

RICCCE 23

23rd Romanian International
Conference on Chemistry
and Chemical Engineering

Constanta - Mamaia
ROMANIA



September 4-7

2024

PROGRAM

 IAKI Hotel, Mamaia, ROMANIA

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ORGANIZER



Faculty of Chemical Engineering
and Biotechnology

Wednesday 4th September 2024 – Opening Sessions

Registration

Time: 14:00 – 17:00

Opening Ceremony

Time: 17:00 – 17:30

Plenary Session

Time: 17:30 – 19:30

Chaired by: Cristina Orbeci and Cristian Pîrvu

17:30 – 18:10

Horia IOVU (*National University of Science and Technology Politehnica Bucharest, ROMANIA*)
Trends in synthesis and processing of advanced biocomposites

18:10 – 18:50

Gabriele MELONI (*University of Texas at Dallas, USA*)
Metal-Thiolate Clusters Assembly, Reactivity, and Selectivity Bias in Human Metallothioneins

18:50 – 19:30

Jarosław MYŚLIWIEC (*Wrocław University of Science and Technology, POLAND*)
Multiphase organic molecular systems for light amplification

Welcome Cocktail

Time: 20:00

Thursday 5th September 2024 – Morning sessions

Plenary Session

Time: 09:00 – 11:00

Chaired by: Cristina Todașcă and Cătălin Zaharia

09:00 – 09:40

Abdelhamid ERRACHID EL SALHI (*Institut des Sciences Analytiques, Villeurbanne, FRANCE*)

Point-of-Care System Based on Silicon Technology: Good Tools for Electrochemical Analysis of Complex Samples

09:40 – 10:20

Aura TÂNTARU (*Aix-Marseille Université, FRANCE*)

Combined Analytical Approches for the Structural Characterization of Molecular Systems

10:20 – 11:00

Mihaela STEFAN (*The University of Texas at Dallas, U.S.A.*)

Amphiphilic Polycaprolactone Diblock Copolymers for Drug Delivery of Anticancer Drugs

Coffee Break

Time: 11:00 – 11:30

Plenary Session

Time: 11:30 – 12:50

Chaired by: Ileana Rău and Daniela Istrati

11:30 – 12:10

Olivier SIRI (*Centre Interdisciplinaire de Nanoscience de Marseille, FRANCE*)

A journey in the world of colors

12:10 – 12:50

Cristian PICIOREANU (*King Abdullah University of Science and Technology, SAUDI ARABIA*)

Challenges in multiphysics computing of membrane processes

Lunch Break

Time: 13:00 – 14:30

Thursday 5th September 2024 – Afternoon parallel sessions

Bioengineering & Biomedical Technologies

Section 2

Time: 14:30 – 17:00

Chaired by: Jose Javier Serrano Olmedo and Iuliana Bîru

14:30 – 14:50 Keynote

Mariana Ionita (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania)

Emerging treatment strategies for multiple myeloma (MM) and myeloma bone damage reversed

14:50 to 15:00

Carmen-Valentina Nicolae (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Elena Olaret, Raluca-Elena Ginghina, Sorina Dinescu, Andrada Serafim, Masoumeh Jahani Kadousaraei, Mehmet Serhat Aydin, Kamal Mustafa, Izabela-Cristina Stancu

Enhancing cellular interactions through bioactivation and local nanomechanical reinforcement in nanodiamond-loaded 3D printed scaffolds

15:00 to 15:10

Andra Mihaela Onas (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Julien De Winter, Horia Iovu

Design and synthesis of peptoid molecules with antibiotic complexation properties for biotechnological applications

15:10 to 15:20

Georgian Alin Toader (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Mariana Ionita

Oligo-DNA extraction from complex media using nitrocellulose membranes modified with carbon nanotubes and PEG-aminated graphene

15:20 to 15:30

Madalina-Cristina Nicolae (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Sorina-Alexandra Garea, Horia Iovu, George-Mihail Vlasceanu, Cristina-Elena Stavarache

Modified pectin and halloysite based biomaterial ink with potential applications in drug delivery

15:30 to 15:40

Adriana Zainea (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Elena Iuliana Biru, Horia Iovu

Epithelial to mesenchymal transition in a prostate on a chip study

15:40 to 15:50

Cosmin-Gabriel Pauliuc (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Iuliana-Elena Biru, Horia Iovu

Exploiting the versatility of chitosan-based biomaterials for the development of novel platforms as drug delivery vehicles

15:50 to 16:00

Ana-Roxana Stefan (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Iuliana-Elena Biru, Horia Iovu

Natural polymers-based hydrogels with possible photothermal properties for treating bacterial infections

16:00 to 16:10

Adina-Nicoleta Trandas (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Iuliana-Elena Biru, Horia Iovu

Nanocomposite chitosan-based hydrogels with reduced graphene oxide for potential application in chemo-photothermal therapy

16:10 to 16:20

George-Mihail Vlasceanu (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Loredana Batagui, Andrada Serafim, Mariana Ionita

Visible light-driven hydrogels for tissue engineering

16:20 to 16:30

Cristina Stavarache (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Adi Ghebur, Andrada Serafim, George Vlasceanu, Sorina Alexandra Garea, Horia Iovu

3D printed k-carrageenan/alginate/carboxymethyl cellulose scaffolds for potential biomedical application

16:30 to 16:40

Elena Olaret, Jana Ghitman, Brindusa Balanuca, Livia Butac, Izabela – Cristina Stancu, **Andrada Serafim** (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania)

Double networks and double cross-linked networks based on mucin and its methacryloyl derivative

16:40 to 16:50

Calin-Constantin Moise (National University of Science and Technology Politehnica Bucharest, Romania), Mircea Bercu, Aida Pantazi, Oana Lazar, Geanina Mihai, Laura-Bianca Enache, Iulian Boerasu, Mariana Prodana, Marius Enachescu

Single CuO nanowire preparation for chemical sensing

16:50 to 17:00

Roxana Cristina Popescu (National University of Science and Technology Politehnica Bucharest, Romania), Teodora Eliana Petcov, Cosmin Catalin Mustăciosu, Adrian Nicoara, Roxana Trusca, Paul Emil Mereuta, Mihai Straticiu, Dragos Alexandru Mirea, Livia Chilug, Diana Iulia Savu, Sorin Ion Jinga

Nanotechnology in radiation therapy: How to find solutions for a targeted and efficient treatment of cancer?

Thursday 5th September 2024 – Afternoon parallel sessions

Pharmaceutical Engineering & Food Safety

Section 5

Time: 14:30 – 17:00

Chaired by: **Daniela ISTRATI** and **Nicoleta CHIRA**

14:30 to 14:50 Keynote

Simona Nica (C. D. Nenitzescu Institute of Organic and Supramolecular Chemistry, Bucharest, Romania)

Azulene-motif in crystal engineering

14:50 to 15:00

Raul-Cornel Stefan-Pantiş (National University of Science and Technology POLITEHNICA Bucharest, Romania), Alina Moroşan, Daniela Istrati, Dan Eduard Mihaiescu

Nanotechnological solutions for Curcumin biodisponibility enhancement

15:00 to 15:10

Brîndușa - Alina Petre (Alexandru Ioan Cuza University of Iași, Romania and Steinbeis Centre for Biopolymer Analysis and Biomedical Mass Spectrometry, Ruesselsheim am Main, Germany), Stefan Maeser, Laura Darie-Ion

Enzymatic diagnosis of lysosomal rare diseases in dried blood spots using tandem mass spectrometry and fluorimetry - A case study of neuronal lipofuscinoses

15:10 to 15:20

Lucia Pintilie (National Institute for Chemical-Pharmaceutical Research and Development, Bucharest, Romania), Adela Ioana Staras, Georgeta Neagu, Radu Albulescu, Maria Maganu, Anamaria Hanganu, Constantin Draghici, Miron Teodor Caproiu

Development a new dual inhibitor of DNA gyrase and topoisomerase IV

15:20 to 15:30

Andrei-Iulian Slabu (National Institute for Chemical-Pharmaceutical Research and Development, Bucharest, Romania and "C. D. Nenitzescu" Institute of Organic and Supramolecular Chemistry of the Romanian Academy, Bucharest, Romania), Florina Teodorescu, Laura Miu, Raluca Stan, Brîndușa Bălănuță

Linseed oil functionalization through epoxidation and epoxy ring-opening reactions

15:30 to 15:50 Keynote

Hans-Jacob Skarpeid (Marint Protein Nettverk, Norway)

Perspectives on utilization of protein rest raw materials from marine sources - potentials and challenges; commercial and chemical

15:50 to 16:00

Robert I. Botea (Laboratorium S.R.L., Bucharest, Romania), Ionuț Melinte, Irina Scarlat

Rapid determination of acrylamide in processed foods using advanced LC-MS/MS techniques

16:00 to 16:10

Rafal Kukawka (Adam Mickiewicz University Foundation, Poznan, Poland), Maciej Spsychalski, Artur Mikiciński, Joanna Puławska, Marcin Smiglak

Bio-based plant resistance inducers as an alternative to pesticides for protecting apple trees

16:10 to 16:20

Adelina-Gabriela Niculescu, Roxana Doina Trușcă, Alexandra Cristina Burdușel, Bogdan Purcăreanu, Dana-Ionela Tudorache, Bogdan Ștefan Vasile, Daniela Istrati, Tony Hadibarata, Alexandru Mihai Grumezescu, **Dan Eduard Mihaiescu** (National University of Science and Technology POLITEHNICA Bucharest, Romania)

Solid phase extraction of pesticides from surface water through aerogel nanocomposites and HR-MS characterization

16:20 to 16:30

Veaceslav Kulcički (Moldova State University, Institute of Chemistry, Chişinău, Republic of Moldova), Natalia Bârcă, Adina Organ, Vladilena Gîrbu, Alic Barbă, Alina Nicolescu, Călin Deleanu

Simultaneous determination of ursolic, pomolic, oleanolic and rosmarinic acids in lavender extracts. Comparison of qNMR and HPLC data

16:30 to 16:40

Cristina Todaşcă (National University of Science and Technology Politehnica Bucharest, Romania), Andreea Loredana Coşereanu, Cătălina-Beatrice Poteraş, Cristian Simion, Gabriela Stamatie, Fulvia Manolache

Enhancement of the nutritional and functional properties of pasta with addition of Romanian Mentha species

Thursday 5th September 2024 – Afternoon parallel sessions

Green Energy & Chemistry Concepts

Section 3

Time: 14:30 – 17:00

Chaired by: **Anca Cojocar** and **Daniela Cristina Berger**

14:30 – 14:50 Keynote

Danut-Ionel Vaireanu (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ioana-Alina Ciobotaru, Anca Cojocar, Ioana Maior

The First Romanian National Chemistry Congress - a turning point in the development of chemistry in Romania

14:50 to 15:00

Stefano Bellucci (INFN - Laboratori Nazionali di Frascati, Italy and National Institute of Materials Physics, Magurele, Romania)

Environmental remediation and sustainable energy solutions through advanced carbon nanomaterials

15:00 to 15:10

Ana Brandão (Instituto de Ciências Moleculares IMS-CIQUP, Porto, Portugal), Sabrina Rosoiu-State, Renata Costa, Geanina Valentina Mihai, Pavel Potorac, Helena Silva, José Vázquez, Jesus Valcarcel, Fernando Silva, Liana Anicai, Marius Enachescu, Carlos Pereira

Innovative biowaste-based carbon composites electrodes towards more sustainable and efficient energy storage systems

15:10 to 15:20

Andrea Kellenberger (Politehnica University Timișoara, Romania), Nicolae Vaszilcsin, Mircea Laurentiu Dan, Ionel Mitelea, Corneliu Craciunescu, Sigrid Lædre

Overcoming corrosion issues in bipolar plates for PEMWE for green hydrogen production

15:20 to 15:30

Adrian Trifan (National University of Science and Technology Politehnica Bucharest, Romania), Mircea Vinatoru, Ioan Călinescu, Adina Ionuta Gavrila, Ioana Popa

Mapping of ultrasonic tank with a new and simple method (applied for ultrasound extraction of phytocompounds with neuroprotective effect)

15:30 to 15:40

Mariana-Dana Damaceanu ("Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania), Andra-Elena Bejan

ProDOT-based polymers for energy saving and energy storage smart windows

15:40 to 15:50

Cezar Comanescu (National University of Science and Technology Politehnica Bucharest, Romania), Petru Palade, Gabriel Schinteie, Nicusor Iacob, Victor Kuncser

Reactive hydride composites - recent advances and development

15:50 to 16:00

Marin Gheorghe (NANOM MEMS SRL, Rasnov, Romania), Simona Gheorghe, Mircea Modreanu

3D dye sensitized solar cell

16:00 to 16:10

Maria Grapin (National Institute for Research & Development in Chemistry and Petrochemistry – ICECHIM, Bucharest, Romania), Valentin Raditoiu, Alina Raditoiu, Florentina Monica Raduly

Photocatalytic activity of TiO_2/Fe_2O_3 composites for rhodamine B degradation

16:10 to 16:20

Tiberiu-Marius Gianga (B23 Beamline, Diamond Light Source, Didcot, OX11 0DE, UK), Tamás Jávorfí, Rohanah Hussain, Giuliano Siligardi, Dan Pantoş

Diamond B23's synchrotron radiation circular dichroism – a tool for life and materials sciences

16:20 to 16:30

Roxana Rada, Ramona Chelcea, Daniela Lucia Manea, Dumitrița Moldovan, Radu Fechete, **Simona Rada** (Technical University of Cluj - Napoca, Romania and National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj Napoca, Romania),

Nanocomposites obtained from construction and demolition waste as substituent for cement: the mitigating of alkali – silice reaction

16:30 to 16:40

Marius Popa (University of Texas at Dallas, USA), Michael Biewer, Mihaela Stefan

Synthesis and characterization of pyrrole-based push-pull donor-acceptor dyes for organocatalyzed atom transfer radical polymerization (O-ATRP)

16:40 to 16:50

Sarah Aboubakr (National Research and Development Institute for Cryogenic and Isotopic Technologies – ICSI, Ramnicu Valcea, Romania), Alexandru Rizoiu, Adnana Spinu-Zaulet, Cosmin Ungureanu, Mihaela Buga, Alexandru Vlad

Towards long-lasting anode-free sodium batteries: a study on the effect of the electrolytes on the plating/stripping process

Coffee Break

Time: 16:30 – 17:00

Thursday 5th September 2024 – Afternoon parallel sessions

Workshop - Future trends in Chemical Engineering & Biotechnology Education

Section 6

Time: 17:30 – 19:00

*Moderated by: **Horia Iovu***

The Workshop focuses on exploring the emerging trends, innovative practices, and future directions in chemical engineering and biotechnology education. As industries evolve with technological advancements and societal needs, educational paradigms must adapt to prepare the next generation of engineers and biotechnologists. The audience will gain insights into how curriculum, teaching methodologies, and learning experiences are changing to meet these challenges.

Speakers:

Isabel Carrillo - UPM - Chemical Engineering Education at UPM

Javier Jose Serrano Olmedo - UPM - Bioengineering Education Programs at UPM

Cristina Orbeci - POLITEHNICA BUCHAREST- Faculty of Chemical Engineering and Biotechnology -
Towards new programs

Elena Iuliana Biru- POLITEHNICA BUCHAREST - Opportunities of new programs under Eelisa
network

Horia Iovu- POLITEHNICA BUCHAREST - New trends in Bioengineering Education

Daniela Istrati - POLITEHNICA BUCHAREST - Future of Pharmaceutical Engineering Education
through Industry Partnerships: A Success Story

Ovidiu Oprea- POLITEHNICA BUCHAREST - Future trends in Inorganic Chemistry Education

Ioan Stefan Voicu - POLITEHNICA BUCHAREST - Modern approaches in Analytical and
Environmental Chemistry Education

Catalin Zaharia- POLITEHNICA BUCHAREST - Advanced topics in Polymer Science and Engineering
education

Costin Sorin Bildea - POLITEHNICA BUCHAREST - From Classroom to Industry: Preparing Chemical
Engineers for the Future

Daniela Ionita - POLITEHNICA BUCHAREST - Future of Education in General Chemistry

Vladimir Lucian Ene - POLITEHNICA BUCHAREST - An epistemological approach on the modern
evaluation of students in an informatic age governed by the evolution of nanoscience and AI

Thursday 5th September 2024 – Afternoon parallel sessions

Sustainability & Environmental Engineering

Section 6

Time: 17:30 – 19:00

Chaired by: **Mădălina Pandeale** and **Constantin Bobiriță**

17:30 to 17:50 Keynote

Pietro Altimari (Sapienza University of Rome), Silvia Iacobelli, Pier Giorgio Schiavi, Monia Ciavaglia,
Gianluca Zanellato, Francesca Pagnanelli

Two Electrodeposition Strategies to Fabricate Porous Zn Electrodes for CO₂ Electroreduction

17:50 to 18:00

Mirela Cismasu (Enache) (National University of Science and Technology POLITEHNICA Bucharest)

Remediation of sites polluted with zinc

18:00 to 18:10

Raluca Elena Cârjilă (Mihalache) (National University of Science and Technology POLITEHNICA Bucharest), Cristina Modrogan, Annette Madelene Dăncilă, Oanamari Daniela Orbuleț, Simona Căprărescu

Preparation and characterization of nanoparticles doped with the plant extract for the wastewater treatment

18:10 to 18:20

Cristian Constantin (National University of Science and Technology POLITEHNICA Bucharest), Cristina Modrogan, Annette Madelene Dăncilă, Simona Călinescu, Georgeta Olguța Popa, Valeriu Dănciulescu, Elena Dicu

Mathematical modeling of air quality for biofiltration systems of waste treatment facilities

18:20 – 18:30

Sabrina State (National University of Science and Technology POLITEHNICA Bucharest), Cristina Modrogan, Christoph Baumer, Oana Brincoveanu, Cosmin Romanitan, Adriana Ispas, Andreas Bund, Marius Enachescu, Liana Anicaior

The influence of several additives on the electrodeposition of Ag using novel deep eutectic solvent formulations – an electrochemical quartz crystal microbalance (EQCM) investigation

18:30 – 18:40

Daniela Simina Ștefan (National University of Science and Technology POLITEHNICA Bucharest), Mircea Ștefan, Thaaer Hamed Abed, Gheorghe Păuna, Margareta Movilă

Technical Solution for the Treatment of Groundwater with a High Level of Loading in Undesirable Substances

18:40 to 18:50

Erdin Feizula (National University of Science and Technology POLITEHNICA Bucharest), Oana Cristina Pârvulescu, Tanase Dobre, Chis Timur

Modelling of Rain Effect of Soil Sort Leaching Based Laboratory Leaching Tests

18:50 to 19:00

Geani Teodor Man (National University of Science and Technology POLITEHNICA Bucharest), Gheorghe Nechifor

Technology Aspects of Thorium Recuperative Separation

Thursday 5th September 2024 – Afternoon parallel sessions

Nanosciences & Nanotechnology

Section 4

Time: 17:30 – 19:00

Chaired by: **Mehmet Ali Gülgün** and **Mirijam Vrabec**

17:30 to 17:50 Keynote

Adelina-Carmen Ianculescu (Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Vasile-Adrian Surdu, Cătălina-Andreea Stanciu, Roxana Elena Pătru, Bogdan Ștefan Vasile, Adrian Ionuț Nicoară, Roxana Doina Trușcă, Nadejda Horchidan, Liliana Mitoșeriu, Ioana Pintilie

Multiscale structured (Ba,Sr)TiO₃ ceramics: preparation, properties and applications

17:50 to 18:10 Keynote

Vrabec Mirijam (University of Ljubljana, Faculty for Natural Sciences and Engineering, Ljubljana, Slovenia), Semsari Parapari Sorour, Gračanin Nik, Šturm Sašo, Janák Marian, Sotelšek Tim

Insights into nanodiamond formation from Pohorje Mountains (Slovenia)

18:10 to 18:20

Vladimir Lucian Ene (Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, Bucharest, Romania), Isabela Maria Mohor, Maria Alexandra Mușat, Cosmin Iulian Codrea, Alexandra Cătălina Bîrcă, Cristina Uncu, Adrian Ionuț Nicoară, Roxana Cristina Popescu

3D printed biocomposites based on hydroxyapatite and TiC for implantology

18:20 to 18:30

Ionela-Cristina Petcu (National University for Science and Technology Politehnica Bucharest, Bucharest, Romania and National Institute for Research and Development in Microtechnologies - IMT Bucharest, Bucharest, Romania), Ana T. S. C. Brandão, Iuliana Mihalache, Lucia Monica Veca, Oana Brâncoveanu, Cosmin Romanițan, Carlos Pereira, Liana Anicăi, Cristina Busuioc, Sabrina-Patricia State

Electrochemical synthesis of TiO₂ and Ag-TiO₂ nanoparticles from deep eutectic solvents and their use in photocatalysis

18:30 to 18:40

Stefania Stoleriu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Cristina Zamfirescu, Ionela-Andreea Neacsu, Vladimir-Lucian Ene, Georgeta Voicu

Enhanced bioresorbable scaffolds for hard tissue engineering based on calcium phosphates

18:40 to 18:50

Zeynep Başaran Bundur (Civil Engineering Department, Engineering Faculty, Ozyegin University, Istanbul, Turkey)

Sustainable and digital transformation in the cement and concrete industry: 3D printing innovations

18:50 to 19:00

Erika Blanzeanu (Advanced Polymer Materials Group, University Politehnica of Bucharest, Bucharest, Romania), Derniza Cozorici, Ionut-Cristian Radu, Cristina Stavarache, Catalin Zaharia, George Mihail Vlasceanu, Eugeniu Vasile, Rafael Luque Alvarez de Sotomayor

Innovative 3D printed catalytic supports using SLA: incorporating metal and chitosan ligands for superior catalysis

19:00 to 19:10

Ionut-Cristian Radu (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Derniza Cozorici, Erika Blanzeanu, Cristina Stavarache, Catalin Zaharia, Rafael Luque Alvarez de Sotomayor

3D Printed catalyst supports based on metal loaded renewable polymers

Friday 6th September 2024 – Morning Sessions

Plenary Session

Time: 09:00 – 11:00

Chaired by: Ștefania Stoleriu and Ștefan Voicu

09:00 – 09:40

Rafael LUQUE (King Saud University, SAUDI ARABIA)

Benign-by-design methodologies for a more sustainable future: present and future

09:40 – 10:20

Mehmet Ali GÜLGÜN (*Sabancı University, Istanbul, TURKEY*)

From Waste to a "Greener" Cement: Materials Science and Mineralogy at Work

10:20 – 11:00

Ron SMALDONE (*University of Texas, Dallas, U.S.A.*)

Chemical Design Tools for 3D Printing Smart, Functional Materials

Coffee Break

Time: 11:00 – 11:30

Plenary Session

Time: 11:30 – 12:50

Chaired by: Iuliana Bîru and Ovidiu Oprea

11:30 – 12:10

Jose Javier Serrano OLMEDO (*Center for Biomedical Technology, Polytechnic University of Madrid, SPAIN*)

The initial findings of the efficacy of novel magnetic and optical particle-mediated hyperthermia systems for glioblastoma multiforme and melanoma uveal

12:10 – 12:50

Stefan Ioan VOICU (*National University of Science and Technology Politehnica Bucharest, ROMANIA*)

Polymeric membranes: the solution for drinkable water availability at global scale

Lunch Break

Time: 13:00 – 14:30

Friday 6th September 2024 – Afternoon parallel sessions

Nanosciences & Nanotechnology

Section 4

Time: 14:30 – 17:00

Chaired by: **Mariana Ioniță** and **Gabriele Meloni**

14:30 to 14:50 Keynote

Alina M. Balu (Departamento de Química Orgánica, Universidad de Cordoba, Edificio Marie Curie (C-3), Ctra Nnal IV-A), Caterina Mosca, Alexander Pokutsa, Olena Korchuganova, Renzo Luisi

Designer nanocatalysts for the waste-to-pharma concept

14:50 to 15:10 Keynote

Catalin Zaharia (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Ionut-Cristian Radu, Derniza Cozorici, Roxana-Cristina Popescu, Rafael Luque

Advances in 3D-Printed Poly(vinyl alcohol) Vascular Grafts: Design, Fabrication, and Medical Implication

15:10 to 15:30 Keynote

Elena Iuliana Bîru (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Madalina Ioana Necolau, Cosmin Pauliuc, Ana Roxana Stefan, Nicoleta Adina Trandas, Adriana Zainea, Horia Iovu

Polybenzoxazine composites – crossing the bridge from industrial to medical applications

15:30 to 15:40

Edina Rusen (National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Alexandra Mocanu, Oana Brincoveanu, Gabriela Toader, Raluca Gavrilă, Aurel Diacon, Cristina Stavarache

One reaction: two types of mechanism SARA-ATRP and SET-LRP for MMA polymerization in the presence of PVC

15:40 to 15:50

Mădălina Ioana Necolau (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Elena Iuliana Bîru, Brîndușa Bălănuță, Horia Iovu

Advancing sustainability: bio-based thermoset nanocomposites for a greener future

15:50 to 16:00

Derniza-Elena Cozorici (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Radu Ionuț-Cristian, Erika Blânzeanu, Andreea Vădureanu, Cristina Stavarache, Catalin Zaharia

Development and optimization of biopolymer-based formulations for 3D bioprinting

16:00 to 16:10

Celina Maria Damian (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Iulia Nicoleta Radu, Mădălina Ioana Necolau Brinduşa Bălănuță

Expressing the potential of epoxidized corn oil into an efficient anticorrosion nanocomposite material

16:10 to 16:20

Violeta-Carolina Niculescu (National Research and Development Institute for Cryogenic and Isotopic Technologies – ICSI Ramnicu Valcea, Ramnicu Valcea, Romania), Diana Ionela Popescu (Stegarus)

Examining catalytic performance of mesoporous silica against chlorinated pesticides removal

16:20 to 16:30

Iulian Berladean ("Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Natural and Synthetic Polymers, Iasi, Romania and Univ. Littoral Cote d'Opale, UR 4476 - UDSMM - Unite de Dynamique et Structure de Materiaux Moleculaires, Dunkerque, France), Luiza Epure, Aurel Simion, Irina Carlescu, Yahia Boussoalem, Nicolae Hurduc, Abdelylah Daoudi

Self-assembling bent-core liquid crystals with chiral mesophases

16:30 to 16:40

Mihai-Vlăduț Stăncilă (National University of Science and Technology Politehnica Bucharest, Romania) Andrei-Marian Îndoilă, Laura-Bianca Enache, Aida Ghiulnare Pantazi, Marius Enachescu, Mariana Prodana

Applications of carbon fibers reinforced with nanostructures for applications in aerospace engineering

16:40 to 16:50

Bogdan Purcăreanu (Department of Science and Engineering of Oxide Materials and Nanomaterials" Faculty of Chemical Engineering and Biotechnologies, University POLITEHNICA of Bucharest, Bucharest, Romania and Biotehnos SA), Manuela Diana Ene, Mihai Alexandru Florea, Veronica Drumea, Dan Eduard Mihaiescu, Mihai Alexandru Grigoroscuta, Anton Fikai

Antioxidant potential of mesoporous silica material loaded with Achillea Millefolium volatile oil

Friday 6th September 2024 – Afternoon parallel sessions

Advanced Strategies in Chemical Engineering & Biotechnology

Section 1

Time: 14:30 – 17:00

Chaired by: **Sorin Costin Bildea and Oana Parvulescu**

14:30 to 14:50 **Keynote**

Tanase Dobre (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Oana Cristina Parvulescu

Chemical engineering from beginning until today by paradigms

14:50 to 15:00

Shaanan Bdaiwi Ahmed, **Tanase Dobre** (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Gabriela Isopencu, Iuliana Deleanu, Hussein Fawzi Hussein

Modelling of simultaneous sorption of heavy metals in fixed bed columns

15:00 to 15:10

Ana-Maria Brezoiu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Mihaela Deaconu, Raul-Augustin Mitran, Cristian Matei, Daniela Berger

Investigating bilberry polyphenolic extracts composition depending on the extraction parameters and extract purification

15:10 to 15:20

Ionut-Alexandru Popa (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Oana Cristina Parvulescu, Petre Chipurici, Tanase Dobre

Modeling of volatile organic compounds flow rate produced in automotive industry by painting with complex solvent paints

15:20 to 15:30

Ianis Pompot (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania and Clermont Auvergne INP, Clermont-Ferrand, France), Tanase Dobre, Cristian Eugen Raducanu, Alina-Violeta Ursu, Fabrice Gros

Analysis of mass transfer for batch cooper cementation for reactor with magnetic mixing of liquid and fixed cementation surface

15:30 to 15:40

Florin Omota (Fluor, Hoofddorp, Netherlands)

High purity ethyl acetate by a single reactive distillation - dividing wall column

15:40 to 15:50

Ionut Banu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Romuald György, Gheorghe Bumbac

Modeling and simulation of glycerol esterification with acetic acid in a catalytic divided wall distillation column

15:50 to 16:00

Roxana Jidveian (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Petrica Iancu, Cristian Eugen Raducanu, Tanase Dobre, Doinita Roxana Cioroiu Tirpan, Cristina Ionela Gogoasa, Oana Cristina Parvulescu, Bogdan Trica, Andreea Luiza Mirt, Gabriel Vasilevici

Biodegradable supported catalyst developed as green strategy in biodiesel synthesis

16:00 to 16:10

Sorina Teiusanu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Lavinia Beznea, Tanase Dobre, Oana Parvulescu

View of environmental monitoring data from a cement plant with Gaussian models

16:10 to 16:20

Sorina Teiusanu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Lavinia Beznea, Tanase Dobre, Oana Parvulescu

Accomplishment and operation of environmental monitoring systems at a cement plant

Friday 6th September 2024 – Afternoon parallel sessions

Bioengineering & Biomedical Technologies

Section 2.2 – eBio-Hub Conference*

Time: 14:30 – 17:00

* endorsed by eBio-hub: Chair of Research Centre in Biomedical Engineering (HORIZON EUROPE Grant agreement No. 101087007)

Chaired by: **Horia Iovu** and **Isabel Carrillo**

14:30 – 14:50

Gratiela Gradisteanu Pircalabioru (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania), Mihai-Viorel Dionisie, Ciprian Iliescu, Madalina Musat

Revolutionizing type 2 diabetes detection and management through liquid biopsy technology

14:50 to 15:10

Ciprian Iliescu (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania)

Microfluidic platforms for drug discovery

15:10 to 15:30

Radu Ionescu (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania and Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Sciences, Tartu, ESTONIA)

Volatolomic studies in biomedical research

15:30 to 15:50

Luminita G. Gheorghiu, **Florina S. Iliescu** (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania)

Simple method for biocompatible microneedles fabrication

15:50 to 16:10

Jana Ghitman (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania), Gratiela Gradisteanu, Eugeniu Vasile, Ciprian Iliescu, Horia Iovu

Hybrid fibrous architectures-mediated gene transfer by pDNA nanoparticles into macrophages

16:10 to 16:20

Feth Eddine Boukhemacha (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania), Elena Cojocaru, Gratiela Gradisteanu Pircalabioru, Horia Iovu, Jana Ghitman

PEI/DNA polyplexes: complexation, characterization, and in vitro biological investigation

16:20 to 16:30

Laura-Elena Andrei (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania), Mihaela Carp, Gratiela Gradisteanu Pircalabioru, Ciprian Iliescu

On-chip device with interdigitated electrodes for electrical bacterial lysis

16:30 to 16:40

Bianca-Maria Tihauan (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania) Gratiela Gradisteanu-Pircalabioru, Luminita Marutescu, Madalina Axinie, Cristina Chircov, Maria Miclaus, Xenia Filip

Lipid-based drug delivery systems for biomedical skin regenerative applications

16:40 to 16:50

Maria-Eliza Puscasu (National University of Science and Technology Politehnica Bucharest, Romania), Cristina Busuioc, Adrian-Ionut Nicoara, Stefania Stoleriu, Sorin Ion Jinga, Florentina-Gabriela Ionita

Fabrication of a composite scaffold with single alternating layers using a ceramic extrusion-based manufacturing technique

16:50 to 17:00

Ileana Rau (National University of Science and Technology Politehnica Bucharest, Romania), Verginica Schroder, Laura Elena Enache, Mirela Adina Anton, Cristiana Luminita Gijiu, Daniel Dumitru Dinculescu, Raluca Isopescu, Nicoleta Badea

Chitosan – molecular mass and deacetylation degree influence

Coffee Break

Time: 17:00 – 17:30

Friday 6th September 2024 – Afternoon parallel sessions

Sustainability & Environmental Engineering

Section 6

Time: 17:30 – 19:00

Chaired by: Simina Ștefan and Ștefan Voicu

17:30 – 17:40

Andreea Miron (National Institute for Research & Development in Chemistry and Petrochemistry-ICECHIM Bucharest; National University of Science and Technology POLITEHNICA Bucharest), Iulia-Elena Neblea, Sorin-Viorel Doalana, Marinela Dumitru, Andrei Sarbu, Horia Iovu, Ana-Mihaela Gavrila, Anamaria Zaharia, Teodor Sandu, Tanta-Verona Iordache, Anita-Laura Chiriac

Chitosan-Based Composite Polymeric Beads: An Innovative Approach for Copper Ion Retention

17:40 to 17:50

Andra Bucșe (National Institute for Research and Development on Marine Geology and Geoecology – GeoEcoMar), Dan Vasiliu, Oana Cristina Pârvulescu, Florina Rădulescu, Florentina Fediuc, Teodor Mușat, Florina Macau, Naliana Lupașcu, Daniela Florea, Sorin Balan

Preparation and characterization of nanoparticles doped with the plant extract for the wastewater treatment

17:50 – 18:00

Oana Cristina Pârvulescu (National University of Science and Technology POLITEHNICA Bucharest), Violeta Alexandra Ion, Ailin Moloșag, Cristina Orbeci, Tănase Dobre, Cristian Eugen Răducanu, Diana Egri, Anne-Kristin Løes, Joshua Cabell, Athanasios Salifoglou, Carlos Octavio Letelier-Gordo

Marine Residue-Based Fertilizers and Biostimulants for Agronomic and Environmental Benefits

18:00 to 18:10

Andrea Bogyor (“Babeș-Bolyai” University of Cluj-Napoca), Alexandra Csavdari, Tamás Lovász, Graziella Turdean

Kinetic and Thermodynamic Aspects for the Adsorption of Some Synthetic Dyes from their Aqueous Solutions

18:10 to 18:20

Carolina Constantin (National University of Science and Technology POLITEHNICA Bucharest), Ioana Carmen Popescu (Hostuc), Ovidiu Oprea, Thomas Bligh Scott, Richard Andrew Crane, Ligia Stoica

Aspects of Removal of U(VI) and Accompanying ions from Aqueous Systems on Fe⁰-based Nanomaterial

18:20 to 18:30

Liana Anicai (National University of Science and Technology POLITEHNICA Bucharest), Aurora Petica, Stefania Costovici, Geanina Mihai, Sabrina Rosoiu, Ioana Nicola, Victoria Ceara

Cerium-Based Conversion Films Developed on LiAl-Layered Double Hydroxide Coatings for Corrosion Protection of Aluminum Alloys

18:30 to 18:40

Silviu-Laurentiu Badea (University of Agronomic Sciences and Veterinary Medicine of Bucharest), Violeta Alexandra Ion, Oana – Crina Bujor, Liliana Badulescu

Advanced GC-MS-MS Methods for Screening Organochlorine and Organophosphate Pesticides in Aquatic and Solid Environmental Samples

18:40 to 18:50

Anamaria Todea (University of Trieste; Politehnica University Timisoara), Monia Renzi, Emanuele Carosati, Lucia Gardossi

Computational strategies and applied biocatalysis for the eco-design of biodegradable oligoesters

Friday 6th September 2024 – Afternoon parallel sessions

Advanced Strategies in Chemical Engineering & Biotechnology

Section 1

Time: 17:30 – 19:00

Chaired by: **Ionut Banu** and **Cristian Matei**

17:30 – 17:50 Keynote

Daniela Berger (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Mihaela Deaconu, Ana-Maria Prelipcean, Ana-Maria Seciu-Grama, Ana-Maria Brezoiu, Madalina Ghiuta, Alin G. Gheorghe, Cristian Matei

Properties of polyphenolic extracts from Vaccinium sp. free and incorporated in mesoporous silica modified with inorganic nanoparticles

17:50 to 18:00

Maria-Gabriela Alexandru (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Diana Visinescu, Sergiu Shova, Ghenadie Novitchi

Cyanido-bridged iron(II) spin crossover coordination polymers

18:00 to 18:10

Andrea Szepecht (Poznan Science and Technology Park, Poznan, Poland), Dawid Zielinski, Marcin Smiglak

Ionic liquids as multifunctional modifiers and hardeners for composite materials

18:10 to 18:20

Mihaela Deaconu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Simona Ionita, Mihaela Moisescu, Mona Mihailescu, Cristian Matei, Daniela Berger

Therapeutic platforms based on mesoporous silica nanoparticles coated with a natural polymer

18:20 to 18:30

Marinela-Victoria Dumitru (INCDCP-ICECHIM, Bucharest, Romania), Andreea Miron, Iulia-Elena Neblea, Sorin-Viorel Dolana, Anamaria Zaharia, Ana Mihaela Gavrilă, Andrei Sarbu, Horia Iovu, Sandu Teodor, Anita-Laura Chiriac, Tanta-Verona Iordache

Retention of ciprofloxacin and carbamazepine from aqueous solutions using chitosan-based composite cryostructures

18:30 to 18:40

Sergiu Sima (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Adrian Victor Crisciu, Catinca Secuianu, Dan Vladimir Nichita

Validation of a new high-pressure apparatus for determining clathrate hydrates

Friday 6th September 2024 – Afternoon parallel sessions

Prof. Sorin Rosca Competition

Time: 17:30 – 19:00

Chaired by: Iuliana Bîru and Ileana Rău

This competition is an exciting platform for aspiring researchers, graduate students, and early-career scientists to showcase their innovative research projects and groundbreaking ideas. It aims to foster creativity, encourage interdisciplinary collaboration, and provide young researchers with an opportunity to present their work to a panel of esteemed judges and industry professionals.

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

The prize is supported by MDPI and its value is 500 CHF.

Friday 6th September 2024

Closing Ceremony

Time: 19:00 – 19:20

Gala Dinner

Time: 20:00

POSTER PRESENTATIONS

Advanced Strategies in Chemical Engineering & Biotechnology

POSTER PRESENTATIONS

Section 1

Thursday 5th September 2024

Time: 9:00 -19:00

S1 –P– ID 040

Violeta Melinte (Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania), Andreea Laura Chibac-Scutaru, Viorica Elena Podasca

Synthesis and physicochemical characterization of chromophore-incorporating polyurethane elastomers

S1 –P– ID 041

Andreea Laura Chibac-Scutaru (Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania), Viorica Elena Podasca, Violeta Melinte

Effect of dansyl photosensitizer on enhancing photocatalytic performance of semiconductor nanoparticles (TiO₂, ZnO or Mn₂O₃) embedded in polyurethane matrix

S1 –P– ID 052

Dawid Zielinski (Poznan Science and Technology Park, Poznan, Poland), Andrea Szpecht, Marcin Smiglak

Cellulose dissolved in ionic liquids as a way to incorporate in situ generated natural filler into an epoxy composite while the resin is simultaneously crosslinked by ionic liquids

S1 –P– ID 057

Daniel Dinculescu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Valentina Ciocan, Cristiana Luminita Gijiu

Separations techniques for azeotropic mixtures

S1 –P– ID 059

Cristiana Luminita Gijiu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Catalina Elena Udrea, Daniel Dinculescu, Sorin Bildea

Ethanol/water mixtures – separation options

S1 –P– ID 083

Gabriela Isopencu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Alexandra Mocanu, Iuliana - Mihaela Deleanu, Miron Adrian Dinescu, Oana Brincoveanu

Biodegradation studies of biocellulose films loaded with different materials

S1 –P– ID 097

Anil Abduraman, Mihaela Deaconu, Ana-Maria Brezoiu, Rodica Tatia, Nada K. Sedky, Laila Ziko, Daniela Berger, **Cristian Matei** (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania)

Properties of polyphenolic extracts free and incorporated in mesoporous carriers

S1 –P– ID 115

Liliana Lazar, Dumitru Coman, **Valeria Danilova** ("Gheorghe Asachi" Technical University of Iasi, Iasi, Romania), Ioan Mamaliga

Performance of brine electrolysis process by ion exchange membrane

S1 –P– ID 129

Adrian Crisciu (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Sergiu Sima, Catinca Secuianu, Dan Vladimir Nichita

Kinetics of clathrate formation and decomposition: an overview

S1 –P– ID 141

Diana Egri, Oana Cristina Parvulescu, Violeta Alexandra Ion, Ailin Molosag, Andrei Mot, Aurora Dobrin, **Cristian Eugen Raducanu** (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Cristina Orbeci, Tanase Dobre, Alexandra Mocanu, Anne Kristin Løes, Joshua Cabell, Athanasios Salifoglou, Carlos Octavio Letelier-Gordo

Recycling marine residues through composting and compost fermentation

S1 –P– ID 186

Andra Mihaela Onas (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Ciprian Victor Florea, Matei D. Raicopol, Horia Iovu, Luisa Pilan

ssDNA-based electrochemical biosensors for aminoglycoside antibiotics detection

S1 –P– ID 206

Alexandru Tompa (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Maria Alexandru, Diana Visinescu, Sergiu Shova, Florina Dumitru

Versatile self-assembly of a bis-Schiff base ligand with Zn²⁺ and Ni²⁺

S1 –P– ID 247

Vlad Tarpa (Aix Marseille Universite, Marseille, France; National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Gabriel Canard, Olivier Siri

Ammonia sensors based on Ni(II) complexes in quinoid chemistry

S1 –P– ID 248

Andreea Dragoi Branza (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Raluca-Ioana Stefan-van Staden, Damaris Cristina Gheorghe, Gabriela Stanciu

Determination of docosahexaenoic acid ethyl ester in the liver of stingray

S1 –P– ID 252

Andra-Elena Sandru (Dorneanu) (National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Raluca-Ioana Stefan-van Staden, Catalina Cioates Negut, Gabriela Stanciu

Determination of estradiol in sapropel and water using a new stochastic microsensor

S1 –P– ID 264

Ioana Cristina Benea (Politehnica University Timisoara, Timisoara, Romania), Alessandro Pellis, Francisc Peter

Green approach in synthesizing novel polyesters and polyesteramides with random and block structures from bio-based raw materials

Bioengineering & Biomedical Technologies

POSTER PRESENTATIONS

Section 2

Thursday 5 September 2024

Time: 9:00 -19:00

S2-P-ID027

Daniela Ionita (National University of Science and Technology Politehnica Bucharest, Romania), Andrei Bogdan Stoian, Mariana Prodana, Radu Nartita, Georgeta Totea, Cristian Burnei

Electrosprayed composite coatings based on chitosan, bioglass and zinc oxide on Ti-Zr-Ta-Ag for biomedical applications

S2-P-ID028

Mariana Prodana (National University of Science and Technology Politehnica Bucharest, Romania), Marius Enachescu, Moise Calin-Constantin, Iulian Boerasu, Daniela Ionita

Characterization of coatings based on chitosan, bioactive glass, titanium dioxide and zinc oxide nanoparticles prepared by matrix assisted pulsed laser evaporation

S2-P-ID029

Marius Enachescu (Center for Surface Science and Nanotechnology, National University of Science and Technology Politehnica Bucharest, Romania), Moise Calin-Constantin, Andrei B. Stoian, Iulian Boerasu, Daniela Ionita

MAPLE deposition of complex coatings on titanium alloy for bio-applications

S2-P-ID030

Madalina Oprea (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Mariana Ionita

Investigating the interactions between functionalized graphene oxide and antisense oligonucleotides using a computational approach via molecular modelling simulations

S2-P-ID047

Florentina Golgovici (National University of Science and Technology Politehnica Bucharest, Romania), Radu Nartita, Ioana Demetrescu

Electrosynthesis of Drug-Embedded Polymeric Coating Using NADES to Improve HEA Alloy Behavior

S2-P-ID049

Elena Olaret (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Adriana-Elena Bratu, Jana Ghitman, Andrada Serafim

Development of alginate bead-integrated polymeric dressings for enhanced deep wound care

S2-P-ID053

Maria Minodora Marin (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Rafael Luque Alvarez de Sotomayor, Ioana Catalina Gifu, Elvira Alexandrescu, Silviu Preda, Andrada Serafim, Horia Iovu, Raluca Ianchis, Izabela Stancu, Anca Aurelia Dumitru, Marian Nicolae Verziu

Novel advanced 3D printed materials

S2-P-ID055

Monica Popa, Laura M. Stefan, **Silviu Iulian Drob** (Institute of Physical Chemistry "Ilie Murgulescu", Bucharest, Romania), Jose M. Calderon Moreno

Corrosion inhibition of carbonate coated magnesium in physiological fluids

S2-P-ID058

Camelia Ungureanu (National University of Science and Technology Politehnica Bucharest, Romania), Silviu Răileanu, Theodor Borangiu

Low-cost digitization of (bio)chemical corrosion processes

S2-P-ID067

Elena Cojocaru (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Mariana Ionita

Construction of alginate/cellulose nanofibrils 3D-printed scaffolds double-reinforced with chitosan nanofibers and graphene oxide for bone tissue regeneration

S2-P-ID074

Brindusa Balanuca (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Cristina Ott, Andrei Iulian Slabu, Madalina Ioana Necolau, Andrada Serafim

Bicomponent macromolecular architectures based on methacrylated linseed oil and alginate

S2-P-ID080

Alisa Ioana Ungureanu (National University of Science and Technology Politehnica Bucharest, Romania), Simona Andreea Popescu, Angela Gabriela Paun, Cristina Dumitriu

Silk fibroin quantum dots applied in electrochemical anti tissue transglutaminase antibodies detection

S2-P-ID085

Simona Popescu (National University of Science and Technology Politehnica Bucharest, Romania), Angela Gabriela Paun, Cristina Dumitriu, Camelia Ungureanu

Nature-inspired biomimetic polymers and nano-engineered structures used for improving antimicrobial effect for dental implants surface

S2-P-ID091

Mihaela Raluca Dobrisan (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Adriana Lungu, Maria Minodora Marin, Gratiela Gradisteanu, Izabela Cristina Stancu, Horia Iovu

Multicomponent scaffolds as 3D extracellular matrix-mimetic biomaterials

S2-P-ID128

Mihaela Raluca Dobrisan (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Georgian Alin Toader, Mariana Ionita

3D bioprinting of cellulose fiber-loaded gellan/gelatin inks reinforced with graphenic allotropes reliable for tissue engineering structure

S2-P-ID138

Florenta Mihai (National University of Science and Technology Politehnica Bucharest, Romania), Ileana Rau, Verginica Schroder

Influence of oncological treatments on blood parameters

S2-P-ID152

Ana-Maria-Raluca Musat, Cristina Busuioc (National University of Science and Technology Politehnica Bucharest, Romania)

Synthesis of cobalt, copper and zinc substituted bioglasses

S2-P-ID161

Otilia Ruxandra Vasile, (National University of Science and Technology Politehnica Bucharest, Romania), Adrian Ionut Nicoara, Diana Camenscic, Roxana Trusca, Cornelia Ilie, Roxana Popescu

Composites based on chitosan and diopside with applications in hard tissue engineering

S2-P-ID162

Marian Verziu (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Radu Ionut-Cristian, Derniza Cozorici, Erika Blanzeanu, Minodora Marin, Anca Dumitru, Catalin Zaharia, Rafael Luque Alvarez de Sotomayor

From seafood waste to Cu based materials by 3D printing

S2-P-ID174

Elena Christen Creanga (Faculty of Pharmacy, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania), Rica Boscencu, Roxana Trusca, Adina Magdalena Musuc, Radu Socoteanu, Mihai Anastasescu

Morphological and spectral assessment of an unsymmetrical porphyrinic complex with biomedical potential

S2-P-ID181

Irina Lixandru-Petre (eBio-Hub Research-Center, National University of Science and Technology Politehnica Bucharest, Romania), Alexandru Dima, Mihai Dascalu, Ciprian Iliescu, Madalina Musat

Machine learning for enhanced diagnosis and personalized treatment of thyroid cancer

S2-P-ID182

Mihai Fotu (National University of Science and Technology Politehnica Bucharest, Romania), Adrian-Ionut Nicoara, Cristina Busuioc

Synthesis of bioglass-ceramics containing boron

S2-P-ID184

Gabriela Mitea (Faculty of Pharmacy," Ovidius" University of Constanta, Romania), Verginica Schröder, Irina Mihaela Iancu, Maria Mihaly

Integrating biophysical insights: a systems approach to understanding cancer cells

S2-P-ID194

Angela Gabriela Paun (National University of Science and Technology Politehnica Bucharest, Romania), Cristina Dumitru, Nicoleta Badea, Cristian Pirvu

Bioinspired coatings based on lipid nanocarriers for indomethacin targeted release

S2-P-ID195

Andreea-Valentina Nita (National University of Science and Technology Politehnica Bucharest, Romania, Pitesti University Centre), Andrei Ionut Costin Vaduva, Carmen Mihaela Topala, Loredana Elena Vijan

A spectroscopic study of pazopanib – DNA interaction

S2-P-ID196

Ruxandra Ioana Ionescu (Serbanescu-Iordanescu) (National University of Science and Technology Politehnica Bucharest, Romania, Pitesti University Centre), Cristina Postolache, Carmen Mihaela Topala, Loredana Elena Vijan

Spectral study of some cytostatic drugs used in breast cancer

S2-P-ID201

Ruxandra-Elena Geanaliu-Nicolae (National University of Science and Technology Politehnica Bucharest, Romania), Roxana-Cristina Popescu, Ramona Elena Meja, Georgeta Voicu, Paul Emil Mereuta

Intelligent therapies - bioglasses used in regenerative medicine suitable for local delivery drugs – ketoprofen

S2-P-ID234

Alexandra Constantinescu (National University of Science and Technology Politehnica Bucharest, Romania), Cristian Pirvu

SPR D-fructose detection by modified gold electrodes

S2-P-ID237

Mihai Paduraru (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Elena Iuliana Biru, Mădălina Ioana Necolau, Horia Iovu

Biomedical uses of guar gum and sodium alginate based hydrogels as bioinks for 3D printing in soft tissue engineering

S2-P-ID242

Paul-Octavian Stanescu (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Romania), Ionut-Cristian Radu, Celina-Maria Damian, Cristina Stavarache, Andra Onas, Ioana Stanoi, Catalin Zaharia

Controlled grafting of bacterial cellulose microparticles with synthetic chains for drug delivery management

S2-P-ID265

Cristian Pirvu (National University of Science and Technology Politehnica Bucharest, Romania), Alexandra Constantinescu, Camelia Ungureanu

Escherichia coli detection by EC-SPR using an electrode modified with phytosynthesized gold nanoparticles

Nanosciences & Nanotechnology

POSTER PRESENTATIONS

Section 4

Thursday 5 September 2024

Time: 9:00 – 19:00

S4 -P-ID 003

Bogdan Tutunaru (Department of Chemistry, Faculty of Sciences, University of Craiova, Craiova, Romania)

Gold nanoparticles as sensitizers for electrochemical inactivation of Newcastle Virus La Sota type using Au electrode

S4 - P-ID 026

Ludmila Motelica, Denisa Ficai, **Ovidiu-Cristian Oprea** (Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Bucharest,

Romania and Academy of Romanian Scientists, Bucharest, Romania), Roxana-Doina Trusca, Anton Fikai, Gabriel Mustatea, Elena Loredana Ungureanu

Antimicrobial packaging based on ZnO modified polyethylene loaded with cinnamaldehyde

S4 - P-ID 034

Ludmila Motelica (Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Romania and Academy of Romanian Scientists, Bucharest, Romania), Gabriela Petrisor, Denisa Fikai, Ovidiu-Cristian Oprea, Roxana-Doina Trusca, Anton Fikai, Ecaterina Andronescu, Alina Maria Holban

Antimicrobial cellulose-based films with zinc oxide and mesoporous silica loaded with cinnamon essential oil

S4 - P-ID 038

Viorica-Elena Podasca (Polyaddition & Photochemistry Department, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania), Violeta Melinte, Andreea-Laura Chibac-Scutaru

Design of ZnO, Mn₂O₃ and TiO₂ particles: synthesis, characterization and photocatalytic study

S4 - P-ID 073

Iulia Nicoleta Radu (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Celina Maria Damian, Madalina Ioana Necolau

Synthesis of polymeric bionanocomposites based on epoxidized corn oil and organophilized Montmorillonite

S4 - P-ID 086

Adelina-Gabriela Niculescu (Department of Science and Engineering of Oxide Materials and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania and Research Institute of the University of Bucharest—ICUB, University of Bucharest, Bucharest, Romania), Alexandra Cătălina Bîrcă, Alina Moroșan, Dana-Ionela Tudorache, Bogdan Ștefan Vasile, Daniela Istrati, Tony Hadibarata, Dan Eduard Mihaiescu, Alexandru Mihai Grumezescu

New 3D vortex microfluidic system tested for magnetic nanocomposite formulations

S4 - P-ID 087

Dana-Ionela Tudorache (Department of Science and Engineering of Oxide Materials and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Adelina-Gabriela Niculescu, Alexandra Cătălina Bîrcă, Alina Maria Holban, Ariana Hudiță, Bogdan Ștefan Vasile, Daniela Istrati, Tony Hadibarata, Dan Eduard Mihaiescu, Alexandru Mihai Grumezescu

Multiple-shell magnetite nanoparticles for biomedical applications

S4 - P-ID 088

Adelina-Gabriela Niculescu, Roxana Doina Trușcă, Alina Moroșan, Marius Rădulescu, Dana-Ionela Tudorache, Bogdan Ștefan Vasile, Daniela Istrati, Tony Hadibarata, Dan Eduard Mihaiescu, **Alexandru Mihai Grumezescu** (Department of Science and Engineering of Oxide Materials and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania and Research Institute of the University of Bucharest—ICUB, University of Bucharest, Bucharest, Romania)

Evaluation of water decontamination capacity using advanced nanostructured magnetic aerogel composite materials

S4 - P-ID 095

Denisa Ficai (Department of Inorganic Chemistry, Physical Chemistry and Electrochemistry, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania; National Center for Micro and Nanomaterials, National University of Science and Technology Politehnica, Bucharest, Bucharest, Romania and Academy of Romanian Scientists, Bucharest, Romania), Ludmila Motelica, Cristina Chircov, Roxana Doina Trusca, Adrian Vasile Surdu, Bogdan Stefan Vasile, Ovidiu Cristian Oprea, Geanina Voicu, Victor-Eduard Peteu, Anton Ficai, Manuela Calin

Magnetic nanoparticles for targeted antitumoral therapy

S4 - P-ID 096

Mariana Jian (Laboratory of Tissue Engineering and Cell Cultures, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Moldova), Ludmila Motelica, Denisa Ficai, Ovidiu-Cristian Oprea, Vitalic Cobzac, Anton Ficai, Viorel Nacu

Biomaterials based on collagen from the umbilico-placental complex for use in tissue engineering

S4 - P-ID 099

Laura-Nicoleta Dragomir, Ștefania Stoleriu, **Georgeta Voicu** (Department of Science and Engineering of Oxide Materials and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Adrian-Ionuț Nicoară

β -TCP and bioglass based scaffolds obtained using polyurethane foam template route

S4 - P-ID 122

Madalina Ioana Necolau (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania and Academy of Romanian Scientists, Bucharest, Romania), Cosmin Pauliuc, Ana Roxana Stefan, Elena Iuliana Biru, Horia Iovu

Exploiting thiol-ene click for biocompatible benzoxazine-thiol copolymers: unveiling synergistic effects on mechanical properties

S4 - P-ID 124

Adi Ghebaur (Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Cristina Elena Stavarache, Sorina Alexandra Garea, Nicolescu Teodor

Methacrylate functionalized halloysite used in Inflammatory Bowel Diseases treatment

S4 - P-ID 127

Cristina Chircov (Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania and National Research Center for Micro and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Vlad Cocoş, Adrian Ionuţ Nicoară, Roxana Doina Truşcă, Ariana Hudiţă

3D-printed bioglass and iron disulfide composite materials for hard tissue engineering

S4 - P-ID 140

Adrian Ionuţ Nicoară (Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania and National Research Center for Micro and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Mihai Fotu, Ştefan Manolache, Cristina Chircov, Roxana Doina Truşcă, Gabriela Olimpia Isopencu

Li-doped bioactive glasses for enhanced bone tissue regeneration

S4 - P-ID 160

Bogdan Ştefan Vasile (Research Center for Advanced Materials, Products and Processes, National University of Science and Technology POLITEHNICA Bucharest, Romania and National Research Center for Micro and Nanomaterials, National University of Science and Technology Politehnica Bucharest, Romania), Adrian Ionuţ Nicoară, Ioana-Cristina Cernat, Adela Banciu

Coatings based on mesoporous silica/hydroxyapatite and chitosan for improving titanium surfaces

S4 - P-ID 167

Alexandra Cătălina Bîrcă (Center for Advanced Research on New Materials, Products and Innovative Processes—CAMPUS Research Institute, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Andreea Gabriela Bratu, Alexandru Mihai Grumezescu, Roxana Truşcă, Bogdan Ştefan Vasile, Ariana Hudiţă, Alina Maria Holban

Dual-action potential: zinc stannate nanoparticles in cancer and infection treatments

S4 - P-ID 180

I.M.A. Oprica, M. Beregoi, I. Constantinoiu, G. Popescu, S.I. Jinga, **C. Busuioc** (National University of Science and Technology Politehnica Bucharest, Bucharest, Romania)

Development of new scaffolds for bone substitution by electrospinning and laser ablation

S4 - P-ID 193

Gârea Sorina Alexandra (Bioresources and Polymer Science Department, Faculty of Chemical Engineering and Biotechnology, National University of Science and Technology Politehnica Bucharest, Romania and Advanced Polymer Materials Group, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Ghebaur Adi, Stavarache Cristina

Hybrid hydrogels for drug encapsulation

S4 - P-ID 197

Marius Eduard Matei (Faculty of Horticulture, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Bucharest, Romania), Irina Fierascu, Radu Claudiu Fierascu, Roxana Ioana Matei, Anda Maria Baroi, Toma Fistos, Ioana Silvia Hosu

Bioactive compounds from medicinal and aromatic plants waste: perspectives in nanotechnology for biomedical applications

S4 - P-ID 199

Roxana Ioana Matei (National Institute for Research & Development in Chemistry and Petrochemistry–ICECHIM, Bucharest, Romania and Faculty of Chemical Engineering and Biotechnology, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania), Radu Claudiu Fierascu, Irina Fierascu, Anda Maria Baroi, Toma Fistos, Ioana Silvia Hosu, Irina Elena Chican

Materials and technologies for environmental protection from laboratory scale to industrial applications

S4 - P-ID 221

Nathanael Murat (Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania), Alina-Giorgiana Brotea, Madalina Marina Hrubaru, Eleonora-Mihaela Ungureanu

Chemically modified electrodes based on azulene-1-yl-2-phenyloxazol-5(4H)-one for heavy metal analysis

S4 - P-ID 228

Elena Chitanu (National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest, Romania), Iulian Iordache, Gabriela Beatrice Sbarcea, Virgil Marinescu, Delia Patroi

The influence of deposition parameters on structural and morphological properties of chromium thin films

S4 - P-ID 235

Irina Petreanu (National Research and Development Technologies for Cryogenic and Isotopic Technologies, ICSI Ramnicu Valcea, Romania), Violeta Carolina Niculescu, Amalia Soare, Mircea Teodorescu

Active filler based on functionalized silica to enhance electrolyte polymer membranes

S4 - P-ID 257

Eugenia Eftimie Totu, **Daniel Costinel Petre** (Department of Analytical Chemistry and Environmental Engineering, Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology Politehnica Bucharest, Bucharest, Romania)

Considerations on measurands in nanomaterials analysis

S4 - P-ID 262

Radu Cercel (National Institute of Materials Physics, Magurele, Romania), Monica Dinescu, Adelina Udrescu, Cristina Stefania Florica, Andreea Androne, Andreea Nila, Adam Lorinczi, Stefano Bellucci, Mihaela Baibarac

Composites based on titanium dioxide and carbon nanoparticles as catalyst for the photodegradation of antibiotics

S4 - P-ID 263

Mihaela Baibarac (National Institute of Materials Physics, Magurele, Romania), Ion Smaranda, Adelina Udrescu, Monica Dinescu, Teodora Burlanescu, Andreea Androne, Andreea Nila, Madalina Chivu, Catalin Negrila, Ionel Mercioniu, Stefano Bellucci

Optical properties of membranes based on poly(vinyl chloride), single-wall carbon nanohorns and titanium dioxide nanoparticles

S4 - P-ID 266

Irina Elena Doicin (Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Chemical Engineering and Biotechnologies, Bucharest, Romania), Ionela Andreea Neacsu, Vladimir Lucian Ene, Alexandra Catalina Birca, Alina Maria Holban, Ecaterina Andronescu

Synthesis and characterization of ZnO-coated cotton textiles for antimicrobial use in healthcare

Green Energy & Chemistry Concepts

POSTER PRESENTATIONS

Section 3

Friday 6 September 2024

Time: 09:00 -19:00

S3-P-ID013

Ioana-Alina Ciobotaru (National University of Science and Technology POLITEHNICA Bucharest, Romania), Oana Camelia Mic, Danut-Ionel Vaireanu

The use of citrus x clementine peel extract as a corrosion inhibitor of carbon steel in NaCl aggressive media

S3-P-ID032

Adina Ionuta Gavrilă (National University of Science and Technology POLITEHNICA Bucharest, Romania), Adrian Trifan, Ioana Popa, Laura Maholea, Erdin Feizula

Ultrasound assisted extraction of phytochemicals from Melissa Officinalis L with neuroprotective effect

S3-P-ID035

Ioana Maior (National University of Science and Technology POLITEHNICA Bucharest, Romania), Angela Georgiana Mareş, Ioana-Maria Nicola

Electrodeposition of amorphous nickel/gold layers on a copper substrate for electrical contacts

S3-P-ID036

Chipurici Petre (National University of Science and Technology POLITEHNICA Bucharest, Romania), Trifan Adrian, Erdin Feizula, Gavrilă Adina-Ionuta

Green extraction of biocompounds with neuroprotective properties from tomato processing waste

S3-P-ID039

Oana Ciocirlan (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ana Cătălina Diculescu, Ludmila Motelica, Ovidiu Oprea, Sergiu Sima, Paul Stănescu

Natural deep eutectic solvents as green plasticizers for food films based on chitosan

S3-P-ID092

Ana-Maria Drăghici-Popa (National University of Science and Technology POLITEHNICA Bucharest, Romania), Adina Ionuța Gavrilă, Cristian Aurelian Boscornea, Ioana Popa

Bioactive compounds extraction using sequential green technology: ultrasound and microwave

S3-P-ID093

Ioana Popa (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ana-Maria Drăghici-Popa, Adina Ionuța Gavrilă, Diana-Ioana Buliga, Cristian Aurelian Boscornea

A promising solvent, fatty acid ethyl esters, for ultrasound-assisted extraction of liposoluble bioactive compounds

S3-P-ID106

Anca Cojocar (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ioana Maior, Adriana-Simona Catranguiu, Gabriela Elena Badea, Petru Cret

Effect of cerium content on the corrosion behavior of cerium doped hydroxyapatite chitosan coatings on steel in aggressive media

S3-P-ID114

Mihaela Mîndroi (National University of Science and Technology POLITEHNICA Bucharest, Romania), Roberta Irodia, Vlad-Florin Iacob, Alexandru Cristian Manea, Alexandru-Ştefan Musteață

TiO₂-based electrocatalyst modified with star-shaped cobalt nanostructures for electrocatalytic hydrogen evolution reaction

S3-P-ID132

Ana-Maria Barbu (University of Bucharest, Romania), Ana-Maria Barbu, Valentina-Claudia Popa, Petruta Oancea, Adina Gavrila, Maria Marinescu, Christina Zalaru

Identification, determination of the content of bioactive compounds from Anagallis arvensis L. Extracts

S3-P-ID164

Maria Marinescu (University of Bucharest, Romania), Diana Mihaela Popescu, Lucia Elena Ionescu, Christina Marie Zălaru, Claudia-Valentina Popa

Synthesis, cytotoxicity, antibacterial activity and DFT study of some pyrimidinone compounds

S3-P-ID175

Diana-Ioana Buliga (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ioana Popa, Aurel Diacon, Cristian Aurelian Boscornea

Optimization of a green method for extracting bioactive compounds from plant materials and techniques for stabilization improvement

S3-P-ID202

Alina Marieta Simion (National University of Science and Technology POLITEHNICA Bucharest, Romania), Cristian Simion, Andrada Ștefania Racovanu, Adina Ionuta Gavrila

Microwave assisted enzymatic transesterification for biodiesel production

S3-P-ID214

Elvin Hogea (National University of Science and Technology POLITEHNICA Bucharest, Romania), Alexandra Constantinescu, Cristian Pirvu

New PLA - NiCu electrode for hydrogen production

S3-P-ID231

Liana Anicai (Center of Surface Science and Nanotechnology, National University of Science and Technology POLITEHNICA Bucharest, Romania), Laura-Bianca Enache, Oana Lazar, Geanina Mihai, Marius Enachescu, Ayrat Dimiev

One-pot synthesis of Pt-Cu nanocomposites on carbon black support with electrocatalytic activity for hydrogen evolution reaction during water electrolysis

S3-P-ID244

Roxana Rada (Technical University of Cluj - Napoca, Romania), Ramona Chelcea, Simona Rada, Daniela Lucia Manea, Dumitrița Moldovan, Sergiu Macavei, Eugen Culea

Metallic composites based on construction and demolition waste in standard / expired cement paste: structure and mechanical properties

S3-P-ID254

Radu Dorin Andrei (National Research and Development Institute for Cryogenic and Isotopic Technologies, ICSI Rm. Valcea, Romania), Luisa Roxana Mandoc, Giorgian Cosmin Ungureanu, Mihaela Ramona Buga

Matching porous anode materials and ion-conducting polymer electrolyte to enhance the performance of SSBs

S3-P-ID255

Alexandru Rizoiu (National Research and Development Institute for Cryogenic and Isotopic Technologies, ICSI Rm. Valcea, Romania), Sarah Aboubakr, Cosmin Ungureanu, Adnana Spînu – Zăuleț, Mihaela Buga, Alexandru Vlad, Dănuț-Ionel Văireanu

Comparative study on different electrolytes in anode-free Na metal cell design configuration

Pharmaceutical Engineering & Food Safety

POSTER PRESENTATIONS

Section 5

Friday 6 September 2024

Time: 9:00 – 19:00

S5-P-011

Daniel PREDA (National University of Science and Technology POLITEHNICA Bucharest, Romania), Maria Lorena JINGA, Gabriel-Lucian RADU, Gabriela-Iulia DAVID

Determination of dipyrindamole by disposable MIP-based electrochemical sensor

S5-P-012

Elena Loredana Ungureanu (National R&D Institute for Food Bioresources - IBA Bucharest, Romania), Andreea Lavinia Mocanu, Corina Alexandra Stroe, Ovidiu Cristian Oprea, Gabriel Mustățea

Safety issues of antimicrobial food packaging materials

S5-P-033

Daniela Istrati (National University of Science and Technology POLITEHNICA Bucharest, Romania), Mara Neagu, Alina Moroșan, Dan Eduard Mihaiescu

Hydrogels based on natural extracts and Zn/Ti nanostructured systems for solar protection applications

S5-P-044

Fulvia Manolache (National Institute of R&D for Food Bioresources IBA Bucharest, Romania), Mirela Cucu, Mihaela Multescu, Gabriela Criveanu-Stamatie, Beatrice Poteras, Diana Constantinescu-Aruxandei, Denisa Duta

Characterization and potential health benefits of nutrient-rich by-products from various food sectors

S5-P-090

Cristina Ott (National University of Science and Technology POLITEHNICA Bucharest, Romania), Andrei Iulian Slabu, Brindusa Balanuca, Madalina Ioana Necolau, Raluca Stan

Double functionalized linseed oil monomers and derived polymeric materials

S5-P-103

Ciprian Victor Florea (National University of Science and Technology POLITEHNICA Bucharest, Romania), Robert Crețu, Anamaria Hanganu, Alexandru Tompa, Matei D. Raicopol

Redox-active thiosemicarbazone ligands for Hg(II) sensing applications

S5-P-104

Matei D. Raicopol (National University of Science and Technology POLITEHNICA Bucharest, Romania), Bianca Dimitrov, Madalina Ioana Necolau, Brindusa Balanuca

Preliminary assessment of alginate-based membranes containing bioactive ingredients

S5-P-111

Radu Ciprian Racoviță (National University of Science and Technology POLITEHNICA Bucharest, Romania), Maria Daniela Ciucă

Comparative photostability of tricyclic antidepressant drugs in aqueous solution

S5-P-119

Paul Cătălin Balaure (National University of Science and Technology POLITEHNICA Bucharest, Romania), Valentina Grumezescu, Alexandra Cătălina Bîrcă, Aurelia Bratu, Adelina Gabriela Niculescu, Bogdan Ștefan Vasile, Alina Maria Holban, Ionela C. Voinea, Miruna S. Stan, Alexandru Mihai Grumezescu

Thin coatings based on magnetic nanoparticles for protection of medical devices against microbial infection

S5-P-135

Aurelia Bratu (National University of Science and Technology POLITEHNICA Bucharest, Romania), Mihaela Tociu, Mihaela Mihalache, Paul Cătălin Balaure

*Compositional characterization of the fruits of *Hippophae rhamnoides* and their use*

S5-P-171

Veaceslav Kulcițki (Moldova State University, Institute of Chemistry, Chișinău, Republic of Moldova), Serghei Carpencov

Molecular docking and ADMET studies of cytotoxic ent-Kauranic derivatives

S5-P-185

Maciej Spychalski (Adam Mickiewicz University Foundation, Poznan, Poland), Rafał Kukawka, Bartosz Grzempa, Agnieszka Kiniec, Renata Gaj, Marcin Smiglak

Synthesis of novel salicylic acid-based ionic liquids for use in agriculture

S5-P-189

Nicoleta Badea, Diego Fernando Samayoa Alvarado, Daniela Istrati, Mihaela Tociu, **Ioana Lăcătușu** (National University of Science and Technology POLITEHNICA Bucharest, Romania)

Hybrid carbohydrate-lipid nanocarriers loaded with synthetic and natural actives for functional cosmeceutical products

S5-P-190

Ioana Lacatusu, Cristina Ott, Marcela-Elisabeta Barbinta-Patrascu, **Nicoleta Badea** (National University of Science and Technology POLITEHNICA Bucharest, Romania)

Dual flavonoids entrapped into nanostructured lipid carriers with effective vascular protective effects

S5-P-217

Georgiana Irina (Bercea) Vizitiu (National University of Science and Technology POLITEHNICA Bucharest and Ovidius University of Constanta, Romania), Simona Dobrinas, Alina Soceanu, Ana-Maria Cristea, Oana Cristina Parvulescu, Vasile Lavric

Quality indicators of various forms of fruits

S5-P-222

Mihaela Tociu (National University of Science and Technology POLITEHNICA Bucharest, Romania), Aurelia Bratu, Nicoleta Chira, Ioana Lăcătușu, Cristina Todașcă

*Characterization and nutritional properties of the fruits from different varieties of *Corylus avellana* and possibilities of their valorization*

S5-P-225

Diana Ionela Popescu (Stegarus) (National Research and Development Institute for Cryogenic and Isotopic Technologies – ICSI, Râmnicu Vâlcea, Romania), Oana Romina Botoran, Corina Oprita (Cioara), Violeta-Carolina Niculescu

Determination of pesticides residues in greengrocery using gas chromatography-mass spectrometry

S5-P-241

Andreea Donise (National University of Science and Technology POLITEHNICA Bucharest, Romania), Emanuela Craciun, Camelia Cristea

Microbial incidence in food products of animal origin

S5-P-251

Cristian Florea, **Nicoleta-Aurelia Chira** (National University of Science and Technology POLITEHNICA Bucharest, Romania), Mihaela Tociu, Aurelia Bratu, Niculina Ionescu, Gabriel Florin Anton

Functional foods: enhancing the nutritional value of biscuits through protein complementation and improvement of the fatty acid profile

S5-P-259

Cristian Valentin Fieru (National University of Science and Technology POLITEHNICA Bucharest, Romania), Ileana Rău, Mihaela Begea, Maria Mihaly, Maria Cristina Todașcă

Designing the sterilization regime for canned chicken meat in own juice using lethality as a tool to ensure sterility

Sustainability & Environmental Engineering

POSTER PRESENTATIONS

Section 6

Friday 6 September 2024

Time: 9:00 -19:00

S6 – P– ID004

Cristina Modrogan (National University of Science and Technology POLITEHNICA Bucharest), Oanamari Daniela Orbuleț, Simona Căprărescu, Raluca Elena Carjila, Annette Madelene Dăncilă

Preparation and Characterization of Adsorbents from Solid Waste

S6 – P– ID007

Mădălina Grinzeanu (National University of Science and Technology POLITEHNICA Bucharest)

Preparation of Biocides with Antimicrobial Activity on Pathogenic Microorganisms Present in Surface Water

S6 – P– ID009

Aliona Olari, **Annette Madelene Dăncilă** (National University of Science and Technology POLITEHNICA Bucharest), Oanamari Daniela Orbuleț, Cristina Modrogan, Simona Căprărescu

Comparative Analysis of the Efficiency of Potential Materials Used in the Adsorption Process of Sulfur Dioxide

S6 – P– ID016

Cristina Orbeci (National University of Science and Technology POLITEHNICA Bucharest), Giovanina - Iuliana Ionică, Constantin Bobirică, Liliana Bobirică, Annette Madelene Dăncilă

Photocatalytic Degradation of Ivermectin from Wastewater

S6 – P– ID017

Constantin Bobirică (National University of Science and Technology POLITEHNICA Bucharest), Cristina Orbeci, Liliana Bobirică, Giovanina - Iuliana Ionică, Oanamari Daniela Orbuleț

Kinetic Modelling of the Photocatalytic Mineralisation of Endocrine Disruptors in Aqueous Solutions

S6 – P– ID018

Giovanina - Iuliana Ionică (National University of Science and Technology POLITEHNICA Bucharest), Cristina Orbeci, Liliana Bobirică, Constantin Bobirică, Ioan Ștefan Voicu

A Comparative Study on the Efficiency of Degradation of Azithromycin from Wastewater by Different Functionalized Materials

S6 – P– ID019

Liliana Bobirică (National University of Science and Technology POLITEHNICA Bucharest), Cristina Orbeci, Giovanina - Iuliana Ionică, Roberta Irodia, Cristian Pîrvu, Constantin Bobirică

Photocatalytic Reactor for the Degradation of Estrogens from Wastewater

S6 – P– ID020

Margareta Elena Nica (Morogan) (National University of Science and Technology POLITEHNICA Bucharest), Cristina Orbeci, Ileana Rău, Larisa Mădălina Meliță, Liliana Bobirică, Giovanina - Iuliana Ionică, Constantin Bobirică

Photocatalytic Reactor for the Degradation of Estrogens from Wastewater Identification of the Binders Used in Historic Buildings Under Restoration

S6 – P– ID022

Oanamari Daniela Orbuleț (National University of Science and Technology POLITEHNICA Bucharest), Cristina Modroga, Constantin Bobirică, Annette Madelene Dăncilă, Liliana Bobirică

Dynamics of Nitrate Ion Migration Processes in Soil Columns Using Permeable Reactive Barriers

S6 – P– ID025

Simona Căprărescu (National University of Science and Technology POLITEHNICA Bucharest), Grațiana Teodora Tihan, Roxana Gabriela Zgârian, Alexandru Mihai Grumezescu, Cristina Modroga, Annette Madelene Dăncilă

Performance of Polymeric Membrane Containing Nanoparticles for the Removal of Heavy Metal Ions from a Simulated Wastewater

S6 – P– ID045

Sorina Laura Topală, Ioana Diaconu (National University of Science and Technology POLITEHNICA Bucharest), Cristina Andreea Tudor, Georgiana Cernica, Cristina Orbeci, Oana Pârvulescu

Efficiency and Selectivity of Some Ionic Liquids in the Pertraction of Some Emerging Pollutants through Bulk Liquid Membranes

S6 – P– ID054

George-Octavian Buică (National University of Science and Technology POLITEHNICA Bucharest), Mariana Prodana, Cristina Dumitriu

Metal Ions Detection on Ti/TiO₂ Nanotubes Electrodes

S6 – P– ID060

Roxana Muntean (Politehnica University Timișoara), Sebastian Ambruș, George Dima, Andrea Kellenberger, Nicolae Vaszilcsin

Recycling Strategies for Materials Involved in PEM Water Electrolysis

S6 – P– ID069

Denisa Nicoleta Airinei (National University of Science and Technology POLITEHNICA Bucharest)

Degradability Studies of High-Density Polyethylene Bags, Respectively of Biodegradable Bags

S6 – P– ID072

Mădălina Oprea (National University of Science and Technology POLITEHNICA Bucharest), Andreea Mădălina Pandeale, Ștefan Ioan Voicu

Covalent Immobilization of Crown Ethers onto Polymeric Membranes Surface for Potential Retention of Heavy Metals from Wastewater

S6 – P– ID084

Andreea Mădălina Pandeale (National University of Science and Technology POLITEHNICA Bucharest), Mădălina Oprea, Ștefan Voicu

Crown Ethers Immobilized onto Graphene Oxide Polymeric Composite Membranes

S6 – P– ID110

Claudia-Maria Simonescu (National University of Science and Technology POLITEHNICA Bucharest), Elișoara Narcissa Toma, Ioan Călinescu, David-Daniel Neagu

Valorization of Mining Tailings by Adsorption on Calcium Alginate

S6 – P– ID112

Sorina Alexandra Leau (Institute of Physical Chemistry – Ilie Murgulescu of the Romanian Academy), Mariana Marin, Cecilia Lete, Ioana Diaconu, Cristian Matei, Stelian Lupu

Development of Nanostructured Electrochemical Sensing Platforms by Novel Sinusoidal Currents Method

S6 – P– ID136

Aurelia Cristina Nechifor (National University of Science and Technology POLITEHNICA Bucharest), Luminița Stoica, Andreia Pîrțac

Hydrogen Sulfide Separation from Impure Specific Air

S6 – P– ID139

Sorina Alexandra Leau, Mariana Marin, Cecilia Lete, **Stelian Lupu** (National University of Science and Technology POLITEHNICA Bucharest)

Innovative and Efficient Synthesis of Nanocomposite Materials for Electrochemical Sensing Applications

S6 – P– ID144

Andreia Pîrțac (National University of Science and Technology POLITEHNICA Bucharest), Gheorghe Nechifor

Recuperative Separation by Composite Membranes of the Compounds Involving Olfactory Discomfort

S6 – P– ID147

Mihaela Caftanachi, Liliana Lazar, Leonid Vasiliu, **Maria Harja** (Gheorghe Asachi Technical University of Iasi)

Low Carbon Dioxide Emission in Inorganic Binder Materials Obtaining

S6 – P– ID148

Mihai Vrabie, Lacramioara Rusu, **Maria Harja** (Gheorghe Asachi Technical University of Iasi)

Minimization of Environmental Pollution in Cementitious Composites Production

S6 – P– ID149

Florina Lungu (Ioniță) (National University of Science and Technology POLITEHNICA Bucharest), Daniela Simina Ștefan

Methods used for removal of pharmaceuticals from water

S6 – P– ID156

Georgeta Teodorescu (Diaconescu) (National University of Science and Technology POLITEHNICA Bucharest), Daniela Simina Ștefan, Alexa Maria Croitoru, Magdalena Boșomoiu

The Packaging Between the Beneficial and the Negative Effects

S6 – P– ID159

Eduard Ionut Piscanu (National University of Science and Technology POLITEHNICA Bucharest), Ștefan Ioan Voicu

Functionalized Cellulose Acetate Membranes: Overcoming Challenges for Efficient Heavy Metal Removal in Water Purification

S6 – P– ID170

Adina Alexandra (Matei) Scarlat (National University of Science and Technology POLITEHNICA Bucharest)

Degradation of Malathion Pesticide from an Agricultural Water Using Electrocoagulation Process

S6 – P– ID173

Elena Ristea (National Institute for Marine Research and Development “Grigore Antipa”, Mamaia, National University of Science and Technology POLITEHNICA Bucharest), Gheorghe Nechifor Andra Oros, Diana Danilov, Nicoleta Damir, Oana Cristina Pârvulescu, Vasile Lavric

Evaluation of Heavy Metal Concentrations in the Components of the Marine Ecosystem along the Romanian Black Sea Coast

S6 – P– ID177

Gabriele-Mario Bogdan (Babeş-Bolyai University), Marian-Iosif Frincu, Sorin-Aurel Dorneanu

Electrochemical Preparation and Regeneration of Raw Materials used in Metals Recovery from Waste Printed Circuit Boards Process

S6 – P– ID183

Florenta Daniela Constantinov (National University of Science and Technology POLITEHNICA Bucharest), Gheorghe Nechifor, Lucian Constantin

Comparison of Three Metal Doped Titanium Dioxide Photo-Catalysts Performances for Treatment of Municipal Wastewater Under Simulated Solarlight

S6 – P– ID187

Anamaria (Ilie) Niculescu (National University of Science and Technology POLITEHNICA Bucharest), Oana Pârvulescu, Tănase Dobre, Chis Timur, Simona Dobrinias, Semaghiul Birghila, Nicoleta Matei

Efects of Metal Pollution to the Constanta Area Soil

S6 – P– ID200

Carlos M. Pereira (Faculdade de Ciências da Universidade do Porto), Thacilla Menezes, Ana T. S. C. Brandão, Renata Costa

Electrochemical Processing of Wastewater from Leather Finishing

S6 – P– ID207

Anca Răzvan, Claudia Simonescu, **Florina Dumitru** (National University of Science and Technology POLITEHNICA Bucharest), Daniela C. Culita, Ovidiu Oprea

Novel PMOs Materials as Highly Efficient Adsorbents

S6 – P– ID209

Adriana Ionela Mihail (National University of Science and Technology POLITEHNICA Bucharest), Cristina Modrogan

Efects of Metal Pollution to the Constanta Area Soil Dexamethasone Degradation in Aqueous Solution by a Photocatalytic UV / H₂O₂ / Al₂O₃

S6 – P– ID233

Daniela Florea (National Institute for Research and Development on Marine Geology and Geoecology – GeoEcoMar), Florina Rădulescu, Dan-Lucian Vasiliu, Andra Bucșe, Albert Scriciu

Assessment of Heavy Metals Contamination in Danube River Sediments

S6 – P– ID246

Cristina Firincă (INCDP-ICECHIM), Lucian-Gabriel Zamfir, Mariana Constantin, Iuliana Răut, Radu Claudiu Fierăscu, Mihaela Doni, Luiza Jecu, Ana-Maria Gurban, Tatiana Eugenia Șesan

Optimized Bioremoval of Heavy Metals from Wastewater Using Trichoderma sp. Biomass

S6 – P– ID250

Vasilica-Alisa Arus ("Vasile Alecsandri" University of Bacău), Ana-Maria Georgescu, Ana-Maria Roșu, Nicoleta Platon, Gabriela Muntianu, Oana-Cristina Pârvulescu, Ileana Denisa Nistor

Biomass Enriching the Nutritional Value of White Wheat Bread with Buckwheat Flour

S6 – P– ID261

Ioan Bîțcan (Politehnica University Timisoara), Alessandro Pellis, Andreea Petrovici, Diana Dăescu, Francisc Peter, Anamaria Todea

Enzymatic synthesis and characterization of adipic acid oligoesters with aliphatic, cyclic, or aromatic diols

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