



# 15<sup>th</sup> Hellenic Polymer Society International Conference

3-6 December 2025 | Patras

## PROGRAM BOOK

[polyconf15.gr](http://polyconf15.gr)

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## WELCOME

On behalf of the Organizing Committee and the Hellenic Polymer Society, we cordially invite you to participate in the 15th Hellenic Polymer Society International Conference (POLYCONF15) which will take place the period 3-6 December 2025 at the Conference and Cultural Center of the University of Patras, Patras, Greece.

The Hellenic Polymer Society International Conference series, is a biannual event hosted in different cities in Greece and features plenary lectures, invited talks, oral and poster presentations from Academics, Researchers, and Industrial partners.

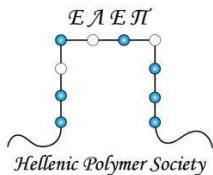
The purpose of the Conference is to communicate the steady and continuous evolution of research in the field of Polymer Science in Greece and abroad and to promote the interaction between basic research and industry, aiming at the maximum possible technological development.

The thematic areas that will be covered include Health, Energy and Environment, Theory and Simulations, Industrial Processes and Applications, and Novel Polymer-Based Materials.

More specifically, the following topics are planned to be discussed: Synthetic and Bio-polymers in Life Sciences, Polymer Formulations for Drug and Gene Delivery, Polymers for Energy and Environmental Applications, Sustainable Polymeric Materials, Biobased and Biodegradable Polymers, Polymer Recycling, Micro/Nano plastics, New Theoretical Developments in Polymer Science, Mathematical Modelling and Computer Simulations, Structure/Properties Predictive Tools Based on AI, Organic and Hybrid Coatings, Polymer Production and Processing, Polymer Characterization, Materials for Packaging Applications, Polymers for Electric, Optical and Electronic Applications, 3D-Printing, Polymer Synthesis and Functionalization, Polymer Blends, Alloys and Composites

At POLYCONF15, will take place for the selection of the new Board of Directors of the Hellenic Polymer Society.

## CONFERENCE ORGANIZERS



### Under the auspices of



### Presiding Board

**G. Bokias** (Chem. Dept., Univ. of Patras)  
**G.C. Psarras** (Mat. Sci. Dept., Univ. of Patras)  
**G.A. Voyatzis** (FORTH/ICE-HT, Patras)

### Organizing Committee

**A.K. Andreopoulou** (Chem. Dept., Univ. of Patras)  
**K.S. Andrikopoulos** (Physics Dept., Univ. of Patras)  
**G. Bokias** (Chem. Dept., Univ. of Patras)  
**V. Deimede** (Chem. Dept., Univ. of Patras)  
**Z. Iatridi** (Mat. Sci. Dept., Univ. of Patras)

**P.K. Karahaliou** (Physics Dept., Univ. of Patras)  
**G. Pasparakis** (Chem. Eng. Dept., Univ. of Patras)  
**G.C. Psarras** (Mat. Sci. Dept., Univ. of Patras)  
**G.A. Voyatzis** (FORTH/ICE-HT, Patras)  
**S.N. Yannopoulos** (Chem. Dept., Univ. of Patras)

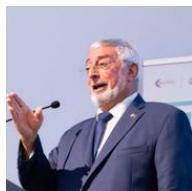
## KEYNOTE SPEAKERS



**Nikos Hadjichristidis**

***"The Beauty of Polymer Chemistry"***

Nikos Hadjichristidis is the Ibn Alhaytham Distinguished Professor of Chemistry at King Abdullah University of Science and Technology (KAUST) in Saudi Arabia.



**Georges Hadzioannou**

***"Polymers, electronics and the genesis of polymer printed flexible electronics"***

Georges Hadzioannou since 2022 is Emeritus Professor of Bordeaux University (Fr). In 1975 he obtained his bachelor's degree in chemistry from the Aristotle University of Thessaloniki.



**Katja Loos**

***"Green Pathways to Functional and Renewable Polymeric Materials"***

Katja Loos is Professor at the Zernike Institute for Advanced Materials of the University of Groningen, holding the chair of Macromolecular Chemistry and New Polymeric Materials.



**Doros Theodorou**

***"Molecular Modeling for Polymer Product Design"***

Doros Theodorou (orcid 0000-0002-4763-9739, Google Scholar) just retired from his position as Professor of Chemical Engineering at the National Technical University of Athens, Greece (NTUA).

## SPONSORS

### Gold Sponsors



### Silver Sponsor



### Student Poster Award



# GENERAL INFORMATION

## Location

The conference takes place in Patras, Greece. It is the third largest city in Greece. Athens international airport is situated 239Km east of Patras.

Visitors arriving at Athens can reach Patras by train, bus or car.

By Train & Bus. From Athens airport, take the suburban rail to Kiato. From Kiato, the bus corresponds to Patras. The journey takes ~3 hours.

By bus. From Athens airport, take the express bus to the intercity coach station, and then the bus to Patras (whole duration is ~4 hours).

By car. From Athens via the Athens-Patras motorway. There are multiple options to rent a car at the airport. The journey time is ~2.5 hours.

## Venue

### **Conference and Cultural Centre of the University of Patras**

Address: University of Patras, 26504 Rio, Greece



The POLYCONF15 conference will be held at the Conference and Cultural Center of the University of Patras, a modern and well-equipped venue, ideal for high-level scientific events.

The University of Patras is located on a lush green campus in the Rio area, with easy access from the center of Patras. The location combines comfort, modern infrastructure and a welcoming environment for participants.

How to get to the venue from Patras' city center:

Bus: Urban line 6 (University – Center) connects the center with the campus.

Taxi: Abundantly available throughout the city.

Driving: There are parking spaces within the University.

### **Conference Dinner**



The Conference Dinner will take place on Thursday, December 4th at 21.00 at “DECK Kalipso Restaurant”. A tasty buffet dinner will be prepared for you. Please book the conference dinner through the conference website. Pre-booking and pre-payment are required.

## **USEFUL CONTACTS**

Conference and Cultural Centre (Venue)	0030 2610 996734
Patras Bus Station	0030 2610 623886
Taxi Patras	0030 2610 450000
General Hospital of Patras	0030 2613 603000
Ambulance (emergency)	166
Fire Department (emergency)	199
Police (emergency)	100
European emergency service line	112

### **Conference Secretariat**

#### **Diazoma Conferences and Events**

<https://diazoma.net>



Tel: 0030-2810321494, 0030-6908 215112

Emails:

[info@diazoma.net](mailto:info@diazoma.net)  
[conferences@diazoma.net](mailto:conferences@diazoma.net)  
[meetings@diazoma.net](mailto:meetings@diazoma.net)

# 15th Hellenic Polymer Society International Conference

## PROGRAM TABLE

### Wednesday 3<sup>rd</sup> December 2025

17:00-18:45	Lobby	Registration
18:45-20:30	Lobby	Welcome Reception

### Thursday 4<sup>th</sup> December 2025

Room A	Session TA1	09:00-11:00 <b>Chairs:</b> Georges HADZIOANNOU, George VOYIATZIS	Speaker	Room B	Session TB1	10:10-11:05 <b>Chairs:</b> Emmanouil GLYNOS, Vagelis HARMANDARIS	Speaker
09:00-09:30		<b>Opening Ceremony – Welcome</b> <b>Chairs:</b> Georgios BOKIAS, George VOYIATZIS, Georgios PSARRAS <b>Welcome Speeches</b> Christos BOURAS, Rector, University of Patras Theofilos IOANNIDES, Director of FORTH/ICE-HT Emmanuel PASPALAKIS, Dean of the School of Natural Sciences Theocharis STAMATATOS, Head of the Department of Chemistry		09:00-09:30	-	-	-
09:30-10:10	Keynote Talk	The Beauty of Polymer Chemistry	Nikos HADJICHRISTIDIS	09:30-10:10	-	-	-
10:10-10:35	Invited Talk	Synthesis, Characterization and Self-Assembly of Linear and Non-Linear Terpolymers. Effect of Architecture on Microphase Separation	Apostolos AVGEROPOULOS	10:10-10:35	Invited Talk	End-of-Life Strategies and Biobased Approaches towards Sustainable Polymers	Stamatina VOUYIOUKA
10:35-11:00	Invited Talk	Main Chain Stimuli-Degradable Polymers	Maria VAMVAKAKI	10:35-10:50	Oral Presentation	Sustainable High-Density Polyethylene through Reversible Network Formation	Christina SAMIOTAKI
-	-	-	-	10:50-11:05	Oral Presentation	Structure-Property Relationship of Biocompatible Electrolytes Based on Polyhistidine and Poly(ethylene oxide)	Margarita LUSHA
11:00-11:30	Lobby	<b>Coffee Break</b>					

Room A	Session TA2	11:30-13:25 <b>Chairs:</b> Aristeidis PAPAGIANNOPoulos, George PASPARAKIS	Speaker	Room B	Session TB2	11:30-13:35 <b>Chairs:</b> Kiriaki CRISSOPOULOU, Margarita CHATZICHRISTIDI	Speaker	
∞	11:30-11:55	Invited Talk	Synthesis and self-assembly of branched copolymer systems	Stergios PISPAS	11:30-11:55	Invited Talk	Wetting states and friction of drops on superhydrophobic and slippery surfaces	Periklis PAPADOPoulos
	11:55-12:10	Oral Presentation	Well-defined polyisoprene vitrimers	Konstantinos NTETSIKAS	11:55-12:10	Oral Presentation	Design of Polyurea Microcapsules for Self-healing Applications	Efterpi AVDELIODI
	12:10-12:25	Oral Presentation	Thin Film and Bulk Morphologies in Linear Triblock Terpolymers of Polystyrene, Polybutadiene and Polydimethylsiloxane	Konstantinos ARTOPOIADIS	12:10-12:25	Oral Presentation	Development of Superhydrophobic Polymer Nanocomposite Coatings exhibiting Antifouling behaviour	Gojda FRANCESKA
	12:25-12:40	Oral Presentation	Macromolecular Brushes based on Polyisocyanates	Aikaterini KATARA	12:25-12:40	Oral Presentation	Self-healing polyurethane nanocomposites: effect of graphene derivative on healing performance	Evangelia GIANNAKAKI
	12:40-12:55	Oral Presentation	Morphological Transitions of "Soft Nature" Diblock Viscoelastic Copolymers	Ioannis MOUTSIOS	12:40-12:55	Oral Presentation	Itaconic Acid-Based Covalent Adaptive Networks for Sustainable 3D Printing	Lazaros PAPADOPoulos
	12:55-13:10	Oral Presentation	How Does Molecular Design Induce Intricate Network Phases?	Maria Gkreti MANESI	12:55-13:10	Oral Presentation	3D-Printed PETG Ternary Composites Reinforced with Short Carbon Fibers and Carbon Nanotubes: Insights into Multiscale Synergistic Mechanisms	Fivos SIMOPOULOS
	13:10-13:25	Oral Presentation	N-Vinylpyrrolidone and 2-Chloroethyl Vinyl Ether based Copolymers as Scaffolds for Poly(Lactide)-Grafted Architectures	Nikolaos PLACHOURAS	13:10-13:35	Invited Talk	Graphene-Polymer Composites: From Nanoengineering to Multifunctional Macroscale Applications	Costas GALIOTIS
	13:40-14:40	Lobby	<b>Lunch Break</b>					
Room A	Session TA3	14:40-16:20 <b>Chairs:</b> Kelly VELONIA, Zacharoula IATRIDI	Speaker	Room B	Session TB3	14:40-16:15 <b>Chairs:</b> Konstantinos RAFTOPOULOS, Georgios BOKIAS	Speaker	
	14:40-15:05	Invited Talk	Nanostructured materials as drug delivery vehicles to treat cancer, cardiovascular and other diseases	Hermis IATROU	14:40-15:05	Invited Talk	Polymer Recycling: Current perspectives and limitations	Dimitris ACHILIAS
	15:05-15:20	Oral Presentation	Poloxamer hydrogels as a modern delivery system of biologically active substances	Joanna SKOPINSKA-WISNIEWSKA	15:05-15:30	Invited Talk	Degradation of Synthetic Polymers and the Emergence of Microplastics: Linking Structure, Aging, and Biological Impact	Dimitris BIKIARIS

15:20-15:35	Oral Presentation	pH-Responsive Poly(L-Histidine) Nanoparticles for Enhanced Delivery of Platinum-Based Chemotherapeutics	Iren Georgia STAVRAKAKI	15:30-15:45	Oral Presentation	Upcycling Waste Cotton Textiles into Bacterial Cellulose via Integrated Enzymatic–Microbial Processing	Nikoleta GRIVA ANNA	
15:35-15:50	Oral Presentation	Combined Chemo-Photothermal Treatment of Pancreatic Cancer Cells by Paclitaxel-loaded Graphene Nanoparticles stabilized by PLA-PEG	Athina ANGELOPOULOU	15:45-16:00	Oral Presentation	Molecular Dynamics in Vitrimer: Effects of Molecular Weight and Crosslinking in PnBMA	Michail DANIKAS	
15:50-16:05	Oral Presentation	Electrostatic self-assembly of xanthan gum and diethylaminoethyl dextran: preparation, characterization, encapsulation of $\beta$ -carotene and interaction with mucus-mimicking systems	Ioannis PISPAS	16:00-16:15	Oral Presentation	Polyhydroxalkanoates Production: Performance and Microbial Dynamics of an MMC enriched with PHAs biocatalyst and fed with acidified food waste	Androniki MALIOUFA	
16:05-16:20	Oral Presentation	Insights into Drug-Polymer Interactions in Paclitaxel Loaded Nanoparticles via NMR Spectroscopy	Aggelos Ioannis PATSIS	-	-	-	-	
16:20-16:45	Lobby	<b>Coffee Break</b>						
6	Room A	Session TA4	16:45-18:45 <b>Chairs:</b> Valadoula DEIMEDE, Lazaros TZOUNIS	Speaker	Room B	Session TB4	16:45-18:45 <b>Chairs:</b> Georgios PSARRAS, Panagiota KARAHALIOU	Speaker
	16:45-17:10	Invited Talk	Water Permeability and Ion Separation based on Multi-Layered Graphene-Oxide Functionalized Membranes: An in-Silico Investigation	Konstantinos KARATASOS	16:45-17:10	Invited Talk	$\alpha$ -helices and $\beta$ -sheets in Polypeptides show distinct Local and Global Dynamics	George FLOUDAS
	17:10-17:35	Invited Talk	Mixed matrix membranes composed of graphene-based derivatives as additives in PVAm for CO <sub>2</sub> capture	Solon ECONOMOPOULOS	17:10-17:35	Invited Talk	Biofabrication of 3D complex tissues and cancer models using functional biomaterials and extrusion bioprinting	Maria CHATZINIKO-LAIDOU
	17:35-17:50	Oral Presentation	Transport Properties in Electrode Laminas and Electrolytes for Structural Batteries	Achilleas PIPERTZIS	17:35-17:50	Oral Presentation	Advancing Multiscale Computational Techniques to Design Sustainable Food Packaging	Andoni UGARTEMENDIA
	17:50-18:05	Oral Presentation	Flexible 3D printed nanocomposite electrodes for sensing and energy storage applications	Stefanos MATSALIS	17:50-18:05	Oral Presentation	Effect of Vitrimer on the Structure and Dynamics of High-Density Polyethylene	Stefano CHIANI
	18:05-18:30	Invited Talk	New Shortwave Infrared Conjugated Polymers for High Performance Organic Photodetectors and Ambipolar Phototransistors	Christos CHOCHOS	18:05-18:20	Oral Presentation	Laser-assisted reduction of GO of polyester textiles: A platform for energy conversion and storage in smart clothing	Natalia KANTOUNI
	18:30-18:45	Sponsors presentation			18:20-18:45	Invited Talk	Eco-friendly recycling of fibre-reinforced composites via thermally assisted hydrogen peroxide treatment	Vasilis KOSTOPOULOS

18:45-20:00	Lobby	<b>Poster Session 1</b>
21:00-23:00		<b>Conference Dinner</b>

## Friday 5<sup>th</sup> December 2025

Room A	Session FA1	09:00-11:00 <b>Chairs:</b> Spiros ANASTASIADIS, Konstantinos KARATASOS	Speaker	Room B	Session FB1	09:40-11:00 <b>Chairs:</b> Dimitris ACHILIAS, Christos CHOCHOS	Speaker
09:00-09:40	Keynote Talk	Molecular Modeling for Polymer Product Design	Doros THEODOROU	09:00-09:40	-	-	-
09:40-10:05	Invited Talk	62 Years of the K-BKZ Constitutive Relation for Polymers	Evan MITSOULIS	09:40-10:05	Invited Talk	Polymer Nanocomposites: Correlating Structure with Properties	Kiriaki CRISSOPOULOU
10:05-10:30	Invited Talk	Computer-aided design of biomolecular nanocarriers for drug delivery applications	Anastassia RISSANOU	10:05-10:30	Invited Talk	A high-performance thermoelectric generator (TEG) device based on 3D printed TPU gyroid structures infiltrated with p- and n-type single-walled carbon nanotubes	Lazaros TZOUNIS
10:30-10:45	Oral Presentation	Molecular Dynamics Simulations for Organic Molecules using Atomic Cluster Expansion Potentials	Artem TOMILO	10:30-10:45	Oral Presentation	Fabrication and characterization of chitosan-based fluorescent microrobots	Haoying WANG
10:45-11:00	Oral Presentation	Atomistic Insights into CO <sub>2</sub> Capture Efficiency of PVDF/Ionic Liquid Composite Membranes	Nikolaos PATSALIDIS	10:45-11:00	Oral Presentation	Green Epoxy Resin/SiO <sub>2</sub> Composites: Development and Study of Dielectric Response and Thermomechanical Behavior	Anastasios PATSIDIS
11:00-11:30	Lobby	<b>Coffee Break</b>					
Room A	Session FA2	11:30-13:25 <b>Chairs:</b> Maria VAMVAKAKI, Stergios PISPAS	Speaker	Room B	Session FB2	11:30-13:30 <b>Chairs:</b> George FLOUDAS, Hermis IATROU	Speaker
11:30-11:55	Invited Talk	Macromolecular Design Strategies for High-Performance Single-ion Electrolytes for Solid-State Batteries	Emmanouil GLYNOS	11:30-11:55	Invited Talk	Combining Metal Oxides with Lithography: Top-Down and Bottom-Up Approaches	Margarita CHATZICHRISTIDI
11:55-12:10	Oral Presentation	Exploring the anticancer potential and enhanced delivery of a novel styrylquinazolinone derivative for glioblastoma treatment	Katarzyna MALARZ	11:55-12:10	Oral Presentation	Supersoft Polymer Melts in Binary Blends of Bottlebrush cis-1,4-Polyfarnesene and cis-1,4-Polyisoprene	Ioannis TZOURTZOUKLIS
12:10-12:25	Oral Presentation	Plant Biomass-Derived Crosslinking Agents in Gelatin Hydrogel Systems: Material Characterization and Biomedical Relevance	Katarzyna BIALIK-WAS	12:10-12:25	Oral Presentation	Nanoparticle Network Formation and Crystallization Kinetics in PEO/SiO <sub>2</sub> Nanocomposites Revealed by Simultaneous SAXS/WAXS	Antonia ATHANASAKI
12:25-12:40	Oral Presentation	pH responsive nanogels for pulmonary drug delivery	Nikolaos POLITAKOS	12:25-12:40	Oral Presentation	Phase Diagram and Dynamics of Diblock Copolymers with Conformational Symmetry	Nikolaos FOTARAS
12:40-12:55	Oral Presentation	Ion-Mediated Modulation of DNA Oligo-Catenane Structure and Compactness	Terpsichori ALEXIOU	12:40-13:05	Invited Talk	Reduction of dynamic helical polymers to 1D Ising-like models: long range effects from polymer self-avoidance	Kostas DAOULAS

12:55-13:10	Oral Presentation	Eco-friendly synthesis of biodegradable PLA-based exfoliant microbeads via droplet microfluidics for sustainable cosmetics	Nikolaos BIKIARIS	13:05-13:30	Invited Talk	Multiscale Investigation of Polymer-Based Nanostructured Materials Using Simulations and Machine Learning: From Atoms to Macroscopic Properties	Vagelis HARMANDARIS
13:10-13:35	Invited Talk	Tailored Biopolymer Nanocarriers from Protein–Polysaccharide Complexes for Delivery of Bioactive Molecules	Aristeidis PAPAGIANNOPoulos	-	-	-	-
13:25-14:25	Lobby	<b>Lunch Break</b>					
Room A	Session FA3	14:25-16:30 <b>Chairs:</b> Apostolos AVGEROPOULOS Georges HADZIOANNOU	Speaker	Room B			
14:25-15:05	Keynote Talk	Green Pathways to Functional and Renewable Polymeric Materials	Katja LOOS	-	-	-	-
15:05-15:30	Lobby	<b>Coffee Break</b>					
12	<b>Retirement Ceremony</b> Georgios BOKIAS, George VOYIATZIS, Georgios PSARRAS						
	Constantinos G. GALIOTIS	Presenter: Doros THEODOROU					
	Joannis K. KALLITSIS	Presenter: Georges HADZIOANNOU					
	Vassilis KOSTOPOULOS	Presenter: Georgios PSARRAS					
	Georgios STAIKOS	Presenter: Georgios BOKIAS					
	Constantinos TSITSILIANIS	Presenter: Hermolaos IATROU					
17:00-18:30	Room A	<b>Hellenic Polymer Society - General Assembly</b> Apostolos AVGEROPOULOS					
18:00-20:15	Lobby	<b>Poster Session 2</b>					

Saturday 6 <sup>th</sup> December 2025								
Room A	Session SA1	09:00-11:15 <b>Chair:</b> Doros THEODOROU, Katja LOOS	Speaker	Room B	Session SB1	09:40-11:15 <b>Chair:</b> Evan MITSOULIS, Aikaterini ANDREOPOLOU	Speaker	
13	09:00-09:40	Keynote Talk	Polymers, electronics and the genesis of polymer printed flexible electronics	Georges HADZIOANNOU	09:00-09:40	-	-	-
	09:40-10:05	Invited Talk	PVDF-based tetrapolymers: A playground for ferroelectrics and their applications	Eleni PAVLOPOULOU	09:40-10:05	Invited Talk	Protein-polymer Conjugates: Synthesis and Catalytic Activity	Kelly VELONIA
	10:05-10:20	Oral Presentation	Cradle-to-gate analysis of OPVs: Impact of the synthetic methodology of different polymeric donors	Konstantinos C. ANDRIKOPOULOS	10:05-10:20	Oral Presentation	GRECO: Innovative Bio-based, Biodegradable, Recyclable, Safe and Circular Food Packaging	Eleftheria XANTHOPOULOU
	10:20-10:35	Oral Presentation	Hybrid composites as inks and humidity-responsive membranes for sensing, actuation, and moisture-enabled energy generation	Ioanna TZOUMANI	10:20-10:35	Oral Presentation	Development of sustainable HDPE composites incorporating lignin-based additives	Alexandra ZAMBOULIS
	10:35-11:00	Invited Talk	Water-soluble polyelectrolyte complexes as amphiphilic systems formed by means of grafting hydrophilic neutral chains on one of their consisting polyelectrolytes and possible applications	Georgios STAIKOS	10:35-11:00	Invited Talk	Upscaling sustainable polymer nanocomposites in Europe: the role of the BIOMAC OITB	Zoi TERZOPPOULOU
	11:00-11:15	Oral Presentation	Polymer Imbibition into Nanochannels: From Linear to Branched	Panagiotis KARDASIS	11:00-11:15	Oral Presentation	Nanocellulose based materials as additives for sustainable completely biobased packaging applications	Panagiotis TSAOUSIS
	11:15-11:45	Lobby	Coffee Break					
	Room A	Session SA2	11:45-13:25 <b>Chair:</b> Valadoula DEIMEDE, Spyros N. YANNOPOULOS	Speaker	Room B	Session SB2	11:45-13:35 <b>Chair:</b> Anastassia RISSANOU, Konstantinos ANDRIKOPOULOS	Speaker
	11:45-12:00	Oral Presentation	A Macromolecular Design Platform for Self-Healable, Mechanically Robust Solid Polymer Electrolytes for Next Generation Lithium Batteries	Eirini DRAMOUNTANI	11:45-12:10	Invited Talk	Hydration in Non-Isocyanate Polyurethanes	Konstantinos RAFTOPOULOS

12:00-12:15	Oral Presentation	Abundant-Ion Chemistries in PEO-Based Electrolytes: Decoding the Role of Cation Identity in Structure and Transport	Chrysostomos PAPAMICHAIL	12:10-12:25	Oral Presentation	Influence of poly (ethylene azelate) (PEAz) blocky segments on the properties of PLA-based copolymers and blends	Rafail IOANNIDIS
12:15-12:30	Oral Presentation	Difluoro-Substituted Thiophene-Based N-Type Conjugated Polymers as Electron Acceptors for Indoor Organic Solar Cells	Vasiliki KIRYKOU	12:25-12:40	Oral Presentation	Durability assessment of PLA-based biocomposites exploiting wood-waste derived lignocellulosic materials	Vasileios NIKITAKOS
12:30-12:45	Oral Presentation	Laser Scribed Graphene Electrodes and Ionic Liquids Integrated Gel Polymer Electrolytes Based Micro-Flexible Supercapacitors	Sangha MITRA	12:40-13:05	Invited Talk	Benzoxazole Thioethers Based on Xanthone and Thioxanthone Chromophore and their Use as Type I Photoinitiators in the Polymerization of Acrylic Monomers	Konstantinos VARDAKAS
12:45-13:00	Oral Presentation	Electrospun PAN-templated laser-assisted graphene for high-performance flexible supercapacitors	Ioannis-Nektarios CHRONOPOULOS	13:05-13:20	Oral Presentation	Reinforcing of Biodegradable Polymers with Graphene oxide and its Effect on the Kinetics of Isothermal Crystallization	Georgianna ATHANASOULIA
-	-	-	-	13:20-13:35	Oral Presentation	Exploring the Antagonistic Interaction Between Phosphorus and Basic Oxide-Forming Minerals as Flame Retardants in Polymeric Composite Coatings	Evangelia MITROPOULOU
13:35-14:15	Lobby	<b>Light Lunch Break</b>					
14:15-14:45	Room A	<b>Awards, Honors</b>					
14:45-15:10	Room A	<b>Announcements of the Hellenic Polymer Society Conference Closing</b>					

# POSTER SESSION 1

Thursday 4<sup>th</sup> December 2025

P1	<i>Tensile properties of thermoplastic polyurethane (TPU)/ carbon nanotube (CNT) nanocomposites for 3D printing through experiments and simulations</i>	Alexandros SPYRIDAKIS
P2	<i>Biocompatibility of 3D printed microfluidic devices for cell culture under flow</i>	Dimitrios TZITZILIS
P3	<i>Design of materials based on negatively charged cellulose nanocrystals and oppositely charged polyelectrolytes</i>	Georgia KATSIDIMA
P4	<i>Biosynthesis of polyhydroxyalkanoates from olive stones pyrolytic oil and acidified food wastes</i>	Elianta KORA
P5	<i>Biohydrogen and Bioplastics Production from Organic Waste</i>	Kelly VELONIA
P6	<i>Environmental reliability of PHB biodegradation in municipal wastewater treatment plants: a risk-based assessment of activated sludge variability and</i>	Ioanna NTAIKOU
P7	<i>Synthesis and Characterization of Poly(mandelic acid) and Biobased Copolymers</i>	Despoina MEIMAROGLOU
P8	<i>Tailoring NIPUs: Exploring the Role of Various Diacids in Non-Isocyanate Polyurethane Synthesis</i>	Evangelia BALLA
P9	<i>Comparative study of titanium alkoxide catalysts in the melt polycondensation of biobased polyesters</i>	Georgia LATHIRA
P10	<i>Leaching Behavior of Chemical Constituents from Poly(lactic acid) Micro- and Nanoplastics Under Simulated Environmental Aging</i>	Nina Maria AINALI
P11	<i>In situ preparation of LDPE/Casein packaging materials through extrusion process</i>	Eleni TRIANTAFYLLOU
P12		
P13	<i>Synergistic integration of spin crossover and zinc oxide in transparent films for active intelligent packaging</i>	Ioanna PAPAGEORGIOU
P14	<i>Food packaging systems functionalized with clay-polymer nanocomposites and natural bioactive compounds</i>	Georgia LAINIOTI
P15	<i>Polyvinylpyrrolidone-Magnesium Oxide Nanocomposite as an Active Layer for Organic Memristive Devices</i>	Katerina MASKANAKI
P16	<i>Water-Triggered Self-Healing Polyurethane Systems via Microencapsulated Acrylate Copolymers</i>	Efterpi AVDELIODI
P17	<i>Eco-Friendly Superhydrophobic Siloxane-based Nanohybrid Coatings</i>	Erta PETSI
P18	<i>Abrasion Resistance of Polymer and Polymer Nanocomposite Coatings</i>	Maria VLASIADI
P19	<i>Embedding TiO<sub>2</sub> nanoparticles inside polycaprolactone-based polyurethane</i>	Ivan STEFANOVIĆ
P20	<i>Polyurethane/TiO<sub>2</sub> composites: Morphology examination</i>	Ivan STEFANOVIĆ
P21	<i>Hybrid polymer nanocomposites reinforced with boron nitride and halloysite nanoparticles</i>	Panagiota KARAHALIOU
P22	<i>Crosslinking of PVA with Tungsten and Molybdenum Polyoxometalates via optical lithography</i>	Margarita CHATZICHRISTIDI
P23	<i>Development and characterization of recycled poly(ethylene terephthalate) (rPET) nanocomposites reinforced with biochar derived from sewage sludge</i>	Lazaros KARAGIANNIDIS
P24	<i>PAN-PANI/GNP Nanocomposites: Morphological Characteristics and Thermal Response</i>	Anastasios PATSIDIS
P25	<i>Epoxy Resin/Cellulose Nanocomposites: Development, Thermo-Mechanical and Electrical Characterization</i>	Helen SERETI
P26	<i>Cellulose/Fe<sub>3</sub>O<sub>4</sub>/Green Epoxy Resin Hybrid Nanocomposites: Development, Dielectric Response and Functional Performance</i>	Georgios PSARRAS
P27	<i>Synergistic and Antagonistic Interactions of Phosphorus-Based Flame Retardants and Mineral Co-Fillers in Polymers</i>	Evangelia MITROPOULOU
P28	<i>Study of Poly(vinyl butyral) composites reinforced with silica-based particles</i>	Vasileios NIKITAKOS
P29	<i>Incorporation of Nanolignin into HDPE for Sustainable Composite Development</i>	Christina SAMIOTAKI
P30	<i>How Polydispersity Affects the Crystallization and Dynamics of Poly(ethylene glycol)</i>	Vasileios MOSCHOS
P31	<i>Elastic properties of cyanobiphenyl-based dimers determined through capacitance measurements in electric/magnetic fields</i>	Panagiota KAPSALI
P32		

P33	Assessing stress concentration in polymers with circular notches using graphene strain sensors	Elli BELLOU
P34	Advanced Probing of Complex Soft Matter Nanoscale Structures	Maria Gkreti MANESI
P35	Circular Economy Approach for High-Performance Bio-Composites Using Waste PET and Lignin/Biosilica Fillers	Milica VASOVIĆ
P36	Design and Optimization of Microhardness in Eco-Friendly Polyester Composites Reinforced with Functionalized Silica	Milica VASOVIĆ
P37		
P38	Stepwise Synthesis and Functionalization of Polymeric Nanocarriers for Paclitaxel Delivery	Katerina ARVANITI
P39	Densely Grafted Double Hydrophilic Copolymers for Biomedical Applications	Achilleas PIPERTZIS
P40	Engineering a Well-Defined Pentablock Copolymer with Tunable Architecture for Biomedical Use	Christina VARFI
P41	Amphiphilic Thermoresponsive Triblock PLA-PEG-PLA and Diblock mPEG-PLA Copolymers for Controlled Deferoxamine Delivery	Ermioni MALINI
P42	Synthesis of pH-Responsive Hybrid Copolymers and Their Conjugation with Protein to Combat Myasthenia Gravis	Eleni KALANTZI
P43	A study on the preparation and physicochemical properties of chondroitin sulfate/diethylaminoethyl dextran carrier nanocomplexes	Ioannis PISPAS
P44		
P45	Enzymatic hydrolysis of bacterial cellulose assisted by non-thermal plasma technology	Erminta TSOUKO
P46	SYNTHESIS AND CHARACTERIZATION OF WELL-DEFINED TADPOLE-SHAPED POLYSTYRENE SINGLE CHAIN NANOPARTICLES	Athina NANOU
P47	Synthesis of Single Chain Polystyrene Nanoparticles via Reversible Ionic Interactions	Anastasia STERGIOU
P48	Thioethers Based on Anthraquinone Chromophore and their Use as type I Photoinitiators in the Polymerization of Methyl Methacrylate	Stavroula SIMOU
P49	Polymer-photocatalyst hybrid nanofibrous membranes: An immobilization approach for sustainable water purification	Athanasiou SOULIOTIS

## POSTER SESSION 2

Friday 5<sup>th</sup> December 2025

P50		
P51	<i>A Safe, Sustainable Route to High Performance Non-Isocyanate Polyurethane (NIPU) Coatings</i>	Nefeli PAPADOPOULOU-FERMELI
P52	<i>Replacing Styrene in Unsaturated Polyester Resins: From Lab to Application</i>	Dimitrios PERIVOLIOTIS
P53	<i>Tunable Rheological Properties of Cross-linked Hydrogels Based on 2-(dimethylamino)ethyl methacrylate Copolymers</i>	Zacharoula IATRIDI
P54	<i>Synthesis and Characterization of Star-Shaped Poly(<i>n</i>-hexyl isocyanate) Homopolymers via Coordination Polymerization and Core-First Methodology</i>	Evangelos APOSTOLAKIS
P55	<i>Pyrene-Containing Copolymers: Synthesis, Characterization, and Potential Applications in MALDI-TOF MS</i>	Maria TSAKANIKA
P56	<i>Sustainable Routes to Cyclic Carbonates: Glycidol-Based Glycidylation and CO<sub>2</sub> Conversion of Dicarboxylic Acids</i>	Nikolaos PARDALIS
P57	<i>Synthesis and characterization of thermo-responsive OEGMA based copolymers and copolymeric hydrogels</i>	Zacharoula IATRIDI
P58	<i>Synthesis of multifunctional polymers for PFAS removal</i>	Margarita KANELLOPOULOU
P59	<i>Amphiphilic Diblock Copolymers of Poly(<i>N</i>-Vinyl Pyrrolidone) and Poly(Vinyl Esters) Bearing N-Alkyl Side Chains for the Encapsulation of Indomethacin</i>	Nikolaos PLACHOURAS
P60	<i>Development of water-based Biocide/Polymer Mixtures for Potential Use in Effective and Lower-Risk Production Line Disinfection</i>	Maria MOSCHAKOU
P61	<i>Novel PEDOT-based Blends for Electronic Skin Applications</i>	Thaleia-Michaela CHATZAKI
P62		
P63		
P64	<i>Influence of vitrimers on the dynamics and crystallization process of degraded semi-crystalline polyolefins.</i>	Anthi SAPOUNA
P65	<i>Low synthetic complexity N-Type Conjugated Polymers for Indoor Organic Solar Cells based on vinylene linked to heterocycle electron withdrawing units</i>	Vasiliki KIRYKOU
P66	<i>Conductive polymer-enabled giant capacitance enhancement of laser-derived 3D porous graphene supercapacitors</i>	Konstantinos MINOTAKIS
P67	<i>Development of cationic polymeric materials for dyeing cotton substrates and/or treating colored dye wastewater</i>	Eleni PAPADAKOU
P68	<i>Thin Film Composite Nanofiltration Membranes with a PSS interlayer for enhanced permeability and rejection</i>	Georgia ZAFEIROPOULOU
P69	<i>Novel Ion-Solvating Polymer Electrolytes based on crown ether functionalized copolymers for Alkaline Water Electrolysis</i>	Eftychia TSOLKA
P70	<i>PEO-Functionalized Ion-Solvating blend membranes towards high-performance water electrolysis</i>	Sara GJOSHI
P71	<i>Lignin-derived laser-assisted graphene electrodes for sustainable energy storage</i>	Athinais MAVRIKAKI
P72	<i>Polymer Semiconductors for Organic Electronics</i>	Charalampos ANASTASOPOULOS
P73	<i>Investigation of Biopolymer Reinforcement Using 2D Hematite Nanoplatelets</i>	Georgios ALPOCHORITIS
P74	<i>Laser-assisted conversion of organosilicon polymers into graphene/SiO<sub>x</sub> nanohybrids for stable Li-ion anodes</i>	Eleni AMIRALI
P75	<i>Semiconducting Polymers based on Perylene Diimide and Indoloquinoxaline building blocks</i>	Konstantina KOUMOUTSOU
P76	<i>Preparation of phase inversion polymeric membranes and their application as pH sensors monitored via spectroscopic techniques</i>	Ioanna KAITSA
P77	<i>Molecular Design of Low-Bandgap Polymers for High-Performance Organic Photovoltaics</i>	Ioannis MOUTSIOS
P78	<i>Synthesis of methacrylate polyanion random linear and star-shaped copolymers via RAFT polymerization</i>	Andreas KATSAOUNOS
P79	<i>Polymer electrolyte membranes for Zinc-ions batteries</i>	Apostolos TSOUKALOS
P80	<i>Study of the ferroelectric and dielectric properties of PVDF-based tetrapolymers.</i>	Vasiliki GEORGOPOULOU
P81	<i>On Replacing Poly(ethylene oxide) in Solid Block Copolymer Electrolytes by Poly(glycidyl methyl ether): Self-assembly and Ionic Conductivity</i>	Ioannis TZOURTZOUKLIS

<b>P82</b>		
<b>P83</b>	<i>Development of polymer electrolyte membranes based on non-fluorinated aromatic polymers</i>	Anna KONDYLI
<b>P84</b>	<i>Monitoring of PFAs levels in water using a Solid Phase Extraction coupled with LC/MS-MS</i>	Georgia SERETOUDI
<b>P85</b>	<i>Development and investigation of Epoxy/BaMnO<sub>4</sub>/CNTs nanocomposites for advanced energy storage and dielectric applications</i>	Despoina BATSOULI
<b>P86</b>	<i>Study of the removal of organic pollutants from aqueous solutions by using negatively charged hydrogels</i>	Paraskevi SOULIOU
<b>P87</b>	<i>Preparation of carbon nanotube polymeric membranes with cross-linkable and antimicrobial agents for water applications</i>	Georgia LAINIOTI
<b>P88</b>	<i>Development of Functionalized Polysulfone-based Hydrophilic Polymeric Materials</i>	Alexios DARAMOUSKAS
<b>P89</b>	<i>Next-Gen Sustainable Construction materials: Geopolymers with built-in macroscale Carbon Nanotubes filament type in-situ monitoring tool</i>	Fivos SIMOPOULOS
<b>P90</b>	<i>Identification and valuable products of end-of-life vehicle plastic parts via pyrolysis</i>	Evangelia VOUVOUDI
<b>P91</b>	<i>Decomposition of epoxy resin using an efficient solvolysis method</i>	Eirinaios Alexandros TSAMIS
<b>P92</b>	<i>Early-stage hydration in sustainable hydrogels based on Poloxamer 407 and biopolymers</i>	Konstantinos RAFTOPOULOS
<b>P94</b>	<i>Preparation of molecularly imprinted hydrogels for selective recognition of Acid Phosphatase</i>	Ioanna TZOUMANI
<b>P95</b>	<i>Covalent polymer networks by Suzuki-Miyaura crosslinking strategies</i>	George PASPARAKIS
<b>P96</b>	<i>Exploring Oxaliplatin/ Poly(L-Histidine) interactions through NMR spectroscopy</i>	Eirini IATROU
<b>P97</b>	<i>Exploring Oxaliplatin/ Poly(L-Histidine) interactions through NMR spectroscopy</i>	Andreas GIDAS
<b>P98</b>	<i>Surface Plasmon Resonance Study of Adsorption Time on Albumin–Chondroitin Multilayer Growth</i>	Angelos PAVLOPOULOS
<b>P99</b>	<i>Designing Precision Polypeptides: Synthesis and Conformational Analysis of PBLG Homopolymers</i>	Evangelia TSAGKARAKI
<b>P100</b>	<i>Frequency Content of Charge Oscillations along B-DNA Sequences with Transition Mutations and Disorder</i>	Pavlos BANEV
<b>P101</b>	<i>Rheological Tuning of Nanoclay–Hyaluronic Acid Hydrogels for Biomedical and Food Structuring Applications</i>	Aristeidis PAPAGIANNOPoulos
<b>P102</b>	<i>P(DIPAEMA-co-DMAEMA-co-OEGMA) stimuli-responsive linear terpolymers and their nano-assemblies encapsulating curcumin and quercetin</i>	Akathi PANTELAIOU
<b>P103</b>	<i>Synthetic and semi-synthetic polymer-based emulgels for controlled transdermal delivery of herbal actives</i>	Justyna KOZLOWSKA
<b>P104</b>	<i>Eco-friendly bigel materials with biodegradable polymers and plant-based actives</i>	Justyna KOZLOWSKA
<b>P105</b>	<i>Effect of GNP Content upon the Electrical Properties of PAN-PANi Nanocomposites</i>	Anastasios PATSIDIS
<b>P106</b>	<i>Experimental study of critical factors influencing polyhydroxyalkanoate (PHA) aerobic degradation in activated sludge systems</i>	Ioanna NTAIKOU
<b>P107</b>	<i>SERS-Based Detection of Low-Concentration PFAS Released from Fluoropolymers Degradation</i>	Georgios N. MATHIOUDAKIS
<b>P108</b>	<i>Polyelectrolyte-based membranes for gas separation processes</i>	Athena NIKOLOPOULOU

