

International Conference on Polymer Science and Composite Materials

July 05-07, 2021

Virtual Event

Bucharest, Romania

Eastern European Summer Time, GMT+3



POLYMER
CONNECT

Day-1

July 05, 2021

Conference Time
Eastern European
Summer Time

Session Details

09:45-10:00 Introduction by **Prof. Geoffrey Robert Mitchell**
Polymer Connect Conference Chair

Keynote Session

10:00-10:35 **Geoffrey Robert Mitchell**, *Vice Director, CDRSP, Portugal*
Polymer Blends, Mixtures and Composites for Increased Circularity and Enhanced Performance

10:35-11:10 **Ko Okumura**, *Ochanomizu University, Japan*
Velocity Jump in Crack Propagation on Sheets: Nano-scale Glass Transition and Boundary Condition

11:10-11:20 **Break**

11:20-11:55 **Eugeny Pestryaev**, *Ufa State Petroleum Technological University, Russian Federation*
When a Polymer Melt Can Be Considered as a Polycrystalline Powder?

11:55-12:30 **Maria Elvira Callapez**, *University of Lisbon, Portugal*
The Introduction of Plastics in Architecture

12:30-13:05 **Frederico Ferreira**, *The University of Lisbon, Portugal*
Design of an Electroconductive and Biodegradable Coaxial Electrospun Fiber for Neural Tissue Engineering Applications

13:05-13:40 **Mariana Pinteala**, *"Petru Poni" Institute of Macromolecular Chemistry, Romania*
Biomedical Applications of polymer-coated Metallic Nanoparticles

13:40-14:00 **Break**

Invited Presentations

14:00-14:25 **Joana Maria Curto**, *The University of Beira Interior, Portugal*
3D Polymer Based Drug Delivery System Porosity Optimization and Simulation to Maximize Drug Retention

14:25-14:50 **Sergio Santoro**, *University of Calabria, Italy*
Photothermal and Ion-Exchange Membranes for a Sustainable Desalination

14:50-15:15 **Tatiana A. Korolenko**, *Scientific Research institute of physiology and Basic Medicine, Russian Federation*
Triton Wr 1339 and Poloxamer 407- Induced Models of Lysosomal Storage Syndrome Resembling Lysosomal Diseases in Human

15:15-15:40 **Manuel José Lis**, *Polytechnic University of Catalonia, Spain*
Assessment of the Steps in Layer-by-Layer Microencapsulation of Essential Oils With Biopolymers

15:40-16:05 **Mohammad Changez**, *A' Sharqiyah University, Oman*
Molecularly Ordered Nanocomposite

16:05-16:15 **Break**

16:15-16:50 **Aman Ullah**, *University of Alberta, Canada*
Renewable Biopolymers: A Step Towards Sustainable Circular Economy

Plenary Talks

16:50-17:25 **Zhanping You**, *Michigan Technological University, USA*
Polymer Vs. Rubber Asphalt: From Lab to Practice

17:25-18:00 **Richard Spontak**, *NC State University, USA*
Novel Material Strategies to Ultrasensitive Membranes for CO₂ Capture

Conference
Time

Session Details

Session-1: Biopolymers&Biomaterials, Tissue Engineering and Regenerative Medicine

Chair: **Joana Maria Curto**, *The University of Beira Interior, Portugal*Co-chair: **Mariana Pinteala**, *Institute of Macromolecular Chemistry, Romania*

- | | |
|-------------|---|
| 10:00-10:20 | Razvan Ghiarasim , <i>"Petru Poni" Institute of Macromolecular Chemistry, Romania</i>
Synthesis and Characterization of Magnetite Nanoparticles Coated With a Double Layer of Polymer Obtained by SI-ATRP Functionalized With the Targeting Molecule and Drug with the Property of Cleavage in Acid pH |
| 10:20-10:40 | Anna Luss , <i>Mendeleev University of Chemical Technology of Russia, Russian Federation</i>
New Biocomposite Materials Based on Polysaccharides for Bone Replacement |
| 10:40-11:00 | Andrada Serafim , <i>University Politehnica of Bucharest, Romania</i>
Methacryloyl Mucin: Characterization and Use as Primary Component in Double-network Hydrogels |
| 11:00-11:20 | Break |
| 11:20-11:40 | Frederik Claeyssens , <i>University of Sheffield, United Kingdom</i>
Hierarchically Structured Biomaterials for Tissue Engineering |
| 11:40-12:00 | Artur Mateus , <i>CDRSP, Portugal</i>
Transform Tires to Value: Developing Special Thermoplastic Based Compounds |
| 12:00-12:20 | Enamul Hoque , <i>Military Institute of Science and Technology (MIST), Dhaka, Bangladesh</i>
Processing of Biomaterials Into 3D Tissue Engineering Scaffolds |
| 12:20-12:40 | Jose Luis Aparicio-Collado , <i>Universitat Politècnica de València, Spain</i>
Novel Hydrogels Based on Phbv/Pva With Incorporated Electroactive Nanoparticles for Regenerative Medicine |
| 12:40-13:00 | Adrian Fifere , <i>"Petru Poni" Institute of Macromolecular Chemistry, Romania</i>
Hybrid Nanostructured Systems Based on Metal Oxides with Magnetic and Antioxidant Properties for Biomedical Applications |
| 13:00-13:25 | Break |
| 13:25-13:45 | Angelica Cifarelli , <i>SCITEC-CNR, Italy</i>
Polyurethane Foams from Epoxidized Vegetable Oil |
| 13:45-14:00 | Lilia Clima , <i>"Petru Poni" Institute of Macromolecular Chemistry, Romania</i>
Supramolecular Squalene Based Self-assembled Entities as Promising Non-viral Vectors for Gene Delivery |

Session-2: Polymers and Nano Composites, Recycling of Polymers and Waste Management

Chair: Filippo Pierini, *Institute of Fundamental Technological Research Polish Academy of Sciences, Poland*

- 14:00-14:20** **Filippo Pierini**, *Polish Academy of Sciences, Poland*
Three-Dimensional Printable Conductive Semi-Interpenetrating Polymer Network Hydrogel for Neural Tissue Applications
- 14:20-14:40** **Elena Stoleru**, *Petru Poni Institute of Macromolecular Chemistry, Romania*
Chitosan-based Hydrogels Incorporating Bioactive Compounds
- 14:40-15:00** **Abbas Montazeri**, *K.N.Toosi University of Technology, Iran*
Tailoring Interfaces in Polymer-based Nanocomposites Via Nanofiller Surface Treatment: An Insight From Molecular Dynamics Simulations
- 15:00-15:20** **Zoya Chanem**, *Czech Technical University in Prague, Czech Republic*
Plasma Treatment of Polyolefin Powder – Process and Application
- 15:20-15:40** **Mihai Brebu**, *Petru Poni Institute of Macromolecular Chemistry, Romania*
Alginate/Lignosulfonate-based Bioactive Systems for Green Synthesis of Ag Nanoparticles
- 15:40-16:00** **Juan P. Ferrer-Rodríguez**, *Andaltec, Spain*
LIFE-COMPoLIVE Project: Polymer Biocomposites Based on Olive Tree Pruning Waste
- 16:00-16:15** **Yasamin Ziai**, *Polish Academy of Sciences, Poland*
Chameleon-inspired Multifunctional Plasmonic Nanoplatforms for Biosensing Applications
-
- 16:15-16:30** **Break**
-
- 16:30-16:50** **Glykeria Visvini**, *FORTH/ICE-HT, Greece*
Towards the Improvement of Water Vapor Permeability of Polypropylene Carbon Based Nanomaterials Composite Films: The Influence of Crystalline Phases
- 16:50-17:10** **Rostami Rohollah**, *Glasgow Caledonian University, United Kingdom*
Application of Superabsorbent Polymers in Fr-Scm Mortars
- 17:10-17:30** **Jose Luis Rivera Armenta**, *ITCM, Mexico*
Effect of Addition of Seed Shell Particles Over Physicochemical Properties Of Polypropylene/ Seeds Shell Composites
- 17:30-17:50** **Saul Sanchez**, *Centro de Investigación en Química Aplicada, Mexico*
PLA/Cellulose/Palygorskite Composites for Compostable Film Packaging

Conference
Time

Session Details

Keynote presentation

- 10:00-10:30** **Giuseppe Pellicane**, *BIOMORF, University of Messina, Italy; School of Chemistry and Physics, UKZN, South Africa*
Computer Simulation of Polymeric Materials at the Interface
- 10:30-11:00** **Paula Faria**, *CDRSP, Portugal*
Digital Twin: A New Tool for Tissue Engineering
- 11:00-11:30** **Samuel Chigome**, *Botswana Institute for Technology Research and Innovation, Botswana*
Electrospinning: A Material Fabrication Technique for Addressing Africa's Current and Future Challenges

11:30-11:50 **Break**

Session-1: Green Chemistry, Polymer Applications, Polymer Simulations and Polymers for Energy Generation and Storage

Chair: Geoffrey Robert Mitchell, *Vice Director, CDRSP, Portugal*

- 11:50-12:10** **Wei Huang**, *Nanyang Technological University, Singapore*
Solid State Rapid Additive Manufacturing
- 12:10-12:30** **Bimlesh Lochab**, *Shiv Nadar University, India*
Emergence of Greener Polybenzoxazines
- 12:30-12:50** **Saad Zafar**, *Shiv Nadar University, India*
Polymeric Benzoxazine-Sulfur Embedded Chitosan Freestanding Beads as a Sustainable Facile Strategy for Remediation of Mercury and Oil
- 12:50-13:10** **Elena Stoleru**, *Petru Poni Institute of Macromolecular Chemistry, Romania*
Xanthan/poly(Vinyl Alcohol) Composites Embedding Natural Antioxidant Agents with Potential in Food Packaging Applications
- 13:10-13:30** **Gabriela Lewinska**, *AGH University of Science & Technology, Poland*
Small-molecule Dyes Characterization in Three-component Thin Films for Ternary Solar Cells
- 13:30-13:50** **Jakub Misiewicz**, *UPWR, Poland*
Swelling Pressure and Absorbency Under Load as Factors Determining the Use of Superabsorbent Polymers as a Water Storage For Plants in Soils
- 13:50-14:05** **Joana Moreira**, *The University of Beira Interior, Portugal*
Development of Dermic Application Systems Made from Micro/nano Cellulose Biopolymeric Materials with 3D Porosity Simulation to Optimize the Retention and Release of Essential Oils Biomolecules
- 14:05-14:20** **Jose Antonio Silva Mendes**, *The University of Beira Interior, Portugal*
Development of Multi Layer Protection Masks Made from Polymer Based Materials

14:20-14:40 **Break**

Poster Presentations

- 14:40-14:50** **Michal Guzej**, *Heat Transfer and Fluid Flow Laboratory, Faculty of Mechanical Engineering, Brno University of Technology, Czech Republic*
Influence of Melt Flow Direction During Injection Molding on Thermal Performance of Polymer Heat Sinks
- 14:50-15:00** **Marc Marín Genesca**, *Universitat Rovira i Virgili, Spain*
Mechanical and Electrical Behavior of Polymeric Blends with Gtr Particles and Applications
- 15:00-15:10** **Alexey Zanin**, *Mendeleev University of Chemical Technology of Russia, Russian Federation*
Polymerization of Electron-deficient Monomers in Aqueous Solutions Using 1,3-Dimethylimidazolium (Phosphonoxy)Oligosulfanide
- 15:10-15:20** **Gabriela Mijas**, *Universitat Politècnica de Catalunya, Spain*
Analysis of Lignin Content in Alkaline Treated Hemp Fibres: Thermogravimetric Studies and Determination of Kinetics of Delignification
- 15:20-15:30** **Jose Luis Aparicio-Collado**, *Universitat Politècnica de València, Spain*
Zinc Alginate/Graphene Nanocomposite Hydrogels for Tissue Engineering: Physicochemical And Morphological Characterization
- 15:30-15:40** **Ebru Basaran**, *Anadolu University, Turkey*
Polymeric Microneedles
- 15:40-15:50** **Bach Nadia**, *University Mentouri Brothers Constantine, Algeria*
Variation In the Composition of Exopolysaccharides Produced by Lactiplantibacillus Plantarum Strain Lbio28 Based on the Fermentation Medium

Session-1: Green Chemistry, Polymer Applications, Polymer Simulations and Polymers for Energy Generation and Storage

Chair: Geoffrey Robert Mitchell, *Vice Director, CDRSP, Portugal*

- 15:50-16:10** **Cielo Char Aubry**, *University of Chile, Chile*
Photopolymerization of Salmon Gelatin of Different Molecular Weight by Uv and Blue Light for Food Safety Applications
- 16:10-16:30** **Bárbara Rodríguez**, *Universidad de Chile, Chile*
Anti-biofouling Properties and Desalination Performance of Thin Film Composite Membranes Modified With Different Antimicrobial Agents
- 16:30-16:50** **Benoit Lessard**, *University of Ottawa, Canada*
Thickness Independent, Low Voltage Operating Organic Thin Film Transistors With Fast Switching Speeds Through the Engineering of Polymer Dielectrics
- 16:50-17:15** **Fred Davis**, *University of Reading, UK*
Smart Greenhouse Cladding

Organising Partner

GED Biomedical Innovations AB

Per Albin Hanssons vag 41
Malmö- 20512, Sweden
Phone: +46 40 666 53 35

Email: committee@biopolymersepisode.com

Web: <https://polymersconference.yuktan.com/>

Administrative Office Yuktan Technologies Pvt Ltd

1 Raffles Place, #44-01A
One Raffles Place
Singapore 048616