

7th International Conference on **Polymer Science and Composite Materials**

Day 1 October 05, 2023

Meeting Hall: Prati

09:00 - 09:45 Registrations

09:45 - 10:00 Introduction

Keynote Presentations

10:00 - 10:45 Title: Multi-Responsive Nanostructured Materials to Treat Cancer, Cardiovascular as Well as Kidney Diseases

Hermis Iatrou, National and Kapodistrian University of Athens, Greece

10:45-11:30 Title: DNA as A Functional Polymer in Nanotechnology

Nina Kasyanenko, Saint Petersburg State University, Russia

Group Photo 11.30 - 11.45

Networking & Refreshments 11:45 - 12.00 @ LOBBY BAR

Oral Presentations

Chair **Jalal El Yagoubi**, I2M Bordeaux, France

Sessions

Smart and Functional Polymers | Biopolymers and Biocomposites | Polymer Waste Recycling and Management | Renewable and Sustainable Polymers | Polymer Chemistry | Polymer Processing and Rheology | Polymer Synthesis and Characterization | Natural and Industrial Waste Based Polymer Composites: Processing, Characterization and Applications | Correlations and Simulations in Polymer Science

12.00 - 12.30 Title: Post-Consumer Recycling of High-Density Polyethylene Lubricant Bottles

Yogesh Patil, Hindustan Petroleum Corporation Limited, India

12.30 - 13.00 Title: Development of Novel Bio-based Primary Antioxidant for the Thermo-Oxidative Stabilization of Polyolefins

Ujjal Haldar, Hindustan Petroleum Corporation Limited, India

13.00 - 13.30 Title: Phthalate Free Novel Ziegler-Natta Catalyst for Propylene Polymerization

Nilesh Mote, Hindustan Petroleum Corporation Limited, India

Lunch 13:30 - 14:30 @ RISTORANTE

14.30 - 15.00 Title: Influence of Stretching on The Microstructure and Gas Permeability Properties of PBS Films

Mathurin Prieur, University of Lyon, France

15.00 - 15.30 Title: Microwave-Accelerated Degradation of Glass Fiber-Reinforced Plastics and Their Horizontal Recycling

Kazutoshi Ikenaga, Sojo University, Japan

15.30 - 16.00 Title: Some Challenges Related to the Design of Compression Tests Applied to Long Fiber Composite Materials

Jalal El Yagoubi, I2M Bordeaux, France

16.00 - 16.30 Title: What Else Dynamic Mechanical Analysis Can Tell You About Your Polymers and Composites?

Olivier Savard, Hitachi High-Tech Analytical Science Ltd, United Kingdom

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Networking & Refreshments 16:30 - 17.00 @ LOBBY BAR

17.00 - 17.30 Title: Thermo-Mechanical Properties of Untreated and Nanoclay Treated of Few Natural Fiber Reinforced Thermoset Epoxy Polymer Composites

Mohan Turup Pandurangan, Durban University of Technology, South Africa

17.30 - 18.00 Title: Sealing Material Model Calibration in Industrial Applications

Julia Petro, Polymer Competence Center Leoben GmbH, Austria

18.00 - 18.30 Title: Basalt-Fiber Reinforced Ballistic Panels: A Numerical Simulation-Based Preliminary Investigation

Samia Danuta Brejão de Souza, Leonardo Labs, Italy

Day 1 Concludes followed by Awards Ceremony

7th International Conference on **Polymer Science and Composite Materials**

Day 2 October 06, 2023

Meeting Hall: **Prati**

Oral Presentations

Chair **Jalal El Yagoubi**, I2M Bordeaux, France

Sessions Polymers and Environmental Applications | Biopolymers and Biocomposites | Polymer Nanostructures and Nanocomposites | Smart and Functional Polymers | Polymer Physics | Biomedical and Biodegradable Polymers

10.00 - 10.30 Title: DNA Complexes with Metal Coordination Compounds as a Base for the Fabrication of DNA nanostructures with Metal Nanoparticles

Nina Kasyanenko, Saint Petersburg State University, Russia

10.30 - 11.00 Title: Tailored Bio-Composite Materials Based on Synergetic Interactions of Polycaprolactone (PCL) and Guar Gum Derivative

Taha El Assimi, Cadi Ayyad University, Morocco

Networking & Refreshments 11.00 - 11.30 @ LOBBY BAR

11:30 - 12:00 Title: Gold Nanoshells Embedded as Core-Shell Architectures in Hybrid Poly(L-Histidine)-Containing Polymers for Photothermal Therapies

Hermis Iatrou, National and Kapodistrian University of Athens, Greece

12:00 - 12:30 Title: TBC

Ivana Schwarz, University of Zagreb, Croatia

Lunch 12:30 - 13:30 @ RISTORANTE

Poster Presentations

PSCM-P01 Title: Bio-Based Microgels for Tissue Engineering

Gokul Kamaraju, RWTH Aachen University, Germany

PSCM-P02 Title: Properties of Polymer Composites Modified with Low Molecular Weight Organosilicon Substances with Mineral Fillers

Natia Shengelia, Sokhumi State University, Georgia

PSCM-P03 Title: Electrospun Cellulose Acetate/Silica Hybrid Nanocomposites as Multifunctional Oil Structuring Agents

José M. Franco, University of Huelva, Spain

PSCM-P04 Title: Boron-Nitrogen Analogues of Spirobifluorene-Based Porous Polymers

Isabel He, The University of Edinburgh, United Kingdom

PSCM-P05 Title: Investigation of the Effect of Moisture Content on Mechanical Properties in the Case of Aliphatic Polyketone with Glass Fiber Reinforced Composites, Polyamide 6 and Polyamide 66

Annamária Polyákné Kovács, University of Miskolc, Hungary

PSCM-P06 Title: Poly(Glycerol Citrate)+PLLA Nonwovens for Possible Biomedical Applications

Krzysztof Kolankowski, Warsaw University of Technology, Poland

PSCM-P07 Title: Biodegradable and Bioresorbable Nonwovens Based on Poly(1,3-Propanediol Citrate) for Ex-Vivo Cell Culturing

Aleksandra Bandzerewicz, Warsaw University of Technology, Poland

Day 2 Concludes

Panel Discussion - Awards & Closing Ceremony followed by Vote of Thanks

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Virtual Presentations

Day 1 October 05, 2023 BST Zone

09:50 - 10:00 Introduction

Keynote Presentations

10:00-10:30 Title: Harvesting and Conversion of Thermal Energy into Mechanical Work by Polymer Actuators
Oleg Dimitriev, National Academy of Science of Ukraine, Ukraine

Oral Presentations

10:30-10:55 Title: Quantum Size Effect to Induce Colossal High-Temperature Energy Storage Density and Efficiency in Polymer/Inorganic Cluster Composites
Qi Li, Tsinghua University, China

10.55 - 11.20 Title: Modification of Wood by Tannin-Furfuryl Alcohol Resins–Effect on Dimensional Stability, Mechanical Properties and Decay Durability
Mahdi Mubarak, IPB University, Indonesia

11.20 - 11.45 Title: Polydopamine-Polystyrene/Polyethylene Glycol-based Phase Change Nanospheres for Solar-to-Thermal Energy Conversion and Storage: Comparative Study on Preparation Methodology of Polydopamine-Containing Systems
Cuneyt Erdinc Tas, Technological University of the Shannon, Ireland

11.45 - 12.10 Title: Dynamic Bacterial Colonization vs. Biofilm Formation on Polylactic Acid Surface Under Diabetic Environments
Juan Manuel Casares-López, University of Extremadura, Spain

12.10-12.35 Title: Dielectric and Viscoelastic Properties of New 3D-printed Biobased Materials
Morgan Lecouplet, UniLaSalle, France

12.35 - 13.00 Title: High Binding Capacity of Single-Layer Albumin-Based Cryogel Toward Haemin and Enhancement of Its Mechanical Stability by The Double-Layer Macroporous Formation
Solmaz Hajizadeh, Lund University, Sweden

Lunch @ 13:00 - 13:30

13.30 - 13.55 Title: Green Composites Prepared from Sheep Wool Reinforced Vulcanised Rubber with Enhanced Physical and Mechanical Properties
Seiko Jose, Mahatma Gandhi University, India

13.55 - 14.20 Title: Fabrication of Smart Biopolymer Nanocomposite Film
Sazzadur Rahman, Institute of Advanced Study in Science and Technology, India

14.20 - 14.45 Title: Designing Smart and Sustainable Biochar/PLA Based Porous Electrospun Fibrous Constructs for Controlled-Release Fertilizer Systems
Krishna Priyadarshini Das, Indian Institute of Technology Delhi, India

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14:45-15:10 Title: PCM@HAF Microcapsules: A Sustainable and Efficient Solution for Passive Cooling
Yeliz KONUKLU, Omer Halisdemir University, Turkey

15:10-15:35 Title: Revolutionizing Material Testing of Elastomers: The Biaxial Deformation Breakthrough
Dilshad Ahmad, Khalifa University, UAE

Poster Presentations

15.35 - 15.55 Title: The Effect of Preheating of Composite Resin on Its Color Stability After Immersion in Tea and Coffee Solutions: An In-Vitro Study
Sanaz Mihandoust, Guilan University of Medical Sciences, Iran

Day 1 Concludes

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Day 2 October 06, 2023 BST Zone

Oral Presentations

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| 11.00 - 11.25 | Title: Physico-chemical Response of a PLA/quercetin/magnesium Composite to Ultraviolet Exposure Juan Manuel Casares-López , University of Extremadura, Spain |
| 11:25 - 11:50 | Title: Fabrication and Testing of Elastomeric Composite skin for 1D Morphing Wing Application Dilshad Ahmad , Khalifa University, UAE |
| 11:50-12:15 | Title: Lignite-Derived Humic Acid: A Potential New Material for Phase Change Material Composites Yeliz KONUKLU , Omer Halisdemir University, Turkey |
| 12:15-12:40 | Title: Straightforward Process for Hydrophobising Cellulose Paper with Oleic Acid Using a Hot Press Naji Majoudi , Mohammed VI Polytechnic University, Morocco |
| 12:40-13:05 | Title: Photodeformable Liquid Crystal Polymers and Novel Microfluidic Technology Yanlei Yu , Fudan University, China |
| 13:05-13:30 | Title: Scratching Resistance of Anticorrosive Epoxy Coatings Reinforced with Zrc and Ti-Ni Nanostructures Luis Hernández-Maya , Instituto Mexicano del Petróleo, México |
| 13:30-13:55 | Title: Effect of Failure Criteria on Open Hole Compressive Strength and Damage Mechanisms in CFRP Laminates Akın Ataş , The University of Manchester, UK |