and transferring knowledge, especially in multi-disciplinary high-tech engineering areas. These centers/laboratories activate within national & international research grants or contracts with industry and governmental organizations, their activities and results placing TUIASI in the Romanian top of scientific research.

Dissemination of research results is supported by the means of the TUIASI international journals: **Environmental Engineering and Management Journal** (ISI Impact Factor 1.334), **Cellulose Chemistry and Technology** (ISI Impact Factor 0.833) and the **Bulletin of the Polytechnic Institute of Iasi**, a BDI publication with 10 specialized sections. Also, TUIASI provides administrative support, human resources, research infrastructure, the informational basis of the university's Library, consulting and monitoring needed to adequately develop and implement all the scientific research projects. In the **Shanghai 500** ranking, Technical University of Iasi is the best ranked technical university in Romania.

### Address and Conference Venue

All ICCE 04 sessions will take place at the "Gheorghe Asachi" Technical University of Iasi. Please check this program for information on the exact locations of events.

*Dear Guests and Colleagues,*

*Welcome to the 4<sup>th</sup> International Conference on Chemical Engineering: Innovative Materials and Processes for a Sustainable Development, organized by our faculty, with the support of “Gheorghe Asachi” Technical University of Iași and under the auspices of Romanian Academy!*

*Thank you for join us these days dedicated to Chemical Engineering.*

*Good luck to all participants to the conference and I wish to enjoy these days in Iași. I hope that you will return anytime with pleasure in our faculty, university and city.*

**Professor Nicolae Hurduc,**

Dean,  
“Cristofor Simionescu” Faculty of Chemical Engineering and  
Environmental Protection

### **ORGANIZING COMMITTEE**

**Prof. Nicolae Hurduc** Co-Chair of the conference

**Prof. Irina Volf** Co-Chair of the conference

**Prof. Carmen Teodosiu**

**Prof. Maria Gavrilescu**

**Prof. Teodor Malutan**

**Prof. Ioan Mamaliga**

**Eng. Eliza Hultuană**

#### **Conference secretariat:**

**Lect. Alexandra Cristina Blaga**, [acblaga@tuiasi.ro](mailto:acblaga@tuiasi.ro)

**Lect. Gabriela Antoaneta Apostolescu** (Section 1: [ganto@tuiasi.ro](mailto:ganto@tuiasi.ro))

**Lect. Lenuța Kloetzer** (Section 2: [lkloetzer@gmail.com](mailto:lkloetzer@gmail.com))

**Lect. Camelia Smaranda** (Section 3: [betianuc@tuiasi.ro](mailto:betianuc@tuiasi.ro))

**Dr. Ramona Tataru-Fărnuș**

#### **Web-site design and administration**

**Assoc. Prof. Nicolae Apostolescu**

[napostol@tuiasi.ro](mailto:napostol@tuiasi.ro)

## Scientific and general information:

### Address and Conference Venue

All ICCE 04 sessions will take place at the “Gheorghe Asachi” Technical University of Iasi.

### Registration and Conference Desk

The ICCE 04 registration will take place on Wednesday, October 31 of from 8:30 to 10:00 at the “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Orizont Hall (Ground Floor). All participants are invited to register and collect the conference materials at the conference desks.

Conference official opening and all the plenary lectures will be held in the Conference Room of the University Main Building, 67, Dimitrie Mangeron Bd., 700050, Iași.

The scientific communications on sections will be presented as follow:

- ✓ Wednesday, 31<sup>th</sup> of October, the Sections S1 and S2 in the Council Room of the “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection Building, 71 A Dimitrie Mangeron Bd., Iași
- ✓ Thursday, 1<sup>th</sup> of November the Section S3 in “Gheorghe Asachi” Technical University Main Building 67, Dimitrie Mangeron Bd., Iași.

### Oral Presentations

Time allocation for keynote lectures is 30 minutes (including discussions) and for oral communications is 15 minutes (including discussions). LCD projectors and a PC (Windows, MS Office, Adobe Acrobat) will be available in the session rooms. Authors are invited to upload their presentations on the PCs of each room well in advance of the beginning of the scheduled session, in order to avoid last minute problems. Uploading will exclusively be done via USB-drives.

Authors are also invited to reach the session room 10 minutes before the beginning and to introduce themselves to the sessions Chairpersons.

### Posters

Posters will be displayed during full time of the Conference in the Main Hall of the “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection.

Abstracts have been published on the Conference volume (USB drives).

## Conference Program

**Wednesday, 31 October 2018**

Venue: University Main Building (Rectorate), 67 Dimitrie Mangeron Bd., Iași

**10<sup>00</sup> - 10<sup>30</sup>      Opening Ceremony**

**Prof. Nicolae Hurduc**, Dean of the “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, TUIASI, ICCE 04 Co-Chairman

**Prof. Dan Cașcaval**, Rector of “Gheorghe Asachi” Technical University of Iași

**Acad. Prof. Bogdan C. Simionescu**, Vice President of the Romanian Academy

### **Special Guests:**

**Prof. Maria Gavrilescu**, Editor in chief of *Environmental Engineering and Management Journal*

**Prof. Valentin I. Popa**, Editor in chief of *Cellulose Chemistry and Technology Journal*

**Dr. Iuliana Spiridon**, Executive Editor of *Cellulose Chemistry and Technology Journal*

### **Industrial Partners:**

**Eng. Dumitru Coman** General Manager S.C. Chimcomplex SA Borzesti;

**Eng. Irina Stoica**, R&D Manager Zeelandia Romania;

**Eng. Cornelia Roșu**, Production Manager Panifcom SA Iași.



## Plenary Session

Chairpersons:

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

**Prof. Maria Gavrilescu**, “Gheorghe Asachi” Technical University of Iași

**10<sup>30</sup> - 11<sup>00</sup>** Plenary Lecture: **Acad. Bogdan Simionescu**, Vice President of the Romanian Academy

### **POLYMER - BASED ENGINEERED CONSTRUCTS DESIGNED FOR DRUG / GENE DELIVERY AND REGENERATIVE MEDICINE**

**11<sup>00</sup> - 11<sup>30</sup>** Coffee Break

**11<sup>30</sup> - 12<sup>00</sup>** Plenary Lecture: **Antonio Marzocchella**  
University of Naples Federico II Italy

### **BIOPRODUCTION OF NEXT-GENERATION FUELS FROM WASTE STREAMS**

Alessandra Procentese<sup>1</sup>, Francesca Raganati<sup>2</sup>, Maria Elena Russo<sup>1</sup>, Antonio Marzocchella<sup>2</sup>

<sup>1</sup>Combustion Research Institute Napoli Italy

<sup>2</sup>University of Naples Federico II Italy

**12<sup>00</sup> - 12<sup>30</sup>** Plenary Lecture: **Wilhelm Schabel**, Karlsruhe Institute of Technology (KIT), Germany

### **THIN FILMS FOR ENERGY SYSTEMS – RECENT ADVANCES IN PROCESSING OF Li ION BATTERY ELECTRODES**

**13<sup>00</sup> – 14<sup>00</sup>** Lunch

**14<sup>00</sup> - 15<sup>00</sup>** Posters Display “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Main Hall

14<sup>30</sup> – 18<sup>00</sup> Oral Presentations Topics:

***Advanced materials, manufacturing and processes (S1)***  
***Biotechnology and bio-based industries (S2)***

Lecture room: Council Room, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection

Chairpersons:

**Dr. Iuliana Spiridon**, “Petru Poni” Institute of Macromolecular Chemistry, Iasi, Romania

**Prof. Ioan Mămăligă**, “Gheorghe Asachi” Technical University of Iași, Romania

**S1-C01. Heterostructures of Sn/Mn Oxides Nanoparticles and Zn/Mg Layered Double Hydroxides for Light-Driven Catalysis of Diclofenac and Ibuprofen Degradation**

M. Darie<sup>1</sup>, J. Prince<sup>2</sup>, J. S. Valente<sup>2</sup>, G. Cârjă<sup>1</sup>

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Instituto Mexicano del Petroleo, Mexico

**S1-C02. Hydrodynamics on a Spinning Disc Reactor**

T. E. Iacob Tudose

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

**S1-C03. Understanding the Structure - Mass Transport Relationship in Azopolymers**

S. Ciobotărescu<sup>1,2</sup>, E. L. Epure<sup>1</sup>, V. Tebouř, N. Hurduc<sup>1</sup>

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University of Angers, Faculty of Sciences, France

**S1-C04. The Effect of Drying Conditions on Polyvinyl Alcohol-Water Films**

O. Forțu, C. Negoescu, I. Mămăligă

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

**S1-C05. Removal of Methyl Orange and Cadmium from Solution Using Modified Activated Charcoal**

M. Visa, N. Popa

R&D Center Renewable Energy Systems and Recycling, Transilvania University of Brasov, Romania

**S1-C06. pH/temperature-sensitive Microgels for Self-regulated Drug Delivery Systems**

S. Bucatariu, M. Constantin, G. Fundueanu

"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S1-C07. Green Synthesis of Silver Nanoparticles Using Plant Extracts**

A. L. Lungoci<sup>1</sup>, A. Fifere<sup>1</sup>, N. Marangoci<sup>1</sup>, A. Corciova<sup>2</sup>, B. Ivanescu<sup>2</sup>, C. Tuchilus<sup>2</sup>, C. Mircea<sup>2</sup>

<sup>1</sup>Center of Advanced Research in Bionanoconjugates and Biopolymers, "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

<sup>2</sup>"Grigore T. Popa" University of Medicine and Pharmacy Iasi, Faculty of Pharmacy, Romania

**S1-C08. Structure-activity Relationship Studies of Metal Complexes with Antitumor Activity**

M. F. Zaltariov

"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S1-C09. Homogeneous and Heterogeneous Catalysts with Silane/Siloxane-based Discrete Metal Complexes and Metal-Organic Frameworks**

M. F. Zaltariov, C. Racles

"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S1-C10. New Hydrogels Based on Cellulose for Biomedical Application**

D. E. Ciolacu, A. R. Petrovici

"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S1-C11. Paper-based Microfluidic Devices with Designed Structure**

F. Ciolacu<sup>1</sup>, D. Ciolacu<sup>2</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S1-C12. Structural and Morphological Characterization of Cellulose-Based Hydrogels**

*D. Rusu<sup>1</sup>, G. Gavril<sup>1</sup>, D. Peptanariu<sup>1</sup>, T. Budtova<sup>2</sup>, D. Ciolacu<sup>1</sup>*

<sup>1</sup>"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

<sup>2</sup>Center for Materials Forming - CEMEF, MINES ParisTech, PSL Research University, Sophia Antipolis, France

**S1-C13. Advanced Polybenzoxazine Structures Based on Reduced Graphene Oxide**

*I. E. Bîru<sup>1</sup>, S. A. Gârea<sup>1</sup>, H. Iovu<sup>1,2</sup>*

<sup>1</sup>Advanced Polymer Materials Group, University Politehnica of Bucharest, Romania

<sup>2</sup>Academy of Romanian Scientists, Bucharest, Romania

**S1-C14. Polysaccharide-based cryogels: preparation, characterization, and potential applications**

*M. V. Dinu, I. E. Raschip, N. Fifere, I. A. Dinu*

"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

**S2-C01. Bioethanol Production from *Ulva lactuca* Dry Algae by using Alcoholic Fermentation**

*D. R. Tirpan<sup>1</sup>, C. I. Koncsag<sup>1</sup>, A. G. Ciufu<sup>2</sup>, O. C. Pârvulescu<sup>2</sup>, T. Dobre<sup>2</sup>*

<sup>1</sup>Ovidius University of Constanta, Romania

<sup>2</sup>University Politehnica of Bucharest, Chemical and Biochemical Engineering Department, Romania

**Thursday, 01 November 2018**

Venue: Conference Room, University Main Building (Rectorate), 67 Dimitrie Mangeron Bd., Iași

Chairpersons:

**Prof. Gabriela Cârjă**, “Gheorghe Asachi” Technical University of Iași

**Prof. Adrian Ungureanu**, “Gheorghe Asachi” Technical University of Iași

**09<sup>30</sup> - 10<sup>00</sup>** Plenary Lecture: **Prof. Sebastien Royer** – Lille University, France

**SYNTHESIS OF MESOPOROUS SILICA SUPPORTED  
TRANSITION METAL NPS**

**10<sup>00</sup> - 10<sup>30</sup>** Plenary Lecture: **Dr. Gheorghe Fundueanu** - “Petru Poni” Institute of Macromolecular Chemistry, Iași, Romania

**SMART POLYMERIC MATERIALS FOR CONTROLLED RELEASE  
OF BIOACTIVE MOLECULES**

Gheorghe Fundueanu, Marieta Constantin, Sanda Bucatariu

**10<sup>30</sup> - 10<sup>50</sup>** Coffee Break

**10<sup>50</sup> - 11<sup>20</sup>** Plenary Lecture: **Prof. Alice Mija** – University of Nice, France

**BIO-BASED RECYCLABLE, RESHAPABLE AND REPAIRABLE  
(3R) THERMOSETS AND THEIRS SUSTAINABLE COMPOSITES**

**11<sup>20</sup> - 11<sup>50</sup>** Plenary Lecture: **Prof. Horia Iovu** – University Politehnica of Bucharest, Romania

**ADVANCED POLYMER-BASED NANOCOMPOSITES. NEW  
METHODS AND CONCEPTS**

12<sup>00</sup> – 13<sup>00</sup> **Optional visit to Library of the „Gheorghe Asachi” Technical University (UNESCO Heritage, selected among the most beautiful 25 libraries in the world) - free of charge. The transport is provided by a minibus**



13<sup>30</sup>-14<sup>30</sup> **Lunch**

14<sup>30</sup> - 17<sup>30</sup> **Oral Presentations Topic: *Environmental engineering and management (S3)***

Venue: Conference Room, University Main Building (Rectorate), 67 Dimitrie Mangeron Bd, Iași

Chairpersons:

**Prof. Cezar Catrinescu**, *Gheorghe Asachi” Technical University of Iași*

**Prof. Brîndușa Slușer**, *Gheorghe Asachi” Technical University of Iași*

**S3-C01. Modelling the Eutrophication of Cuedel Lake’s Water, Neamț District**

*A. Agafitei, V. Gabor*

”Gheorghe Asachi” Technical University of Iasi, Faculty of Hydrotechnics and Environmental Engineering

**S3-C02. Struvite Precipitation from Sewage Sludge Ash**

*B. A. Militaru, L. Lupa, F. Manea, R. Pode*

Politehnica University of Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Timisoara, Romania

**S3-C03. Comparative Studies Regarding Molybdate Adsorption onto Mg<sub>n</sub>Fe-LDH Obtained from Reagent and Waste Sludge**

*A. Golban, L. Lupa, L. Cochechi, R. Pode*

Politehnica University Timisoara, Faculty of Industrial Chemistry and Environmental Engineering, Timisoara, Romania

**S3-C04. Biogenic Volatile Organic Compounds Measurement Techniques - from Leaf to Canopy Level**

*L. Copolovici<sup>1</sup>, A. Lupitu<sup>1</sup>, C. Moisa<sup>2</sup>, D. Copolovici<sup>1</sup>*

<sup>1</sup>Faculty of Food Engineering, Tourism and Environmental Protection, Institute of Research- Development-Innovation in Technical and Natural Sciences of "Aurel Vlaicu" University, Arad, Romania

<sup>2</sup>Banat University of Agricultural Sciences and Veterinary Medicine "King Michael 1<sup>st</sup> of Romania" from Timisoara, Romania

**S3-C05. Investigating the Air Quality we Breathe in Romania**

*D. M. Copolovici<sup>1</sup>, D. N. Iosif<sup>1</sup>, A. C. Popitanu<sup>2</sup>, L. Copolovici<sup>1</sup>*

<sup>1</sup>"Aurel Vlaicu" University of Arad, Faculty of Food Engineering, Tourism and Environmental Protection; Institute for Research, Development and Innovation in Technical and Natural Sciences, Arad, Romania

<sup>2</sup>University of Oradea, Faculty of Medicine and Pharmacy, Romania

**S3-C06. Process Water Treatment into a Thermal Power Plant: Characterization, Treatment and Disposal of Produced Sediment and Sludge. A Case Study**

*D. Staciulescu<sup>1</sup>, C. Zaharia<sup>2</sup>*

<sup>1</sup>Veolia Energie Iasi, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-C07. Protecting Environment in Romania - Perceptions versus Active Participation**

*S. R. Ulman<sup>1</sup>, K. M. Dobay<sup>2</sup>*

<sup>1</sup>CERNESIM Environmental Research Center, "Alexandru Ioan Cuza" University of Iasi, Romania

<sup>2</sup>Romanian Academy, Iași Branch, „Gheorghe Zane” Institute of Economic and Social Research, Romania

**S3-C08. Olefins and Fuels from Frying Palm Oil through Pyrolysis**

A. M. Sivriu<sup>1</sup>, C. I. Koncsag (Muntean)<sup>2</sup>, A. M. Mares<sup>1</sup>, D. R. Tirpan<sup>2</sup>, O. Sapunaru<sup>2</sup>, G. Jinescu<sup>3</sup>

<sup>1</sup>University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

<sup>2</sup>University Ovidius of Constanta, Faculty of Applied Science and Engineering, Romania

<sup>3</sup>Romanian Academy of Technical Sciences, Bucharest, Romania

**S3-C09. Modeling of a Rectangular Channel Monolith Reactor for Sorption-Enhanced Water-Gas Shift**

V. Sandu, I. Dumbrava, A. M. Cormos, A. Imre-Lucaci, C. Cormos

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

**S3-C10. Microemulsified Carbon Nanotubes for Clean-up Operations**

T. Juzsakova<sup>1</sup>, N. Al-Jammal<sup>1</sup>, I. Crețescu<sup>2</sup>, V. Sebestyén<sup>1</sup>, J. Németh<sup>1</sup>, E. Domokos<sup>1</sup>, Á. Rédey<sup>1</sup>

<sup>1</sup>University of Pannonia, Veszprém, Hungary

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-C11. Aquatic Environmental Assessment**

J. Németh, V. Sebestyén, T. Juzsakova, E. Domokos, Á. Rédey

University of Pannonia, Veszprém, Hungary

**S3-C12. Investigation of Heavy Metals Toxic Effects on White Mustard**

S. I. Vasiliță<sup>1</sup>, M. Roșca<sup>1</sup>, E. D. Comăniță<sup>1</sup>, P. Cozma<sup>1</sup>, M. Diaconu<sup>1</sup>, M. Gavrilescu<sup>1,2</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Academy of Romanian Scientists, Bucharest, Romania



14<sup>30</sup>- 17<sup>30</sup>

Poster Session

Hall of “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection

**Topics:**

***Advanced materials, manufacturing and processes (S1)***  
***Biotechnology and bio-based industries (S2)***

Chairpersons:

**Prof. Corina Cernătescu**, “Gheorghe Asachi” Technical University of Iași, Romania

**Prof. Eugenia Iacob Tudose**, “Gheorghe Asachi” Technical University of Iași, Romania

**S1-P01. The Influence of Certain Inorganic Salts Used in the Salting-out Method on the Aromatic Profile of some Romanian White Wine Varieties**

A. M. Nistor<sup>1</sup>, V. V. Cotea<sup>1,2</sup>, M. Niculaua<sup>2</sup>

<sup>1</sup>“Ion Ionescu de la Brad” University of Agricultural Sciences and Veterinary Medicine, Iași, Romania

<sup>2</sup>Research Centre for Oenology, Romanian Academy Iasi Branch, Romania

**S1-P02. Fixed-Bed-Column Studies for Methylene Blue Removal by Cellulose CELLETS**

I. Nica<sup>1</sup>, S. Coser<sup>2</sup>, C. Zaharia<sup>1</sup>, L. Rusu<sup>3</sup>, D. Șuteu<sup>1</sup>

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>“Petru Poni” Institute of Macromolecular Chemistry, Iasi, Romania

<sup>3</sup>“Vasile Alecsandri” University of Bacau, Faculty of Engineering, Romania

**S1-P03. Optimization of the Lactic Acid Esterification in Reactive Distillation Process**

O. V. Țaga (Săpunaru)<sup>1</sup>, C. I. Koncsag<sup>2</sup>, A. M. Mares<sup>1</sup>, A. M. Sivriu<sup>1</sup>, G. Jinescu<sup>3</sup>

<sup>1</sup>University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

<sup>2</sup>University Ovidius of Constanta, Faculty of Applied Science and Engineering, Romania

<sup>3</sup>Romanian Academy of Technical Sciences, București, Romania

**S1-P04. Kinetic Modelling of Thermal Decomposition of Limestone Raw Materials Used for Inorganic Industry**

*L. Lazăr<sup>1</sup>, G. Lisă<sup>1</sup>, I. Fechetă<sup>2</sup>, M. Harja<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University of Strasbourg, ICPEES, France

**S1-P05. Structural Characterization, Magnetic and Transport Properties in Co-substituted  $\text{La}_{0.67}\text{Sm}_{0.33}\text{Fe}_{1-x}\text{Co}_x\text{O}_3$  Perovskites**

*N. Corneji<sup>1</sup>, C. Afloarei<sup>1,2</sup>, C. Ciomaga<sup>3</sup>, C. Miță<sup>1</sup>, M. L. Craus<sup>4,5</sup>*

<sup>1</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>2</sup>Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania

<sup>3</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Physics, Romania

<sup>4</sup>Joint Institute for Nuclear Physics, Moscow region, Dubna, Russia

<sup>5</sup>National Institute of Research & Development for Technical Physics, Iasi, Romania

**S1-P06. Heterogeneous Photocatalysis for the Removal of Levetiracetam from Waste Water, using  $\text{TiO}_2$**

*L. Favier<sup>1</sup>, A. M. Sescu<sup>2</sup>, D. Lutić<sup>3</sup>, L. Rusu<sup>4</sup>, M. Harja<sup>2</sup>*

<sup>1</sup>Superior National School of Chemistry of Rennes, CNRS, France

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>4</sup>"Vasile Alecsandri" University of Bacau, Faculty of Engineering, Romania

**S1-P07. Overview of Molecular Modeling of Polymers**

*E. L. Epure<sup>1</sup>, S. Ciobotărescu<sup>1,2</sup>, A. Căluian<sup>1</sup>, N. Hurduc<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

University of Angers, Faculty of Sciences, France

**S1-P08. Molecular Modelling of Amorphous Polysiloxanes Substituted with Different Azo Groups**

*E. L. Epure<sup>1</sup>, S. Ciobotărescu<sup>1,2</sup>, A. Căluian<sup>1</sup>, N. Hurduc<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University of Angers, Faculty of Sciences, France

**S1-P09. Solvatochromic Effect of pH over Some Azobenzimidazoles**

*C. Cernătescu<sup>1</sup>, R. Ciocchina<sup>2</sup>, G. A. Apostolescu<sup>1</sup>, C. Cobzaru<sup>1</sup>, R. E. Tătaru-Fărnuș<sup>1</sup>, N. Apostolescu<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup> Pacific University, Department of Chemistry, Oregon, USA

**S1-P10. Photodegradation of Fried Sunflower Oil**

C. Cobzaru<sup>1</sup>, G. Bordeianu<sup>2</sup>, G. A. Apostolescu<sup>1</sup>, R. E. Tătaru-Fărnuș<sup>1</sup>, N. Apostolescu<sup>1</sup>, C. Cernătescu<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania  
<sup>2</sup> Tehnical College "Danubiana" Roman, Neamt, Romania

**S1-P11. Investigation of Structural and Photocatalytic Properties of ZnS Prepared by Hydrothermal Process**

G. A. Apostolescu, C. Cernătescu, C. Cobzaru, R. E. Tătaru Fărnuș, N. Apostolescu

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

**S1-P12. Relationships between Structure and Liquid Crystalline Behavior of some Azoaromatic Compounds**

C. Măluțan, I. Cârlescu, C. M. Herghiligiu, N. Hurduc, D. Scutaru

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

**S1-P13. Recovery of Alkali and Lignin from Agri-waste Soda Pulping Black Liquor**

A. C. Puițel, A. M. Cheșcă, D. Gavrilăscu

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

**S1-P14. Impurities in Graphene Like Materials**

G. Hristea<sup>1</sup>, A. Topirlan<sup>1</sup>, D. Patroî<sup>1</sup>, O. Culicov<sup>1,2</sup>, I. Zinicovscaia<sup>2,3</sup>

<sup>1</sup>National Institute for R&D in Electrical Engineering, INCDIE ICPE CA, Bucharest, Romania

<sup>2</sup>Joint Institute for Nuclear Research, Moscow Region, Dubna, Russian Federation

<sup>3</sup>Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), Bucharest- Magurele, Romania

**S1-P15. Magnetic Nanoparticles-based Chitosan for Application in Cancer Therapy**

K. Z. Dellali<sup>1,2</sup>, C. L. Savin<sup>2</sup>, M. Dellali<sup>1,2</sup>, M. Popa<sup>2,3</sup>

<sup>1</sup>Hassiba Benbouali University of Chlef, Algeria

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S1-P16. Immobilization of Curcumin in Hydrogel Films Based on Chitosan and Oxidized Carboxymethyl Cellulose**

*M. Dellali*<sup>1,2</sup>, *C. E. Iurciuc (Tincu)*<sup>2</sup>, *K. Z. Dellali*<sup>1,2</sup>, *M. Popa*<sup>2,3</sup>

<sup>1</sup>Hassiba Benbouali University of Chlef, Algeria

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"

Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S1-P17. Investigation of Controlling Parameters for an Efficient Elimination of an Emergent Contaminant by TiO<sub>2</sub> Assisted Photo-Oxidation**

*A. M. Sescu*<sup>1</sup>, *L. Favier*<sup>2</sup>, *D. Lutic*<sup>3</sup>, *L. Rusu*<sup>4</sup>, *M. Harja*<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"

Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University Rennes, Ecole Nationale Supérieure de Chimie de Rennes, CNRS, France

<sup>3</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>4</sup>"Vasile Alecsandri" University of Bacau, Faculty of Engineering, Romania

**S1-P18. Macrospherical Porous Metallosilicate Materials Obtained by the Multi-Templating Technique**

*E. I. Mureșan*<sup>1</sup>, *D. Lutic*<sup>2</sup>, *N. Cimpoesu*<sup>3</sup>, *B. Istratie*<sup>4</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"

Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>3</sup>"Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Romania

<sup>4</sup>"Gheorghe Asachi" Technical University of Iasi, Faculty of Mechanical Engineering, Romania

**S1-P19. Caffeine as an Eco-friendly Inhibitor for Ti, Mo and Nb Based Alloys in Ringier Solution**

*M. M. Pricopi*<sup>1</sup>, *R. Chelariu*<sup>2</sup>, *N. Ailenei*<sup>1</sup>, *D. M. Sutiman*<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"

Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, Faculty of Materials Science and Engineering, Romania

**S1-P20. Comparison between New Complex Coagulant from Fly Ash and Al/Fe Coagulants**

*L. Forminte (Litu)*<sup>1</sup>, *G. Ciobanu*<sup>1</sup>, *C. Gómez De Castro*<sup>2</sup>, *O. Kotova*<sup>3</sup>, *M. Harja*<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"

Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Complutense University of Madrid, Department of Materials Science and Metallurgical Engineering, Spain

<sup>3</sup>Institute of Geology, Komi Science Centre, Ural Branch of RAS, Syktyvkar, Russia

**S1-P21. Packed Column Simulation for CO<sub>2</sub> Chemisorption in Activated Solutions**

*E. Droniuc (Hultuana)<sup>1</sup>, L. Favier<sup>2</sup>, L. Rusu<sup>3</sup>, I. Crețescu<sup>1</sup>, G. Ciobanu<sup>1</sup>, M. Harja<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University Rennes, Ecole Nationale Supérieure de Chimie de Rennes, CNRS, France

<sup>3</sup>"Vasile Alecsandri" University of Bacau, Faculty of Engineering, Romania

**S1-P22. Intensification of Water Softening Process by Combination of Ultrasound and Ion Exchange**

*L. Lazăr<sup>1</sup>, B. Bandrabu<sup>2</sup>, M. Harja<sup>1</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Process Engineering SRL, Bucharest, Romania

**S1-P23. Advanced Graphene Oxide – Protein Complexes for Tissue Engineering**

*A. M. Onas<sup>1</sup>, I. E. Bîru<sup>1</sup>, H. Iovu<sup>1,2</sup>*

<sup>1</sup>Advanced Polymer Materials Group, University Politehnica of Bucharest, Romania

<sup>2</sup>Academy of Romanian Scientists, Bucharest, Romania

**S1-P24. A Melt Infiltration Approach to Synthesize Nickel Nanocatalysts Encapsulated within the Intra-wall Pores of Mesoporous Supports**

*C. Ciotonea<sup>1</sup>, S. Chen<sup>1</sup>, C. Catrinescu<sup>2</sup>, E. Dumitriu<sup>2</sup>, A. Ungureanu<sup>2</sup>, R. Wojcieszak<sup>1</sup>, F. Dumeignil<sup>1</sup>, S. Royer<sup>1</sup>*

<sup>1</sup>University of Lille, CNRS, ENSCL, Centrale Lille, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, France

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S1-P25. Structural, Morphological and Thermal Analysis Evaluation of some Alginate/starch/n-clay Composites**

*A. M. Predescu, E. Matei, M. Râpă, C. Pantilimon, A. Țurcanu, C. Drăgan, C. Predescu*

University Politehnica of Bucharest, Center for Research and Eco - Metallurgical Expertise, Romania

### **S2-P01. Synthesis and Characterization of NAP-like Anti-amyloid Peptides**

A. V. Lupaescu<sup>1</sup>, B. A. Petre<sup>1,2</sup>, L. Ion<sup>1</sup>, C. I. Ciobanu<sup>1,3</sup>, M. Murariu<sup>4</sup>, G. Drochioiu<sup>1</sup>

<sup>1</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, "Romania

<sup>2</sup>Center for Fundamental Research and Experimental Development in Translation Medicine – TRANSCEND, Regional Institute of Oncology, Romania

<sup>3</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>4</sup>"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

### **S2-P02. New Mutant Truncated Amyloid- $\beta$ Peptides: Solid Phase Synthesis and Mass Spectrometric Characterization**

M. Jureschi<sup>1</sup>, B. A. Petre<sup>1,3</sup>, L. Ion<sup>1</sup>, C. I. Ciobanu<sup>2</sup>, M. Murariu<sup>4</sup>, G. Drochioiu<sup>1</sup>

<sup>1</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

<sup>2</sup>"Alexandru Ioan Cuza" University of Iasi, Research Department, Faculty of Chemistry, Romania

<sup>3</sup>Center for Fundamental Research and Experimental Development in Translation Medicine – TRANSCEND, Regional Institute of Oncology, Romania;

<sup>4</sup>"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

### **S2-P03. Modeling of *Porphyridium purpureum* Growth and Production of either Carbohydrates or Lipids**

E. E. Oprescu<sup>1</sup>, C. E. Enascuta<sup>1</sup>, M. Bombos<sup>1</sup>, E. Radu<sup>1</sup>, S. Velea<sup>1</sup>, A.-M. Galan<sup>1</sup>, V. Lavric<sup>2</sup>

<sup>1</sup>National Research and Development Institute for Chemistry and Petrochemistry ICECHIM, Bucharest, Romania

<sup>2</sup>University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

### **S2-P04. Conditioning the Biogas Digestate in Order to Optimize the Pyrolysis Process**

C. Calin<sup>1</sup>, S. Velea<sup>2</sup>, M. Bombos<sup>2</sup>, C.-E. Enascuta<sup>2</sup>, G. Vasilevic<sup>2</sup>, E. E. Oprescu<sup>1</sup>, D. Bombos<sup>1</sup>

<sup>1</sup>Petroleum-Gas University of Ploiesti, Romania

<sup>2</sup>National Research and Development Institute for Chemistry and Petrochemistry ICECHIM, Romania

### **S2-P05. Control the Epoxidation Reaction of Lignin by Reaction Calorimetry**

V. Iordan, Th. Măluțan, C. Măluțan

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

**S2-P06. Selective Separation of Carboxylic Acids Biosynthesized by *Rhizopus oryzae* Using Reactive Extraction**

*L. Kloetzer*<sup>1</sup>, *R. A. Ilică*<sup>1</sup>, *A. Tucaliuc*<sup>1</sup>, *A. I. Galaction*<sup>2</sup>, *D. Cașcaval*<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Grigore T. Popa" University of Medicine and Pharmacy, Faculty of Medical Bioengineering, Iasi, Romania

**S2-P07. Non-conventional Technique for Separation of Rosmarinic Acid - Synergic Extraction**

*M. Poștaru*<sup>1</sup>, *A. S. Bompă*<sup>2</sup>, *L. Kloetzer*<sup>2</sup>, *D. Cașcaval*<sup>2</sup>, *A. I. Galaction*<sup>1</sup>

<sup>1</sup>"Grigore T. Popa" University of Medicine and Pharmacy, Faculty of Medical Bioengineering, Iasi, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S2-P08. Improvement of Aerobic Yeasts Fermentation by n-dodecane Addition Versus Hybrid Process of Yeasts Fermentation - Alcohol Separation**

*A. Tucaliuc*<sup>1</sup>, *A. C. Blaga*<sup>1</sup>, *C. Ciobanu*<sup>1</sup>, *D. Cașcaval*<sup>1</sup>, *A. I. Galaction*<sup>2</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Grigore T. Popa" University of Medicine and Pharmacy of Iasi, Faculty of Medical Bioengineering, Iasi, Romania

**S2-P09. Bioethanol Production in Hybrid Systems**

*A. C. Blaga*<sup>1</sup>, *L. Kloetzer*<sup>1</sup>, *A. Tucaliuc*<sup>1</sup>, *D. Cașcaval*<sup>1</sup>, *A. I. Galaction*<sup>2</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Grigore T. Popa" University of Medicine and Pharmacy of Iasi, Faculty of Medical Bioengineering, Iasi, Romania

**S2-P10. Biosynthesis of Silver Nanoparticles Using Natural Extracts as a Novel Bioresource with Antibacterian Activity**

*C. Tanase*<sup>1</sup>, *A. I. Talmaciu*<sup>2</sup>, *L. Beța*<sup>1</sup>, *E. Mircia*<sup>1</sup>, *I. Volf*<sup>2</sup>, *V. I. Popa*<sup>2</sup>

<sup>1</sup>University of Medicine and Pharmacy of Târgu Mureș, Faculty of Pharmacy, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S2-P11.  $\alpha$ -Amylase immobilization in chitosan/alginate particles obtained by polyelectrolyte complexation and ionic cross-linking**

*Mary Joy Ugwonal*<sup>1</sup>, *Camelia Elena Iurciuc (Tincu)*<sup>2</sup>, *Corina Lenuța Savin*<sup>2</sup>, *Patrick Martin*<sup>1</sup>, *Marcel Popa*<sup>2,3</sup>

<sup>1</sup>Artois University, Institute of Technology (IUT) of Béthune, France

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucuresti, Romania

**Friday, 2 November 2018**

Conference Room, University Main Building (Rectorate), 67 Dimitrie Mangeron Bd., Iași

Chairperson:

**Prof. Carmen Teodosiu**, *“Gheorghe Asachi” Technical University of Iași*  
**Dr. George Bârjoveanu**, *“Gheorghe Asachi” Technical University of Iași*

**10<sup>00</sup> - 10<sup>30</sup>** Plenary Lecture: **Prof. Jean-François Lamonier** -  
University of Lille 1, France

**DESIGN OF HIGH-PERFORMANCE HETEROGENEOUS  
CATALYSTS USING HYDROXYAPATITE FOR VOLATILE  
ORGANIC COMPOUNDS REMOVAL**

**10<sup>30</sup> – 11<sup>00</sup>** Plenary Lecture: **Prof. Florica Manea** - Politehnica  
University of Timișoara, Romania

**ELECTROCHEMICAL PROCESSES: CHALLENGES AND  
OPPORTUNITIES FOR ADVANCED WATER TREATMENT AND  
PROCESS CONTROL**

**11<sup>00</sup> – 11<sup>30</sup>** Plenary Lecture: **Dr. Carmen M. Torres** - Rovira i  
Virgili University, Spain

**COMPUTER-AIDED TOOLS FOR ENVIRONMENTAL AND  
ECONOMIC OPTIMIZATION OF INDUSTRIAL PROCESSES**

**11<sup>30</sup>- 11<sup>50</sup>** **Coffee Break**

**Hall of “Cristofor Simionescu” Faculty of Chemical Engineering  
and Environmental Protection**



11<sup>50</sup>- 13<sup>30</sup>

Poster Session

Hall of “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection

Topic:

*Environmental engineering and management (S3)*

Chairperson:

**Prof. Carmen Zaharia**, “Gheorghe Asachi” Technical University of Iași

**Dr. Camelia Smaranda**, “Gheorghe Asachi” Technical University of Iași

**S3-P01. Volatile Compounds of Romanian Red Wines Aged with Oak Chips**

*G. D. Dumitriu (Gabur)*<sup>1</sup>, *C. Teodosiu*<sup>1</sup>, *V. V. Cotea*<sup>2</sup>, *N. Lopez de Lerma*<sup>3</sup>, *R. A. Peinado*<sup>3</sup>

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University of Agricultural Sciences and Veterinary Medicine “Ion Ionescu de la Brad” Iași, România

<sup>3</sup>University of Córdoba, Spain

**S3-P02. Use of Autoclaved Cellular Concrete and Pumice Stone for the Removing of Phosphates from Wastewater**

*O. D. Orbuleț*, *C. Modrogan*, *C. Bobirică*, *C. Orbeci*, *D. Madelene*, *L. Bobirică*, *A. Pitic*

University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

**S3-P03. Adsorptive Removal of Manganese and Iron from Groundwater**

*C. Modrogan*, *C. Bobirică*, *O. D. Orbuleț*, *L. Bobirică*, *C. Orbeci*, *D. Ionitã*

University Politehnica of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

**S3-P04. Ti/ZnFeAILDH and Mn/ZnFeAILDH Nanostructures as Highly Efficient Catalysts for Photo-Fenton Processes**

*M. Darie*, *M. Secula*, *M. Vizitiu*, *G. Cârjã*

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

**S3-P05. Agri-wastes as a Low Cost Adsorbent for Nicosulfuron Herbicide**

*J. C. Cara<sup>1</sup>, L. Bulgariu<sup>2</sup>, B. G. Rusu<sup>1</sup>, G. Jitareanu<sup>3</sup>*

<sup>1</sup>“Ion Ionescu de la Brad” University of Agricultural Sciences and Veterinary Medicine, Research Institute for Agriculture and Environment, Iasi, Romania

<sup>2</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>“Ion Ionescu de la Brad” University of Agricultural Sciences and Veterinary Medicine, Iasi, Romania

**S3-P06. Potential Use of Biochar from Various Biomass Wastes as Biosorbent in Heavy Metal Removal Processes**

*A. M. Matcaboja<sup>1</sup>, A. R. Lucaci<sup>1</sup>, D. Bulgariu<sup>2,3</sup>, A. M. Mocanu<sup>1</sup>, L. Bulgariu<sup>1</sup>*

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>“Alexandru Ioan Cuza” University of Iași, Faculty of Geography and Geology, Romania

<sup>3</sup>Romanian Academy, Filial of Iași, Branch of Geography, Romania

**S3-P07. New Adsorbents Obtained from PET Waste with Applications in the Removal of Cu(II) Ions from Aqueous Solution**

*B. Cojocariu<sup>1</sup>, O. I. Ungureanu<sup>1</sup>, A. M. Mocanu<sup>1</sup>, D. F. Loghin<sup>2</sup>, L. Bulgariu<sup>1</sup>*

<sup>1</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Petru Poni Institute of Macromolecular Chemistry, Iași, Romania

**S3-P08. Clinical and Thermodynamic Studies of the Lead (II) Binding by Pectins in the Blood of Children**

*I. Povar<sup>1</sup>, O. Spinu<sup>1</sup>, P. Demchenko<sup>2</sup>, A. Voytko<sup>2</sup>, T. Lupașcu<sup>1</sup>, C. Luca<sup>3</sup>*

<sup>1</sup>Institute of Chemistry, Chisinau, Republic of Moldova

<sup>2</sup>“Technologika” SPE Ltd., Ukraine

<sup>3</sup>“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-P09. Equilibrium Study of the Removal of Heavy Metals from Industrial Effluents by Chemical Processes and Biosorption**

*I. Povar<sup>1,2</sup>, I. Zinicovscaia<sup>1,2,3</sup>, O. Spinu<sup>1</sup>, S. Ubaldini<sup>4</sup>, T. Lupașcu<sup>1</sup>, Gh. Duca<sup>1</sup>*

<sup>1</sup>The Institute of Chemistry, Chisinau, Republic of Moldova

<sup>2</sup>The Joint Institute for Nuclear Research, Dubna, Russia

<sup>3</sup>Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Bucharest - Magurele, Romania

<sup>4</sup>Istituto di Geologia Ambientale e Geoingegneria – CNR, Rome, Italy

**S3-P10. Biosorptive Performances of Soy Waste Biomass in Environmental Remediation Processes**

*I. D. Fertu<sup>1</sup>, L. Bulgariu<sup>2</sup>, T. Măluțan<sup>2</sup>, M. Gavrilescu<sup>2,3</sup>*

<sup>1</sup>Dunărea de Jos University of Galați, Faculty of Medicine and Pharmacy, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>3</sup>Academy of Romania Scientists, Bucharest, Romania

**S3-P11. The Oxidative Dissolution of Pyrite in the Presence of New Synthesized Organic Compounds**

*M. I. Duinea<sup>1,2</sup>, G. Cârâc<sup>2</sup>, B. Ghejan<sup>1</sup>, A.-M. Sandu<sup>1</sup>, M. Petcu<sup>1</sup>, L. M. Birsa<sup>3</sup>, P. I Chirita<sup>1</sup>*

<sup>1</sup>University of Craiova, Department of Chemistry, Romania

<sup>2</sup>"Dunarea de Jos" University of Galati, Romania

<sup>3</sup>"Alexandru Ioan Cuza" University of Iasi, Department of Chemistry, Romania

**S3-P12. Dye Removal from Aqueous Effluents by Adsorption on Activated Carbon Prepared by Stone Cherry Physical Treatment**

*C. G. Grigoras<sup>1</sup>, A. I. Simion<sup>1</sup>, L. Favier<sup>2,3</sup>, L. Gavrilă<sup>1</sup>*

<sup>1</sup>"Vasile Alecsandri" University of Bacău, Faculty of Engineering, Romania

<sup>2</sup>Ecole Nationale Supérieure de Chimie de Rennes; CNRS, France

<sup>3</sup>Université Européenne de Bretagne, France

**S3-P13. Integrated Assessment of Heavy Metals Pollution in the Prut River Basin: A Case Study for Iași County**

*R. Neamțu, B. M. Slușer, C. Teodosiu, A. F. Gîlcă, D. Gavrilescu, C. P. Mustereț*

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

**S3-P14. Sequential Biosorption of Priority pollutants on Agricultural Waste: Isotherm and Kinetic Studies**

*I. Moroșanu, C. Teodosiu, C. Păduraru, D. Fighir, D. Ibănescu, P. Apopei, L. Tofan*

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

**S3-P15. Effect of Manganese  $\beta$ -aminoisobutyric Acid Complexes Treatment on the Growth of *Phaseolus Vulgaris* and *Lens Culinaris* Seedlings**

*D. Sibiescu<sup>1</sup>, C. Miță<sup>2</sup>, M. Vizitiu<sup>1</sup>, V. R. Gradinaru<sup>2</sup>, D. G. Cozma<sup>2</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Alexandru Ioan Cuza" University of Iasi, Faculty of Chemistry, Romania

**S3-P16. Optimization of *Chlorophyll a* Removal from Wastewaters Using Bio-inspired Algorithms**

E. N. Dragoi<sup>1,2</sup>, S. Curteanu<sup>1</sup>, F. Leon<sup>2</sup>, L. Eva<sup>3</sup>, V. Dafinescu<sup>3</sup>, M. D. Turliu<sup>3</sup>  
1"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"  
Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania  
2"Gheorghe Asachi" Technical University of Iasi, Faculty of Automatic Control  
and Computer Engineering, Romania  
3Emergency Clinical Hospital "Prof. Dr. Nicolae Oblu", Iasi, Romania

**S3-P17. Data Driven Modeling for Better Understanding the Sustainable Development Goals**

V. Sebestyén<sup>1</sup>, G. Dörgő<sup>2</sup>, T. Juzsakova<sup>1</sup>, E. Domokos<sup>1</sup>, J. Abonyi<sup>2</sup>  
1University of Pannonia, Institute of Environmental Engineering, Veszprém,  
Hungary  
2University of Pannonia, MTA-PE „Lendület” Complex Systems Monitoring  
Research Group, Veszprém, Hungary

**S3-P18. New Developments in Red Mud Reprocessing and Utilization**

T. Juzsakova<sup>1</sup>, Z. Bakonyi<sup>2</sup>, E. Domokos<sup>1</sup>, Á. Rédey<sup>1</sup>  
1University of Pannonia, Veszprém, Hungary  
2MAL Hungarian Aluminum Producing and Trading Closed Share Company,  
Gyártelep, Ajka, Hungary

**S3-P19. Influence Study of Different Liquid Mediums on *Spirulina platensis* Microalgae Cultivation for Environmental Applications**

M. Diaconu, I. Volf, I. Cretescu, G. Șoreanu  
"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty  
of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-P20. Raster Sampling, Chemical Characteristics and Floristic Peculiarities of a Soil Affected by Anthropic Activities**

T. A. Zotică<sup>1</sup>, S. D. Chirilă<sup>2</sup>, C. Balan<sup>1</sup>, I. Volf<sup>1</sup>  
1"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu"  
Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania  
2"Alexandru Ioan Cuza University" of Iași, Faculty of Biology, Romania

**S3-P21. Influence of Particle Size and Distribution on Polyphenols Ultrasound Assisted Extraction Process**

O. A. Pătrăuțanu, L. Lazăr, V. I. Popa, I. Volf  
"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty  
of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-P22. Studies on Some Polyphenols Complexes with Copper(II)**

R. P. Damaschin, V. I. Popa, I. Volf

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

**S3-P23. Comparative Evaluation of Polyphenols in Branches Extracts of *Rosa canina*, *Hippophae rhamnoides* and *Prunus spinosa* sp. Using Conventional Extraction Methods**

O. T. Ciupercă<sup>1,2</sup>, C. E. Țebrencu<sup>2,3</sup>, L. Lazar<sup>1</sup>, E. Ionescu<sup>2,3</sup>, I. Volf<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Research and Processing Centre for Medicinal Plants "Plantavorel" S.A., Piatra Neamț, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P24. Investigation on Microwave Assisted Extraction Process of Some Polyphenols from Branches of *Prunus spinosa* L.**

O. T. Ciupercă<sup>1,2</sup>, C. E. Țebrencu<sup>2,3</sup>, L. Lazăr<sup>1</sup>, I. Volf<sup>1</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Research and Processing Centre for Medicinal Plants „Plantavorel” S.A., Piatra Neamț, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P25. Graphene Based Electrochemical Sensors for Carbendazime Pesticides Detection in Vegetable and Fruits**

G. Hristea, A. Topirlan, M. Iordoc

National Institute for R&D in Electrical Engineering, INCĐIE ICPE CA, Bucharest, Romania

**S3-P26. Magnetic Chitosan Composite as an Adsorbent for the Removal of Cu(II) Ions from Aqueous Environment**

A. Ibanescu, D. Hritcu, M. I. Popa

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

**S3-P27. Kinetic Modeling of Metal Uptake in Phytoremediation**

P. Cozma, S. I. Vasilică, M. Roșca, R. M. Hlihor, C. Ghinea, L. Apostol, E. D. Comăniță, C. Smaranda, M. Diaconu, M. Gavrilescu

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

**S3-P28. Behavior of *Bacillus megaterium* Living Biomass in a Concentric-tube Airlift Bioreactor in the Presence of Cadmium Ions**

M. Roșca<sup>1</sup>, T. Tavares<sup>2</sup>, P. Cozma<sup>1</sup>, M. Gavrilescu<sup>1,3</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>University of Minho, CEB – Centre of Biological Engineering, Campus de Gualtar, Braga, Portugal

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P29. Survey on Pesticides Used at National and International Level and Available Technologies for the Environmental Remediation**

M. Roșca<sup>1</sup>, E. D. Comăniță<sup>1</sup>, P. Cozma<sup>1</sup>, R. M. Hlihor<sup>1,2</sup>, M. Gavrilescu<sup>1,3</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine of Iasi, Faculty of Horticulture, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P30. Evaluation of Phytoremediation Performance for the Removal of Heavy Metals from the Environment by Life Cycle Assessment (LCA)**

E. D. Comăniță<sup>1</sup>, M. Roșca<sup>1</sup>, P. Cozma<sup>1</sup>, C. Smaranda<sup>1</sup>, M. Gavrilescu<sup>1,2</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P31. Acute Toxicity of Heavy Metals to Various Species of Bacteria**

M. Diaconu<sup>1</sup>, S. I. Vasilică<sup>1</sup>, M. Roșca<sup>1</sup>, P. Cozma<sup>1</sup>, E. D. Comăniță<sup>1</sup>, C. Smaranda<sup>1</sup>, R. M. Hlihor<sup>2</sup>, M. Gavrilescu<sup>1,3</sup>

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Ion Ionescu de la Brad" University of Agricultural Sciences and Veterinary Medicine of Iasi, Faculty of Horticulture, Romania

<sup>3</sup>Academy of Romanian Scientists, Bucharest, Romania

**S3-P32. Study of Heavy Metals in Soil**

G. C. Bartic (Lazăr), F. Stătescu, D. Toma

"Gheorghe Asachi" Technical University of Iasi, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Iasi, Romania

**S3-P33. Advanced Quantitative Environmental Assessment in Case of Abandoned Industrial Site**

*V. Sebestyén<sup>1</sup>, T. Juzsakova<sup>1</sup>, J. Németh<sup>1</sup>, Z. Kovacs<sup>1</sup>, B.M. Sluser<sup>2</sup>, I. Cretescu<sup>2</sup>, E. Domokos<sup>1</sup>, Á. Rédey<sup>1</sup>*

<sup>1</sup>University of Pannonia, The Institute of Environmental Engineering, Veszprem, Hungary

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

**S3-P34. Modeling of a Wastewater-Treatment Electrolytic Process Using a Neuro-evolutive Technique**

*S. Curteanu<sup>1</sup>, E. N. Dragoi<sup>1,2</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

<sup>2</sup>"Gheorghe Asachi" Technical University of Iasi, Faculty of Automatic Control and Computer Engineering, Iasi, Romania

**S3-P35. Considerations on the Radioactivity's Effect of Materials Embedded in Constructions to the Living Environment**

*D. Covatariu<sup>1</sup>, G. Covatariu<sup>1</sup>, I. Volf<sup>2</sup>*

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, Faculty of Civil Engineering and Building Services, Iasi, Romania

<sup>1</sup>"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Iasi, Romania

## Some key figures

