International Conference

Progress in Organic and Macromolecular Compounds

29th Edition

Program

ICMPP – Petru Poni Institute of Macromolecular Chemistry
Iasi | Romania | October 4 - 6, 2023
https://icmpp.ro/macroiasi2023/index.php

Edited by

Marcela MIHAI

Radu-Dan RUSU

Marius-Mihai ZAHARIA

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Catalin-Paul CONSTANTIN | Radu-Dan RUSU

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Dear colleagues from Romania and abroad

It is our pleasure to invite you to attend at the 29th edition of the Progress in Organic and Macromolecular Compounds Conference, MACRO Iasi 2023, a traditional event organized by the Petru Poni Institute of Macromolecular Chemistry, between 4 and 6 October 2023, in Iasi.

The Conference addresses polymer and organic chemists and physicists from academia, research institutes and industry, being intended as a dynamic platform for the presentation and sharing of their research and ideas.

MACRO Iasi 2023 gives a broad overview of major topics in organic and polymer synthesis and physics, multifunctional polymeric architectures, engineering of polymeric materials and their applications.

This meeting could not have been organized without the generous and tireless support and contribution of many individuals and groups within and outside the ICMPP. Therefore, we would like to acknowledge to all the invited lecturers, speakers, board and committee members, chairpersons, sponsors and all the people that have been involved in the organization and presentation of relevant results and perspectives.

Best wishes for a professionally rewarding conference!

Valeria HARABAGIU and Bogdan C. SIMIONESCU

Chairpersons of MACRO Iasi 2023

Chairpersons of MACRO Iasi 2023

Valeria HARABAGIU and Bogdan C. SIMIONESCU

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Wednesday 04.10.2023

	9:45 - 10:00	Opening
S1	10:00 - 10:45	PL1 - Laaksonen
S1	10:45 - 11:15	L1 - Ferbinteanu
S1	11:15 - 11.30	OC1 - Al-Matarneh
S1	11:30 - 11:45	OC2 - Damoc
	11:45 - 12.15	Cofee break & Poster session
S2	12:15 - 13:00	PL2 - Stoilova
S2	13:00 - 13:15	OC3 - Karagiani
S2	13:15 - 13:30	OC4 - Rusu G
S2	13:30 - 13:45	S1 - Sponsor Ronexprim
	13:45 - 15:15	Lunch break
S3	15:15 - 16:00	PL3 - Froidevaux
S3	16:00 - 16:15	OC5 - Cristea
S3	16:15 - 16:30	OC6 - Buta
S3	16:30 - 16:45	OC7 - Cibotaru
	16:45 - 17:15	Cofee break & Poster session
S4	17:15 - 17:30	OC8 - Dimitriu
S4	17:30 - 17:45	OC9 - Bujor
S4	17:45 - 18:00	OC10 - Apostol
S4	18:00 - 18:15	OC11 - Cretu
S4	18:15 - 18:30	OC12 - Raduca

Thursday 05.10.2023

S5	10:00 - 10:45	PL4 - Bismarck
S5	10:45 - 11:15	L2 - Abadie
S5	11:15 - 11.30	OC13 - Isac
S5	11:30 - 11:45	OC14 - Zaltariov
	11:45 - 12.15	Cofee break & Poster session
S6	12:15 - 13:00	PL5 - Werz
S6	13:00 - 13:15	OC15 - Enache
S6	13:15 - 13:30	OC16 - Vasiliu
S6	13:30 - 13:45	S2 - Sponsor Zeiss
	13:45 - 15:15	Group photo Lunch break
S7	15:15 - 16:00	PL6 - Ladegaard-Skov
S7	16:00 - 16:30	L3 - Racles
S7	16:30 - 16:45	OC17 - Trifan
S7	16:45 - 17:00	OC18 - Ursu
S7	17:00 - 17:15	S3 - Sponsor Apel Laser
	19:00 - ...	Dinner - Hotel Moldova

Friday 06.10.2023

S8	10:00 - 10:45	PL7 - Rychter
S8	10:45 - 11:00	OC19 - Iftime
S8	11:00 - 11:15	OC20 - Bendrea
S8	11:15 - 11:30	OC21 - Lotos
S8	11:30 - 11:45	OC22 - Isvoranu
	11:45 - 12:15	Cofee break & Poster session
S9	12:15 - 12:45	L4 - Peptu
S9	12:45 - 13:00	OC23 - Balan-Porcarasu
S9	13:00 - 13:15	OC24 - Pamfil
S9	13:15 - 13:30	OC25 - Dumitriu
S9	13:30 - 13:45	OC26 - Andone
	13:45 - 14:15	Awards and closing
	14:15 - 15:15	Lunch break

- **Best Oral Presentation – 1000 lei**
- **Best Poster Presentation - 750 lei**
- **Best Young Scientist Oral Presentations – 1000 lei**
- **Best Young Scientist Poster Presentations– 750 lei**
- **Prize "Sorin I. Rosca" of Romanian Chemical Society (*for a Young Scientist*)**

Part of the presented papers are published in the volume

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INVITED LECTURERS

Aatto Ilmari LAAKSONEN

PhD: Theoretical Chemistry, Stockholm University (SU), Arrhenius Laboratory 1981.
Docent (habilitation): Physical Chemistry SU 1984.
Post-doctoral fellow: Daresbury Laboratory UK, 1982, IBM Laboratory USA 1983-1985.
Sen. Lecturer: Physical Chemistry SU 1987-1999.
Full Professor: Physical Chemistry SU 2000-present.
Sabbaticals: Dalhousie University (Canada) 1993-94, 1995, JAERI (Japan) 2002, 2005.
Guest Professor: University of Cagliari (Italy), Nanyang Tech University (Singapore), Jilin University (China), University of Sao Paulo (Brazil), Nanjing Tech (China), Luleå University of Technology, Uppsala University Ångström Laboratory, Stellenbosch Institute of Advanced Study (South Africa).
ERA Chair: Petru Poni Institute of Macromolecular Chemistry.
Research interests: In silico modelling in materials science, biopharma and green chemical engineering.

Olya STOILOVA is professor of macromolecular chemistry at the Institute of Polymers, Bulgarian Academy of Sciences (IP-BAS). Since 2013 until 2021 she was elected as scientific secretary of Nanosciences, new materials and technologies Research division of the Bulgarian Academy of Sciences and was a member of the Governing council of the Academy. Her expertise covers design of hybrid materials based on natural and synthetic polymers (gels, films, nanoparticles, electrospun materials), development of polymeric materials with defined and desirable properties, and controlled structure for a wide range of applications – biomedicine, water purification, environmental protection, agriculture, etc. She is leading researcher in polyelectrolyte complexes, as well fabrication of fibrous polymeric materials by electrospinning, their characterization and possible applications. She has published more than 40 research papers with over of 950 citations, H-index 19. She is a co-author of one chapter in book and one interactive vocational training tools in the field of Food Industry. She is a project leader and participant of more than 25 national and international research projects and is the inventor of 1 utility model and 1 patent. Since 2021, she is heading the Polymeric Biomaterials Department at the IP-BAS, which is focusing on the development of novel biocompatible and biodegradable polymeric materials, polymer-inorganic hybrid nanoparticles and nanocomposites, and design of biomaterials for tailored applications.

Rénato FROIDEVAUX is full professor of biocatalysis at Lille University in France. He is heading the team « Biotransformation, biocatalysis and enzyme » in the BioEcoAgro Joint Cross-Border Research Unit. His research concerns enzymatic biocatalysis (homogeneous and heterogeneous) applied to hydrolysis of agro-food proteins for obtaining bioactive peptides, enzymatic biocatalysis applied to the valorization of lignin for obtaining biobased aromatics. More recently, he developed the concept of "hybrid catalysis" which consists of combining chemical catalysis and enzymatic biocatalysis for biomass valorization. This interdisciplinary concept involves the search for new enzymes, the search for compatible reaction conditions between (bio)catalysts and the development of different types of reactors (one-pot one step, two-pots one-step) and Multi Catalytic Hybrid Materials (also called MMCH) for heterogeneous (bio)catalysis. Author and co-author of more than 50 articles mostly in JCR, 3 book chapters and 3 patents. Total citations almost 800 (WoS), H Index 16. He is a project leader and participant of more than 25 national and international research projects. He is responsible of an Industrial Chair called « Charles Viollette », financed by the European Metropole of Lille and the University of Lille. This

chair brings together academic partners from Lille and Canada (INAF in Quebec) and industrial partners in the development of co-products from the agricultural and agro-food industries by biotechnological tools for the production of bioactive molecules for animal, human nutrition and plant health. He was a lecturer in enzyme biocatalysis from 2004 to 2009 in the Franco-Romanian Master's "Bioprocesses in the Agrifood field" between Al. I. Cuza University of Iasi and Lille University, then director of this master's until 2013. Currently, he works with the Technical University Gheorghe Asachi of Iasi (Dr. Alexandra BLAGA) for the implementation of a double master'degree in (bio)chemical engineering.

Alexander BISMARCK research group, the Polymer & Composite Engineering (PaCE) Group, is

a multi-disciplinary team with research interests in the manufacture and characterisation of fibre reinforced high performance (nano) composites, porous materials and hydrogels. The group focuses on the development of renewable materials, biomaterials for applications in tissue engineering, composite super-capacitors and emulsion templating for the synthesis of porous polymers (so called polymerisable High Internal Phase Emulsions (polyHIPEs)). Furthermore, the group is interested in the social dimensions of materials research. He is also affiliated member of The Composite Centre at Imperial College London and visiting professor of the Department of Chemical Engineering.

Daniel B. WERZ received a BS in chemistry at Heidelberg University, Germany, in 1997, a diploma

in 2000, and a Ph.D. in organic chemistry from Heidelberg University in 2003 with Rolf Gleiter. Following his doctoral studies, he was a Postdoctoral Fellow with Peter H. Seeberger at ETH Zurich, Switzerland. In December 2006 he joined Göttingen University as an Assistant Professor. In 2013 he took the position of an Associate Professor at the University of Braunschweig, in 2018 he was promoted at the same university to Full Professor. In 2022 he moved to the University of Freiburg. His main research interests include the development of novel efficient methods for the synthesis of hetero- and carbocyclic compounds (e.g. by cyclopropane chemistry, cascade reactions and Pd catalysis). In addition, he is interested in carbohydrates, glycolipids and fluorescent dyes. His awards include inter alia an Emmy Noether Fellowship of the German Research Foundation, a Heisenberg Fellowship, the “Dozentenstipendium” of the Fund of Chemical Industry, the ORCHEM Award, a JSPS Visiting Professorship in Japan, and an ERC Consolidator Grant. Since 2017 he has been Distinguished Visiting Professor at the IIT Bombay, in 2018 he has become Visiting Scholar at Tel Aviv University in Israel.

Anne LADEGAARD SKOV is a professor of polymer technology at DTU in Denmark and is

heading the Danish Polymer Centre. She is a world-leading expert in silicone elastomer synthesis, characterization, and utilization. Her main focus is on making artificial muscles via dielectric elastomers. She has published more than 160 publications and has been granted 13 patent families. Anne Ladegaard Skov is active in building bridges between research and industry and has taken a sabbatical leave in 2021 to focus on creating the company Glysious. She is furthermore cofounder of another 3 companies that are either spun out or still in the incubator environment. Anne Ladegaard Skov has received multiple prizes for her work, including the Elite Forsk award in 2022, granted by the Danish Ministry of Higher Education and Science, and the Grundfos Prize in 2022, regarded as one of the most prestigious prized in Denmark for technical research.

Piotr RYCHTER is researcher and university teacher at Jan Długosz University in Częstochowa, Faculty of Science and Technology, Department of Biochemistry, Biotechnology and Ecotoxicology. Position: associate professor. Research topic focuses on environmental and health aspects of biodegradable and biocompatible polymers including biodegradation, controlled release system of agrochemicals. Participated in several national and international scientific projects mostly related to environmental and health aspects of biodegradable and biocompatible polymers. Awarded four medals (three gold and one silver) for the inventions at national and international invention shows in Warsaw, Bangkok, Hong Kong. Participant of numerous international and national conferences. Participant of three research internships: Centre of Polymer and Carbon Materials Polish Academy of Sciences, Zabrze Poland, Institute of Polymers of Slovak and Bulgarian Academy of Sciences. Several delivered lectures within an Erasmus programme at various Universities in Europe like Cagliari University, University of Perugia, Joseph Fourier University in Grenoble, Centre of Polymer Systems, Thomas Bata University (Zlin - Czech Republic), Polymer Institute of Slovak Academy of Sciences. Author and co-author of more than 70 articles mostly in JCR. Total citations almost 700 (WoS), H Index 12. From 2021 head of Interdisciplinary Science and Research Centre at Jan Dlugosz University in Czestochowa.

Oral presentations

PL invited lectures (45 min, Q & A included)
L lectures (30 min, Q & A included)
OC oral contributions (15 min, Q & A included)
S sponsor presentations (15 min, Q & A included)

Poster presentations

PP posters
Posters (A1 size, portrait orientation) *will be posted after registration and will remain displayed during the entire conference*

Language

The conference language is English

PROGRAM

WEDNESDAY, October 4

$09^{00} – 09^{45}$	**Registration of Participants**
$09^{45} – 10^{00}$	**Conference Opening**

$10^{00} – 11^{45}$

Session 1

Chairs: Mariana PINTEALA and Gheorghe FUNDUEANU

$10^{00} – 10^{45}$	**PL1. *IN SILICO* STUDIES OF NATURE'S HIERARCHICAL CREATIONS** Aatto Ilmari LAAKSONEN [1]*Department of Materials and Environmental Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, Sweden* [2]*Centre of Advanced Research in Bionanoconjugates and Biopolymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania.* [3]*State Key Laboratory of Materials-Oriented and Chemical Engineering, Nanjing Tech University, Nanjing, P. R. China.* [4]*Department of Engineering Sciences and Mathematics, Division of Energy Science, Luleå University of Technology, Luleå, Sweden*
$10^{45} – 11^{15}$	**L1. THE MAGNETIC ANISOTROPY IN THE LANTHANIDE COORDINATION UNIT ASSEMBLIES** Marilena FERBINTEANU,[1] Fanica CIMPOESU[2] [1]*University of Bucharest, Faculty of Chemistry, Bucharest, Romania* [2]*Institute of Physical Chemistry, Bucharest, Romania*
$11^{15} – 11^{30}$	**OC1. NOVEL PYRROL-2-ONE DERIVATIVES AS HUMAN CARBONIC ANHYDRASE ISOFORMS INHIBITORS** Cristina M. AL-MATARNEH[1,2] [1]*Center of Advanced Research in Bionanoconjugates and Biopolymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* [2]*Research Institute of the University of Bucharest-ICUB, Bucharest, Romania*
$11^{30} – 11^{45}$	**OC2. A FERRONEMATIC Co(II) COORDINATION COMPOUND SUITABLE AS ACTIVE FILLER FOR MAGNETICALLY ACTUATED MATERIALS** Madalin DAMOC,[1] Vasile TIRON,[2] Codrin TUGUI,[1] Cristian-Dragos VARGANICI,[3] Alexandru-Constantin STOICA,[1] Ghenadie NOVITCHI,[4] Mihaela DASCALU,[1] Maria CAZACU[1] [1]*Department of Inorganic Polymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* [2]*Research Center on Advanced Materials and Technologies, Department of Exact and Natural Sciences, Institute of Interdisciplinary Research, Alexandru Ioan Cuza University of Iasi, Romania* [3]*Centre of Advanced Research in Bionanoconjugates and Biopolymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* [4]*Laboratoire National des Champs Magnétiques Intenses, Grenoble, France*

WEDNESDAY, October 4

$11^{45} – 12^{15}$	**Coffee Break & Poster session**
	$12^{15} – 13^{45}$ **Session 2** **Chairs: Marcela MIHAI and Madalin DAMOC**
$12^{15} – 13^{00}$	**PL2. ADVANCED ELECTROSPUN MATERIALS: FROM DESIGN TO PROSPECTIVE APPLICATIONS** Olya STOILOVA *Laboratory of Bioactive Polymers, Institute of Polymers, Bulgarian Academy of Sciences, Sofia, Bulgaria*
$13^{00} – 13^{15}$	**OC3. HYBRID NANOSTRUCTURES OF CHITOSAN AND POLY(*N*-ISOPROPYLACRYLAMIDE) WITH CARBOXYLATE END GROUP** Maria KARAYIANNI,[1,2] Elena-Daniela LOTOS,[1] Ana-Lavinia VASILIU,[1] Marcela MIHAI,[1] Stergios PISPAS[1,2] *[1]Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* *[2]Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece*
$13^{15} – 13^{30}$	**OC4. FLUORESCENT CARBON NANOPARTICLES SUSPENSION GENERATED BY PULSED LASER ABLATION IN ETHANOL** Bogdan-George RUSU,[1] Cristian URSU,[1] Daniela IONITA,[1] Victor OANCEA,[1] Mihaela OLARU,[1] Gabriel ABABEI,[2] Petru NICA[3] *[1]Physics of Polymers and Polymeric Materials Laboratory, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* *[2]Materials Characterization Laboratory, National Institute of Research and Development for Technical Physics, Iasi, Romania* *[3]Department of Physics, "Gheorghe Asachi" Technical University, Iasi, Romania*
$13^{30} – 13^{45}$	**S1. RONEXPRIM - FROM 32 YEARS YOUR RELIABLE PARTNER FOR NEWEST TECHNOLOGIES IN R&D** *SC RONEXPRIM SRL*
$13^{45} – 15^{15}$	**Lunch Break**

WEDNESDAY, October 4

$15^{15} – 16^{45}$

Session 3

Chairs: Carmen RACLES and Radu-Dan RUSU

$15^{15} – 16^{00}$ **PL3. HYBRID CATALYSIS: A POWERFUL SYNERGY BETWEEN CHEMICAL AND BIOLOGICAL CATALYSIS**

Rénato FROIDEVAUX,[1] Alexandra GIMBERNAT,[1] Antoine LANCIEN,[1] Pascal DHULSTER,[1] Franck DUMEIGNIL,[2] Damien DELCROIX,[3] Nicolas LOPES FERREIRA,[3] Egon HEUSON,[2] Jean-Sébastien GIRARDON[2]

[1]UMRT BioEcoAgro, Equipe Biotransformation/Enzymes et Biocatalyse, Univ. Lille, INRAE, Univ. Liège, UPJV, JUNIA, Univ. Artois, Univ. Littoral Côte d'Opale, ICV – Institut Charles Viollette, Lille, France

[2]Univ. Lille, CNRS, Centrale Lille, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, Lille, France

[3]IFP Energies Nouvelles, Rond-Point de l'Echangeur de Solaize BP 3, Solaize, France

$16^{00} – 16^{15}$ **OC5. MODULATED DIFFERENTIAL SCANNING CALORIMETRY AS A TOOL FOR POLYMER CHARACTERIZATION**

Daniela IONITA,[1] Mariana CRISTEA,[1] Paul LAZAR,[2] Constantin GAINA,[1] Bogdan C. SIMIONESCU[1]

[1]Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

[2]S.C. Laboratorium S.R.L., Targu Bujor, Galati, Romania

$16^{15} – 16^{30}$ **OC6. ONE DIMENSIONAL COORDINATION POLYMERS BASED ON SCHIFF BASE LIGAND: STRUCTURES, PROPERTIES AND POTENTIAL APPLICATIONS**

Ildiko Mariana BUTA, Maria Andreea NISTOR, Simona Gabriela MUNTEAN, Otilia COSTISOR

Romanian Academy ''Coriolan Dragulescu" Institute of Chemistry, Timisoara, Romania

$16^{30} – 16^{45}$ **OC7. BANDAGES BASED ON CHITOSAN NANOFIBERS WITH BROAD SPECTRUM ANTIMICROBIAL ACTIVITY FOR WOUND HEALING APPLICATIONS**

Sandu CIBOTARU,[1] Daniela AILINCAI,[1] Alexandru ANISIEI,[1] Irina ROSCA,[1] Andreea-Isabela SANDU,[1] Liliana MITITELU-TARTAU,[2] Luminita MARIN[1]

[1]Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

[2]"Grigore T. Popa" University of Medicine and Pharmacy, Iasi, Romania

$16^{45} – 17^{15}$ **Coffee Break & Poster session**

WEDNESDAY, October 4

$17^{15} – 18^{30}$

Session 4

Chairs: Andra-Cristina ENACHE and Bogdan-George RUSU

$17^{15} – 17^{30}$ **OC8. FUNCTIONALIZATION OF 5-BROMOSALICYLALDEHYDE AS MANNICH, SCHIFF-BASE, AND NITRONYL-NITROXIDE LIGANDS AND THEIR COMPLEXES**

Ștefan DIMITRIU,[1,2] Sergiu SHOVA,[3] Marius ANDRUH[1,2]
[1]*"Costin D. Nenițescu" Institute of Organic and Supramolecular Chemistry, of the Romanian Academy, Bucharest, Romania*
[2]*University of Bucharest, Faculty of Chemistry, Bucharest, Romania*
[3]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*

$17^{30} – 17^{45}$ **OC9. CHARACTERIZING THE INFLUENCE OF BASE SELECTION ON THE *IN VITRO* DISSOLUTION PROFILE OF CHRYSIN FROM SEMISOLID TOPICAL PREPARATIONS**

Alexandra BUJOR,[1] Eleonora CARBONE,[2] Ilenia QUERCIA,[2] Mousa SHA'AT,[1] Monica ILIUȚA STAMATE,[1] Piera di MARTINO,[2] Lăcrămioara OCHIUZ[1]
[1]*"Grigore T. Popa" University of Medicine and Pharmacy, Faculty of Pharmacy, Iași, Romania*
[2]*University of Camerino, School of Pharmacy, Camerino, Italy*

$17^{45} – 18^{00}$ **OC10. EXPLOITING THE POTENTIAL OF XANTHAN AND LIGNIN FOR THE ADSORPTION OF DEGRADED OIL**

Narcis ANGHEL, Irina APOSTOL,
Mirela Fernanda ZALTARIOV, Iuliana SPIRIDON
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

$18^{00} – 18^{15}$ **OC11. Cu(I) AND Zn(II) METALLOMESOGENS FOR ELECTROCHEMICAL SENSING OF GLUCOSE AND URIC ACID**

Carmen CRETU,[1] Adelina A. ANDELESCU,[1] Sorina ILIES,[1] Florica MANEA,[2] Elisabeta I. SZERB[1]
[1]*"Coriolan Dragulescu" Institute of Chemistry Timisoara, Romanian Academy, Romania*
[2]*Department of Applied Chemsitry and Engineering of Inorganic Compounds and Environment, Politehnica, University of Timisoara, Romania*

$18^{15} – 18^{30}$ **OC12. WHEN A NITRONYL NITROXIDE LIGAND MEETS AMINES TO FORM SCHIFF BASES. LIGANDS DESIGN AND THEIR COMPLEXES**

Mihai RĂDUCĂ,[1,2] David HUNGER,[3] Sergiu SHOVA,[4] Marius ANDRUH[1,2]
[1]*Faculty of Chemistry, University of Bucharest, Bucharest, Romania*
[2]*"Costin D. Nenițescu" Institute of Organic and Supramolecular Chemistry of the Romanian Academy, Bucharest, Romania*
[3]*Institute of Physical Chemistry, University of Stuttgart, Stuttgart, Germany*
[4]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*

THURSDAY, October 5

$10^{00} – 11^{45}$

Session 5

Chairs: Maria-Valentina DINU and Sandu CIBOTARU

$10^{00} – 10^{45}$	**PL4. TURNING LIQUIDS SOLID: FROM EMULSIONS TO MICROMIXERS** Alexander BISMARCK *Vienna U, Wien, Austria*
$10^{45} – 11^{15}$	**L2. CROSS-LINKED POLYMER STRUCTURES: BENEFITS AND DRAWBACKS** Marc Jean Médard ABADIE *University of Montpellier, UMR 5253 CNRS-UM ENSCM, Pôle Chimie Balard Recherche, Campus CNRS, Montpellier, France*
$11^{15} – 11^{30}$	**OC13. COMBINED ELECTRONIC ABSORPTION AND RAMAN SPECTRA OF SOME AZOBENZENE DERIVATIVES** Dragos Lucian ISAC,[1] Emilian ROSCA,[1] Anton AIRINEI,[1] Elena Laura URSU,[1] Razvan PUF,[1] Isabela Costinela MAN,[2] Aatto LAAKSONEN[1] [1]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* [2]*"C. D. Nenițescu" Institute of Organic and Supramolecular Chemistry, Bucharest, Romania*
$11^{30} – 11^{45}$	**OC14. S-BLOCK COORDINATION POLYMERS BUILT UP WITH SILICON-CONTAINING CARBOXYLATE LINKERS** Mirela-Fernanda ZALTARIOV, Sergiu SHOVA, Maria CAZACU *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
$11^{45} – 12^{15}$	**Coffee Break & Poster session**

$12^{15} – 13^{45}$

Session 6

Chairs: Marc Jean Médard ABADIE and Cristina M. AL-MATARNEH

$12^{15} – 13^{00}$	**PL5. FLUORESCENT DYES BY RATIONAL DESIGN AND SERENDIPITOUS DISCOVERIES** Daniel B. WERZ *Institute of Organic Chemistry, Albert-Ludwigs-Universität Freiburg, Germany*
$13^{00} – 13^{15}$	**OC15. MAGNETIC IONOTROPIC HYDROGELS FOR WATER POLLUTION MITIGATION** Andra-Cristina ENACHE, Ionela GRECU, Petrisor SAMOILA, Corneliu COJOCARU, Valeria HARABAGIU *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
$13^{15} – 13^{30}$	**OC16. COMPOSITE HYDROGELS BASED ON ALGINATES AND CALCIUM CARBONATE** Ana-Lavinia VASILIU, Elena-Daniela LOTOS, Marius-Mihai ZAHARIA, Marcela MIHAI *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
$13^{30} – 13^{45}$	**S2. ZEISS – MODERN SOLUTIONS FOR AUTOMATIC MICROSCOPY** *CARL ZEISS INSTRUMENTS SRL*
$13^{45} – 15^{15}$	**Group Photo & Lunch Break**

THURSDAY, October 5

$15^{15} – 17^{00}$

Session 7

Chairs: Maria CAZACU and Cristian PEPTU

$15^{15} – 16^{00}$ **PL6. ARTIFICIAL MUSCLES FROM BUNDLES OF SILICONE-BASED DIELECTRIC ELASTOMER FIBERS**

Anne LADEGAARD SKOV, Zhaoqing KANG, Liyun YU
Technical University of Denmark, Department of Chemical and Biochemical Engineering, Danish Polymer Center, Denmark

$16^{00} – 16^{30}$ **L3. POROUS SILICONES WITH TUNED SURFACE AND SENSING PROPERTIES**

Carmen RACLES, Adrian BELE, Ana-Lavinia VASILIU, Mihaela DASCALU, Maria CAZACU
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

$16^{30} – 16^{45}$ **OC17. INCREASING THE CHEMICAL FUNCTIONALITY OF BIOPOLYMERS USING BENZYL AMINES DERIVATIVES. THE CASE OF PULLULAN**

Ioana-Sabina TRIFAN, Sergiu COSERI
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

$16^{45} – 17^{00}$ **OC18. A COMBINED APPROACH FOR THE DEPOSITION HIGH QUALITY AND POROUS ZnO FILMS WITH APPLICATION IN PHOTOCATALYSIS**

Cristian URSU,[1] Bogdan-George RUSU,[1] Andrei DASCALU,[1] Mihaela OLARU,[1] Victor OANCEA,[1] Petru E. NICA[2]
[1]*Physics of Polymers and Polymeric Materials Laboratory, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
[2]*Department of Physics, "Gheorghe Asachi" Technical University, Iasi, Romania*

$17^{00} – 17^{15}$ **S3. APEL LASER – *20 Years of Excellence in Laser Systems and Instruments for Science***

SC Apel Laser SRL

19^{00} - **Gala Dinner – Hotel Moldova**

FRIDAY, October 6

10^{00} – 11^{45}

Session 8

Chairs: Sergiu COSERI and Mihaela BALAN-PORCARASU

10^{00} –10^{45} **PL7. ENVIRONMENTAL ASPECTS OF POLYMERS AND POLYMER WASTES**

Piotr RYCHTER

Faculty of Science and Technology, Jan Dlugosz University in Czestochowa, Czestochowa, Poland

10^{45} –11^{00} **OC19. CHITOSAN CROSSLINKING WITH A VANILLIN ISOMER TOWARD SELF-HEALING HYDROGELS WITH ANTIFUNGAL ACTIVITY**

Manuela-Maria IFTIME, Irina ROSCA, Andreea-Isabela SANDU, Luminita MARIN

Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

11^{00} –11^{15} **OC20. COMBINING ELECTROACTIVE AROMATIC MOIETIES AND VARIOUS CONTROLLED POLYMERIZATION METHODS TO ENDOW LINEAR AND FLEXIBLE POLYMERS WITH ADVANCED FUNCTIONS BY END-GROUP FUNCTIONALIZATION STRATEGY**

Anca-Dana BENDREA,[1] Demet Göen COLAK,[2] Luminita CIANGA,[1] Ioan CIANGA[1]

[1]*Centre of Advanced Research in Bionanoconjugates and Biopolymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*

[2]*Istanbul Technical University, Faculty of Science and Letters, Department of Chemistry, Istanbul, Turkey*

11^{15} –11^{30} **OC21. NONSTOICHIOMETRIC POLYELECTROLYTE COMPLEX NANOPARTICLES BASED ON ZEIN AND POLYSACCHARIDES**

Elena-Daniela LOTOS, Ana-Lavinia VASILIU, Marcela MIHAI, Bogdan C. SIMIONESCU

Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

11^{30}– 11^{45} **OC22. PHARMACOKINETICS OF A MAGNESIUM SUPPLEMENT MONITORED BY NMR METABOLOMICS**

Mara-Anastasia ISVORANU,[1,2] Cătălin DUDUIANU,[2,3] Calin DELEANU,[2,4] Alina NICOLESCU[4]

[1]*IMC Krems University of Applied Sciences, Krems, Austria*

[2]*"Costin D. Nenițescu" Institute of Organic and Supramolecular Chemistry, Bucharest, Romania*

[3]*National University of Science and Technology Politehnica Bucharest, Faculty of Chemical Engineering and Biotechnologies, Bucharest, Romania*

[4]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*

11^{45} –12^{15} **Coffee Break & Poster session**

FRIDAY, October 6

12^{15} – 15^{15}

Session 9

Chairs: Mirela-Fernanda ZALTARIOV and Dragos Lucian ISAC

12^{15} –12^{45}	**L4. MALDI MASS SPECTROMETRY BASED ANALYTICAL APPROACH FOR THE ANALYSIS OF RING-OPENING OLIGOMERIZATION OF CYCLIC ESTERS IN THE PRESENCE OF CYCLODEXTRIN** Cristian PEPTU, Diana-Andreea BLAJ, Mihaela BALAN-PORCARASU, Valeria HARABAGIU *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
12^{45}– 13^{00}	**OC23. INSIGHTS INTO THE INCLUSION COMPLEXATION OF 3,4-ETHYLENEDIOXYTHIOPHENE WITH PERMODIFIED CYCLODEXTRINS IN AQUEOUS SOLUTION** Mihaela BALAN-PORCARASU, Aurica FARCAS *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
13^{00}– 13^{15}	**OC24. CHITOSAN-GELATIN XEROGELS CROSS-LINKED BY UV IRRADIATION AND LOADED WITH A HYDROPHOBIC BIOACTIVE AGENT** Daniela PAMFIL, Elena STOLERU, Raluca Petronela DUMITRIU, Elena BUTNARU, Mihai BREBU *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
13^{15}– 13^{30}	**OC25. ELECTROSPUN FIBERS BASED ON CASEINATE LOADED WITH ROSEMARY EXTRACT** Raluca Petronela DUMITRIU,[1] Mihai BREBU,[1] Elena STOLERU,[1] Nusrat SHARMIN[2] [1]*Physical Chemistry of Polymers Laboratory, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania* [2]*Department of Food Safety and Quality, Nofima AS, Ås, Norway*
13^{30}– 13^{45}	**OC26. THE RM ROADMAP PROJECT AND THE AMBASSADORS NETWORK** Raluca-Oana ANDONE *Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania, RM Roadmap Ambassador for Romania*
13^{45}– 14^{15}	**AWARDS & Conference Closing**
14^{15}– 15^{15}	**Lunch Break**

POSTERS LIST

Chairs: Marius-Mihai ZAHARIA and Catalin Paul CONSTANTIN

PP1 **DESIGN AND SYNTHESIS OF PARTICLES BASED ON CHITOSAN GRAFTED POLY(ETHYLENEGLYCOL) METHYLETHER ACRYLATE AS CARRIERS FOR ANTIBIOTICS**

Cătălina Anișoara PEPTU,[1] Corina-Lenuța LOGIGAN,[1] Christelle DELAITE,[2] Crina-Elena TIRON,[3] Marcel POPA,[1,5,6] Cristian PEPTU[4]
[1]*Department of Natural and Synthetic Polymers, Faculty of Chemical Engineering and Environmental Protection "Cristofor Simionescu", "Gheorghe Asachi" Technical University of Iasi, Romania*
[2]*Laboratory of Photochemistry and Macromolecular Engineering, Institute J.B. Donnet, University of Haute Alsace, Mulhouse, France*
[3]*Regional Institute of Oncology, Iasi, Romania*
[4]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
[5]*Faculty of Medical Dentistry, "Apollonia" University of Iasi, Iasi, Romania*
[6]*Academy of Romanian Scientists, Bucharest, Romania*

PP2 **EXPLORING THE REMARKABLE PROPERTIES OF WATER SOLUBLE CHITOSANS**

Larisa-Maria PETRILA,[1] Marius-Mihai ZAHARIA,[1] Florin BUCATARIU,[1] Marcela MIHAI,[1] Stergios PISPAS[1,2]
[1]*Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania*
[2]*Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece*

PP3 **INSIGHTS OF COLD PLASMA-INDUCED CHANGES IN STARCH PROPERTIES THROUGH MULTIVARIATE DATA ANALYSIS**

Monica R. NEMȚANU,[1] Mirela BRAȘOVEANU,[1] Cătălin M. TICOȘ[1,2]
[1]*National Institute for Laser, Plasma and Radiation Physics, Electron Accelerators Laboratory, Bucharest-Măgurele, Romania*
[2]*Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Bucharest-Măgurele, Romania*

PP4 **OXIDATION PROCESS OF WATER-SOLUBLE A POLYSACCHARIDE IN THE *N*-HYDROXYPHTHALIMIDE-MEDIATIATED SYSTEM**

Gabriela BILIUTA, Raluca-Ioana BARON, Sergiu COSERI
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP5 **PHYSICOCHEMICAL INVESTIGATION OF PLASMA_TREATED POLYMER SOLUTIONS FOR CANCER TREATMENT**

Camelia MIRON,[1] Luminita MARIN,[2] Valeria HARABAGIU,[3] Adrian FIFERE,[4] Mariana PINTEALA,[4] Du LYIN,[1] Taishi YAMAKAWA,[1] Takashi KONDO,[1] Hiroki KONDO,[1] Shinya TOYOKUNI,[1,5] Masaaki MIZUNO,[6] Hiromasa TANAKA,[1] Masaru HORI[1]
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[3]*Inorganic Polymers Department, Institute of Macromolecular Chemistry Petru Poni, Iasi, Romania*
[4]*Centre of Advanced Research in Bionanoconjugates and Biopolymers Department, Institute of Macromolecular Chemistry Petru Poni, Iasi, Romania*
[5]*Department of Pathology and Biological Responses, Nagoya University, Graduate School of Medicine, Nagoya, Japan*
[6]*Center for Advanced Medicine and Clinical Research, Nagoya University Hospital, Nagoya, Japan*

PP6 **VISCOSITY AND FLOCCULATION PROPERTIES OF SOME CATIONIC PULLULAN DERIVATIVES**
Maria-Magdalena NĂFUREANU, Marieta CONSTANTIN, Luminița GHIMICI
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP7 **EFFECT OF PREPARATIVE METHODS ON THE CHARACTHERISTICS OF ZnO NANOPARTICLES**
Viorica Elena PODASCA, Andreea Laura CHIBAC-SCUTARU, Violeta MELINTE
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP8 **FIXED- BED COLUMN STUDY FOR PB(II) REMOVAL FROM AQUEOUS SOLUTION USING SILICA COMPOSITE MICROPARTICLES**
Ramona CIOBANU,[1] Daniela FIGHIR,[1] Carmen PADURARU,[1] Florin BUCATARIU,[1,2] Oana PLAVAN,[1] Andreea GHERGHEL,[1] Marcela MIHAI,[1,2] Carmen TEODOSIU[1]
[1]Department of Environmental Engineering and Management, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, "Gheorghe Asachi" Technical University of Iasi, Iasi, Romania
[2]Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP9 **HIGH PERFORMANCE AMORPHOUS POLYMER COMPOSITES**
Diana-Ioana BRATILESCU,[1] Alexander BISMARCK[1,2]
[1]Polymer & Composite Engineering (PaCE) Group, Institute of Materials Chemistry & Research, Faculty of Chemistry, Vienna, Austria
[2]Department of Chemical Engineering, Imperial College of London, London, United Kingdom

PP10 **SYNTHESIS, STRUCTURES AND ELECTROCHEMICAL INVESTIGATION OF IRON(II) COORDINATION COMPOUNDS WITH SEMICARBAZIDE DERIVATIVES LIGANDS**
Gheorghe GHILEȚCHI,[1] Tatiana PALAMARCIUC,[2] Oleg PALAMARCIUC,[2,3] Iuliana BEȘLEAGĂ,[3] Peter RAPTA,[4] Sergiu SHOVA,[5] Vladimir ARION[3]
[1]University of Vienna, Institute of Inorganic Chemistry, Vienna, Austria
[2]Moldova State University, Faculty of Physics and Engineering, Chișinău, Republic of Moldova
[3]Institute of Physical Chemistry and Chemical Physics, Faculty of Chemical and Food Technology, Slovak University of Technology in Bratislava, Bratislava, Slovak Republic
[4]Inorganic Polymers Department, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP11 **VERSATILE MAGNETIC FILMS INSPIRED BY NATURAL SOURCES**
Ioana A. DUCEAC, Raluca Ioana BARON, Gabriela BILIUTA,
Maria Valentina DINU, Sergiu COSERI
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP12 **DEVELOPMENT OF SUSTAINABLE MATERIALS WITH POTENTIAL APPLICATION IN CIRCULAR ECONOMY**
Claudiu-Augustin GHIORGHITA, Maria Marinela LAZAR,
Madalina-Mihaela BARZU, Ioana-Victoria PLATON, Irina-Elena RASCHIP,
Maria Valentina DINU
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP13 **SOME COORDINATION POLYMERS WITH PYRIDINE-BASED LIGANDS: SYNTHESIS AND STRUCTURAL CHARACTERIZATION**
Alexandru-Constantin STOICA, Mihaela DASCALU, Madalin DAMOC,
Maria CAZACU
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP14 **ELECTRONIC EXCITATIONS AND TRANSIENT SPECIES IN THE ISOMERIZATION PROCESS OF THE AZOBENZENE MOLECULAR SYSTEM**
Dragos Lucian ISAC, Carmen GHERASIM, Anton AIRINEI, Emilian ROSCA,
Radu TIGOIANU, Aatto LAAKSONEN
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP15 **THEORETICAL INVESTIGATION OF DISSOCIATION REACTIONS IN THE CASE OF UROCANIC ACID AFTER UV IRRADIATION PROCESS**

Dragos Lucian ISAC,[1] Adina COROABA,[2] Mihaela SILION,[2] Razvan PUF,[2] Narcis CIBOTARIU,[2] Andrei NEAMTU,[2] Teodora RUSU,[2] Mariana PINTEALA,[2] Aatto LAAKSONEN[2]

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PP16 **CONSTRUCTING CONJUGATED POROUS POLYMERS CONTAINING TRIPHENYLAMINE MOIETIES FOR DETECTION OF NITROAROMATIC DERIVATIVES**

Andra-Elena BEJAN, Loredana VĂCĂREANU

Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP17 **A MODIFIED VEGETABLE OIL COATING FOR WOOD SURFACE PROTECTION**

Leonard IGNAT, Cristian-Dragos VARGANICI, Maurusa-Elena IGNAT, Dan ROSU, Irina ROSCA, Liliana ROSU

Centre of Advanced Research in Bionanoconjugates and Biopolymers, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP18 **FORCE FIELD COMPARISON FOR *IN SILICO* ANALYSIS OF GENE CARRIER**

Razvan PUF,[1] Tudor VASILIU,[1] Dragos PEPTANARIU,[1] Razvan GHIARASIM,[1] Mariana PINTEALA,[1] Aatto LAAKSONEN[1,2]

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[2]Department of Materials and Environmental Chemistry, Division of Physical Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, Sweden

PP19 ***IN SILICO* STUDY OF DRUG ENCAPSULATION IN MICELLES RESULTING FROM THE SELF-ASSEMBLY OF AMPHIPHILIC SYSTEMS**

Narcis-Iulian CIBOTARIU,[1] Aatto LAAKSONEN,[1,2] Francesca MOCCI,[3] Bogdan CRACIUN,[1] Mariana PINTEALA[1]

[1]Centre of Advanced Research in Bionanoconjugates and Biopolymers Department, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

[2]Department of Materials and Environmental Chemistry, Division of Physical Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, Sweden

[3]Department of Chemical and Geological Sciences, University of Cagliari, Italy

PP20 **XANTHAN-BASED MATERIALS EMBEDDING NATURAL ANTIOXIDANTS WITH POTENTIAL APPLICATIONS IN FOOD PACKAGING**

Irina-Elena RASCHIP, Raluca Nicoleta DARIE-NITA, Nicusor FIFERE, Ioana Victoria PLATON, Claudiu-Augustin GHIORGHITA, Anamaria IRIMIA, Maria Valentina DINU

Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP21 **INFLUENCE OF UV IRRADIATION ON THE STRUCTURAL AND COLOR MODIFICATIONS OF WOOD-BIOBASED POLYMER COMPOSITES**

Leonard IGNAT, Liliana ROSU, Maurusa-Elena IGNAT, Cristian-Dragos VARGANICI, Dan ROSU

Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

PP22 **DEVELOPMENT OF A SENSITIVE HPLC-ESI-MS METHOD FOR THE DETERMINATION OF DORZOLAMIDE AND INDOMETHACIN WITHIN DRUG-LOADED POLYMERIC MICELLES**

Mihaela SILION,[1] Anca Roxana PETROVICI,[1] Leonard ATANASIE,[2] Mariana PINTEALA[1]

[1]Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

[2]Faculty of Medical Dentistry, "Apollonia" University of Iasi, Iasi, Romania

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