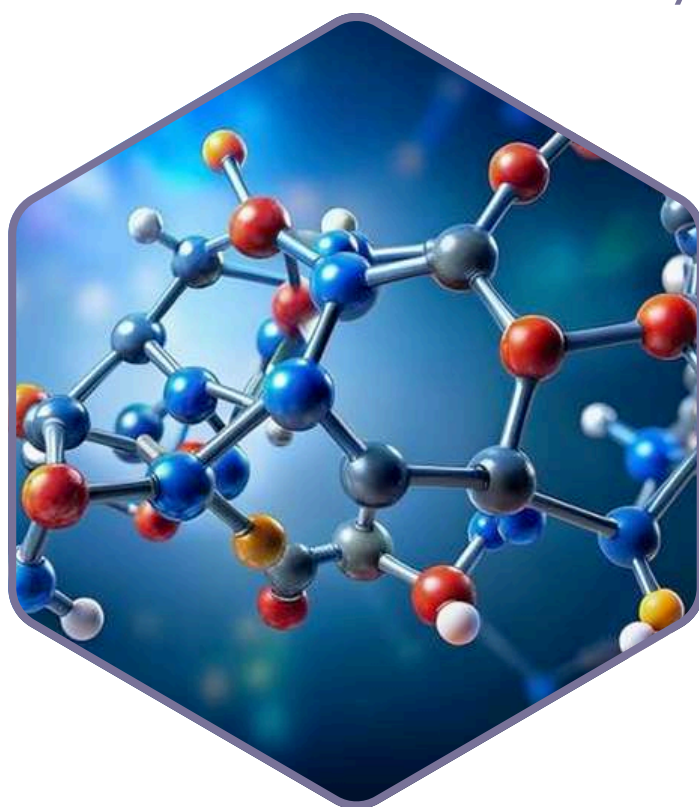


• • • •

3rd International Summit on
**Biopolymers and Polymer
Science**

Hotel NH Frankfurt Airport West, Frankfurt, Germany
July 21-22, 2025



Final Program

ISBPS2025

Day 01 | July 21, 2025

09:00 - 09:30

On-Spot Registrations

Conference Chair

Geoffrey Robert Mitchell, Professor, Centre for Rapid and Sustainable Product Development, Portugal

Conference Co-Chair

Feng-Huei Lin, President-Formosa Associate of Regeneration Medicine, Dept-Biomed. Eng., National Taiwan University, Taiwan

Plenary Talks

09:30 - 10:10

P **Title:** Operando X-ray Scattering Measurements during Injection Moulding: Clues to Increasing Circularity

Geoffrey Robert Mitchell, Professor, Centre for Rapid and Sustainable Product Development, Portugal

10:10 - 10:50

P **Title:** Iron-doped Calcium Sulfide Magnetic Nanoparticles Surface Modified with PVP and SiO₂ as Thermoseeds for Hyperthermia

Feng-Huei Lin, President-Formosa Associate of Regeneration Medicine, Dept-Biomed. Eng., National Taiwan University, Taiwan

10:50 - 11:05

Refreshment Break

11:05 - 11:45

P **Title:** Shaping the Future of Polymer Processing and Durability by using Biobased Stabilizers

Elke Metzsch-Zilligen, Head of the Division Plastics - Fraunhofer Institute for Structural Durability & System Reliability LBF, Germany

11:45 - 12:25

P **Title:** Plant-Based Protein Adhesives and Plant-Based Protein Hydrophobes the Conundrum of Water in Bio-Based Composites

Joseph J. Marcinko, Principal Scientist & President - Polymer Synergies LLC, USA

12:25 - 13:05

P **Title:** Latest Market Trends for Renewable Polymers from Biomass, CO₂ and Recycling

Michael Carus, Physicist, Germany

13:05 - 14:05

Group Photo / Lunch Break

Keynote Talks

14:05 - 14:35

K **Title:** From the T-string World of RNA to Genes and Curricula: T-society Self-similarity as a Turning Point in Earth's Natural History

Magnus Magnusson, University of Iceland, Iceland

14:35 - 15:05

K **Title:** Methodology for the Development of Essential Oil Microcapsules using Complex Coacervation with Biopolymers

Manuel-Jose Lis Arias, INTEXTER-UPC, Spain

15:05 - 15:35

K **Title:** Novel Polymer-based Approaches for Self-Assembly of mRNA-based Pharmaceuticals

Heinrich Haas, Chief Technology Officer-NeoVac, Germany

15:35 - 16:05

K **Title:** Process Development of Remote Atmospheric Pressure Plasma-Assisted Functionalization on Biodegradable Polymeric Textiles for Bone Tissue Engineering

Wei-Yu Chen, Ming Chi University of Technology, Taiwan

16:05 - 16:20

Refreshment Break

Invited Talks

16:20 - 16:45

I **Title:** Process Optimization of Exopolysaccharide Production: An Iterative and Integrative Approach

Venessa Dsouza, Technical University Munich, Campus Straubing, Germany

16:45 - 17:10

I **Title:** Development of Dextran-Pluronic Thermo sensitive Hydrogel Containing Extracellular Vesicles from Adipose Derived Stem Cells for Nerve Repair

Cheng-Hao Yeh, National Taiwan University, Taiwan

17:10 - 17:35

I **Title:** XLANCE® EOL Yarn: Tailoring Elasticity while Advancing Textile Sustainability

Lorenza Gardella, Head of R&D-XLANCE® SRL, Italy

17:35 - 18:00

I **Title:** Assessing the Green Shift: Comparing Conventional and Biopolymer Packaging

Bruna Gabriela Mendes Machado, PIEP – Centre for Innovation in Polymer Engineering, Portugal

18:00 - 18:25

I **Title:** Innovative Biomedical Materials and Advanced Animal Models for Infection disease: Bridging Research and Clinical Application

Shu-Wei Huang, National Taitung University, Taiwan

18:25 - 18:50

I **Title:** Development of Innovative Thermotropic Materials for Cost-Effective Solar Energy Collectors

Nurten Sahan, Marie Curie Postdoctoral Fellow, UK

Poster

P-01

Title: Comparative Study of Chain Extenders for the Reactive Extrusion of PLA

Franka Malsch, Fraunhofer UMSICHT, Germany

Poster

P-02

Title: Co-polymerization of Carbon Dioxide with Propylene Oxide by Heterogeneous and Homogeneous Catalysts to Produce Low Molecular Weight Polycarbonate Ether Polyols

Afsoon Farzan, Technical Research Center of Finland (VTT), Finland

End of Day 01

Day 02 | July 22, 2025

Plenary Talks

09:30 - 10:10

P

Title: Multivalent Targeted Protein Degradation Polymeric Chimeras for Cancer Treatment

Hsin-Cheng Chiu, National Tsing Hua University, Taiwan

10:10 - 10:50

P

Title: Fermentative Production of Monomers for Polymers

Walter J. Koch, Director Biochemical Technology, Biotech for Net Carbon Zero-BASF, Germany

10:50 - 11:05

Refreshment Break

11:05 - 11:45

P

Title: Superior Nonlinear Optical Response of Single Crystalline Bio-Reachable Polymers

Satoshi Okamoto, Team Director of RIKEN, Japan

11:45 - 12:25

P

Title: Cradle to Cradle Design Innovations

Albin Kaelin, Founder & CEO-EPEA Switzerland, GmbH, Switzerland

Keynote Talks

12:25 - 12:55

K

Title: Polycarboxylate Ether as Super Plasticizers in Concrete, their Current Impact on CO2 Emissions and how to reduce them through Biopolymer Synthon

Vincent Froidevaux, Saint-Gobain Construction Chemicals, France

12:55 - 13:55

Group Photo / Lunch Break

13:55 - 14:25

K **Title:** Biodegradable Polycaprolactone for Cartilage Repair and Drug Delivery Applications

Ming-Fa Hsieh, Chung Yuan Christian University, Taiwan

14:25 - 14:55

K **Title:** Biopolymers Extracted from Food Waste for Packaging

Dalila Hammiche, Editor-in-Chief-Biopolymer Applications journal, University of Bejaia, Algeria

Invited Talks

14:55 - 15:20

I **Title:** Using Biology to Create Improves Performance in Engineering Plastics: The Challenges & Successes

Chris Schroder, Pegasus Materials, Netherlands

15:20 - 15:45

I **Title:** From Waste to Value: Environmental and Economic Assessment of Biodegradable Shoe Shapers from Olive Pits

Catarina Faria, PIEP – Centre for Innovation in Polymer Engineering, Portugal

15:45 - 16:00

Refreshment Break

16:00 - 16:25

I **Title:** Operationalising an Integrated Holistic impact Assessment to Accelerate Safe and Sustainable Design (SSbD) Acceptance in the Plastic Value Chain

Ines Costa, PIEP – Centre for Innovation in Polymer Engineering, Portugal

16:25 - 16:50

I **Title:** Influence of Amorphous PHA on the Crystallization Behaviour and Rheological Properties of Semi-Crystalline PHA Blends: Key Insights for Foaming Potential

Malvina Boutigny, University of Bayreuth, Germany

16:50 - 17:15

I **Title:** Development of Beta-Cyclodextrin based MOFs for Volatile Molecule Stabilisation and Delivery

Siddanth Saxena, INTEXTER-UPC, Spain

17:15 - 17:40

I **Title:** Innovative Applications of Injectable Hyaluronic Acid Hydrogels in Orthopedics

Yu-Chun Chen, National United University, Taiwan

17:40 - 18:05

- I Title:** Home Compostability of Thermoplastic Biocomposites under Laboratory Conditions: Multiscale Characterization and Bioaugmentation Strategy to Increase Biodegradability

Jules Bellon, UniLaSalle Polytechnic Institute, France

18:05 - 18:30

- I Title:** Beyond the Surface: How Degradation Transforms Microplastic-Soil-Plant Interactions

Helen Gordillo, Free University of Berlin, Berlin

Poster

P-03

Title: Polyhydroxyalkanoate Copolymer Production from Brewery Wastewater via Mixed Microbial Cultures

Jeyran Ghased, Seoul National University of Science and Technology, South Korea

End of the Conference

UPCOMING CONFERENCE

4TH INTERNATIONAL SUMMIT ON BIOPOLYMERS AND POLYMER SCIENCE

JULY 23-25, 2026 | PRAGUE, CZECH REPUBLIC