



Organized by  
**UNITED** Scientific  
Group  
A non-profit organization

**POLYMERS-2024**  
October 21-23, 2024 | Boston, MA

## Tentative Program

3<sup>rd</sup> International Conference on  
**POLYMER SCIENCE  
AND ENGINEERING**

**October 21-23, 2024**

**Boston, MA | Hybrid**

✉ [polymers@uniscigroup.net](mailto:polymers@uniscigroup.net)

🌐 <https://polymers.unitedscientificgroup.org/>

## About Organization:

The United Scientific Group, a 501(c)(3) non-profit organization, is thrilled to announce the Third International Conference on Polymer Science and Engineering, scheduled for October 21-23, 2024. This event aims to foster innovative ideas that can advance the product pipeline in polymer science and engineering. The conference will gather a diverse group of professionals, including scientists, researchers, entrepreneurs, CEOs, CSOs, academicians, and technologists from across the globe. By facilitating discussions and collaborations, the conference seeks to generate new approaches and strategies to enhance the drug discovery process, from preclinical development through to clinical development.



### **Publishing Partner: Polymers Advanced Technologies**

**Special Issue:** We are excited to announce that Polymers-2024 has established a full collaboration with the **Polymers Advanced Technologies** journal for the publication of a special issue. This issue aims to feature papers stemming from discussions and discoveries showcased at the **Third International Conference on Polymer Science and Engineering** (Polymers-2024) held in Boston, Massachusetts, USA, from October 21 to 23, 2024.

## **Scientific Sessions**

- Polymer Technology
- Polymer engineering and processing
- Polymer Composites
- Polymer Materials
- Polymer Chemistry
- Polymer Science
- Polymer Physics
- Polymer Plastics
- Polymer Recycling and Sustainability
- Industrial Polymer and Carbon Chemistry
- Trends in Polymer Science
- Food Science in Polymers
- Nano & Biopolymers
- Natural & Synthetic Polymers
- Optoelectronic Polymers
- Supramolecular Polymers

- Polymer 3D Printing
- Smart & Functional Polymers
- Peptides, Fibers & Colloids
- Polymers In Medicine & Biochemistry
- Synthesis & Characterization
- Advances & Applications
- Polymer Emulsions, Surfaces & Interfaces
- Polymer Waste & Recycling
- Advances in Polymer Synthesis
- Polymers and the environment
- Advanced Polymer Materials Research
- Ceramics & Ceramic Composites
- Physical properties of polymers
- Polymers for Nanotechnology

### Program Last Updated on: August 13, 2024

Last minute changes due to functional, private, or organizational needs can be necessary. The event organizer accepts no liability for any additional costs caused by a change of program. **Program is subject to change.**

### Past Editions Programs

[https://polymers.unitedscientificgroup.org/2023/pdfs/Polymers-2023\\_In-Person.pdf](https://polymers.unitedscientificgroup.org/2023/pdfs/Polymers-2023_In-Person.pdf)  
[https://polymers.unitedscientificgroup.org/2023/pdfs/polymers-2023\\_virtual.pdf](https://polymers.unitedscientificgroup.org/2023/pdfs/polymers-2023_virtual.pdf)  
<https://polymers.unitedscientificgroup.org/2022/pdfs/Polymers-2022-Program.pdf>

## Plenary Presentations (40 Minutes)

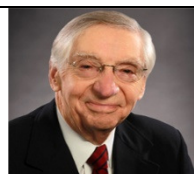


**Xuanhe Zhao**, Massachusetts Institute of Technology, Cambridge, MA  
Title to be announced!!



**Liming Dai**, University of New South Wales, Australia  
Title to be announced!!

## Keynote Presentations (30 Minutes)



**Harry R Allcock**, Penn State University, University Park, PA  
Extending the Possibilities of Polymer Synthesis by the use of Macromolecular Substitution



**Qing Wang**, Pennsylvania State University, State College, PA  
Dielectric Polymers Under Elevated Temperatures and High Electric Fields



**Reinhold W. Lang**, Johannes Kepler University Linz, Austria  
Title to be announced!!



**Tianbo Liu**, University of Akron, Akron, OH  
Block Copolymers with Rigid Components – Unique Assembled Structures from New Packing Pathways



**Andre Y Lee**, Michigan State University, East Lansing, MI  
Title to be announced!!



**Vistasp Karbhari**, University of Texas at Arlington, Arlington, TX  
Title to be announced!!

## Oral Presentations (20 Minutes)

**Nianqiang Wu**, University of Massachusetts Amherst, Amherst, MA  
Engineering Polymer-ceramic Interface in Solid-state Composite Electrolytes of Batteries

**Yanfei Xu**, University of Massachusetts Amherst, Amherst, MA  
Understanding Thermal Transport Properties in Polymers

**Shawn Putnam**, University of Central Florida, Orlando, FL  
Impact of Material Stiffness on the Dynamic Wetting and Deformation of Microstructured Polymer Surfaces

**Jie Zheng**, University of Akron, Akron, OH  
Advanced Molecular Design and Applications of Multifunctional Hydrogels

**Guoqiang Li**, Louisiana State University, Baton Rouge, LA  
Bioinspired Self-healing Thermoset Polymers

**Mark A Arnould**, Bruker, Billerica, MA  
Analysis of Complex Polymers Utilizing Chromatography Free Mass Spectrometry

**Tugba Gungor Ertugral**, Canakkale Onsekiz Mart University, Turkey  
Hybrid Combination and Characterization of Pla/ Peg 4000 Nanofiber Prepared Withthe Sbs Method and Calf Leather for the Improvement and Development of the Material Structure of Percussion Instruments Belonging to Traditional Music Culture

**Rund Abu-Zurayk**, The University of Jordan, Jordan  
Mixed Matrix Membranes Based on Polyvinylidene Fluoride (Pvdf)/Nanoclay Composites: Structure-properties-performance Relationship

**Matthew J Herman**, Los Alamos National Laboratory, Los Alamos, NM  
Biologically Inspired Mechanical Reinforcement of Plastic Bonded Explosives

**Javier Vallejo Montesinos**, University of Guanajuato, Mexico  
Study Concerning Nitrogenated Heterocycles Compounds Anchored to Titanium Dioxide Particles Used as Fillers in Several Polymer Matrices: Thermomechanical Behavior

**Hemant Mittal**, Dubai Electricity & Water Authority, Research & Development Centre, United Arab Emirates  
Adsorption of Rhodamine B Dye Using N-isopropylacrylamide and Acrylic Acid-based Superporous Hydrogels-adsorption Isotherm and Kinetics Studies

**Huiyan Li**, University of Guelph, Canada  
Intracellular Metal Enhanced Fluorescence for Highly Sensitive Cell Analysis Using a Hydrogel-based Microarray

**Giuseppina Raffaini**, Politecnico di Milano, Italy  
Molecular Dynamics Simulations of the Adsorption of Lysine-based Oligopeptides on Double-stranded DNA for Gene Delivery Purposes

**Rocio Guadalupe Casaña Pimentel**, Instituto Politecnico Nacional, Mexico  
Extracellular Matrix-derived Biomaterials for Tissue Engineering

**Robert Guidoin**, Universite Laval, Canada  
Assessing the Adverse Events for the Betterment of Cardiovascular Implantology

**Emiliano Laudadio**, Polytechnic University of Marche, Italy  
An Efficient Delivery System Based on Poly Lactic-co-glycolic Acid for Antioxidant Nanoformulations

**Mariechristine Durrieu**, Bordeaux University, France  
Controlling Differentiation of Human Adult Stem Cells Using Bioactive Disordered Cues on Polymer Surfaces

**Koji Matsuoka**, Saitama University, Japan  
Use of Polymeric Compounds to Enhance the Biological Activities

**Doha Belfadil**, Hassan II University of Casablanca, Morocco  
Preparation and Characterization of Dialdehyde Starch by New Method in Acidic Conditions

**Rana Alimohammadzadeh**, Mid Sweden University, Sweden  
Sustainable Organocatalytic Modification of Biopolymers Such as Cellulose and Nanocellulose

**Abderrahim Bouftou**, Hassan II University of Casablanca, Morocco  
Monitoring Tomato Sauce Freshness with Biodegradable Labels Containing Thymol and Red Cabbage Anthocyanin

**Oukass Saad**, Hassan II University of Casablanca, Morocco  
The Application of Activated Carbon in Extracting and Separating Methylene Blue, Alongside Acid Yellow 61, is Facilitated Through the Use of An Inclusion Polymer Membrane

**Ping Zhang**, University of Macau, Macau  
Polymeric Scale Inhibitor for Mineral Scale Control

**Qihan Liu**, University of Pittsburgh, Pittsburgh, PA  
Independent Characterization of the Elastic and Mixing Free Energy Densities of Swellable Polymer Networks

**Severine A.E. Boyer**, Mines Paris PSL CNRS, France  
Revisit model-experiment for high-pressure solidification of polymers

**Byung-Dae Park**, Kyungpook National University, South Korea  
Crystalline Thermosetting Polymer and its Conversion to Amorphous Polymer

**Igor Sokolov**, Tufts University, Medford, MA  
Mechano-spectroscopy of Polymers with Nanometer Spatial Resolution

**Michael L Hall**, SABIC, Selkirk, NY  
Application of In-Situ Reaction Monitoring to Achieve Greater Process Understanding

**Kei Toyota**, Panasonic Holdings Corporation, Japan  
Production of One-Dimensional Organic-inorganic Hybrid Polymer *Via* the Sol-gel Reaction Of 3-Glycidoxypropylmethyldimethoxysilane on a Liquid-Liquid Interface

**Raymond Thompson**, Vista Engineering LLC, Hoover, AL  
Commercialization of Composite Technologies and Products

**Gonzalo quezada**, Universidad del Bio-Bio, Chile  
Use of Biopolymers as Candidate Flocculants in Thickeners in Mining Operations using Molecular Simulation Approach

**Eduardo Ruiz**, Polytechnique Montreal, Canada  
Eco-friendly Reinforced Green-plastics from Waste Tires and Renewable Resources

**Marthe Nees**, University of Antwerp, Belgium  
The Nco Cycle: A Two-step Complete Recycling Process for Polyurethanes

**Sung Hee Joo**, MSU Denver, Denver, CO  
Bio-based Plastic Polymers in a Circular Economy

**Rathanawan Magaraphan**, Chulalongkorn University, Thailand  
Structure and Properties of Pla/Mevoh-Clay Nanocomposite Processed through Candy-floss Spinning and Extrusion

**Aziya rezzouq**, Hassan II University of Casablanca, Morocco  
Hancing Cellulose Acetate Films: Impact of Glycerol and Ionic Liduid Plasticisers

**Emil P Kartalov**, Naval Postgraduate School, Monterey, CA  
Neutrally Buoyant Ergonomic Segmented Glass-Ceramic Composite Chocobar K4 Diving Suit with Superior Thermal Protection

**Ali Sarhadi**, Technical University of Denmark, Denmark  
Mechanical Performance of 3D Printed Fiber-reinforced Polymer Composites

**Donghong Yu**, Aalborg University, Denmark  
Non-fully conjugated polymers for efficient and thermally stable solar cells

**Masafumi Yamato**, Tokyo metropolitan university, Japan  
Innovations in Nanoparticle-containing Gas Separation Membranes

**Yahya Ahmed Ismail**, University of Calicut, India  
Mimicking Proprioception: Polyaniline/Hydrogel Hybrid Systems as Self sensing Macromolecular Motors

**Subramanian venkatachalam**, IIT Madras, India  
Machine Learning Optimization for Designing Polymer Based Multilayer Microwave Absorber

**Anamaria Barrera Bogoya**, LCPM, Universite de Lorraine, France  
New poly(ionic liquid)s with different alkyl chains for CO<sub>2</sub> capture

**Michal Rezanka**, Technica University of Liberec, Czech Republic  
Cyclodextrin Polymers as Sorbents For Pfas

**Piyachat Chuysinuan**, Chulabhorn Research Institute, Thailand  
Release Characteristic of Curcumin (Zingiberaceae) from Sodium Alginate and Polyvinyl Alcohol-based Hydrogel Composite: Antioxidant Properties

## Poster Presentations

**Hanan Fawaz Akhdar**, Imam Mohammad Ibn Saud Islamic Univeristy, Saudi Arabia  
Assessment of the Effect of Different Composites on the Photon and Neutron Shielding Capabilities of Polyurethane Using Geant4 Toolkit

**Zachary Frome Burton**, Michigan State University, East Lansing, MI  
Origin of Life: Trna is an Ordered Rna Polymer at the Inception of Life

**Nadarajah Vasanthan**, Long Island University, Brooklyn, NY  
Surface Modification and Antimicrobial Properties of Cellulose Nanocrystals and its Impact on Crystallization of poly[(R)-3-hydroxybutyrate]

**Mircea Chipara**, University of Texas Rio Grande Valley, Edinburg, TX  
Polyethylene Oxide – Polyvinylidene Fluoride Blends

## Titles To be Announced

**Yanbin Fan**, Dow, Dow

**Claudia Romero**, Instituto Politecnico Nacional, Mexico

**Laura Romero-Zeron**, University of New Brunswick, Canada

**Juliana Cardinali Rezende**, Federal University of ABC, Brazil

**Yong Zhao**, Edwards Lifesciences LLC, Lake Forest, CA

**Takehisa Hanawa**, Tokyo University of Science, Japan

**Priyanka Sharma**, Western Michigan University, Kalamazoo, MI

**Ricardo Acosta Ortiz**, Centro de Investigacion en Quimica Aplicada, Mexico

**Ian Nicholls**, Linnaeus University, Sweden

**Wen Zhong**, University of Manitoba, Canada

**Ryan Berry**, Authority Health, Detroit, MI

**Enock Heyman**, Avery Dennison, Mentor, OH

**Phillip Choi**, University of Regina, Canada

<b>Ana Beatriz Morales Cepeda</b> , Tecnologico Nacional de Mexico, Mexico
<b>Joseph Zilberman</b> , ICL Group LTD., Israel
<b>Hao Dang</b> , Boston Scientific, Marlborough, MA
<b>Rosangel Ramos Espinoza</b> , Boston Scientific, Marlborough, MA
<b>John Tsavalas</b> , University of New Hampshire, Durham, NH
<b>Anima Bose</b> , University of Houston, Houston, TX
<b>Satoru Tsukada</b> , Chiba University Japan
<b>Yanguang Zhang</b> , National Research Council of Canada (NRC), Canada
<b>Chen Jian-Yi</b> , Industrial Technology Research Institute, Taiwan
<b>Min Kyu Lee</b> , University of California (UCLA), Los Angeles, CA
<b>Dmitri Kilin</b> , North Dakota State University, Fargo, ND
<b>Stephen Schmidt</b> , Braskem, Pittsburgh, PA
<b>Pashupati Pokharel</b> , Altria Client Services, Richmond, VA
<b>Umar Raza</b> , University of Connecticut, Storrs, CT
<b>Zafer Kazanci</b> , Queen's University Belfast, United Kingdom
<b>Fang Xie</b> , Imperial College London, United Kingdom
<b>Przemyslaw Rybinski</b> , Jan Kochanowski University of Kielce, Poland
<b>Matthew Warner</b> , Hexcel Corporation, Stamford, CT
<b>Debes Bhattacharyya</b> , University of Auckland, New Zealand
<b>Mohak Deesai</b> , University of Auckland, Mansfield, CT

## Presentations Yet to be Confirmed

<b>Stanley Onwubu</b> , Durban University of Technology, South Africa Utilization of Fish Scale-derived Collagen as a Filler Material in Polyurethane Foam Composites
<b>Sanjib Banerjee</b> , Indian Institute of Technology Bhilai, India Facile Access to Next Generation of Responsive Polymers
<b>Anindya Deb</b> , Indian Institute of Science, India Insights Into the Behaviors of Polymer-based Structural Solutions in Lightweighting of Transportation Systems



**Ahmed S Haidyrah**, King Abdulaziz City for science & Technology, Saudi Arabia  
Manufacturing of Carbon Fiber Reinforced Thermoplastics and its Recovery of Carbon Fiber: A Review

**Mubarak Ahmad Khan**, Bangladesh Jute Mills Corporation, Bangladesh  
Jute Cellulose Based Totally Biodegradable Biopolymer "Sonali Bag" Developed as Smart Bio-materials: Real Life Example

**Yaquan Wang**, Queen Mary University of London, United Kingdom  
Versatile and Recyclable Conductive Hydrogels for Flexible Electronics

**Aasma El Kaddouri**, University of Lorraine, France  
A Coupled Ex-Situ/In-situ Approach to Investigate Ionomer Membrane Performances and Durability for Fuel Cell Application

**Munziya Abutalip**, Nazarbayev University, Kazakhstan  
Multifunctional Zwitterionic Polymeric Membrane for Water Desalination

**Oluwatoyin Joseph Gbadeyan**, Durban University of Technology, South Africa  
The Properties of Biobased Plastic Fabricated Using Poly (Vinyl Alcohol) (Pva) as Based Material

**Yehia Manawi**, Qatar Environment and Energy Research Institute (QEERI), Qatar  
New Ceramic Membrane for Phosphate and Oil Removal

**Wei Wu**, University College London, United Kingdom  
A Study on the Triazine-based Polymers for the Removal of Mercury Ions

**Kushal**, Bruker, Billerica, MA  
Chromatography Free Mass Spectrometry

**Moges Admasie Mengstie**, Bahir Dar University, Ethiopia  
Synthesis and Characterization of 5-Hydroxymethylfurfural from Corncob Using Solid Sulfonated Carbon Catalyst

**Shumaila Razzaque**, IChF,PAN, Poland  
Hypercrosslinked Polymers for the Integrated Storage and Conversion of Carbon Dioxide

**Zhongqi He**, USDA-ARS Southern Regional Research Center, Orleans, LA  
Valorization of Cottonseed Byproducts for Bioplastic (Biocomposite, Biofilm) Applications

**Tanyaradzwa Muzata**, Hampton University, Hampton, VA  
Development of EMI shielding materials from virgin and post-consumer derived polymers

#### Poster Presentation

**Eyasu Anjulo Lambebo**, National Taiwan University of Science and Technology, Taiwan  
Efficient Removal of Methyl Blue from Aqueous Solutions Using Humic Acid Modified Magnetite (Ha-Fe<sub>3</sub>O<sub>4</sub>) Nanoparticles: Synthesis, Characterization, and Sorption Performance

#### Poster Presentation

**Raikhan Rakhmetullaeva**, Al-Farabi Kazakh National University, Kazakhstan  
Development of Producing Hydrogels Based on Natural Polymers for Seed Drying Development of Natural Polymer-based Hydrogel Production for Seed Drying

#### Poster Presentation

**Clarita Clements**, Sathyabama Institute of science and Technology, India  
Silicone Mediated Cross-linked Composites: A Biomimetic Approach for Antibiofilm Applications

## Presentation Slots Available!!!



### Exhibitor and Sponsorship Opportunities:

Polymers-2024, a three-day conference will give attendees a chance to interact, learn and engage with the business industries foremost researchers, while tackling the pressing issues that face the new generation. Participants will be top level representatives from sectors like prominent commercial; regulatory; scientific organizations and academic institutes.

### Benefits of Exhibiting and Sponsoring:

- **Enhanced Brand Exposure:** Gain visibility among top professionals and decision-makers.
- **Networking Opportunities:** Connect with industry leaders and potential clients.
- **Promotional Activities:** Highlight your brand through our marketing channels and during the event.
- **Complimentary Passes:** Receive complimentary passes for your team (2 persons) to attend the conference.

For more information on available slots and pricing, please contact us at:

**Email:** [secretary@polymersmeeting.com](mailto:secretary@polymersmeeting.com)

**Contact:** 1-469-854-2280

**SEE YOU AT POLYMERS-2024 CONFERENCE  
BOSTON, MA**