PROGRAM

POLYMER CONNECT

26-28 OCTOBER 2026 | MADRID, SPAIN | HYBRID





7th International Conference on

ADVANCED POLYMER SCIENCE AND ENGINEERING

October 26-28, 2026 | Madrid, Spain

October 29, 2026 | Virtual

Universidad Carlos III de Madrid
Ronda de Toledo, 1, 28005 Madrid

BEING ORGANIZED IN COLLABORATION WITH

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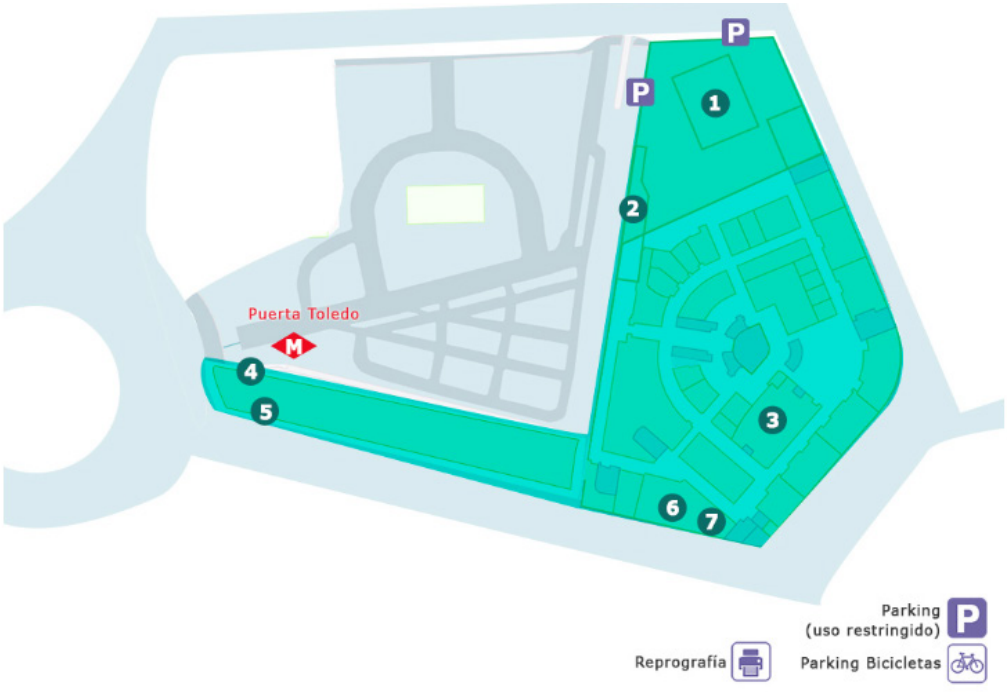
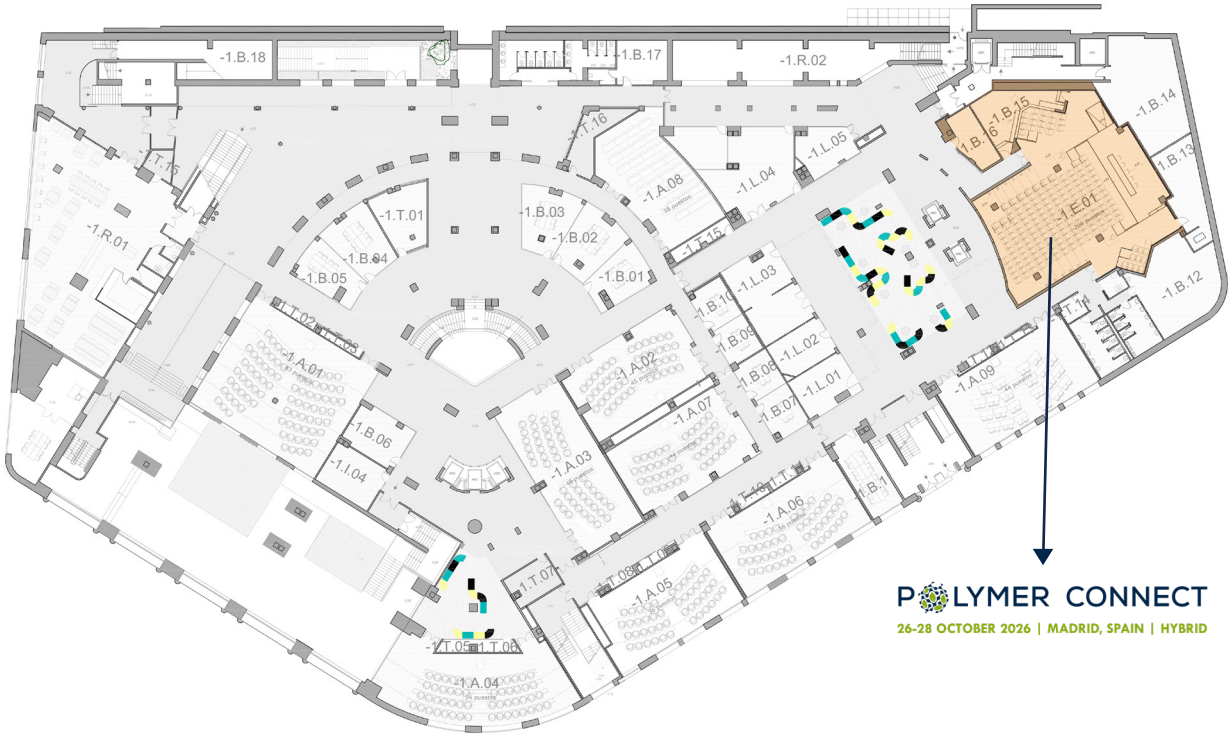
FLOOR PLAN



Buildings

1. Auditorium (Floor-1))
2. Canteen (Floor-1)
3. Graduation Hall
4. Puerta de la Cultura Room (Floor-1)
5. Library
6. Cafeteria (Floor-1)
7. Reprograhics



PROGRAM

DAY 1 In-Person

MONDAY, OCTOBER 26, 2026

Room: Auditorium

09:00 On-Site Registrations & Badge Pick-up

09:20 Introduction by **Alberto Garcia-Penas**, Charles III University of Madrid (UC3M), Spain

Keynote Presentations



09:30
Transformative, Waste Plastics Recycling & Measurement Technologies
Amit Goyal, University at Buffalo, United States



10:10
Functional Materials for VAT Printing Towards Advanced Applications
Annalisa Chiappone, University of Cagliari, Italy

10:50 Coffee Break



11:10
Ultrasonic Consolidation of Unidirectional Thermoplastic Matrix Composite Tapes and Sandwich Panels
Alfonso Maffezzoli, University of Salento, Italy

Oral Presentations

Symposium 1: Polymer Engineering, Processing & Mechanical Performance

Chair: Alberto Garcia-Penas, Charles III University of Madrid (UC3M), Spain

11:50 **CFD-Assisted Development of Reactive Extrusion Polymerization: From Lab-Scale Formulations to Industrial Extrusion Systems**
Elham Delvar, University of Porto, Portugal

12:10 **Thermal History-Driven Crystallization in Thermoplastic Composite Thermoforming: Linking Process Conditions to Microstructure and Performance**
Adrian Pedrosa Valbuena, CIDAUT, Spain

12:30 **Enhancing Foaming Behavior of Biobased PHBV Through Chain Extension**
Malvina Boutigny, University of Bayreuth, Germany

12:50 Group Photo

13:00 Lunch

13:50 **Synergistic Effects of and Low-content $CaCO_3$ and LDH on the Melt Stability and Thermo-mechanical Performance of PLA Composites**
Erika Varga, John von Neumann University, Hungary

14:10 **Geometric Effects on the Bond Performance of CFRP-Strengthened Polyethylene Joints: A Parametric Study**
Wassim Raphael, Saint Joseph University of Beirut, Lebanon

PROGRAM

14:30 **Development of Conductive Filament for 3D Printing**
Jan Sezemsky, Czech Technical University in Prague, Czech Republic

14:50 **Effect of Plasma Treatment of Carbon Nanofibers on Cure Inhibition, Thermal Stability and Mechanical Performance of Elium Nanocomposites**
Kamal Iqbal Rana, Czech Technical University in Prague, Czech Republic

15:10 **Numerical Assessment of Thermal and Electromagnetic Performance of Polymeric Enclosures for Automotive Battery and Power Electronics Applications**
Lourenço Bastos, PIEP - Innovation in Polymer Engineering, Portugal

15:30 **Silicone Rubber Self-Fusing Material with a TFP-Enabled Interconnected Dual-Dynamic Network**
Aadil Rasoliwala, Indian Institute of Technology, India

15:50 **Melt Electrowriting for Flexor Tendon Repair: Introducing α-amino Acid Poly(ester amide)s**
Jef Brebels, KU Leuven, Belgium

16:10 **Melt-Flow and Crystallization Trade-offs in Extruded HDPE/MWCNT-OH Nanocomposites**
Houda Alfarsi, Sultan Qaboos University, Oman

16:30 Coffee Break

Symposium 2: Polymer Synthesis, Characterization & Emerging Frontiers

Chair: Alfonso Maffezzoli, University of Salento, Italy

16:50 **Biobased Copolyesters as Precursors to UV-induced Thermoset Networks**
Ane Araiz Márquez, University of Sannio (UNISANNIO), Italy/The University of Alcalá (UAH), Spain

17:10 **Viscoelastic Signatures of Polymeric Solids in Sliding Contacts-discovery of a Phenomenon**
Padmanabhan Krishnan, Vellore Institute of Technology, India

17:30 **Rationally Designed Smart Polymers for Viral Vector Bioprocessing**
Emma Daniels, Tozaro, United Kingdom

17:50 **Extrusion of Active LDPE Films Containing Essential Oils for Food Packaging Applications**
Nusrat Sharmin, Nofima AS, Norway

18:10 Poster Presentations

Poster Judges: Alberto Garcia-Penas, Charles III University of Madrid (UC3M), Spain
Marina P. Arrieta Dillon, Polytechnic University of Madrid (ETSII-UPM), Spain

PC-01 **Structurally Complex, Multifunctional Smart Polymers: Synthesis and Characterisation, and their Potential as Innovative Active Substance Carriers**
Agnieszka Gola, Wroclaw Medical University, Poland

PC-02 **Amphiphilic Gradient Copolymers for Improved Particle Size Control in Dispersion Polymerization**
Yamamoto Hyoma, Ritsumeikan University, Japan

PC-03 **Preparation of a Chitosan/Silica/CaO Organic-Inorganic Hybrid via IPTS Modification and TEOS Sol–Gel Processing**
SangHoon Rhee, Seoul National University, South Korea

PC-04 **Synthesis and Properties of Polymethacrylate/Cellulose Nanocomposites Prepared by *In Situ* Polymerization in the Green Solvent Dihydrolevoglucosenone**
Ante Jukic, University of Zagreb, Croatia

PC-05 **Tailoring Poly(N-Vinylamide) as Binders for Silicon Anodes**
Darya Freimann, Max Planck Institute for Medical Research, Germany

PC-06 **Detection of Biomolecular Interactions Using Polyfluorine Tracers in Diffusion Ordered Spectroscopy**
Abdulrahman M. Alazemi, Kuwait University, Kuwait

PC-07 **Computationally-Guided Design of a Molecularly Imprinted Polymer for the Detection of Psilocybin in Unregulated Mushroom Drug Products**
Hannah Peterson, Virginia Commonwealth University, United States

PC-08 **Rationally Designed Smart Polymers™ for Affinity Purification of AAV and Lentiviral Vectors**
Francesco Canfarotta, Tozaro, United Kingdom

PC-09 **Smart Polymers™ Enabling Detection, Capture and Release of AAV**
Alistair Groves, Tozaro, United Kingdom

PC-10 **Advanced Antibacterial Nanocomposites Fibers for Biomedical Applications**
Francisca Acevedo, University of La Frontera, Chile

PC-11 **Antibacterial CMC Foam Dressings via Citric Acid Crosslinking and Silver Incorporation**
Gyu Dong Lee, Korea Institute of Industrial Technology, South Korea

PC-12 **Release Characteristic and Antioxidant Activity of Gac Seeds (*Momordica cochinchinesis*) from Collagen- and Chitosan-based Hydrogel Composite**
Piyachat Chuysinuan, Chulabhorn Research Institute, Thailand

PC-13 **Electro-Mechanical Behavior of PVC Gels in the Sol–Gel Transition Region**
Ryota Miyazaki, Ritsumeikan University, Japan

PC-14 **Development of Coated Metallized BOPET Films for Offset Printing in Luxury Paperboard Packaging and Evaluation of Metal Transfer Performance**
Hasret Karakurt Mumcu, Süper Film Ambalaj ve Tic. A.Ş., Turkey

PC-15 **BOPET-based Thermal Transfer Coating Films for Polystyrene Surfaces**
Gizem Şahin, Süper Film Ambalaj ve Tic. A.Ş., Turkey

PC-16 **Performance Evaluation of Recycled PP Granules Derived from Post-consumer FIBC Waste for Industrial Tape Production**
Betul Gulgec, İşbir Sentetik Dokuma San. A.Ş., Turkey

PC-17 **Enhancing Recycled Polystyrene Properties through Lignin Incorporation and Optimized Melt Processing**
Fabio Faraguna, University of Zagreb, Croatia

PC-18 **Composition–property Relationships in PBS/PHBV Blends for Sustainable Food Packaging**
Vesna Ocelic Bulatovic, University of Zagreb, Croatia

PC-19 **PIGMENTS: Development of an International Master's Programme in Sustainable Paints and Coatings**
Nevena Milcic, University of Zagreb, Croatia
Zvjezdana Findrik Blažević, University of Zagreb, Croatia

PC-20 **Influence of Extrusion and Biaxial Stretching Parameters on ePTFE Membrane Characteristics**
Song Jun Doh, Korea Institute of Industrial Technology, South Korea

PC-21 **Development of Polymeric Gutters for Industrial Applications**
Joel Prior, J. Prior - Plastics Factory, Ltd., Portugal

PC-22 **Functionalization-driven Interfacial Polarization and Dielectric-magnetic Synergy in Vitrimer f-MWNT/ZnO Composites**
Nehal, University of Petroleum and Energy Studies, India

PC-23 **Direct Comparison of Dextran, Ficoll, and Albumin Compressibility by High-resolution Ultrasound Spectroscopy**
Jana Fojtíková, Brno University of Technology (BUT), Czech Republic

PC-24 **Spectral Analysis of Heat Diffusion in Polymeric Materials Using Eigenfunction Expansion**
Ehtisham Ali, Riphah International University, Pakistan

PC-25 **Thermal Evaluation and Optimization of Polymeric Enclosures for Electric Vehicle Applications**
Agnieszka Żmijewska Rocha, PIEP - Innovation in Polymer Engineering, Portugal

PC-26 **Post-Consumer Textile Recycling: From Fibre Recovery to Recycled Materials and Further Possibilities for Functional Valorisation**
Saikat Ghosh, University of Huddersfield, United Kingdom

PC-27 **From Molecular Design to Functional Nanohybrids: Applications in Sensing and Water Purification**
Isabel Quijada-Garrido, Institute of Polymer Science and Technology (ICTP-CSIC), Spain

PC-28 **Thermal Polymerization from Amino-Nitrile Monomers: A New Route for Construction of Nitrogen-Rich Materials with Functional Properties**
Juan Francisco Ruiz Guerrón, National Institute of Aerospace Technology (INTA), Spain

PC-29 **Glass Fiber-Reinforced Polymer Inclusion Membranes: Mechanical Enhancement without Compromising Transport Performance**
Kalina Velikova, Sofia University "St. Kliment Ohridski", Bulgaria

PC-30 **Novel 3-Ethylcarbazole-Derived Hosts for High-Efficiency OLED Applications**
Daiva Tavgenienė, Kaunas University of Technology, Lithuania

PC-31 **Efficient Red Phosphorescent OLEDs Enabled by Benzophenone–(Benzo)carbazole Host Systems through Co-host Design**
Gintare Krucaite, Kaunas University of Technology, Lithuania

PC-32 **Development of a Cast Polypropylene (CPP) Film Heat-Sealable at 90°C**
Gulgun Kayin Cetin, Süper Film Ambalaj ve Tic. A.Ş., Turkey

PC-33 **Synthesis of Novel Levulinic Acid Based-plasticisers Derived from Sugarcane Bagasse**
Suleshi Gedara, Queensland University of Technology, Australia

Keynote Presentations



09:00
Degradable and Functional Aliphatic Co-polyesters: Chemical Strategies for Synthesis and Recycling
Daniela Pappalardo, University of Sannio, Italy



09:40
Luminescent Sensing Materials for Real-Time Monitoring
Helen Willcock, Loughborough University, United Kingdom

10:20 Coffee Break

Oral Presentations

Symposium 3: Sustainable Polymers, Recycling & Environmental Applications

Chairs : Helen Willcock, Loughborough University, United Kingdom
Daniela Pappalardo, University of Sannio, Italy

10:50 **Structure–performance Insights into Hyper-crosslinked Polymer Catalysts for the Oxygen Reduction Reaction**
Shumaila Razzaque, Institute of Physical Chemistry, Poland

11:10 **Redox-active Coordination Polymers: Locating Lithium in the Structure of High Energy Iron-anilates**
Víctor Durán-Egido, Complutense University of Madrid, Spain

11:30 **Conductive Polymers: Green Synthesis and Applications in Environmental Remediation**
Ermelinda Falletta, University of Milan, Italy

11:50 **Hydrogel Evaporators for Interfacial Solar Desalination and Brine Management**
Yihan Shi, University of Technology Sydney, Australia

12:10 **Comparative Performance of Three Nanofiltration Membranes (NF270, NF90, NP010) for Multicomponent Ion Transport: Material and Pore Size Effects**
Amal Al Saadi, Sohar University, Oman

12:30 **Sustainable Photocatalytic Degradation of Imidacloprid Using a Ferrite-based Tungstate Nanocomposite for Environmental Remediation**
Irum Jamil, University of Wah, Pakistan

12:50 **Valorization of Low-cost Carbon Sources for the Production of Biopolymers Using Paraburkholderia Xenovorans LB400**
Rodrigo Navia, San Sebastián University, Chile

13:10 Lunch

14:00 **New Powder Polymer for 100% Bio-based Cosmetic Formulations**
Miruna Bodoc, Seppic, France

14:20 **Closed-loop Mechanical Recycling of Biopolyesters for Food Packaging: Relationships Between Polymer Structure and Decontamination Efficiency**
Rebeca Heller dos Santos, INRAE, France

14:40 **Experimental and Numurical Simulation of High Pressure Torsion Process Effect on Polypropylene Behavior**
Ahmed DRAI, Mustapha Stambouli University of Mascara, Algeria

15:00 **Stakeholder Governance and Reverse Logistics in Urban Fuel Infrastructure Decommissioning: The El Beaterio Case, Quito, Ecuador**
Paul Villagomez, National Polytechnic School, Ecuador

15:20 **Valorization of *Saccharum munja* Fibers for Sustainable HDPE Composite Development**
Nitin Kumar Arya, Indian Institute of Technology, India

16:00 Coffee Break

16:40 *Social & Networking Tour (Ticket Required)

Keynote Presentations



09:00
Exploring Strategies for More Sustainable Polymer-based Composites Across their Life Cycle
Alberto Jiménez Suárez, Rey Juan Carlos University, Spain



09:40
Valorization of HoReCa Waste for the Development of Food Packing Materials
Marina P. Arrieta Dillon, Polytechnic University of Madrid (ETSII-UPM), Spain

10:20 Coffee Break



10:40
Understanding Anion-Exchange Membranes in Dry-cathode Water Electrolysis
Liliana A. Díaz Palacios, CIIAE-Iberian Center for Research in Energy Storage, FUNDECYT-PCTEX, Cáceres, Spain

Oral Presentations

Symposium 4: Polymers for Healthcare, Food & Life Sciences

Chair: Alberto Jiménez Suárez, Rey Juan Carlos University, Spain

11:20 **Encapsulation of Iron with Pectin: A Challenge for the Industry**
Mar Villamiel, CSIC, Spain

11:40 **Nanosized Block Copolymer Carriers of Natural Bioactive Substances and Fluorogenic Dyes for DNA Analysis**
Petar Petrov, Bulgarian Academy of Sciences, Bulgaria

Symposium 5: Smart, Functional & Nano-Enabled Polymeric Materials

Chair: Alberto Jiménez Suárez, Rey Juan Carlos University, Spain

12:00 **Artificial Nano-fingerprints from Self-assembled Block Copolymers**
Federico Ferrrarese Lupi, National Institute of Metrological Research, Italy

12:20 **Novel Redispersible Polymer-graphite Composites as a Greener and Sustainable Alternative in EMI Shielding**
Priyanka Verma, Sri Sathya Sai Institute of Higher Learning, India

12:40 **Redox-responsive Self-immolative Poly(dithiothreitol)-nanocellulose Hybrids for Smart Release Applications**
Asifa Nadeem, Monash University, Australia

13:00 Lunch

14:00 **Additive-Modified Polyurethane Foams: Effects on Mechanical and Thermal Properties**
Abdeslam Skoudarli, Nantes University, France

14:20 **Rapid-Curing Hybrid Polymer Coatings: A Biobased and PFAS-free Strategy for Advanced Corrosion Protection**
Siddhartha Shankar Kashyap, CSIR-Indian Institute of Chemical Technology, India

14:40 **Unravelling Hydrocarbon Microseepage: Evidence of Petroleum Systems in a Semi-arid Rift Setting**
Mussa Mathew Nalogwa, Tanzania Petroleum Development Corporation, Tanzania

15:00 **Copper Nanoparticles Obtained from Mixed Lactobacilli Culture**
Gala Arsovska, Sofia University "Saint Kliment Ochridski", Bulgaria

15:20 Best Poster Award Announcement

Closing Remarks & Departure

Zoom Link
https://us06web.zoom.us/j/83447090790?pwd=PH4JhbqFCBbwGqoWIbEaX59y05ntDa.1

Meeting ID: 834 4709 0790
Passcode: 155565

Virtual Presentations

14:00 **Photoaligned Azodye Nanolayers for New Liquid Crystal Devices**
Vladimir Chigrinov, Hong Kong University of Science and Technology, Hong Kong

14:20 **Endospore Bioaugmentation Accelerates and Stabilizes Biodegradation of Poly(Butylene Succinate-coadipate) in Seawater**
Tomoya Suzuki, Gunma University, Japan

14:40 **Structural Dynamics of Sustainable Polymer Systems: From Processing to End-of-Life**
Ehsan Behzadfar, Toronto Metropolitan University, Canada

15:20 **Fibrils or Not Fibrils: How to Control P3HT-based Copolymer Thin Film Morphology?**
Sirikorn Chasvised, Rambhai Barni Rajabhat University, Thailand

15:40 **The RAFT Polymerization Method for the Preparation of Alpha-amino Functionalized Polystyrene Derivatives Mediated by Amino Functionalized Trithiocarbonate Chain Transfer Agents**
Teboho Motsoeneng, University of Zululand, South Africa

16:00 **Controlling Polyphenol Release Through Engineered Bio-based Materials for Sustainable Agriculture Applications**
Fabrizio De Cesare, University of Tuscia, Italy

16:20 **Molecular Dynamics Simulation of High-performance Resins**
Gregory M. Odegard, Michigan Technological University, United States

We look forward to seeing you at

ADVANCED POLYMER SCIENCE AND ENGINEERING 2027



Advanced Polymer Science & Engineering

April 21-23, 2027

Kuala Lumpur, Malaysia

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Advanced Polymer Science & Engineering

October 20-22, 2027

Budapest, Hungary

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