E. HIGHLIGHTS IN ADVANCED MEDICINE C. RECENT DEVELOPMENTS IN NANOMEDICINE POSTER SESSION

The evaluation committee: Alin Stelian Ciobica Marcel Popa Gabriela Vochita

Thursday, February 27, 2025

P01. Zwitterionic semi-interpenetrating networks as carriers for antibiotic drugs

Ștefania Racoviță¹, Diana Felicia Loghin¹, Silvia Vasiliu¹, Marcel Popa^{2,3}

¹,,Petru Poni" Institute of Macromolecular Chemistry, Iași ²Faculty of Chemical Engineering and Environmental Protection, ,,Gheorghe Asachi" Technical University of Iasi ³Academy of Romanian Scientists

P02. Anthocyanin-based intelligent pH-sensitive films for realtime food freshness monitoring

Oumaima Fakraoui^{1,2}, Leonard Ionut Atanase^{3,4}, Slim Salhi⁵, Isabelle Royaud², Mourad Arous¹, Zoubir Ayadi² ¹LaMaCoP, Faculty of Sciences of Sfax, University of Sfax, Sfax, Tunisia;

²IJL, CNRS, University of Lorraine, Campus Artem, Nancy, France; ³Faculty of Medical Dentistry, Apollonia University of Iasi, Iasi, Romania;

⁴Academy of Romanian Scientists, Bucharest, Romania; ⁵Laboratoire de Chimie Appliquée, Faculty of Sciences of Sfax, University of Sfax, Sfax, Tunisia

P03. Mechanical characterization of a PVA/GO hydrogel loaded with Vitamin A palmitate for wound healing

Cristian Escobar¹, Toribio Figueroa¹, Katherina Fernández², Leonard I. Atanase^{3,4}

¹Biomaterials Laboratory, Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ²Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Chile ³Faculty of Medicine, "Apollonia" University of Iasi, Romania ⁴Academy of Romanian Scientists, Romania

P04. An innovative strategy for wound healing: using collagenbased conductive hydrogels

Luisbel González¹, Claudio Aguayo², Leonard I. Atanase^{3,4}, Katherina Fernández¹ ¹Biomaterials Laboratory, Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ²Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Chile ³Faculty of Medicine, "Apollonia" University of Iasi, Romania ⁴Academy of Romanian Scientists, Romania

P05. Microwave-assisted chemical exfoliation of MoS2 with different solvents combinations: structural characterization and cytotoxicity evaluation

Daylenis Pérez¹, Luisbel González¹, Claudio Aguayo², Toribio Andrés Figueroa¹, Leonard I. Atanase^{3,4}, Katherina Fernández¹ ¹Biomaterials Laboratory, Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ²Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Chile ³Faculty of Medicine, "Apollonia" University of Iasi, Romania ⁴Academy of Romanian Scientists, Romania



P06. Biological characterization of a PVA/GO hydrogel loaded with Vitamin A palmitate for wound healing

Cristian Escobar¹, Toribio Figueroa¹, Katherina Fernández², Leonard I. Atanase^{3,4}

¹Biomaterials Laboratory, Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ²Department of Clinical Biochemistry and Immunology, Faculty of Pharmacy, University of Concepción, Chile ³Faculty of Medicine, "Apollonia" University of Iasi, Romania ⁴Academy of Romanian Scientists, Romania

P07. Engineering Antimicrobial Fibrous Mats with Metal-Organic Frameworks

Gonzalo Lanfranconi¹, Miriam Iurlina², Leonard Atanase³, Silvestre Bongiovanni Abel¹, Gustavo A. Abraham¹ ¹INTEMA, UNMDP-CONICET, Argentina; ²FCEYN, UNMdP, Argentina; ³Faculty of Medicine, "Apollonia" University of Iasi, Romania

P08. Oral Self-Nanoemulsifying Systems for the Combined Delivery of Remdesivir and Baricitinib with Natural Bioactive Oils: A Novel Therapeutic Approach for COVID-19 and Cancer Treatment

Yousef Alanazi¹, Leonard Ionut Atanase², Mohsin Kazi¹ ¹Department of Pharmaceutics, College of Pharmacy, King Saud University;

²Faculty of Medicine, "Apollonia" University of Iasi, Romania

P09. A nanosystem developed for targeted drug delivery based on functionalized human serum albumin cross-linked with oxidized gellan designed to treat brain tumors

Camelia Elena Tincu (Iurciuc)^{1,2}, Silvia Vasiliu³, Ștefania Racoviță³, Gabriela Vochița⁴, Daniela Gherghel⁴, Marcel Popa^{1,5,6*}, Lăcrămioara Ochiuz²

¹ "Cristofor Simionescu" Faculty of Chemical Engineering and Protection of the Environment, "Gheorghe Asachi" Technical University;

²*Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy, Iasi, Romania;*

³ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania; ⁴NIRDBS - Institute of Biological Research Iasi, Romania; ⁵Faculty of Medicine, "Apollonia" University of Iasi, Iasi, Romania;

⁶Academy of Romanian Scientists, Bucharest, Romania









P10. Chemical Valorization of PET: A Road Towards Innovative and Ecological Copolyesteramides

Makram El-Abed¹, Slim Salhi¹, Marcel Popa^{2,3,4}, Houcine Ammar¹ ¹Applied Chemistry Laboratory, Faculty of Sciences, University of Sfax, Sfax, Tunisia

² "Apollonia" University of Iasi, Iasi, Romania;
³ "Acad. Ioan Hăulică" Research Institute of the "Apollonia" University of Iași;
⁴Academy of Romanian Scientists, Bucharest, Romania.

P11. Innovation in Bio-based Polyesteramides: From the synthesis of materials to the design of nanoparticles for drug delivery systems

Y. Chatti¹, L. Kadri¹, S. Salhi¹, L.I. Atanase², C. Delaite³, H. Ammar¹ ¹Applied Chemistry Laboratory, Faculty of Sciences of Sfax, University of Sfax, Sfax, Tunisia; ²Faculty of Medicine, Apollonia University of Iasi, Iasi, Romania; ³Université de Haute-Alsace, Mulhouse, France

P12. Advanced hydrogels loaded with heparin for the treatment of varicose ulcers

Elena Farcaș¹, Patrascu Alexandru², Leonard Atanase^{2.3} ¹Gheorghe Asachi Technical University of Iași – Faculty of Chemical Engineering and Environmental Protection ,, Cristofor Simionescu";

²*Faculty of Medicine, Apollonia University of Iasi, Romania;* ³*Academy of Romanian Scientist, Bucharest, Romania*

P13. Electrochemical characterization of reduced graphene oxide alginate hydrogels by electrochemical impedance spectroscopy technique

Josefa Silva¹, Katherina Fernández¹, Luis Felipe Montoya², Leonard I. Atanase^{3,4}

¹Biomaterials Laboratory, Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ²Department of Chemical Engineering, Faculty of Engineering, University of Concepción, Chile ³Faculty of Medicine, "Apollonia" University of Iasi, Romania

⁴Academy of Romanian Scientists, Romania









P14. Polymeric Micro/Nanofibers Based on Modified Chitosan/ PVA for wound healing applications

Corina-Lenuta Logigan¹, Marius Prodan², Cristian Peptu², Catalina-Anisoara Peptu¹

¹Faculty of Chemical Engineering and Environmental Protection "Cristofor Simionescu", Department of Natural and Synthetic Polymers, "Gheorghe Asachi" Technical University of Iasi, Iasi, Romania

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

Friday, February 28, 2025

P01. Characterization and performance of hydrogel based on gelatin cross-linked with oxidized alginate for biomedical applications

Chahrazed Mahmoudi^{1,2*}, Naima Tahraoui Douma¹, Camelia Elena Iurciuc (Tincu)^{2,3}, Marcel Popa^{2,4,5}

¹Faculty of Technology, Hassiba Benbouali University of Chlef, Hay Salem, Algeria

² "Cristofor Simionescu" Faculty of Chemical Engineering and Protection of the Environment, "Gheorghe Asachi" Technical University, Iasi, Romania;

³Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy, Iaşi, Romania

⁴Academy of Romanian Scientists, Bucharest, Romania ⁵Faculty of Medicine, "Apollonia" University of Iasi, Iași, Romania

P02. Synthesis Control of P4VP-PCL Copolymers with Linear and Multi-Branch ABx Architectures: From Self-Assembly to Tailored Nano-Aggregate Formation for Advanced Applications

Ridouan El Yousfi¹, Gisela Trifas², Leonard Ionut Atanase^{2,3,4} ¹Laboratory of Applied Chemistry and Environment, Faculty of Sciences, Mohamed First University, Oujda, Morocco. ²Faculty of Chemical Engineering and Environmental Protection "Cristofor Simionescu", "Gheorghe Asachi" Technical University of Iași, Romania

³Faculty of Medicine, "Apollonia" University of Iasi, Iasi, Romania.

⁴Academy of Romanian Scientists, Bucharest, Romania.







P03. Structural Design and Functional Applications of PEG-PCL Copolymers: From Toxic Substance Removal to Sol-Gel Transitions and Nanostructured Drug Delivery Systems

Ridouan El Yousfi¹, Leonard Ionut Atanase^{2,3} ¹Laboratory of Applied Chemistry and Environment, Faculty of Sciences, Mohamed First, Oujda, Morocco. ²Faculty of Medicine, Apollonia University of Iasi, Iasi, Romania. ³Academy of Romanian Scientists, Bucharest, Romania.

P04. Effect of the dispersing agent "BYK W-9010" on the Properties of Spent Coffee Grounds-Based Biocomposites

Lina Kadri¹, Slim Salhi¹, Anne-Sophie Schuller^{2,3}, Makki Abdelmouleh⁴, Leonard Ionut Atanase^{5,6}, Christelle Delaite^{2,3}, Houcine Ammar¹ ¹Applied Chemistry Laboratory, Faculty of Sciences, University of Sfax, Tunisia ²Université de Haute-Alsace, Mulhouse, France ³Université de Strasbourg, France ⁴Laboratory of Materials Science and Environment (LMSE), Faculty of Science of Sfax, University of Sfax, Sfax, Tunisia ⁵Faculty of Medicine, Apollonia, University of Iasi, Iasi, Romania ⁶Academy of Romanian Scientists, Bucharest, Romania

P05. Efficient Hydrothermal Synthesis of Carbon Dots from Green Precursors: A Comparative Study and Potential Applications

Noumane ELouakassi^{1,2}, Abdelmajid Almaggoussi^{1,3}, Corneliu S. Stan², Marcel Popa^{2,4,5}, Larbi Belachemi¹, Jaafar Ghanbaja^{6,7}, Hamid Kaddami^{1,8}

¹Cadi Ayyad University, UCA, Faculty of Science and Technology, Innovative Materials for Energy and Sustainable Development (IMED-Lab), Marrakech, Morocco

²Faculty of Chemical Engineering and Environmental Protection,
"Gheorghe Asachi" Technical University of Iasi, Iasi, Romania
³Applied Chemistry and Engineering Research Centre of Excellence (ACER CoE), Advanced Organic Optoelectronic Laboratory,
Mohammed VI Polytechnic University (UM6P), Ben Guerir, Morocco
⁴Academy of Romanian Scientists, Bucharest, Romania
⁵Apollonia University of Iasi, Romania
⁶Institut Jean Lamour, Université de Lorraine, Nancy, France



⁷Geology & Sustainable Mining Institute (GSMI), Mohammed VI Polytechnic University (UM6P), Ben Guerir, Morocco ⁸Sustainable Materials Research Center (SusMat-RC), Mohammed VI Polytechnic University (UM6P), Ben Guerir, Morocco

P06. Photocatalytic Ceramic Foams for the Removal of Emerging Contaminants in Water

Yhosmary L. Franco¹, Jimmy Castillo², Leonard Atanase³, Juan C.
Pereira¹
¹Petroleum, Hydrocarbons and Derivatives Laboratory (PDH) of the University of Carabobo, Valencia, Venezuela
²Laser Spectroscopy and Nanotechnology Laboratory of the Central University of Venezuela, Caracas, Venezuela
³"Apollonia" University of Iasi, Romania

P07. Synthesis and Characterization of Shape Memory Polymers Based on Isobornyl Acrylate

Djazia Bendeddouch¹, Ulrich Maschke², Marcel Popa^{3,4}, Lamia Bedjaoi-Alachaher¹ ¹Laboratoire de Recherche sur les Macromolécules (LRM), Université de Tlemcen, Algérie ²Unité Matériaux Et Transformations (UMET), Université de Lille, Lille, France ³ "Apollonia" University of Iași, Romania ⁴Academy of Romanian Scientists, Bucharest, Romania

P08. Study of the physico-chemical and mechanical properties of acrylic polymers

Ghizlene Fatima Zohra Hakem¹, Christelle Delaite², Anne Sophie Schuller², Marcel Popa^{3,4}, Amina Bouriche¹, Lamia Bedjaoui-Alachaher¹

¹Laboratory of Research on Macromolecules (LRM), Faculty of Sciences, University of Abou Bekr Belkaid, Tlemcen, Algeria; ²Laboratory of Photochemistry and Macromolecular Engineering (LPIM), National School of Chemistry – University of Haute Alsace – France; ³"Apollonia" University of Iasi, Iasi, Romania

⁴Academy of Romanian Scientists, Bucharest, Romania



Cadinoiu¹, Leonard Ionuț Atanase^{1,2} ¹ "Apollonia" University of Iași, Romania ²Academy of Romanian Scientists, Bucharest, Romania

P09. Investigation of Solvent Interaction Behavior of an Acrylic Hybrid Material in Ethanol and Toluene

Mohammed Aymen Zehouani¹, Marcel Popa^{2,3}, Lamia Bedjaoui-Alachaher¹

¹Laboratoire de Recherche sur les Macromolécules (LRM), Université de Tlemcen, Algérie; ²"Apollonia" University of Iasi, Iasi. Romania

³Academy of Romanian Scientists, Bucharesti, Romania

P10. Cell morphology modulation after treatments with different peptide functionalized nanocapsules containing magnetic particles

Gherghel Daniela¹, Rată Delia-Mihaela², Cadinoiu Anca Niculina², Atanase Leonard Ionut², Popa Marcel², Sande Sverre Arne³, Vochita Gabriela¹

¹Institute of Biological Research Iasi - branch of NIRDBS, Iasi, Romania

² "Apollonia" University of Iași, Romania ³University of Oslo, Oslo, Norway

P11. Cellular response to the action of some novel peptidesfunctionalized liposomes loaded with dexamethasone

Vochița Gabriela¹, Cadinoiu Anca Niculina², Rață Delia-Mihaela², Atanase Leonard Ionut², Popa Marcel², Bo Nystrøm³, Gherghel Daniela¹

¹Institute of Biological Research Iasi - branch of NIRDBS, Iasi, Romania ² "Apollonia" University of Iasi, Romania

³University of Oslo, Oslo, Norway

P12. Cytotoxicity assessment of some biocomposite hydrogels containing ZnO nanoparticles and ibuprofen for the treatment of burns wounds

Oana-Maria Darabă¹, *Delia Mihaela Rață¹*, *Anca Niculina*







P13. Tailoring antimicrobial properties of polyethersulfone membranes by silver-loaded zeolite dopping

Antonia-Ioana Iftimie¹, Diana Serbezeanu¹, Tăchită Vlad-Bubulac¹, Cristina M. Rîmbu², Yuri Kalvachev³

¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

² Faculty of Veterinary Medicine "Ion Ionescu de la Brad". University of Life Sciences, Iasi, Romania

³ Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria

P14. Preparation and Characterization of a biocompatible Hydrogel obtained by Crosslinking chitosan/lactalbumin with **Oxidized carboxymethylcellulose for Potential Biomedical**

Applications

Mohammed Dellali¹, Kheira Zanoune Dellali¹, Camelia Elena *Iurciuc (Tincu)², Marcel POPA^{2,3}* ¹Hassiba Benbouali University of Chlef, Algeria, ²"Gheorghe Asachi" Technical University of Iasi, Romania, ³Academy of Romanian Scientists, Bucuresti, Romania



Saturday, March 1, 2025

P01. Development of modified drug delivery systems with metformin loaded in mesoporous silica matrices

Mousa Sha'at¹, Maria Ignat^{2,3*}, Adrian Florin Spac⁴, Alexandra Bârsan (Bujor)¹, Fawzia Sha'at⁵, Ramona-Daniela Păvăloiu⁵, Monica-Iliuța Stamate Crețan¹, Lăcrămioara Ochiuz¹ ¹*Faculty of Pharmacy, "Grigore T. Popa" University of Medicine* and Pharmacy Iasi, Iaşi, Romania ²Department of Chemistry, "Alexandru Ioan Cuza" University of Iasi, Iasi, Romania ³"Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania ⁴*Faculty of Pharmacy, "Grigore T. Popa" University of Medicine* and Pharmacy Iasi, Iasi, Romania ⁵National Institute for Chemical-Pharmaceutical Research and

Development – ICCF, Bucharest, Romania





P02. Experimental and theoretical design on the development of matrix tablets with metformin and honokiol

Mousa Sha'at¹, Adrian Florin Şpac², Cristina Marcela Rusu³, Maricel Agop^{3,4}, Alexandra Bârsan (Bujor)¹, Monica-Iliuța Stamate Crețan¹, Carmen Anatolia Gafițanu¹, Lăcrămioara Ochiuz¹ ¹Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy Iasi, Romania ²Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy Iasi, Romania ³Department of Physics, "Gheorghe Asachi" Technical University of Iasi, Romania ⁴Romanian Scientists Academy, Bucharest, Romania ⁵National Institute for Chemical-Pharmaceutical Research and Development – ICCF, Bucharest, Romania

P03. Applications of artificial intelligence in neuro-oncology

Mihaela Gavrilă¹, Raluca Maria Munteanu¹, Maria Spiridon¹ ¹Regional Institute of Oncology, Iasi, Romania

P04. Development and characterization of levofloxacin-loaded vitamin A-polymacrolactone nanoemulsions as potential ophthalmic drug delivery systems

Şerban Alexandru-Mihail¹ ¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

P05. Design and characterization of microcapsules based on alginate and poly(methyl vinyl ether-alt-calcium maleat) for drug delivery applications

Sanda Bucătariu¹, Gheorghe Fundueanu¹, Marieta Constantin¹, Irina Popescu¹

¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania









P06. Studying Biomedical Applications of BaFe₁₂O₁₉ (Ba-Ca) TiO₃ Magnetoelectric Nanoparticles For Anti-Cancer Drug delivery

Hend. H. Nada¹, Ahmed I. ALI², Leonard I. Atanase³, Mohammed SALLAH¹ ¹Physics Department, Faculty of Science, Mansoura University, Egypt ²Basic Science Department, Faculty of Technology and Education, Helwan University, Cairo, Egypt

³Faculty of Medicine, Apollonia University of Iasi, Romania

P07. Eco-friendly synthesis of poly(ethylene brassylate) as potential hydrophobic drug carrier

Bianca-Elena-Beatrice Crețu¹, Alina Gabriela Rusu¹, Loredana Elena Nita¹ ¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

P08. Evaluation of the synergistic benefits of a multifunctional system based on active substances with effects on antimelanogenesis

Alexandra Vieru¹, Loredana E. Nita¹ ¹Institutul de Chimie Macromoleculară "Petru Poni", Iași

P09. Design of fibrous membranes based on cellulose acetate/ polyvinylidene fluoride/silver nanoparticles with specific properties for application in medical field

Adina Maria-Dobos¹, Diana Serbezeanu¹, Daniela Rusu¹, Cristina Mihaela Rîmbu², Anca Filimon¹

¹ "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

²Department of Public Health, University of Life Science Iasi, Romania

P10. Development of new nanocellulose-based materials for biomedical applications

Gabriela Biliuta¹, Raluca-Ioana Baron¹, Sergiu Coseri¹ ¹Petru Poni" Institute of Macromolecular Chemistry of Romanian Academy, Iasi, Romania











P11. New 3D architectures with anti-freezing, electrical conductivity, and impressive mechanical properties for medical applications

Raluca-Ioana Baron¹, Biliuta Gabriela¹, Sergiu Coseri¹, Maria-Valentina Dinu¹

¹ "Petru Poni" Institute of Macromolecular Chemistry of Romanian Academy, Iasi, Romania

P12. Evaluation of the conjunctival vascular network and microcirculation in individuals with type 1 diabetes

Aristia Șeremet¹, Pavel Leahu ¹ ¹Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu"

P13. Development of biocompatible superparamagnetic nanoparticles based on chitosan for targeted delivery of 5-Fluorouracil

Kheira Zanoune^{1,2}, Mohammed Dellali^{1,2}, Corina-Lenuța Savin³, Marcel Popa^{3,4}

¹Faculty of Technology, Hassiba Benbouali University of Chlef, Algeria

²Laboratory of Natural Bio-Resources, University Hassiba Benbouali of Chlef, Algeria

³ "Gheorghe Asachi" Technical University of Iasi, Romania ⁴Academy of Romanian Scientists, Bucuresti, Romania

P14. Supramolecular Structures as Drug Delivery Systems. Oil – in – Water Microemulsions as carriers for anti-cancer agents

René D. Peralta-Rodríguez¹ and Leonard I. Atanase^{2,3} ¹Research Center for Applied Chemistry (Centro de Investigación en Química Aplicada), Saltillo, Coahuila, México. ²Faculty of Medicine, "Apollonia" University of Iasi, Romania 3Academy of Romanian Scientists, Bucharest, Romania

P15. Comparison between IMRT External Beam Radiotherapy and Brachytherapy Treatments for Some Pelvic Tumors

Mahmoud S. Subahi¹, Sozy F. Gohar¹, Prof. univ. dr. Mohammed Sallah¹

¹Mansoura University, Egypt







