

# RICCCE 22

22nd Romanian International  
Conference on Chemistry  
and Chemical Engineering

**Sinaia**  
**ROMANIA**

September 7-9

**2022**

## PROGRAM



INTERNATIONAL Hotel, Sinaia, ROMANIA



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## Wednesday 7 September 2022 – Opening Sessions

### Registration

*Time: 14:00 – 17:00*

### Opening Ceremony

*Time: 17:00 – 17:30*

### Plenary Session

*Time: 17:30 – 19:00*

*Chaired by: Cristina Orbeci and Cristian Pîrvu*

17:30 – 18:15

**Horia IOVU** (*University Politehnica of Bucharest, ROMANIA*)

*Transforming Chemical Engineering Education and Research for Shaping Knowledge Societies of the Future*

18:15 – 19:00

**Mihaela ȘTEFAN** (*University of Texas at Dallas, USA*)

*Fused-ring pyrrole organic semiconductors for organic field effect transistors (OFETs)*

### Welcome Cocktail

*Time: 20:00*

## Thursday 8 September 2022 – Morning sessions

### Plenary Session

*Time: 9 – 10:30*

*Chaired by: Ștefania Stoleriu and Oana Pârvulescu*

09:00 – 09:45

**Pietro ALTIMARI** (*Sapienza University of Rome, ITALY*)

*Production of microalgae biomass integrated with wastewater treatment: control of bacterial contamination in heterotrophic cultures*

09:45 – 10:30

**Marie-Noëlle COLLOMB** (*University Grenoble Alpes, FRANCE*)

*Bio-inspired polymer/metal oxides material for electrocatalytic water oxidation*

### Coffee Break

*Time: 10:30 – 11:00*

### Plenary Session

*Time: 11:00 – 12:30*

*Chaired by: Ileana Rău and Paul Stănescu*

11:00 – 11:45

**Bertrand DONNIO** (*Institut de Physique et Chimie des Matériaux de Strasbourg (IPCMS), FRANCE*)

*Control of the Properties and Structural Diversity in Self-assembled Nanoparticle Superlattices by Ligand Shell Chemistry*

11:45 – 12:30

**Yoshiko OKADA-SHUDO** (*University of Electro-Communications, JAPAN*)

*Molecular electronics and image engineering applications of photosynthetic protein bacteriorhodopsin*

## WORKSHOP - New materials for electrochemical recognition of inorganic and biological species - NOMARES

*Time: 10:30 – 12:30*

*Chaired by:* **Marie-Noëlle Collomb** and **Eleonora-Mihaela Ungureanu**

11:00 to 11:20 keynote

Alina-Alexandra Vasile (Corbei), Oana Ciocirlan, Raluca Isopescu, Eleonora-Mihaela Ungureanu, **Amalia Stefaniu** (National Institute of Chemical-Farmaceutical Research and Development, Bucharest, Romania), Gabriela Stanciu

*Properties assessment by quantum mechanical calculations for azulenes substituted with thiophen- or furan-vinyl-pyridine*

11:20 to 11:40 keynote

Claudiu Narcis Spinu, Cătălin Manea, Georgiana-Luiza Tatu (Arnold), George-Octavian Buica, **Eleonora-Mihaela Ungureanu** (University Politehnica of Bucharest, Romania)

*Electrochemical behaviour of new (azulen-1-ylmethylene)-heteroaromatic compounds containing 2-thioxo-thiazolidin-4-one moieties*

11:40 to 12:00 keynote

**Veronica Anastasoae** (National Institute for Research and Development In Microtechnology – Imt Bucharest), Roxana Tomescu, Cristian Kusko, Iuliana Mihalache, Adrian Dinescu, Catalin Parvulescu, Stefan Caramizoiu, Gabriel Craciun, Dana Cristea

*Experiments for fluorescent improvement with plasmonic metasurfaces*

12:00 to 12:20 keynote

**Ovidiu-Teodor Matica** (University Politehnica of Bucharest, Romania), Elena Diacu, Alina-Georgiana Brotea, Adina- Maria Paun, Amalia Stefaniu, Eleonora-Mihaela Ungureanu

*DFT Investigations on 2-thioxo-thiazolidin-4-ones for Estimation of Chemical Reactivity Parameters*

## Lunch Break

*Time: 12:30 – 14:00*

**New Materials and Nanomaterials**

*Section 6*

*Time: 14:00 – 16:30*

*Chaired by: Anton Fikai and Ștefania Stoleriu*

14:00 to 14:20 Keynote

**Alina Bădănoiu** (University Politehnica of Bucharest, Romania)

*Intumescent Materials - Why, Where and How?*

14:20 to 14:40 Keynote

**Adelina-Carmen Ianculescu** (University Politehnica of Bucharest, Romania), Catalina Stanciu, Bogdan Vasile, Adrian Surdu, Roxana Trusca, Roxana Patru, Lucian Pintilie, Ioana Pintilie, Mihaela Botea, Mircea Udrea

*Structural, functional properties and enhanced thermal stability of bulk graded (Ba,Sr)TiO<sub>3</sub> ceramics for pyroelectric applications*

14:40 to 14:50

**Constantin Dorinel Voinițchi** (Technical University of Civil Engineering Bucharest, Romania), M. Barnaure, D. Neculescu, E. Matsch, F. Capatana

*Considerations on determining the characteristics of historical lime mortars*

14:50 to 15:00

**Vasile-Adrian Surdu** (University Politehnica of Bucharest, Romania), Mariana Andreea Marinică, Ovidiu Oprea, Adelina Carmen Ianculescu

*High entropy perovskite oxides: synthesis and characterization*

15:00 to 15:10

**Vladimir Lucian Ene** (University Politehnica of Bucharest, Romania), Claudiu Vasile Condor, Valentin Razvan Lupu, Roxana Elena Patru, Adelina Carmen Ianculescu

*Structure and functional properties of BCT-BZT ceramics near morphotropic phase boundary*

15:10 to 15:20

**Marin Gheorghe** (NANOM—MEMS, Romania), Anton Fikai, Denisa. Fikai, Ecaterina Andronescu, Simona Gheorghe, Georgiana Dolete, Paul Svasta

*Ferromagnetic Layers Deposited by Inkjet Printing*

15:20 to 15:30

**Isabella Bondesson** (Cellink, Sweden)

*Biofabrication of advanced, multi-material 3D models*

15:30 to 15:40

**Holban Alina Maria** (University of Bucharest, Romania), Vizireanu Sorin, Zarif Maria, Grumezescu Alexandru Mihai, Birca Alexandra, Farcasiu Alexandru Titus, Marinescu Florica, Chifiriuc Mariana Carmen

*Atmospheric plasma treatment to modulate biofilm formation and fluoridation of enamel-like hydroxyapatite model*

15:40 to 15:50

**Alexandra-Cristina Burduşel** (University Politehnica of Bucharest, Romania), Valentina Gugiu, Ecaterina Andronescu, Cristina Chircov, Alexandra Cătălina Bîrcă, Ionela Neacşu, Anton Fikai, Ovidiu Oprea

*Hydroxyapatite-cerium oxide system functionalized with Thymus vulgaris essential oil with antimicrobial effect*

15:50 to 16:00

**Cezar Comanescu** (National Institute of Materials Physics, Romania), Petru Palade, Nicu Iacob, Gabriel Schinteie, Victor Kuncser

*Exploring the journey of ferrites from biomedical to energy storage applications*

16:00 to 16:10

**Patrick Frederix** (Nanosurf AG, Switzerland), Christian Bippes, Jonathan Adams, Goetz Hoffmann

*AFM as a tool to characterize material properties at the nanoscale*

16:10 to 16:20

**Bogdan Purcareanu** (Department Research and Development BIOTEHNOS SA, Otopeni, Romania), Mihai Alexandru Florea, Veronica Drumea Dan Eduard Mihaiescu, Anton Fikai, Gabriel Vasilievici, Laura Olariu

*Mesoporous composites for slow-release applications of bioactive compounds*

16:20 to 16:30

**Bogdan Ştefan Vasile** (University Politehnica of Bucharest, Romania), Bogdan Andrei ILIE, Adrian-Ionuţ Nicoara, Vasile-Adrian Surdu, Vladimir Lucian Ene, Ionela Andreea Neacsu, Ovidiu Oprea, Roxana Trusca

*Valorization of historical thermal plant ash deposits as supplementary cementing materials*

## Thursday 8 September 2022 – Afternoon parallel sessions

### Monitoring & Environmental Protection

#### Section 5

Time: 14:00 – 16:40

Chaired by: **Cristina Orbeci** and **Simina Ștefan**

14:00 to 14:20 Keynote

**Daniela Simina Ștefan** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Magdalena Bosomoiu, Mircea Ștefan

*Leather waste valorisation for the obtaining of smart fertilizers*

14:20 to 14:30

**Vasilica Vasile** (INCD URBAN-INCERC, INCERC Bucharest Branch), Alina Dima, Mihaela Ion

*Experimental researches regarding the monitoring of some VOCs in conditions of controlled emissions*

14:30 to 14:40

**Ștefan Ioan Voicu** (Department of Analytical Chemistry and Environmental Engineering, Advanced Polymers Materials Group, University Politehnica of Bucharest)

*Contributions to the field of polymeric membranes for environmental and biomedical applications*

14:40 to 14:50

**Giovanina - Iuliana Lupu** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Liliana Bobirica, Constantin Bobirica, Cristina Orbeci, Ecaterina Matei, Maria Rapa

*Photocatalytic oxidation of azithromycin in aqueous solution by TiO<sub>2</sub>-coated fiberglass membrane*

14:50 to 15:00

**Nicolaie Marin** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Constantin Bobirica, Liliana Bobirica, Cristina Orbeci

*Synthesis and characterization of new assortments of solid alkaline activators for the manufacture of one-part geopolymer cements*

15:00 to 15:10

**Thaer Hameed Abed** (University Politehnica of Bucharest, Faculty of Biotechnic Systems Engineering), Daniela Simina Stefan, Mircea Stefan

*Hydrogen sulfide, ammonium, and organic compounds removal from natural water*

15:10 to 15:20

**Ecaterina Anca Serban** (Faculty of Chemical Engineering and Biotechnology, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, Department of General Chemistry, National Research and Development Institute for Industrial Ecology ECOIND Bucharest, Department Pollution Control), Daniela Simina Stefan, Ileana Rau, Adrian Peticila, Annette Madelene Dancila

*Retention of Cd, Pb and Zn metal ions on lavender by biosorption*

15:20 to 15:30

**Sorina-Alexandra Leau** (Department of Electrochemistry and Corrosion, Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy, Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University "Politehnica" of Bucharest), Cecilia Lete, Stelian Lupu

*Development of sensing materials based on PEDOT and PtNPs for analytical applications*

15:30 to 15:40

**Konstantinos Dermentzis** (International Hellenic University, Department of Chemistry, Hephaestus Research Laboratory), Kokkoni Karakosta, Ali Zamani, Dimitrios Marmanis

*Electrochemical treatment of phosphate wastewater and simultaneous recovery of phosphorus and hydrogen*

15:40 to 15:50

**Adriana Cornelia Mârşolea** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Florentina Laura Chiriac, Cristina Orbeci, Constantin Bobirică, Liliana Bobirică, Vasile Ion Iancu

*Assessment of Bisphenol a release from PET water bottles under different storage temperature and duration*

15:50 to 16:00

**Bianca Azanfire** (Department of Environmental Engineering and Management, "Gheorghe Asachi" Technical University of Iaşi, "Cristofor Simionescu", Faculty of Chemical Engineering and Environmental Protection), Laura Bulgariu

*Thermodynamic studies of Cd (II) ions adsorption from aqueous solutions on clay adsorbent*



16:00 to 16:10

**Sorina-Mihaela Teiușanu** (Chemical and Biochemical Engineering Department, University Politehnica of Bucharest, Romcim S.A. - Fabrica de ciment Medgidia (CRH CIMENT S.A.)), Claudia Muntean, Oana Cristina Pârvulescu, Alexandra Mocanu, Cristian Eugen Răducanu, Tănase Dobre

*Atmospheric discharge of fine powders from industrial processes*

16:10 to 16:20

**Carmen Curutiu** (Microbiology & Immunology Department, Faculty of Biology, University of Bucharest), Luc Tran Van, Ilinca Hagi, Adelina Popovici, Florica Marinescu, Irina Gheorghe, Lia Mara Ditu, Alina-Maria Holban, Tatiana Eugenia Sesan, Veronica Lazar

*Antimicrobial activity of essential oils against resistant *Pseudomonas aeruginosa* strains*

16:20 to 16:30

**Silviu-Laurentiu Badea** (National Research and Development Institute for Cryogenics and Isotopic Technologies – ICSI Rm. Valcea), Diana-Ionela Popescu (Stegarus), Ionut Cristea, Oana-Romina Botoran, Roxana-Elena Ionete

*Degradation of emerging contaminant hexabromobenzene in advanced oxidation processes experiments using Fe (II) activated potassium persulfate*

16:30 to 16:40

**Alina-Alexandra Ciobanu** (Gheorghe Asachi Technical University of Iasi-Romania, Faculty of Chemical Engineering and Environmental Protection), Loredana Munteanu, Laura Bulgariu, Gabriela Vasile

*Biosorption of metal ions Co (II) and Zn (II) from aqueous media using biochar obtained from algae biomass*

## Coffee Break

*Time: 16:30 – 17:00*

## Thursday 8 September 2022 – Afternoon parallel sessions

### New Materials and Nanomaterials

#### Section 6

Time: 17:00 – 19:30

Chaired by: **Cătălin Zaharia** and **Mihaela Ștefan**

17:00 to 17:20 Keynote

**Antonina Lavrentieva** (Institut für Technische Chemie, Leibniz Universität Hannover, Germany)

*3D cell cultures for tissue engineering and drug screening: implementation of gradient hydrogels and hypoxia sensor cells*

17:20 to 17:40 Keynote

**Xavier Perrin** (University of Toulon, France)

*Environmentally friendly corrosion inhibitor pigments for protective coatings*

17:40 to 17:50

**Elena Iuliana Bîru** (University Politehnica of Bucharest, Romania), Sorina Alexandra Garea, Horia Iovu

*Development of hyperbranched polybenzoxazines for advanced nanocomposites*

17:50 to 18:00

**Mădălina-Cristina Nicolae** (University Politehnica of Bucharest, Romania), Rebeca Leu Alexa, Horia Iovu, Ionuț Cătălin Mihăescu, Elvira Alexandrescu, Raluca Ianchiș

*Composite Ink with Increased Shape Fidelity For Tissue Engineering Applications*

18:00 to 18:10

**Carmen-Valentina Nicolae** (University Politehnica of Bucharest, Romania), Elena Olăreț, Izabela-Cristina Stancu

*Melt Electrowritten Scaffolds as Reinforcing Elements for Bone Surface Reconstruction*

18:10 to 18:20

**Andreea I. Dinu** (University Politehnica of Bucharest, Romania), Alexandra I. Cernencu, Sorina Dinescu, Adriana Lungu, Horia Iovu

*POSS-reinforced Naturally Derived Multi-Component Hydrogels: High-Performance Scaffolds for Bone Regeneration Applications*

18:20 to 18:30

**Maria Minodora Marin** (National Research and Development Institute for Textile and Leather, Division Leather and Footwear Research Institute, Department of Collagen, University Politehnica of Bucharest, Romania), Madalina Albu Kaya, Roxana Constantinescu, Ioana Catalina Gifu, Bogdan Trica, Elvira Alexandrescu, Silviu Preda, Catalin Mihaescu, Cristina Lavinia Nistor, Cristian Petcu, Horia Iovu, Raluca Ianchis

*Polysaccharide-based formulation with silica nanoparticles. A Novel Hydrogel for 3D Printing*

18:30 to 18:40

**Madalina-Ioana Necolau** (University Politehnica of Bucharest, Romania), Elena-Iuliana Biru, Ana-Roxana Stefan, Horia Iovu

*Advanced Bio-sourced Polybenzoxazines with Tunable Properties*

18:40 to 18:50

**George Mihail Vlasceanu** (University Politehnica of Bucharest, Romania), Mariana Ionita, Corina Cristiana Popescu, Elena Diana Giol, Irina Ionescu, Andrei - Mihai Dumitrascu, Madalina Floarea, Iulian Boerasu, Madalina Ioana Necolau, Elena Olaret, Jana Ghitman, Horia Iovu

*Fatty-acid bioconjugated chitosan scaffolding materials with anisotropic characteristics for biomedical applications*

18:50 to 19:00

**Iulia Elena Neblea** (National Institute for Research & Development in Chemistry and Petrochemistry ICECHIM, Romania), Anamaria Zaharia, Andreea Olaru, Mircea Teodorescu, Tanța-Verona Iordache, Elena-Bianca Stoica, Teodor Sandu, Andreea Miron, Andrei Sarbu, Anita-Laura Chiriac

*New Innovative Biopolymer-Based Interpenetrated Hydrogels With Potential Antibacterial Activity*

19:00 to 19:10

**Georgiana Dana Dumitrescu** (University Politehnica of Bucharest, Romania), Adi Ghebaour, Elena Olăreț, Andrada Serafim

*Fabrication of chitosan-alginate membranes loaded with active substance (5-Aminosalicylic acid)*

19:10 to 19:20

**Andra Mihaela Onaș** (University Politehnica of Bucharest, Romania), Andreea Madalina Pandele, Horia Iovu, Ciprian Victor Florea, Matei Raicopol, Luisa Pilan

*Carboxyl-modified graphene oxide incorporated chitosan scaffolds as promising materials for bone tissue engineering*

19:20 to 19:30

**Elena Cojocaru** (University Politehnica of Bucharest, Romania), Jana Ghitman, Gratiela Gradisteanu Pircalabioru, Horia Iovu

*New membranes based on citric acid-functionalized chitosan containing rGO-TEPA with nanofibrous architecture as promising biomaterials for antibacterial wound dressings*

19:30 to 19:40

**Elena Olaret** (University Politehnica of Bucharest, Romania), Andra Onaş, Brîndușa Bălănuță, Jana Ghițman, Izabela-Cristina Stancu, Andrada Serafim

*Investigation of mucin – carboxylated nanodiamonds interactions*

## Thursday 8 September 2022 – Afternoon parallel sessions

### New Developments in Chemical Synthesis & Catalysis

#### Biochemistry, Food & Health

Section 1 & 2

Time: 17:00 – 20:00

Chaired by: **Daniela Istrati** and **Ovidiu Oprea**

17:00 to 17:20 Keynote

Mihaela Deaconu, Simona Ioniță, Ioan. C. Tivig, Ana-Maria Brezoiu, Cristian Matei, Mihaela G. Moiescu, **Daniela Berger** (University Politehnica of Bucharest, Romania)

*Targeted irinotecan delivery systems containing fucoidan coated mesoporous silica nanoparticles*

17:20 to 17:40 Keynote

**Olivier Siri** (Aix-Marseille Université, France)

*Azacalixarene: An Ever-Growing Macrocycle*

17:40 to 17:50

Ciprian Victor Florea, Andra Mihaela Onaş, George Octavian Buică, Mădălina Andreea Pandele, Manuela-Elena Voicu, **Matei D. Raicopol** (University Politehnica of Bucharest, Romania)

*Synthesis, characterization and sensing performance of a “clickable” ferrocene-based redox-active thiosemicarbazone receptor*

17:50 to 18:00

**Elisabeta I. Szerb** (“Coriolan Drăgulescu” Institute of Chemistry, Romanian Academy, Timișoara, Romania), Florica Manea, Bertrand Donnio, Sorina Ilieș, Adelina A. Andelescu, Carmen Cretu, Ildiko Buta

*Metallomesogens as functional materials for advanced electrochemical sensing*

18:00 to 18:10

Liviu Dudaș, Iulia-Ștefania Voicu, Angela Enachi, **Cristian Matei** (University Politehnica of Bucharest, Romania), Daniela Berger

*NIR to visible upconversion phosphors based on Er<sup>3+</sup>, Yb<sup>3+</sup> co-doped oxides*

18:10 to 18:20

**Andrei Iulian Slabu** ("C. D. Nenitzescu" Institute of Organic and Supramolecular Chemistry of the Romanian Academy, Bucharest, Romania and University Politehnica of Bucharest, Romania), Florina Teodorescu, Raluca Stan

*Functionalization of epoxidized vegetable oil through heterogenous catalysis*

18:20 to 18:30

**Bogdan Mihaiescu** (University of Bucharest, Romania), Alexia Popescu, Oana Maria Mihaiescu, Alina Moroşan, Roxana Truşcă, Daniela Istrati, Dan Eduard Mihaiescu

*Bioactive compounds from water kefir - characterization and applications*

18:30 to 18:40

**Teodora Alexandra Iordache** (University Politehnica of Bucharest, Romania), Simona Crisan, Anca Pop, Mirela Mihaila, Nicoleta Badea, Ioana Lacatusu

*Optimized approach for developing lipid nanocarriers loaded with active herbal extracts*

18:40 to 18:50

Eugenia Eftimie Totu, **Daniel Costinel Petre** (University Politehnica of Bucharest, Romania) Fatih Erci, Tiberiu Totu, Liliana Burlibaşa, Corina Marilena Cristache

*Application of an endogenous dual formulation in tissue regeneration*

18:50 to 19:00

**Brindusa-Alina Petre** (Alexandru Ioan Cuza University of Iasi and TRANSCEND - Regional Institute of Oncology, Romania), Stefania-Claudia Jitaru, Laura Darie-Ion, Iuliana Stoica, Gabi Drochioiu, Robert-Vasile Gradinaru

*The pH effect on self-assembly properties of a lysozyme-derived model peptide*

19:00 to 19:10

**Vasile Robert Grădinaru** (Alexandru Ioan Cuza University of Iasi, Romania), Alexandra Lupu, Cosmin Stefan Mocanu, Laura Darie-Ion, Brânduşa-Alina Petre

*Self-assembly properties of two collagen bioinspired peptides*

19:10 to 19:20

**Mirela Roman (Iana-Roman)** („Dunărea de Jos“ University of Galaţi, Romania), Petronela Nechita

*The performance of xylan hemicelluloses to form edible films used to preserve the quality of fresh vegetables*

19:20 to 19:30

**Robert Țincu** (University Politehnica of Bucharest and “C. D. Nenitescu” Institute of Organic and Supramolecular Chemistry of the Romanian Academy, Romania), Florina Teodorescu, Nicoleta Badea, Daniela Istrati, Ioana Lăcătușu

*Novel Hybrid Nanostructured Lipid Carrier for Piperine Encapsulation*

19:30 to 19:40

**Anca Daniela Raiciu** (Hofigal Export-Import S.A. and University of “Titu Maiorescu”, Romania), Andrei Justinian Tomescu, Cristina Manea

*Comparative Study on the Physico-chemical Characterization and Medical Properties of Volatile Oils of Cinnamon Bark & Cinnamon Leaf*

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## Friday 9 September 2022 – Morning Sessions

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### Plenary Session

*Time: 09:00 – 10:30*

*Chaired by: Cristina Todașcă and Anca Cojocaru*

09:00-09:45

**Călin DELEANU** (*"Costin D. Nenitescu" Institute of Organic and Supramolecular Chemistry of the Romanian Academy, ROMANIA*)

*NMR Metabolomics and Lipidomics: From Plant Science to Pollutants' Effect on Human Health*

09:45 – 10:30

**Joana AMARAL** (*Polytechnic Institute of Bragança, PORTUGAL*)

*Authenticity of plant food supplements: detection of the illegal addition with pharmaceutical drugs and botanical adulterations*

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### Coffee Break

*Time: 10:30 – 11:00*

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## Friday 9 September 2022 – Morning parallel sessions

### Competition for “Professor Sorin Rosca” Award

*Time: 11:00 – 12:30*

*This competition aims to encourage young people involved in research activities to present the scientific results obtained. The prize is supported by MDPI and its value is 500 CHF.*

*This year, the prize is awarded in the memory of Professor Sorin Roșca who, through his activity of more than 6 decades at the Politehnica University of Bucharest, has been a permanent supporter of young people towards the study and practice in the field of chemistry.*

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## Friday 9 September 2022 – Morning parallel sessions

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### New Materials and Nanomaterials

#### Section 6

Time: 11:00 – 12:30

Chaired by: **Iuliana Bîru** and **Celina Damian**

11:00 to 11:20 keynote

**David Hyndman** (University of Texas at Dallas, USA)

*Education and Research Opportunities at The University of Texas at Dallas*

11:20 to 11:30

**Andrada Serafim** (University Politehnica of Bucharest, Romania), Elena Olaret, Livia Butac, Ruxandra Oprea, Stefan Ioan Voicu

*Polyacrylamide - Carbon Nanotubes Composites with Antimicrobial Activity and Improved Mechanical Properties*

11:30 to 11:40

**Mariana Ionita** (University Politehnica of Bucharest, Romania), Elena Alina Chiticaru, George Mihail Vlasceanu, Alin Toader

*Graphene-based nanomaterials for bone tissue engineering*

11:40 to 11:50

**Catalin Zaharia** (University Politehnica of Bucharest, Romania), Ionut-Cristian Radu, Mircea Teodorescu, Madalina-Ioana Necolau, Bianca Galateanu, Eugeniu Vasile, Cristina Stavarache

*Novel studies on functionalized silk sericin nanoparticles as carriers of antineoplastic agents for cancer therapy*

11:50 to 12:00

**Cristina Stavarache** (<sup>1</sup>University Politehnica of Bucharest, <sup>2</sup>C.D. Nenitzescu Institute of Organic and Supramolecular Chemistry, Romania), Sorina-Alexandra Gârea, Adi Ghebur, Horia Iovu

*A potential drug delivery system for the encapsulation of an anti-inflammatory drug based on polysaccharides interpenetrating network beads*

12:00 to 12:10

**Aurel Diacon** (University Politehnica of Bucharest, Romania), Edina Rusen, Florica Rizea, Alexandra Mocanu, Adrian Trifan, Adrian Dinescu, Cristina Stavarache, Luiza Izabela Jinga, Cristian N. Mihăilescu

*Suspension photopolymerization of methyl methacrylate and surface-initiated ATRP grafting of thermo-responsive polymers*



12:10 to 12:20

**Jana Ghitman** (University Politehnica of Bucharest, Romania), Gratiela Gradisteanu, Adriana Zainea, Horia Iovu, Eugeniu Vasile, Raluca Stan

*Macrophage -targeted drug delivery mediated by mannose-decorated PLGA hybrid nanoparticles*

12:20 to 12:30

**Ionut-Cristian Radu** (University Politehnica of Bucharest, Romania), Catalin Zaharia, Madalina Necolau, Eugeniu Vasile, Andreea Vadureanu

*New sensitive and complex vesicles designed by living polymerization for cancer management*

## Lunch Break

*Time: 12:30 – 14:00*

## Friday 9 September 2022 – Afternoon parallel sessions

### Physical Chemistry; Electrochemistry & Corrosion

#### Section 3

*Time: 14:00 – 16:30*

#### Section 3.1

Chaired by: **Catinca Secuianu** and **George Buică**

14:00 to 14:20 Keynote

Sergiu Sima, Adrian Crişciu, **Catinca Secuianu** (University Politehnica of Bucharest, Romania)

*Clathrates hydrates - what we have learnt?*

14:20 to 14:30

**Sergiu Sima** (University Politehnica of Bucharest, Romania), Mihaela Ioniţă, Adrian Crişciu, Catinca Secuianu

*Experimental methods for investigating phase equilibria of clathrate hydrates*

14:30 to 14:40

**Adrian Crişciu** (University Politehnica of Bucharest, Romania), Mihaela Ioniţă, Sergiu Sima, Catinca Secuianu

*Modelling phase equilibria of clathrate hydrates*

14:40 to 14:50

**Loredana Vacareanu** ("P. Poni" Institute of Macromolecular Chemistry, Iasi, Romania), Mircea Grigoras

*Electrosynthesis of D- $\pi$ -A polymers and their photophysical and electrochemical characterization*

14:50 to 15:00

**Liana Anicai** (University Politehnica of Bucharest, Romania), Aurora Petica, Stefania Costovici, Anca Cojocaru, Calin Moise, Sabrina Rosoiu, Teodor Visan

*Thin Cerium Oxide Based Coatings Prepared by Cathodic Electrodeposition Using Deep Eutectic Solvents Formulations on AA7075 Aluminium Alloy*

### **Section 3.2**

Chaired by: **Simona Popescu** and **Mihaela Mindroiu**

15:00 to 15:20 Keynote

**Cristian Pîrvu** (University Politehnica of Bucharest, Romania)

*Complex surface features reflected on the interaction of titanium with biological environment*

15:20 to 15:40 Keynote

**Ileana Rau** (University Politehnica of Bucharest, Romania), Adrian Petris, Petronela Gheorghe, Mirela Anton

*DNA – CTMA based materials with enhanced biolasing properties*

15:40 to 15:50

**Angela Gabriela Olaru** (University Politehnica of Bucharest, Romania), Cristina Dumitriu, Nicoleta Badea, Simona Popescu, Camelia Ungureanu, Cristian Pîrvu

*Silk fibroin coatings for amoxicillin encapsulation on implantable antibacterial surface*

15:50 to 16:00

**Roberta Irodia** (University Politehnica of Bucharest, Romania), Mihaela Mîndroiu, Cristian Pîrvu

*Heterojunction Photocatalyst based on TiO<sub>2</sub>/Chlorophyll-Polydopamine*

16:00 to 16:10

**Alexandra Constantinescu** (University Politehnica of Bucharest, Romania), Cristina Dumitriu, Cristian Pîrvu

*Electrochemical sensor based on Nafion and carbon quantum dots for folic acid detection*

16:10 to 16:20

**Simona Popescu** (University Politehnica of Bucharest, Romania), Angela Olaru, Camelia Ungureanu, Anisoara Cimpean, Cristian Pirvu

*Bio-functionalization of titanium surfaces with hybrid coatings based on silk fibroin to enhance cell proliferation and antimicrobial effect*

16:20 to 16:30

**Dumitriu Cristina** (University Politehnica of Bucharest, Romania), Cristian Pîrvu

*Nanostructures Modified Electrodes for Antibiotics Detection*

## Coffee Break

*Time: 16:30 – 17:00*

**Friday 9 September 2022 – Afternoon parallel sessions**

## New Concepts in Chemical and Biochemical Engineering

### *Section 4*

*Time: 17:00 – 19:30*

*Chaired by: Costin Sorin Bîldea and Oana Pârvulescu*

17:00 to 17:20 Keynote

**Tanase Dobre** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Violeta Alexandra Ion, Cristian Eugen Raducanu

*Engineering Aspects of Hydrolysis-Fermentation and Pyrolysis of Biomass Residues*

17:20 to 17:30

**Mihaela Urzica** (OMV Petrom, Romania)

*Transition to Low and Zero Carbon Business*

17:30 to 17:40

**Laura Renea** (University Politehnica of Bucharest, Romania), Gheorghe Maria

*Optimal Operating Alternatives of a Batch, or a Series of Batch Reactors to Maximize the Bi-Enzymatic Production of Mannitol*

17:40 to 17:50

**Alexandra Blaga** (Gheorghe Asachi Technical University of Iasi, Romania), Alexandra Tucaliuc, Lenuta Kloetezer, Anca Irina Galaction, Dan Cascaval

*Synergic Reactive Extraction Applied for Acidic Compounds Separation*

17:50 to 18:00

**Alexandru Stefan** (University Politehnica of Bucharest, Romania), Gabriela Isopencu, Ana-Maria Brezoiu, Anicuta Stoica-Guzun, Alina Culetu

*Antioxidant and Antibacterial Activities of Food Matrices Based on Bacterial Cellulose and Blackberries Juice*

18:00 to 18:10

**Ana-Maria Brezoiu** (University Politehnica of Bucharest, Romania), Mihaela Deaconu, Adrian Costache, Cristian Matei, Daniela Berger

*Factorial Design of Polyphenols Extraction from Berries with Antioxidant Properties*

18:10 to 18:20

**Aila Geambulac** (University Politehnica of Bucharest, Romania), Claudia-Irina Koncsag, Oana Parvulescu, Adina Gavrilă, Tanase Dobre

*The Sorption Capacity of Microplastics - A Review*

18:20 to 18:30

**Alessandra-Diana Selejan** (Babes-Bolyai University, Cluj-Napoca, Romania), Ana-Maria Cormos, Hannelore-Inge Lisei, Calin-Cristian Cormos

*The Development of 1D Mathematical Model of Biogas Steam Reforming Process for Hydrogen Production*

18:30 to 18:40

**Alexandru-Dan Vasiliu** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Iuliana Mihaela Deleanu, Tanase Dobre, Cristian Eugen Raducanu

*Mass Transfer in Rotating Disks Contactors*

18:40 to 18:50

**Marius Ciprian Ilie** (University Politehnica of Bucharest, Romania), Tanase Dobre, Oana Cristina Parvulescu, Ioana Maior, Iuliana Deleanu, Cristian Eugen Raducanu

*On the Modeling of Corrosion in Film Flow*

18:50 to 19:00

**McGreg Josef Duru** (University Politehnica of Bucharest, Romania), Tanase Dobre, Oana Cristina Parvulescu, Tiberiu Danciu, Iuliana Deleanu, Cristian Eugen Raducanu

*Stochastic Modelling of Coupled Diffusion and Surface Reaction at Copper Cementation on Iron*

19:00 to 19:10

**Mihaela Popescu** (University Politehnica of Bucharest, Romania), Petrica Iancu, Valentin Plesu, Maria Cristina Todasca, Costin Sorin Bildea

*Supercritical CO<sub>2</sub> Extraction of Plant Oils and Pigments*

19:10 to 19:20

**Cristian Eugen Raducanu** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Ionela Cristina Gogoasa, Doinita Roxana Cioroiu Tirpan, Tanase Dobre

*Superbases On Bacterial Cellulose Matrix as Heterogeneous Catalyst for Transesterification Reactions*

19:20 to 19:30

**Valentin Plesu** (University Politehnica of Bucharest, Romania), Petrica Iancu, Anna Lorenzo Galles

*Process Design and Simulation for Biodiesel Production*

19:30 to 19:40

**Petrica Iancu** (University Politehnica of Bucharest, Romania), Valentin Plesu, Mihail Checiu

*Tools for Feasibility of Non-Ideal Mixtures Separation Processes*

## Friday 9 September 2022

### Closing Ceremony

*Time: 19:45 – 20:00*

### Gala Dinner

*Time: 20:30*

## **POSTER PRESENTATIONS**

# New Developments in Chemical Synthesis & Catalysis

## POSTER PRESENTATIONS

### Section 1

**Thursday 8 September 2022**

*Time: 14:00 -19:00*

**S1 – 010**

**Gheorghita Mitran** (University of Bucharest, Romania), Octavian Dumitru Pavel, Urdă Adriana

*Malic acid oxidation over Fe doped Co<sub>3</sub>O<sub>4</sub> catalysts*

**S1 – 015**

**Maria-Gabriela Alexandru** (University Politehnica of Bucharest, Romania), Diana Visinescu, Sergiu Shova, Francisc Lloret, Miguel Julve

*Molecular nanomagnets assembled from diamagnetic cobalt (III) cyanido metalloligands*

**S1 – 026**

**Diana Visinescu** ("Ilie Murgulescu" Institute of Physical Chemistry of the Romanian Academy, Bucharest, Romania), Adela-Maria Spinciu, Maria-Gabriela Alexandru, Daniela C. Culita, Silviu Preda, Jose Calderon-Moreno, Cecilia Lete, Mariana Marin

*Design of copper-based materials for the development of new electrochemical sensors*

**S1 – 035**

**Raluca Stan** (University Politehnica of Bucharest, Romania), Mihaela Tociu, Brîndușa Bălănuță, Mihaela Idu, Oana Popa, Cristina Ott

*Vegetable oils based oleogels – New perspective for cosmetics, medical devices and foods*

**S1 – 084**

**Cristina Ott** (University Politehnica of Bucharest, Romania), Mihaela Tociu, Teodora Iordache, Simona Crisan, Anca Pop, Nicoleta Badea, Ioana Lacatusu

*Resveratrol and diosgenin Co-loaded lipid nanocarriers with effective anti-inflammatory action*

**S1 – 108**

**Oprea Ovidiu** (University Politehnica of Bucharest, Romania), Fikai Anton, Motelica Ludmila, Fikai Denisa, Trușcă Roxana, Andronescu Ecaterina

*Synthesis and characterization of antimicrobial packaging based on zinc oxide loaded with essential oils*

**S1 – 109**

**Motelica Ludmila** (University Politehnica of Bucharest, Romania), Fikai Denisa, Oprea Ovidiu, Fikai Anton, Andronescu Ecaterina, Trușcă Roxana, Surdu Adrian

*Synthesis and characterization of magnetite nanoparticles stabilized with amino acids*

**S1 – 135**

**Vlad Tarpa** (Aix Marseille University, France and University Politehnica of Bucharest, Romania), Jean-François Longevial, Gabriel Canard, Simon Pascal, Olivier Siri

*One-pot synthesis of a bis-zwitterionic macrocycle*

**S1 – 165**

Minodora Marin, Iuliana Biru, Sorin Avramescu, Adriana Marinoiu, Francois Devred, Eric Gaigneaux, **Marian Nicolae Verziu** (University Politehnica of Bucharest, Romania and *National Research and Development Institute for Textile and Leather, Bucharest, Romania*)

*Oxidation of limonene over carbon-supported titanium-benzoxazine complex catalyst*

**S1 – 175**

**Mihai Răducă** (University Politehnica of Bucharest, Romania and C.D. Nenitzescu Institute of Organic and Supramolecular Chemistry of the Romanian Academy, Bucharest, Romania), Daniel O. T. A. Martins, Cristian A. Spinu, Mihaela Hillebrand, Floriana Tuna, Gabriela Ionita, Augustin M. Mădălan, Constance Lecourt, Jean-Pascal Sutter, Marius Andruh

*A new nitronyl-nitroxide ligand for designing binuclear Ln<sup>III</sup> complexes: syntheses, crystal structures, magnetic and EPR studies*



# Food, Health & Bioresources

## POSTER PRESENTATIONS

### *Section 2*

**Friday 9 September 2022**

*Time: 8:00 – 13:00*

**S2 – 001**

**Cristina Todașcă** (University Politehnica of Bucharest, Romania) Teodora-Alexandra Iordache, Fulvia-Ancuța Manolache

*Metabolomic profile of Romanian Fetească wines*

**S2 – 033**

**Maria Madalina Nichitoi** (University Politehnica of Bucharest, Romania), Raluca Isopescu, Ana Maria Josceanu, Teodor Costache, Vasile Lavric

*Advanced Analysis in the Extraction of Polyphenolic Compounds from Romanian Propolis*

**S2 – 034**

Christina Zălaru, Florea Dumitrascu, Constantin Draghici, Maria Marinescu, Rodica Tatia, Lucia Moldovan, **Andreea Aloman** (University of Bucharest, Romania), Ana Maria Barbu, Estera Cristescu

*New Pyrazole Derivatives with Anti-tumor Activity*

**S2 – 038**

Camelia Ungureanu, **Diana Gabriela Hutu** (University Politehnica of Bucharest, Romania), Irina Fierascu, Ana Maria Baroi, Raluca Somoghi, Radu Claudiu Fierascu

*The development of phytosynthesized silver nanoparticles mediated by Raphanus sativus L. extracts*

**S2 – 057**

**Adina Ionuta Gavrilă** (University Politehnica of Bucharest, Romania), Ioana Popa, Christina Marie Zălaru, Ioan Călinescu, Cristina Negrea

*Comparison of Different Techniques for the Extraction of Bioactive Compounds with Immunostimulatory Activity from Ivy Leaves*

**S2 – 071**

**Monica Raduly** (Research and Development National Institute for Chemistry and Petrochemistry – ICECHIM, Romania) Valentin Raditoiu, Alina Raditoiu, Violeta Purcar, Miruna S. Stan, Maria Mernea, Cristina Nițu

*Synthesis of 2-phenyl-3,5-bis (styryl) pyrazole, curcumin derivatives with potential antitumor properties*

**S2 – 073**

Rodica Tatia, **Christina Zălaru** (University of Bucharest, Romania), Isabela Țârcomnicu, Lucia Moldovan, Anca Daniela Raiciu, Adina Gavrilă, Ioan Călinescu

*Comparative Study of Hederagenin Isolation from Hedera helix L. Extracts*

**S2 – 083**

Teodora Alexandra Iordache, Simona Crisan, Anca Pop, Mirela Mihaila, Ioana Lacatusu, **Nicoleta Badea** (University Politehnica of Bucharest, Romania)

*Use of herbal ingredients for development of anti-inflammatory nanostructured delivery systems*

**S2 – 087**

**Nicoleta Chira** (University Politehnica of Bucharest, Romania), Anamaria Hanganu, Mihaela Tociu, Aurelia Bratu, Mihaela Mihalache, Liliana Popescu, Rodica Sturza, Aliona Ghendov-Mosanu, Mihaela Ivanova, Galin Ivanov, Cristina Stavarache, Calin Deleanu

*Detection of Addition of Non-Dairy Fats to White Brined Cheese Based on <sup>1</sup>H-NMR Data and Chemometrics*

**S2 – 096**

**Ana-Maria Drăghici-Popa** (University Politehnica of Bucharest, Romania), Raluca Stan, Stefan Theodor Tomas, Ioana Popa

*Investigation of the antioxidant properties of some fruit extracts from the native spontaneous flora*

**S2 – 117**

**Monica Dinescu** (National Institute of Materials Physics and University Politehnica of Bucharest, Romania), Mirela Paraschiv, Stefania Florica, A. Udrescu, Toulbe N'ghaya, Radu Cercel, Alina C. Ion, Ion Ion, Mihaela Baibarac

*Applications of photoluminescence over the photodegradation of organic compounds*

**S2 – 127**

**Alexandra Lupu** (Alexandru Ioan Cuza University of Iasi, Romania), Brândușa-Alina Petre, Laura Darie-Ion, Vasile Robert Grădinaru

*Synthesis and characterization of a collagen derived octapeptide*

**S2 – 145**

**Diana Ionela (Stegarus) Popescu** (National Research and Development Institute for Cryogenics and Isotopic Technologies—ICSI Ramnicu Valcea, Romania), Oana Romina Botoran, Ecaterina Lengyel, Apostolescu Florian George, Nicoleta Anca Şuţan

*Variability of Active Ingredients Identified and Quantified in Buds and Needles of Pinus Mugo Turra from Allopatric Populations in Romania*

**S2 – 148**

**Laura Darie-Ion** (Alexandru Ioan Cuza University of Iasi, Romania), Vasile Robert Gradinaru, Brindusa Alina Petre

*Extraction and Characterization of Zein Protein: A New Approach*

**S2 – 189**

**Stefania-Claudia Jitaru** (Alexandru Ioan Cuza University of Iasi, Romania), Brindusa Alina Petre, Laura Ion, Gabi Drochioiu, Robert Vasile Gradinaru

*Copper (II) interaction with a pentapeptide containing phenylalanine moieties*

**S2 – 208**

**Mihaela Tociu** (University Politehnica of Bucharest, Romania), Gabriela Chiriac, Brînduşa Bălănuţă, Nicoleta Chira, Aurelia Bratu, Mihaela Mihalache, Cristina Ott, Raluca Stan

*Optimization of the Extraction Method of Biologically Active Compounds and Characterization of Extracts Obtained from Vegetable Residues*

**S2 – 222**

**Sorin Vizireanu** (INFLPR-National Institute for Laser, Plasma and Radiation Physics, Romania), Veronica Satulu, Cristian Stancu, Anca Bonciu, Gheorghe Dinescu, Denis Panaitescu, Adriana Frone, Valentin Raditoiu, Cristian Nicolae, Catalina Usurelu

*Cold plasma activation of biopolymers for wound healing dressings*

**S2 – 232**

**Alexandru Suciu** (Hofigal Export Import S.A., Romania), Georgeta Alexandru, Marcela Bucur (Popa)

*Partial characterization of a complex plant extracts mixture, Propolis and Aloe Vera for wounds management*

# Physical Chemistry; Electrochemistry & Corrosion

## POSTER PRESENTATIONS

### Section 3

**Thursday 8 September 2022**

*Time: 14:00 -19:00*

**S3 – 005**

**Marcela-Elisabeta Barbinta-Patrascu** (University of Bucharest, Romania), Nicoleta Badea, Irina Zgura, Camelia Ungureanu, Monica Enculescu

*Bioperformant phytogenic nanocomposites: physico-chemical and biological aspects*

**S3 – 006**

**Daniela Catană** (University Politehnica of Bucharest, Romania), Aurelia Meghea, Maria Mihaly, Radu Ciprian Racovită, Adina Mirela Anton, Maria Daniela Ciucă, Andreea Camelia Hirjău

*Optimization of extraction methods into microemulsion systems applied for photodegradation of some aqueous organic contaminants*

**S3 – 013**

**Vasilica Mihaela Mîndroiu** (University Politehnica of Bucharest, Romania), Grațiela Teodora Tihan, Roxana Gabriela Zgârian, Andrei Stoian

*Optimization of Physical and Optical Properties of TiO<sub>2</sub> Nanostructures Deposited on FTO Substrate by Slow Hydrolyses*

**S3 – 025**

**Lucan Dumitra** (Institute for Nuclear Research Pitesti, Romania), Mihalache Maria, Mares Alina – Monica, Samarineanu Claudia

*Corrosion Behavior of Zirconium Alloys Tested in CANDU NPP Primary Circuit Conditions*

**S3 – 030**

V. Mitran, A. Cimpean, A.I. Staraș, V. Giurcan, J.M. Calderon Moreno, **S.I. Drob** (Institute of Physical Chemistry “Ilie Murgulescu”, Bucharest, Romania)

*Novel zirconium bioalloy for use in bone implants*

### S3 – 045

**Mirela Anton** (University Politehnica of Bucharest, Romania), Ileana Rau, Manuela Apetroaei, Verginica Schroder

*Identifying the potential for recovery and quantification of marine waste from food and environment*

### S3 –048

**George-Octavian Buica** (University Politehnica of Bucharest, Romania), Andra Onas, Raicopol D. Matei

*Mercury Detection at a Pyrrole-thiole like Modified Electrode*

### S3 – 049

Verginica Schröder, **Manuela Apetroaei** (Mircea cel Batran Naval Academy Constanta, Romania), Ileana Rau, Mirela Anton, Luminita Gijiu, Daniel Dinculescu, Raluca Isopescu, Bogdan Florentin Nițu

*Chitosan Interaction with Biological Systems – Molar mass Influence*

### S3 – 070

**Ciprian Victor Florea** (University Politehnica of Bucharest, Romania), Andra Mihaela Onaș, Andreea Madalina Pandele, Matei Raicopol, Luisa Pilan

*Development of an Aptasensing Platform for Antibiotics Determination using Aryldiazonium Grafting and “Click” Functionalization*

### S3 – 089

Nicoleta Mirela Blebea, **Manuela Rossemary Apetroaei** (Mircea cel Batran Naval Academy Constanta, Romania), Miruna Maria Apetroaei, Verginica Schröder

*Preliminary Studies to Identify Potential Formulations for Cannabidiol Transdermal Administration through Chitosan*

### S3 – 105

**Alexandra Zamfir** (University Politehnica of Bucharest, Romania), Adina Roxana Milășan, Adina Elena Andrei, Aurelia Meghea, Maria Mihaly

*Capitalization of mine tailings by microemulsion assisted technology*

### S3 – 110

Iancu Irina Mihaela, **Apetroaei Manuela Rossemary** (Mircea cel Batran Naval Academy Constanta, Romania), Crețu Ruxandra-Mihaela, Ștefanache Camelia-Paula, Grigoraș Aurică Valentin, Mireșan Horațiu, Iancu Valeriu, Mitea Gabriela, Schröder Verginica

*Phytochemical and Spectral Determinations of Lythri herba Extracts*

**S3 – 114**

**Ioana-Alina Ciobotaru** (University Politehnica of Bucharest, Romania), Florin-Mihai Benga, Anca Cojocaru, Ioana Maior, Danut-Ionel Vaireanu

*An Integrated System for Rechargeable Batteries Reconditioning and Recycling Management*

**S3 – 125**

**Anca Cojocaru** (University Politehnica of Bucharest, Romania), Ioana Maior, Ioana Alina Ciobotaru, Marina Teodora Patrascu, Adrian-Ionut Nicoara, Violeta Alexandra Ion, Danut-Ionel Vaireanu

*Evaluation of Propolis as a Green Corrosion Inhibitor for Aluminium Alloys*

**S3 – 129**

**Ioana Maior** (University Politehnica of Bucharest, Romania), Ioana-Maria Nicola, Anca Cojocaru, Adrian-Ionuț Nicoară, Ioana-Alina Ciobotaru, Dănuț-Ionel Văireanu

*Electrochemical Studies of Gold Electroplating on Nickel Intermediate Layer from Different Electrolytes*

**S3 – 136**

**Mihaela Brinzei** (University Politehnica of Bucharest, Romania), Gabriel Guicin, Alexandru Mandache, Nathanael Murat, Mihai Păduraru, Amalia Stefaniu, Oana Ciocirlan

*Volumetric, Viscometric and Theoretical Studies of the Solvation Behavior of Glucosamine and N-acetyl-glucosamine in Aqueous Solutions of [Hmim]Cl Ionic Liquid at T = 298.15 K*

**S3 – 137**

**Oana Maria Memecică** (University Politehnica of Bucharest, Romania), Ana Maria Albu, Ileana Rău, Radu Claudiu Fierăscu

*Tailoring the organizational versatility in the chemical modification of chitosan*

**S3 – 177**

**Mihaela Cristina Lite** (University Politehnica of Bucharest, Romania), Nicoleta Badea, Roxana Constantinescu, Elena Cornelia Tănăsescu, Andrei Kuncser

*Green synthesis of silver nanoparticles with potential application in textile artefacts preservation*

**S3 – 209**

**Danut-Ionel Vaireanu** (University Politehnica of Bucharest, Romania), Florin-Mihai Benga, Ioana-Alina Ciobotaru, Anca Cojocaru, Ioana Maior

*Is the use of lithium-based rechargeable batteries a care free operation?*

**S3 – 219**

**Alexandru Rizoiu** (National Research and Development Institute for Cryogenic and Isotopic Technologies – ICSI Rm. Valcea, Romania), Cosmin Ungureanu, Alin Chițu, Adhana Spînu-Zăuleț, Mihaela Buga

*The Electrochemical Behavior of Multifunctional Electrolyte Additives on High Voltage Cathodes in Lithium - ion Batteries*

**S3 – 221**

Ciprian Iacob, **Radu Andrei** (National Research and Development Institute for Cryogenic and Isotopic Technologies – ICSI Rm. Valcea, Romania), Elena Carcadea

*Solid Polymer Electrolytes for Solid-State Batteries*

# New Concepts in Chemical and Biochemical Engineering

## POSTER PRESENTATIONS

### Section 4

**Thursday 8 September 2022**

*Time: 14:00 -19:00*

**S4 – 008**

Alexandra Cristina Blaga, **Alexandra Tucaliuc** (Gheorghe Asachi Technical University of Iasi, Romania), Lenuta Kloetezer

*Ionic Liquids for Reactive Extraction of Biosynthetic Products*

**S4 – 040**

**Cristiana Luminita Giju** (University Politehnica of Bucharest, Romania), Raluca Isopescu, Daniel Dinculescu, Maria Memecica, Manuela Rossemary Apetroaei, Mirela Anton, Verginica Schroder, Ileana Rau

*Optimization of Chitin Extraction to Obtain Chitosan with Tailored Properties*

**S4 – 053**

**Oana Cristina Parvulescu** (University Politehnica of Bucharest, Romania), Violeta Alexandra Ion, Cristian Eugen Raducanu, Diana Egri, Suzana Ioana Calcan, Cristina Orbeci, Tanase Dobre, Roxana Madjar, Liliana Badulescu, Andrei Mot, Lavinia Mihaela Iliescu

*Effects of Biochar on Soil Properties and Bell Pepper Growth*

**S4 – 077**

Raluca Isopescu, **Paula Postelnicescu** (University Politehnica of Bucharest, Romania), Anca Dumitrescu

*Simulation of Polymeric Biomaterials in Injection Molding*

**S4 – 079**

Violeta Alexandra Ion, Oana Cristina Parvulescu, Oana-Crina Bujor, Andrei Mot, Liliana Badulescu, Anne-Kristin Loes, Joshua Cabell, Athanasios Salifoglou, Marios Maroulis, Sevasti Matsia, Cristian Raducanu, **Alexandra Mocanu** (University Politehnica of Bucharest, Romania)

*Assessment of Chemical Composition of Fish Residues*



**S4 – 088**

**Cristian Eugen Raducanu** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Violeta Alexandra Ion, Tanase Dobre, Andrei Burghilea, Andrei Negrea, Suzana Ioana Calcan, Diana Egri

*Engineering Biochar for Environmental Benefits*

**S4 – 112**

**Madalina Mariana Drug** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Cristian Simion, Cristian Eugen Raducanu, Tanase Dobre

*Preparation of Beef Jerky: Experimental and Modelling*

**S4 – 158**

**Mihaela Popescu** (University Politehnica of Bucharest, Romania), Petrica Iancu, Valentin Plesu, Maria Cristina Todasca, Costin Sorin Bildea, Anicuta Stoica Guzun, Angela Marculescu

*Optimal Parameters for Sea Buckthorn Oil Extracted with Supercritical CO<sub>2</sub>*

**S4 – 161**

**Laura Elisabeta Petras** (University Politehnica of Bucharest, Romania), Claudia Muntean, Oana Cristina Parvulescu, Tanase Dobre, Iuliana Deleanu, Cristian Eugen Raducanu

*A Simple Model for Gasoline Reforming*

**S4 – 199**

**Elena Gratiela Popescu** (University Politehnica of Bucharest, Romania), Oana Cristina Parvulescu, Tanase Dobre, Cristian Eugen Raducanu, Mihaela Emanuela Craciun

*Air Drying of Aromatic Plants with the Recovery of Volatile Compounds*

**S4 – 204**

Ana-Maria Rosu, **Vasilica Alisa Arus** (Vasile Alecsandri University of Bacau, Romania), Nicoleta Platon, Ileana Denisa Nistor, Oana Cristina Parvulescu

*Extraction of Bioactive Compounds from Peppermint - Experimental and Statistical Modelling*

# Monitoring & Environmental Protection

## POSTER PRESENTATIONS

### *Section 5*

**Friday 9 September 2022**

*Time: 8:00 – 13:00*

#### **S5 – 016**

**Ioana-Carmen Popescu** (R&D National Institute of Metals and Radioactive Resources-ICPMRR, Environmental Protection), Aura Daniela Radu

*Uranium Species in Mine Water*

#### **S5 – 017**

**Aura Daniela Radu** (R&D National Institute of Metals and Radioactive Resources-ICPMRR), Ioana-Carmen Popescu, Eugenia Panțuru

*Ion Exchange - A Viable Solution to Prevent and to Control Radioactive Environmental Pollution*

#### **S5 – 018**

**Diana-Maria Banu** (R&D National Institute of Metals and Radioactive Resources-ICPMRR), Ana-Maria Obreja, Ioana-Carmen Popescu, Sorin Ovidiu Mihai

*Geological Risk Management Process and Its Particularities for a Uranium Mining Site - Case Study*

#### **S5 – 023**

**Radu Ciprian Racoviță** (Department of Inorganic Chemistry, Physical Chemistry and Electrochemistry, Research Centre for Environmental Protection and Ecological Technologies, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Adina Mirela Anton, Daniela Catană, Maria Daniela Ciucă, Andreea Camelia Hîrjău, Maria Mihaly, Ileana Rău

*Development and Internal Validation of Spectroscopic and Chromatographic Methods for Monitoring Antidepressant Drug Residues in Wastewaters*

#### **S5 – 029**

Oanamari Daniela Orbuleț, **Cristina Modrogan** (Analytical Chemistry and Environmental Engineering Department, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Constantin Bobirică, Madelene Annette Dăncilă, Liliana Bobirică, Cristina Orbeci, Simona Căprărescu

*Adsorption of Phosphates from Aqueous Solutions using LDH-Type Materials*

**S5 – 037**

**Georgica Pandelea (Voicu)** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Mirela Florina Calinescu, Ivona Cristina Enescu (Mazilu), Camelia Ungureanu, Daniela-Simina Stefan

*Influence of Fertilization with Different Doses Composts on Soil Agrochemical Indicators, after Two Years from Application in the Aronia Plantation in the Field*

**S5 – 056**

**Andreea Madalina Pande** (Advanced Polymer Materials Group, University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, University Politehnica of Bucharest), Stefan Ioan Voicu

*New polymeric membranes for the treatment of patients with chronic kidney dysfunction and liver cancer*

**S5 – 063**

**Elena Ruxandra Radu** (Advanced Polymers Materials Group, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Andreea Madalina Pande, Cristina Tuncel, Stefan Ioan Voicu

*Functionalization of polysulfone membranes with supramolecular architectures*

**S5 – 069**

**Sorina Laura Topală** (Department of Chemical and Biochemical Engineering, University Politehnica of Bucharest), Oana Cristina Pârvulescu, Ioana Diaconu, Georgian-Ileana Badea, Doina-Antoaneta Radu

*Removal of emerging pollutants from wastewater by membrane techniques*

**S5 – 074**

**Liliana Bobirică** (Analytical Chemistry and Environmental Engineering Department, Faculty of Chemical Engineering and Biotechnologies, University Politehnica of Bucharest), Cristina Orbeci, Constantin Bobirică, Oanamari Daniela Orbuleț, Cristina Modrojan

*Kinetics of photocatalytic degradation of chlorophenols from aqueous solutions*

**S5 – 113**

**Alina Dura (Pahontu)** (Environmental Engineering, "Politehnica" University of Bucharest, Faculty of Biotechnic Systems Engineering), Daniela Simina Stefan, Rosana Draganescu, Mircea Stefan

*Bisphenol A removal from water by different methods*

**S5 – 133**

**Sorin Nidelea** (University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies), Annette Madelene Dăncilă, Daniela Oanamari Orbuleț, Cristina Modrojan, Eugeniu Vasile, Simona Căprărescu

*Preparation and characterization of mixed oxide sorbent for H<sub>2</sub>S retain by HTDG processes*

#### S5 – 140

**Georgeta Predeanu** (Research Center for Environmental Protection and Ecofriendly Technologies, University Politehnica of Bucharest), Valerica Slăvescu, Marius Florin Drăgoescu, Mihaela Bălănescu, Traian Alexandru Abagiu, Ana-Maria Manea-Saghin, Petrișor Samoilă, Valeria Harabagiu, Felicia Cosmulescu

*Pyrolysis of lignocellulosic waste, a process to obtain suitable precursors for making carbon sorbents*

#### S5 – 170

**Radu Gabriel Stan** (University Politehnica of Bucharest, Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies), Cristina Modrogan, Denisa Nicoleta Airinei, Annette Madelene Dăncilă, Adina Alexandra Scarlat, Oanamari Daniela Orbuleț, Simona Căprărescu

*Photocatalytic degradation of Indigo Carmine dye from a simulated wastewater using modified magnetite*

#### S5 – 188

**Nicoleta Vasilache** (National Research and Development Institute for Industrial Ecology-ECOIND), Elena Diacu, Gabriela Geanina Vasile, Iuliana Paun, Florinela Pirvu, Stefania Gheorghe, Vasile Iancu, Laura Florentina Chiriac

*Assessment of the corrosion and scaling potential of groundwater from an area affected by industrial activities*

#### S5 – 193

**Elena-Mirela Suceveanu** (Department of Chemical and Food Engineering, Faculty of Engineering, “Vasile Alecsandri” University of Bacău), Lăcrămioara Rusu, Cristina-Gabriela Grigoraș, Andrei-Ionuț Simion

*Eco-friendly biosorbents based on Saccharomyces Pastorianus immobilized in natural polymers: synthesis, characterization and application for the removal of pharmaceuticals from aqueous matrices*

#### S5 – 195

**Lăcrămioara Rusu** (Department of Chemical and Food Engineering, Faculty of Engineering, “Vasile Alecsandri” University of Bacău), Cristina-Gabriela Grigoraș, Andrei-Ionuț Simion, Elena-Mirela Suceveanu, Christophe Vial

*Application of biocomposite material based on residual microbial biomass and natural polymer for the removal of pharmaceuticals from aqueous solutions in continuous system*

#### S5 – 214

**Cristina Orbeci** (University Politehnica of Bucharest, Faculty of Chemical Engineering and Biotechnologies, Department of Analytical Chemistry and Environmental Engineering), Liliana Bobirică, Constantin Bobirică, Giovanina -Iuliana Lupu

*Evaluation of TiO<sub>2</sub>-Photocatalytic Membrane to Removal of 2,4-DCP from Wastewater*

**S5 – 228**

**Doru Bârsan** (Oil-Gas University, Ploiești), Mihaela Helstern, Tiberiu Sandu, Timur Chis  
*Drying of gases in droplet separators*

**S5 – 229**

**Shaalán Bdaiwi Ahmed**, (University Politehnica of Bucharest, Environment and Water Directorate, Ministry of Science and Technology, Baghdad, Irak), T. Dobre, F. Hashim Kamar, Iuliana M. Deleanu  
*Continuous adsorption of heavy metals – case of Pb (II) and Cd (II) removal by biosorbents in fixed-bed column*

**S5 – 231**

**Gheorghe Grigore** (The National Institute for Research and Development in Environmental Protection INCDPM), Deak Gyorgy, Madalina Boboc, Raluca Prangate, Lucian Lumînăroiu, Alexandru Anton Ivanov, Cristina Maria  
*Methodology of sampling water and sediments for the identification and analysis of the presence of microplastics*

# New Materials and Nanomaterials

## POSTER PRESENTATIONS

### Section 6

**Friday 9 September 2022**

*Time: 14:00 -19:00*

#### **S6 – 011**

**Liliana Rosu** (*“Petru Poni” Institute of Macromolecular Chemistry, Iasi, Romania*), Cristian–Dragos Varganici, Dan Rosu

*Thermal degradation study of S–IPNs based on epoxy resin and oligophosphonate*

#### **S6 – 012**

**Cristian–Dragos Varganici** (*“Petru Poni” Institute of Macromolecular Chemistry, Iasi, Romania*), Liliana Rosu, Dan Rosu

*Photochemical behaviour of flame retardant epoxy and oligophosphonate systems*

#### **S6 – 014**

**Madalina Tudose** (University Politehnica of Bucharest, Romania), Daniela C. Culita, Elena Maria Anghel, Mariana Voicescu, Simona Somacescu, Anamaria Hanganu, Andrei Kuncser, Diana Iulia Savu

*Hybrid composites based on graphene oxide and fluorescent benzofurazan derivatives with enhanced biological properties*

#### **S6 – 036**

**Andreea Costas** (National Institute of Materials Physics, Romania), Nicoleta Preda, Marcela Socol, Irina Zgura, I. Enculescu

*Bio-templated synthesis of interwoven fibers based on ZnO and ZnS by replicating eggshell membranes*

#### **S6 – 039**

**Adriana Zainea** (University Politehnica of Bucharest, Romania), Elena Iuliana Biru, Horia Iovu

*Organ on a Chip: A platform for Prostate Cancer Prevention*

#### **S6 – 050**

**Maria Minodora Marin** (<sup>1</sup>National Research and Development Institute for Textile and Leather, Division Leather and Footwear Research Institute, Department of Collagen, <sup>2</sup>University Politehnica of Bucharest, Romania), Madalina Albu Kaya, Durmus Alpaslan Kaya, Roxana Constantinescu, Ioana Catalina Gifu, Bogdan Trica, Elvira Alexandrescu, Catalin Mihaescu, Cristina Lavinia Nistor, Cristian Petcu, Horia Iovu, Raluca Ianchis,

*Microbial polysaccharide crosslinked hydrogels as bioactive wound dressing*

**S6 – 060**

**Celina Maria Damian** (University Politehnica of Bucharest, Romania), Mădălina Ioana Necolau, Brîndușa Bălănuță, Horia Iovu

*Advanced Dual Nanohybrids Based on Layered Clay and Functionalized Graphene Oxide*

**S6 – 072**

**Mădălina Ioana Necolau** (University Politehnica of Bucharest, Romania), Celina Maria Damian, Brîndușa Bălănuță, Horia Iovu

*Sustainable Epoxy Nanocomposites Reinforced with Functional Nanocellulose Structures*

**S6 – 078**

**Paul-Octavian Stanescu** (University Politehnica of Bucharest, Romania), Ionut-Cristian Radu, Catalin Zaharia, Andreea Vadureanu, Eugeniu Vasile

*Organ on-a-chip model for cancer therapy*

**S6 – 081**

**Adi Ghebur** (University Politehnica of Bucharest, Romania), Cristina Elena Stavarache, Sorina Alexandra Garea

*pH sensitive halloysite used in oral administration of mesalazine used in Inflammatory Bowel Diseases treatment*

**S6 – 085**

**Alexandra Cernencu** (University Politehnica of Bucharest, Romania) George M. Vlasceanu, Horia Iovu, Mariana Ionita

*Design of Graphene Oxide - Colloid composite hydrogels with controlled architecture and multifunctionality*

**S6 – 090**

**Anita-Laura Chiriac** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Iulia Elena Neblea, Ana-Mihaela Gavrilă, Anamaria Zaharia, Teodor Sandu, Andreea Miron, Marinela Dumitru, Sorin Dolana, Andrei Sarbu, Tanta-Verona Iordache

*Innovative Structures based on Bio-friendly Polymers*

**S6 – 092**

**Verona Iordache** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Anamaria Zaharia, Ana-Mihaela Gavrilă, Bianca Elena Stoica, Ana Lorena Ciurlica, Marinela Dumitru, Andreea Olaru, Andrei Sarbu, Laura Anita Chiriac

*Quaternary Ammonium Functionalized-Clay Microparticles with Bactericidal Activity Applied for Wastewater Treatment*

**S6 – 093**

**Anamaria Zaharia** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Ana-Mihaela Gavrilă, Anita-Laura Chiriac, Iulia Elena Neblea, Teodor Sandu, Sorin Dolana, Bogdan Trica, Iuliana Caras, Andrei Sarbu, Tanta-Verona Iordache

*Ligand-free targeted delivery nanogels for recognizing Hymenoptera venom-originated PLA2 enzyme*

**S6 – 099**

**Ana-Mihaela Gavrila** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Ana-Lorena Neagu, Petru Epure, Anamaria Zaharia, Catalin Zaharia, Horia Iovu, Andrei Sarbu, Bianca-Elena Stoica, Sorin-Viorel Dolana, Tanta-Verona Iordache

*Molecularly Imprinted Polymers for the Detection of Different Hazardous Analytes*

**S6 – 144**

**Mirela Roman** ("Dunărea de Jos" University of Galați, Romania), Petronela Nechita, Marian-Silviu Năstac

*Innovative and sustainable food packaging solutions based on biopolymer coated papers*

**S6 – 142**

**Cristina Chircov** (University Politehnica of Bucharest, Romania), Ștefania Cepoiu, Alexandra Cătălina Bîrcă, Alexandru Mihai Grumezescu, Anton Fikai, Ecaterina Andronescu

*Magnetite-based nanostructured composite systems*

**S6 – 143**

**Alexandra Cătălina Bîrcă** (University Politehnica of Bucharest, Romania), Luca Huștiuc, Alexandru Mihai Grumezescu, Cristina Chircov, Bogdan Ștefan Vasile, Alina Maria Holban, Ecaterina Andronescu

*Solid lipid nanoparticles for acne treatment*

**S6 – 150**

**Georgiana Dolete** (University Politehnica of Bucharest, Romania), Bogdan Purcăreanu, Anton Fikai, Ovidiu Oprea, Alexandra Cătălina Bîrcă, Gabriel Vasilievici, Ecaterina Andronescu

*A comparative study of vancomycin release behavior from a mesoporous silica obtained by a "green" method*

**S6 – 151**

**Ionela Andreea Neacsu** (University Politehnica of Bucharest, Romania), Ioana Alexandra Lungescu, Alexandra Cătălina Bîrcă, Cristina Chircov, Vladimir Lucian Ene

*Biomaterials from biogenic calcium sources for tissue engineering*

**S6 – 153**

**Alexandru Mihai Grumezescu** (University Politehnica of Bucharest, Romania), Cristina Chircov, Andrei Ilie, Bogdan Ștefan Vasile, Ovidiu Cristian Oprea, Alexandra Catalina Birca, Ecaterina Andronescu

*Microfluidic synthesis of dextran-coated magnetite nanoparticles*

**S6 – 155**

**Andrada-Elena Alecu** (University Politehnica of Bucharest, Romania), Ștefania-Andreea Gîrjoabă, Claudiu-Constantin Costea, Adrian-Ionuț Nicoară, Mihaela Beregoi, Mihaela Bacalum, Mina Răileanu, Cristina Busuioc

*Electrospun Fibres Loaded with Active Powders as Multifunctional Hard Tissue Scaffolds*



**S6 – 156**

**Adrian Ionuț Nicoară** (University Politehnica of Bucharest, Romania), Adelina Carmen Ianculescu, Roxana Trușcă, Bogdan Ștefan Vasile

*Alkali activated glass materials with CaCO<sub>3</sub> filler addition - synthesis and characterization*

**S6 – 159**

**Ilie Cornelia-Ioana** (University Politehnica of Bucharest, Romania), Ficai Anton, Spoiala Angela, Vasile Bogdan-Stefan, Motelica Ludmila, Trusca Doina-Roxana, Oprea Ovidiu-Cristian, Dolet Georgiana, Nicoara Adrian-Ionut

*Decoration of the activated glass surface with Ag NPs*

**S6 – 162**

**Maria Marinescu** (University of Bucharest, Romania), Ludmila-Otilia Cintează, Ioana Beatrice Ghiță, Christina-Marie Zălaru, Cristina Tăbleț, Cristian Petcu

*Synthesis, Nonlinear Optical Properties and DFT Studies of Nitrogen-Containing Heterocyclic Compounds*

**S6 – 167**

**Otilia Ruxandra Vasile** (University Politehnica of Bucharest, Romania), Andreea Diana Stănciulescu, Adrian Ionuț Nicoară, Bogdan Ștefan Vasile, Roxana Trușcă

*Fibroin-alginate-hyaluronic acid nanocomposites with ZnO and essential oils for tissue engineering*

**S6 – 169**

**Anton Ficai** (University Politehnica of Bucharest, Romania), Liliana Marinescu, Motelica Ludmila, Denisa Ficai, Alina-Maria Holban, Ovidiu Oprea, Ecaterina Andronescu

*Synthesized Silver Nanoparticles and their Applications for Antibacterial of Stone Protection*

**S6 – 171**

**Denisa Ficai** (University Politehnica of Bucharest, Romania), Ludmila Motelica, Dan Adrian Vasile, Adrian Vasile Surdu, Roxana Doina Trusca, Ionela Andreea Neacsu, Bogdan Stefan Vasile, Ovidiu Cristian Oprea, Anton Ficai, Ecaterina Andronescu

*Design and synthesis of magnetic nanoparticles for applications in theranostics*

**S6 – 172**

**Anton Ficai** (University Politehnica of Bucharest, Romania), George Valentin Saftoiu, Ludmila Motelica, Georgiana Dolet, Roxana Trusca, Denisa Ficai, Ovidiu Cristian Oprea, Ecaterina Andronescu

*Functional Glass Surfaces for Emerging Applications*

**S6 – 173**

**Alice Podaru** (Military Technical Academy „Ferdinand I”, Romania), Gabriela Toader, Aurel Diacon, Edina Rusen, Traian Rotariu, Raluca Elena Ginghină

*Photo-crosslinkable N-vinyl-2-pyrrolidone hydrogel films designed for immediate decontamination of surfaces*

**S6 – 174**

**Alice Podaru** (Military Technical Academy „Ferdinand I”, Romania), Paul O. Stănescu, Ștefania Stoleriu, Mircea Teodorescu

*Nanocomposite hydrogels based on Poly(N-vinylpyrrolidone – co-N-vinylcaprolactam) and Poly(N-vinylpyrrolidone– co-vinyl acetate)*

**S6 – 176**

**Violeta-Carolina Niculescu** (National Research and Development Institute for Cryogenic and Isotopic Technologies, Romania), Silviu-Laurentiu Badea, Amalia Soare, Marius Constantinescu, Felicia Bucura, Claudia Sandru

*MOF-177 – a comparison between two preparation methods*

**S6 – 183**

**Georgeta Voicu** (University Politehnica of Bucharest, Romania), Andrada-Ioana Damian-Buda, Cristina-Daniela Ghițulică, Andreia Cucuruz, Izabela-Cristina Stancu,

*ZnO(MgO)-CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> bioglass synthesised in presence of surfactant agent - biocompatibility, bioactivity and antibacterial activity*

**S6 – 185**

**Marinescu Florica** (University of Bucharest, Romania), Holban Alina Maria, Grumezescu Alexandru Mihai, Popovici Adelina, Lia Maria Ditu, Carmen Curutiu, Veronica Lazar

*Inorganic nanoparticles modulate growth and anti-pathogenic potential of microbiota isolates with probiotic potential*

**S6 – 186**

**Grumezescu Alexandru Mihai** (University Politehnica of Bucharest, Romania), Holban Alina Maria, Valentina Grumezescu, Lia Maria Ditu, Carmen Curutiu, Mariana Carmen Chifiriuc, Veronica Lazar

*Wound dressings modified with ZnO nanoparticles to inhibit biofilm pathogens*

**S6 – 187**

**Monica Ionita** (University Politehnica of Bucharest, Romania), Razvan Bucuresteanu, Ioan Calinescu, Alina-Maria Holban, Carmen Curutiu, Grigore Mihaescu, Viorica Parvulescu, Mihai Husch, Lia-Mara Ditu

*A new design of the photocatalytic activated surfaces with antimicrobial properties*

**S6 – 192**

**Maria E. Zarif** (National Institute for Lasers, Plasma and Radiation Physics, Romania), Sasa A. Yehia, Bogdan Biță, Bogdan Biță, Andreea Groza, Alexandru Grumezescu, Ecaterina Andronescu

*Radiofrequency magnetron sputtering deposition of calcium phosphate coatings – chemical and phase composition*

**S6 – 194**

**Olga Pintilie** (Al. I. Cuza University, Faculty of Chemistry, Iasi, Romania), Alexandra Lupu, Vasile Robert Gradinaru

*BSA-alginate gelation assisted by glutaraldehyde: a microplate assay study*

**S6 – 220**

**Stefania Stoleriu** (University Politehnica of Bucharest, Romania), Andreea Iulia Costică

*The role of Gallium doping on CaO – SiO<sub>2</sub> – P<sub>2</sub>O<sub>5</sub> resorbable glass-ceramic scaffolds properties*

**S6 – 223**

**Roxana Ioana Matei (Brazdis)** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Sorin Marius Avramescu, Irina Fierascu, Toma Fistos, Anda Maria Baroi, Radu Claudiu Fierascu

*Wastewater Depollution Studies Using Hydroxyapatite-Based Adsorbents*

**S6 – 224**

**Anda Maria Baroi** (The National Institute for Research&Development in Chemistry and Petrochemistry ICECHIM, Romania), Roxana Ioana Matei (Brazdis), Fistos Toma, Radu Claudiu Fierascu, Lia Mara Ditu, Sorin Avramescu, Raluca Somoghi, Irina Fierascu

*Agro-wastes – Opportunities and Perspectives in Development of a New Generation of Materials for Multidisciplinary Approaches*

**S6 – 226**

**Timur Chiş** (Oil-Gas University, Ploieşti, Romania), Mihaela Helstern, Doru Bârsan, Tiberiu Sandu

*Effect of polymer additives on the distillation of paraffinic crude oils*

**S6 – 227**

**Timur Chiş** (Oil-Gas University, Ploieşti, Romania), Tiberiu Sandu, Mihaela Helstern, Doru Bârsan

*Determination of the minimum miscibility pressure (M.M.P.) of some crude oils from Romania*

# WORKSHOP - New materials for electrochemical recognition of inorganic and biological species - NOMARES

## POSTER PRESENTATIONS

### Section 7

Friday 9 September 2022

Time: 8:00 – 13:00

#### S7 – 107

**Alina Giorgiana Brotea** (University Politehnica of Bucharest, Romania), Ovidiu Teodor Matica, Cornelia Elena Musina (Borsaru), Magdalena-Rodica Bujduveanu, Eleonora-Mihaela Ungureanu

*Chemical Modified electrodes based on new azulene-thiophene-vinylpyridine*

#### S7 – 146

Sorina-Alexandra Leau, Cecilia Lete, Cristian Matei, Ioana Diaconu, **Stelian Lupu** (University Politehnica of Bucharest, Romania)

*Synthesis of Composite Materials based on Conducting Polymers and Inorganic Nanoparticles using Sinusoidal Voltages and Currents Methods*

#### S7 – 149

Sorina-Alexandra Leau, Adela-Maria Spinciu, Maria-Gabriela Alexandru, Mariana Marin, Diana Visinescu, **Cecilia Lete** (Institute Of Physical Chemistry "Ilie Murgulescu" Of The Romanian Academy, Romania), Stelian Lupu

*Copper (II) oxide-based nanocomposite material as a sensing element of non-enzymatic electrochemical sensor for H<sub>2</sub>O<sub>2</sub> detection*

#### S7 – 163

**Adina-Maria Păun** (University Politehnica Of Bucharest, Romania) Ovidiu-Teodor Matica, Laura-Bianca Enache, Elena Diacu, Eleonora-Mihaela Ungureanu

*Surface characterization of chemically modified electrodes based on E-5-((5-isopropyl-3,8-dimethylazulene-1-yl)dyazonyl)-1H-tetrazole for the evaluation of the complexation capacity of heavy metal ions*

#### S7 – 203

**Laura-Bianca Enache** (University Politehnica Of Bucharest, Romania), Aurora Petica, Eleonora-Mihaela Ungureanu, Liana Anicai, Marian Enachescu

*Template-free electrochemical synthesis of 1D bismuth nanostructures using deep eutectic solvents*

#### S7 – 213

Oana Enache, **Claudiu Narcis Spinu** (University Politehnica Of Bucharest, Romania), Irinela Chilibon, Cristina Vasiliu, Magdalena-Rodica Bujduveanu, Eleonora-Mihaela Ungureanu

*Characterization of azulene-based complexing polymer films*

**S7 – 218**

Alexandru Trandabat, Alexandru Arcire, **Luisa Roxana Mandoc** (National Research And Development Institute For Cryogenic And Isotopic Technologies, Romania), Adriana Mona Mosneagu (Andrei), Claudiu Narcis Spinu, Eleonora-Mihaela Ungureanu

*Development of a nitrogen sensor based on carbon nanofiber and magnetic nanoparticles*

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