

BIOPOL-2026. SCIENTIFIC PROGRAMME

Pisa, 21st-23rd JULY 2026





Tuesday, July 21st, 2026

09.00-11.00. Registration

11.00-11.15. Opening by Alfonso Jiménez, María Carmen Garrigós, Patrizia Cinelli, Maurizia Seggiani

Session 1.

Room 1. Chairperson TBA

11:15-12:00. Opening Lecture. Francesco Paolo La Mantia (University of Palermo, Italy) “Environmental sustainability of polymers in the agro-industrial chain: From the soil to the market”

12.00-12.30. Keynote Lecture 1. Lorenzo Guazzelli (University of Pisa, Italy). “Ionic liquids or deep eutectic solvents: which is the best choice for the valorization of biopolymers?”

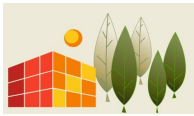
12.30-13.30. Lunch

Session 2.

Room 1. Chairperson TBA

13.30-14.00. Keynote Lecture 2. Balazs Imre (Budapest University of Technology and Economics, Hungary). “Plant protein-based nanocarriers: design principles and emerging applications”

14.00-14.20. Oral Communication 1. Sandra Domenek (Université Paris-Saclay, INRAE, AgroParisTech, France). “Full degradation of residual biodegradable microplastics derived from compostable packaging after large-scale industrial composting in soil”



14.20-14.40. Oral Communication 2. Debora Puglia (University of Perugia, Italy). “Reactive extrusion of biopolymeric blends based on polylactic acid and polybutylene furanoate”

14.40-15.00. Oral Communication 3. Antonio Greco (University of Salento, Italy). “Fully Bio-based Plastisol from Poly(3-hydroxybutyrate)”

Room 2. Chairperson TBA

14.00-14.20. Oral Communication 4. Giulia Guidotti (University of Bologna, Italy). “Poly(butylene succinate)-based aliphatic polyesters with tuneable molecular architecture for shape-memory sutures”

14.20-14.40. Oral Communication 5. Chiara Pedrotti (University of Pisa, Italy). “Towards Sustainable Agricultural Mulching Films based on Biochar- Poly(butylene succinate-co-butylene adipate) composites”

14.40-15.00. Oral Communication 6. Lucas Tamele Júnior (NOVA University Lisbon, Portugal). “Towards chloroform-free recovery of polyhydroxyalkanoates from mixed microbial culture using supercritical CO₂ and green solvents”

Room 3. Chairperson TBA

14.00-14.20. Oral Communication 7. Valentina Salaris (Instituto de Ciencia y Tecnología de Polímeros (ICTP-CSIC), Spain). “In vitro Degradation, Bioactivity and Biocompatibility of PLA-based Electrospun Nanofibers Mats with Mg-based NPs”

14.20-14.40. Oral Communication 8. Arunjunai Raj Mahendran (Kompetenzzentrum Holz GmbH, Austria). “Tailoring Structure and Properties of Bio-Based Epoxies via liquefied Citric Acid”

14.40-15.00. Oral Communication 9. Cristina Mellinas (University of Alicante, Spain). “Improving recycled PLA properties with biobased epoxidized tannic acid”

15.00-15.15. Coffee Break



Session 3.

Room 1. Chairperson TBA

FURIOUS PROJECT SPECIAL SESSION

15.15-15.35. Oral Communication 10. Nadia Lotti (University of Bologna, Italy). “From bio-based to bio-medical: The huge versatility of 2,5-FDCA in polyester design”

15.35-15.55. Oral Communication 11. Alessandro Coatti (University of Bologna, Italy) “Photoactive bio-based polyester resins for VAT photopolymerization”

15.55-16.15. Oral Communication 12. Ignacio Solaberrieta (University of Alicante, Spain). “Sustainable polyalkylene furanoate-based copolyesters for packaging applications”

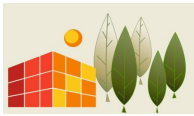
16.15-16.35. Oral Communication 13. Anna Szymczyk (West Pomeranian University of Technology in Szczecin, Poland). “Scale-up synthesis and functional properties of sustainable PTF-based copolyester for medical packaging applications”

Room 2. Chairperson TBA

15.15-15.35. Oral Communication 14. Thomas Rodrigues (NOVA University Lisbon, Portugal). “Sustainable PHBV Production with Tailored 3HV Content by *Burkholderia thailandensis* from Eucalyptus Bark Hydrolysate and Levulinic Acid”

15.35-15.55. Oral Communication 15. Victor Oliver-Cuenca (Instituto de Ciencia y Tecnología de Polímeros (ICTP-CSIC), Spain). “Electrospun PLA Nanofibrous Mats Reinforced with Yerba Mate Nanoparticles and Vegetable Oils: Mechanical, Thermal, and Hydrolytic Characterisation within a Circular Economy Framework”

15.55-16.15. Oral Communication 16. Marta Catalão (NOVA University Lisbon, Portugal). “Application of Physics-Informed Neural Networks (PINNs) for the evolution of a Natural Microbiome into an Enriched Polyhydroxyalkanoate (PHA)-Accumulating consortium”



16.15-16.35. Oral Communication 17. Mario Miranda-Pinzon (Universitat Politècnica de València, Spain). “Tailoring the properties of PHBV through plasticization with modified linseed oils”

Room 3. Chairperson TBA

15.15-15.35. Oral Communication 18. José Gámez-Pérez (Universitat Jaume I, Castelló, Spain). “Biodegradation of active PHA-based agricultural mulch films in soil, greenhouse and composting environments”

15.35-15.55. Oral Communication 19. Daniele Carullo (University of Milan, Italy). “Microfibrillated cellulose films from agri-food wastes and plant residues for food packaging applications: An in-depth performance assessment”

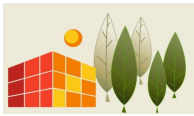
15.55-16.15. Oral Communication 20. Chloé Chevigny (Université Paris-Saclay, France). “Multilayer biobased packaging films made with nanocelluloses from food industry by-products”

16.15-16.35. Oral Communication 21. Francisco Santos (NOVA University Lisbon, Portugal). “Novel poly(3-hydroxybutyrate-co-4-hydroxybutyrate) production by *Burkholderia thailandensis* E264 using 1,6-hexanediol precursor”

17.30. Transfer to Pisa city center

18.00. Guided tour Pisa

20.00. Aperitif on Arno River



Wednesday, July 22nd, 2026

Session 4.

Room 1. Chairperson TBA

09:00-09:40. Invited Lecture. Luc Averous (University of Strasbourg, France). “A personal journey through several decades of research on starch-based materials”

09:40-10:10. Keynote Lecture 3. C.A.P. (Kees) Joziase (TotalEnergies Corbion, The Netherlands). “Pushing the boundaries of PLA in foam and nonwoven applications”

10:10-10:30. Oral Communication 22. Alberto Frache (Politecnico di Torino, Italy). “Tailoring structure-property relationships in fully bio-based polymer blends through compatibilization strategies”

10:30-10:50. Oral Communication 23. Emmanuelle Gastaldi (University of Montpellier, France). “Beyond biogas production: Anaerobic digestion as a structural pre-treatment accelerating composting biodegradation of PLA-based packaging”

Room 2. Chairperson TBA

10:10-10:30. Oral Communication 24. Antje Lieske (Fraunhofer Institute for Applied Polymer Research, Germany). “Circular Production of Flexible PLA-Polyether Copolymers”

10:30-10:50. Oral Communication 25. João Matias (NOVA University Lisbon, Portugal). “Development of highly porous P(3HB-co-4HB) aerogel via DMC-induced formation and salt leaching”

Room 3. Chairperson TBA

10:10-10:30. Oral Communication 26. Shan Liu Chen (University of Alicante, Spain). “Development of zein-based films through the comprehensive utilisation of red beet peel-derived betalains and CQDs”



10.30-10.50. Oral Communication 27. María del Mar Cammarata (University of the Basque Country UPV/EHU, Spain). “Challenges in preparing recyclable soybean oil-based NIPUs with Diels-Alder reversible networks”

10.50-11.30. Coffee Break and Poster Session

Session 5.

Room 1. Chairperson TBA

11.30-12.00 Keynote Lecture 4. Koro de la Caba (University of the Basque Country, Spain). “How to design materials based on proteins and polysaccharides for healthcare applications”

12.00-12.20. Oral Communication 28. Amira Fernández (Technology Center, AIMPLAS, Spain). “Safe and Sustainable by Design Frameworks for Complex Matrices: Harmonising NAMs across Consumer and Environmental Health”

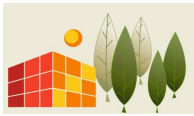
12.20-12.40. Oral Communication 29. Michelina Soccio (University of Bologna, Italy). “Design, synthesis and characterization of fully biobased polymer system for sustainable high-performance packaging”

12.40-13.00. Oral Communication 30. Marina Ramos (University of Alicante, Spain) “Development of electrospun packaging materials functionalized with waste-derived carbon quantum dots and curcumin”

Room 2 Chairperson TBA

12.00-12.20. Oral Communication 31. Saeem Ismaeilimoghadam (National Interuniversity Consortium for Materials Science and Technology (INSTM), Italy). “Poly(alkylene furanoate) filters for automotive cabin”

12.20-12.40. Oral Communication 32. Noelia Martínez-Pérez (University of Alicante, Spain). “Synergistic effects of xylitol:glycerol-LTTM in extruded TPS: Comparison with non-LTTM systems”



12.40-13.00. Oral Communication 33. Bruno. C. Marreiros (NOVA University Lisbon, Portugal). "Selection of a PHA-accumulating MMC under High Salinity: Influence of Salinity and VFA Composition on PHA Synthesis"

Room 3. Chairperson TBA

12.00-12.20. Oral Communication 34. Miren Itxaso Calafel (University of the Basque Country, Spain). "Effect of shearing on electrical conductivity of poly(butylene succinate-co-adipate)/carbon nanotube nanocomposites"

12.20-12.40. Oral Communication 35. Ioanna-Georgia Athanasoulia (Agricultural University of Athens, Greece). "Optimization of biobased PBSA thin mulching films"

12.40-13.00. Oral Communication 36. Florian Zikeli (University of Perugia, Italy), Colombia). "Aerogels based on lignocellulose nanofibers and lignin isolated from waste biomass for wastewater treatment"

13.00-14.00. Lunch

Session 6.

Room 1. Chairperson TBA

14.00-14.30 Keynote Lecture 5. Jiang Chang (Shanghai Institute of Ceramics, China). "Bioactive ceramic/polymer composites for tissue regeneration and disease therapy"

14.30-14.50. Oral Communication 37. Serena Danti (University of Pisa, Italy). "PEOT-PBT/Fibrin Ossicular Scaffolds for Middle Ear Surgery"

14.50-15.10. Oral Communication 38. Alessandra Perrucci (University of Bologna, Italy). "Acrylate-based polymeric blends as promising candidates for the treatment of chronic corneal edema"

15.10-15.30. Oral Communication 39. Damiano Rossi (University of Pisa, Italy). "Synthesis and Characterization of Silica-Encapsulated Phase Change Materials Derived from Waste Cooking Oil"



15.30-15.50. Oral Communication 40. Antonella Esposito (Univ Rouen Normandie, INSA, France). “Crystallization behavior of co-polyesters based on hydroxy fatty acids extracted from tomato peel agro-wastes”

Room 2. Chairperson TBA

14.30-14.50. Oral Communication 41. Jaume Gomez-Caturla (University of Alicante, Spain). “Mango peel-reinforced PLA-based blown films for antioxidant salmon packaging”

14.50-15.10. Oral Communication 42. Roberta Palmieri (University of Campania “Luigi Vanvitelli”, Italy). “Cascade valorization of grape pomace for cellulose acetate biofilm development: An Early-Stage Life Cycle Assessment (LCA)”

15.10-15.30. Oral Communication 43. Beatriz Almeida (NOVA University Lisbon, Portugal). “Ionically cross-linked hyaluronic acid-like polysaccharide-based hydrogel membranes from *Vibrio alginolyticus* Mo245”

15.30-15.50. Oral Communication 44. Quebouch Doha (Cadi Ayyad University, Marrakesh, Morocco). “Antiadhesive Chitosan–Pectin Polyelectrolyte Complex Films for Food Packaging Applications”

Room 3. Chairperson TBA

14.30-14.50. Oral Communication 45. Mónica Carvalheira (NOVA University Lisbon, Portugal). “From tomato pomace to polyhydroxyalkanoates: An integrated biorefinery approach”

14.50-15.10. Oral Communication 46. Juan López (Polytechnic University of Valencia, Spain). “Proof-of-Concept of Recycled PLA/Thermoplastic Starch Blends for 3D Printing and Packaging Films”

15.10-15.30. Oral Communication 47. Yaiza Flores (Universitat Politècnica de València, Spain). “Synthesis of polybutylene sebacate and its use in food packaging”



15.30-15.50. Oral Communication 48. Yineth Piñeros Castro (Universidad Jorge Tadeo Lozano, Colombia). “Cassava Starch-Based Biocomposites Reinforced with Coffee Husk and Carnauba Wax: Effect on Water Affinity and Mechanical Properties”

15.50-17.00. Coffee Break and Poster Session

20.00. Conference dinner at Hotel Galilei



Thursday 23rd July 2026

Session 7.

Room 1. Chairperson TBA

09:00-09:40 Invited Lecture. Maria Chatzinikolaidou (University of Crete, Greece).
“Bioprinted complex constructs for advanced healthcare applications”

09.40-10.10. Keynote Lecture 6. Ipsita Roy (University of Sheffield, United Kingdom).
“Natural and Sustainable Polymers of Bacterial Origin and their Biomedical Applications”

10.10-10.30. Oral Communication 49. Annabelle Fricker (Azienda Ospedaliero-Universitaria Pisana, Italy). “3D bioprinted cellular constructs as human ossicular chain replacements”

10.30-10.50. Oral Communication 50. Bahareh Azimi (University of Pisa, Italy). “Hybrid Electrospun–Electrosprayed PVDF-HFP/PLGA Nanoplatfoms for Sustained Local Cancer Drug Delivery”

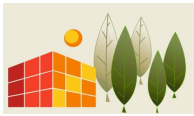
Room 2. Chairperson TBA

10.10-10.30. Oral Communication 51. Bruno C. Marreiros (NOVA University Lisbon, Portugal). “Polyhydroxyalkanoate Production at High Salinity by Isolates Obtained from PHA-Accumulating Mixed Microbial Cultures”

10.30-10.50. Oral Communication 52. Kioomi Loú-Ramos (Instituto de Agroquímica y Tecnología de Alimentos (IATA), CSIC, Spain). “Sustainable fungal biomass films enhanced with black plum peel extract”

Room 3. Chairperson TBA

10.10-10.30. Oral Communication 53. Edoardo Bondi (University of Bologna, Italy).
“Copolymers based on poly(butylene trans-1,4-cyclohexanedicarboxylate) and pripol 1009 as platforms for small diameter vascular grafts”



10.30-10.50. Oral Communication 54. Büşra Karakaya Yalçın (Middle East Technical University, Turkey). “Design and characterization of smart plant-based biopolymer packaging materials for food applications”

10.50-11.30. Coffee Break and Poster Session

Session 8

Room 1. Chairperson TBA

YOUNG RESEARCHERS SPECIAL SESSION

11.30-12.00 Keynote Lecture 7. Patricia Marques de Farias (Sigmaringen University, Germany). “Babassu mesocarp-derived moisture-resistant films via hydrothermal pretreatment and stearyl chloride grafting”

12.00-12.20. Oral Communication 55. Mercedes Fernandez (University of the Basque Country, Spain). “From structure to application: Rheology of bio-based and biodegradable polymers”

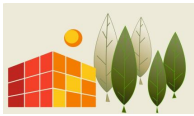
12.20-12.40. Oral Communication 56. Laura Cabrera-Villamizar (Institute of Agrochemistry and Food Technology, IATA, CSIC, Spain). “Fungal Biomass-Starch Composites Reinforced with Rice Straw Nanocrystalline Cellulose for Next-Generation Sustainable Packaging”

12.40-13.00. Oral Communication 57. Paula Vera (University of Zaragoza, Spain). “Functionalization and Safety Assessment of Biopolymer-Based Food Packaging Films”

Room 2. Chairperson TBA

12.00-12.20. Oral Communication 58. Mario Milazzo (University of Pisa, Italy). “Bio-inspired multi-material architectures fabricated by POLYJET technology for enhanced flexural energy absorption”

12.20-12.40. Oral Communication 59. Maria N. Batista (NOVA University Lisbon, Portugal). “Highly sulphated and fucose rich polysaccharide Ra19 produced by the pigmented marine bacterium *Paracoccus zeaxanthinifaciens*”



12.40-13.00. Oral Communication 60. Amine Joul (Hassan II University of Casablanca, Morocco). “Novel food preservation strategy using sprayed PVA/chitosan-based coatings activated by macroemulsions of chamomile essential oil adsorbed on activated carbon”

Room 3. Chairperson TBA

12.00-12.20. Oral Communication 61. Edoardo Zonta (University of Trento, Italy). “Tuning bacterial cellulose aerogels properties through controlled processing and citric acid crosslinking”

12.20-12.40. Oral Communication 62. Margherita Montorsi (CNR-IPCF Pisa, Italy). “Maximizing Piezoelectric Performance in Chitosan: The Role of Fabrication Process and Crystalline Content”

12.40-13.00. Oral Communication 63. Diana Araújo (NOVA University Lisbon, Portugal). “FucoPol-based Dissolving Microneedles for Transdermal Delivery of Anti-Inflammatory Drugs”

13.00-14.00. Lunch

14.00-14.30. Poster Session

Session 9

Room 1. Chairperson TBA

14.30-14.50. Oral Communication 64. Maria Beatrice Coltelli (University of Pisa, Italy). “From Pruning Residues to Packaging: Biopolymer-Based Solutions for Sustainable Mediterranean Fruit Supply Chains”

14.50-15.10. Oral Communication 65. Leon Mishnaevsky Jr. (Technical University of Denmark). “Bio-based polymer coatings for wind turbine blades”



15.10-15.30. Oral Communication 66. Mehdi Tajvidi (University of Maine, USA).
“Cellulose Nanomaterials in Binder and Barrier Applications”

Room 2. Chairperson TBA

14.30-14.50. Oral Communication 67. Giulia Maccaroni (University of Bologna, Italy).
“Synthesis and Characterization of Novel Bio-based Poly(pentamethylene furanoate) Copolymers Containing Dimethyl Sulfoisophthalate for Sustainable Medical Packaging”

14.50-15.10. Oral Communication 68. Riccardo Gallorini (University of Pisa, Italy).
“Sustainable Recycling Strategies for Furan-Based Polyesters”

15.10-15.30. Oral Communication 69. Cristiana A.V. Torres (NOVA University Lisbon, Portugal). “Bioconversion of Tomato Pomace and Brewer’s Spent Grain oils into Polyhydroxyalkanoates”

Room 3. Chairperson TBA

Session 11

Room 1. Chairperson TBA

15.30-16.00. Closing Lecture. Keynote Lecture 8. Elisabetta Ranucci (University of Milan, Italy). “ α -amino acid derived polyamidoamines as flame retardants for cotton”

16.00-16.15. Announcement of BIOPOL-2028 – Best Poster Award Ceremony

16.15. BIOPOL-2026 closure