POLY-CHAR 2026
Chiang Mai, Thailand

SIIT SINCE 1992 FAME Functional Advanced Materials Engineering

CHASPARK

BOOK OF PROGRAM

"Smart, Sustainable & Data-Driven Polymeric Materials: From Molecular Design to Circular Applications"

22 – 25 November, 2026

Chiang Mai, Thailand



Table of Contents

About POLY-CHAR Conference 2

Welcome Address 3

Co-Organizers 4

Strategic Partner/Sponsors 5

Committees 6

General Information 11

Floor Plan 13

"Melissa Chan Chin Han" Conference Courses 16

Plenary Talks & Parallel Sessions 27

- 23 November 2026 27
- 24 November 2026 28
- 25 November 2026 39

Poster Presentation Session 49

About POLY-CHAR Conference

POLY-CHAR is a non-profit, non-governmental organization dedicated to fostering a collegial environment for the exchange of knowledge, promoting student exchanges and collaborations, hosting international meetings, and providing a platform for scientists worldwide in the field of Polymer Science and Technology. Its scope embraces researchers engaged in experimental work, theoretical studies, and computer simulations, with the goal of achieving a deeper understanding of the relationships between polymer structures, properties, and applications. The main aim of this conference, for nearly 30 years, has been to bring together academia and industry at all levels.

Another key point of **POLY-CHAR** is that it has always placed special emphasis on international collaboration, the promotion of young scientists, and the provision of a collegial environment. It should also be noted that a good balance between senior and young scientists of both genders has been and will be sought throughout the organization and duration of the conference.

The **POLY-CHAR 2026** conference carries the underlying theme "Smart, Sustainable & Data-Driven Polymeric Materials: From Molecular Design to Circular Applications" to promote cross-disciplinary understanding between the classical branches of polymer science and more avant-garde fields. The conference theme covers topics of special significance at present, such as sustainability, recyclability, energy, health, security, and AI, and the conference will be held in Chiang Mai, Thailand, from November 22-25, 2026. We believe that your expertise will greatly contribute to the discussions at this conference and enrich the overall experience for all participants. Your participation would be highly valued by both the organizing committee and fellow attendees. In addition to our main conference activities, we hope that all participants will have the opportunity to enjoy the rich history, charming culture, beautiful scenery, and delicious cuisine of Chiang Mai, Thailand.

Welcome Message from Chairperson of POLY-CHAR 2026

On behalf of the organizing committee, it is our great honor to warmly welcome all participants to the **POLY-CHAR 2026** conference, Chiang Mai, Thailand. We are delighted to host this conference in Thailand for the first time, continuing the series' successful history.

With approximately 220 researchers from more than 40 diverse institutes, **POLY-CHAR 2026** aims to offer a distinctive platform for advancing discussions surrounding polymer science and technology. Beyond this, we envision this gathering catalyzing profound learning experiences for emerging talents, nurturing their growth and facilitating interactions with esteemed researchers. In a close-knit environment, we anticipate generating novel ideas and inspiration, fostering a dynamic exchange of knowledge and insights.

Beyond the scientific program, we hope you will take the opportunity to discover Chiang Mai's rich cultural heritage and natural beauty. Known as the "Rose of the North," the city is home to centuries-old temples, lively night markets, and a distinctive culinary tradition, set against a backdrop of scenic mountains and lush countryside. Its warm hospitality provides a welcoming setting for reconnecting with colleagues, building new friendships, and creating lasting memories.

Adding to this experience, the conference coincides with the Loy Krathong festival, offering participants an opportunity to enjoy one of Thailand's most cherished cultural traditions, celebrated with candlelit floats and festive activities. We hope that your time at POLY-CHAR 2026 will be both scientifically inspiring and personally rewarding. Thank you for joining us and contributing to the success of the conference. We wish you a productive meeting and a memorable stay in Chiang Mai.

Warm Regards,



Prof. Pakorn Opaprakasit
Chair, POLY-CHAR 2026

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Assoc. Prof. Shu Han Hsu (Thammasat University, Thailand)

Asst. Prof. Tanyakarn Treeratanaphitak (Thammasat University, Thailand)

Dr. Atitsa Petchsuk (National Metal and Materials Technology,
National Science and Technology Development Agency, Thailand)

Prof. Amorn Chaiyasat (Rajamangala University of Technology Thanyaburi, Thailand)

Dr. Kamonchanok Thananukul (Thammasat University, Thailand)

Dr. Kusima Pinsuwan (Thammasat University, Thailand)

Dr. Jirawan Jindakaew (Chulalongkorn University, Thailand)

Mr. Worathep Khimlek (Thammasat University, Thailand)

Mr. Pattara Somnuake (Thammasat University, Thailand)

Plenary Speakers

Prof. Alejandro J. Müller	University of the Basque Country, Spain
Prof. Sanat Kumar	Columbia University, USA
Prof. Eugene Chen	Colorado State University, USA
Prof. Katja Loos	University of Groningen, The Netherlands
Prof. Zhibo Li	Qingdao University of Science and Technology, China
Prof. Christine Luscombe	Okinawa Institute of Science and Technology, Japan
Prof. Filip Du Prez	Ghent University, Belgium
Prof. Sébastien Lecommandoux	University of Bordeaux, France

Keynote Speakers

Prof. Bin Zhang	Zhengzhou University, China
Prof. Michael Silverstein	Israel Institute of Technology, Israel
Prof. Claudio De Rosa	University of Napoli Federico II, Italy
Prof. Simone Napolitano	Université libre de Bruxelles, Belgium
Prof. Tiberio Ezquerra	Institute of the Structure of Matter (IEM), CSIC, Spain
Prof. Andrew Whitaker	University of Queensland, Australia
Prof. Volker Abetz	University of Hamburg, Germany
Prof. Holger Schönher	University of Siegen, Germany
Prof. Wenbing Hu	Nanjing University, China
Prof. Xiao Matthew Hu	Nanyang Technological University, Singapore
Prof. Voravee Hoven	Chulalongkorn University, Thailand
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Prof. Suwabun Chirachanchai	Chulalongkorn University, Thailand
Assoc. Prof. Winita Punyodom	Chiangmai University, Thailand
Prof. Anongnat Somwangthanaroj	Chulalongkorn University, Thailand
Prof. Syuji Fujii	Osaka Institute of Technology, Japan
Prof. Philippe Zinck	University of Lille, France
Prof. Hathaikarn Manuspiya	Chulalongkorn University, Thailand

Invited Speakers

Dr. Ester Verde-Sesto	Centro de Física de Materiales (CFM-MPC) CSIC-EHU, Spain
Dr. Antonio J. Capezza	KTH Royal Institute of Technology, Sweden
Prof. Natalie Stingelin	Georgia Institute of Technology, USA
Prof. Paul Topham	Aston University, The United Kingdom
Assoc. Prof. Jianyong Jin	University of Auckland, New Zealand
Prof. Ricardo Manríquez-González	University of Guadalajara, Mexico
Assoc. Prof. Oratai Jongprateep	Kasetsart University, Thailand
Prof. Guoming Liu	Chinese Academy of Sciences, China
Assoc. Prof. Dario Cavallo	University of Genova, Italy
Prof. Scott Grayson	Tulane University, United States
Dr. Jon Maiz	Centro de Física de Materiales (CFM-MPC) CSIC-EHU, Spain
Prof. Dimitrios N. Bikiaris	Aristotle University of Thessaloniki, Greece
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Prof. Yanchun Han	Chinese Academy of Sciences, China
Prof. Xia Dong	Chinese Academy of Sciences, China
Prof. Julian Xiao-Xia Zhu	Beijing Normal University Zhuhai, China
Asst. Prof. Arnaud Thevenon-Kozub	Utrecht University, The Netherlands
Prof. Nezha Badi	Ghent University, Belgium
Dr. Daniele Mantione	University of the Basque Country (UPV/EHU), Spain
Prof. Cattaleeya Pattamaprom	Thammasat University, Thailand
Prof. Siripon Anantawaraskul	Kasetsart University, Thailand
Assoc. Prof. Chariya Kaewsaneha	Thammasat University, Thailand
Prof. Chunye Xu	University of Science and Technology of China, China
Dr. Atitsa Petchsuk	National Metal and Materials Technology, National Science and Technology Development Agency, Thailand
Prof. Changxia Shi	Chinese Academy of Sciences, China
Assoc. Prof. Kannika Sahakaro	Prince of Songkla University, Thailand
Assoc. Prof. Supakij Suttiruengwong	Silpakorn University, Thailand

Assoc. Prof. Yeampon Nakaramontri	King Mongkut's University of Technology Thonburi, Thailand
Assoc. Prof. Ekwipoo Kalkornsurapranee	Prince of Songkla University, Thailand
Dr. Chutima Saeheng	National Metal and Materials Technology, National Science and Technology Development Agency, Thailand
Dr. Witchuda Daud	National Metal and Materials Technology, National Science and Technology Development Agency, Thailand
Assoc. Prof. Kun Cheng Ke	National Taiwan Normal University, Taiwan
Prof. Kuei Chih Feng	Ming Chi University of Technology, Taiwan
Assoc. Prof. Nattakan Soykeabkaew	Mae Fah Luang University, Thailand
Assoc. Prof. Paiboon Sreearunothai	Thammasat Univeristy, Thailand
Assoc. Prof. Shu-Han Hsu	Thammasat University, Thailand
Assoc. Prof. Yi-Ting Lai	Ming Chi University of Technology, Taiwan
Assoc. Prof. Yukiya Kitayama	Osaka Metropolitan University, Japan
Prof. Zheng Li	Peking University, China
Asst. Prof. Jyoti Giri	Tribhuvan University, Nepal
Asst. Prof. Audrey Favrelle-Huret	University of Lille, France
Prof. Metha Rutnakornpituk	Naresuan University, Thailand
Prof. Mehrdad Negahban	University of Nebraska-Lincoln, USA

General Information

Registration Desk Open

Sunday, 22 November 2026: 08:30-16:00 (Thippiman)

Monday, 23 November 2026: 08:00-12:00 (Grandview Convention Center)

Tuesday, 24 November 2026: 08:00-16:00 (Grandview Convention Center)

Wednesday, 25 November 2026: 08:00-12:00 (Grandview Convention Center)

Presentation Guidelines

Oral presentations and poster presentations will take place at the Convention Center.

Guidelines for oral presentation

Presenters are required to upload their presentation files at the Computer Center located at the Center of Excellence in Functional Advanced Materials Engineering (CoE FAME) booth at least 2 hours before the start of the scheduled session. All presentation files will be deleted from the conference computers after the conclusion of the respective symposium.

Audio-Visual Equipment

Each meeting room comes equipped with a computer, an LCD projector, a Screen, and a laser pointer. The computer will be configured with the Windows 10 operating system, Microsoft Office, and Adobe Acrobat Reader. Please bring your presentation files on thumb drives/flash drives only.

Length of Presentation

Total presentation duration, including Q&A, is 50 minutes for the plenary talks, 30 minutes for the keynote talks, 20 minutes for the invited talks, and 20 minutes for each contributed oral presentation.

Guidelines for poster presentation

1. Presenters are responsible for setting up their posters prior to 24 November 2026 and for removing them either after the poster session or on 25 November 2026.

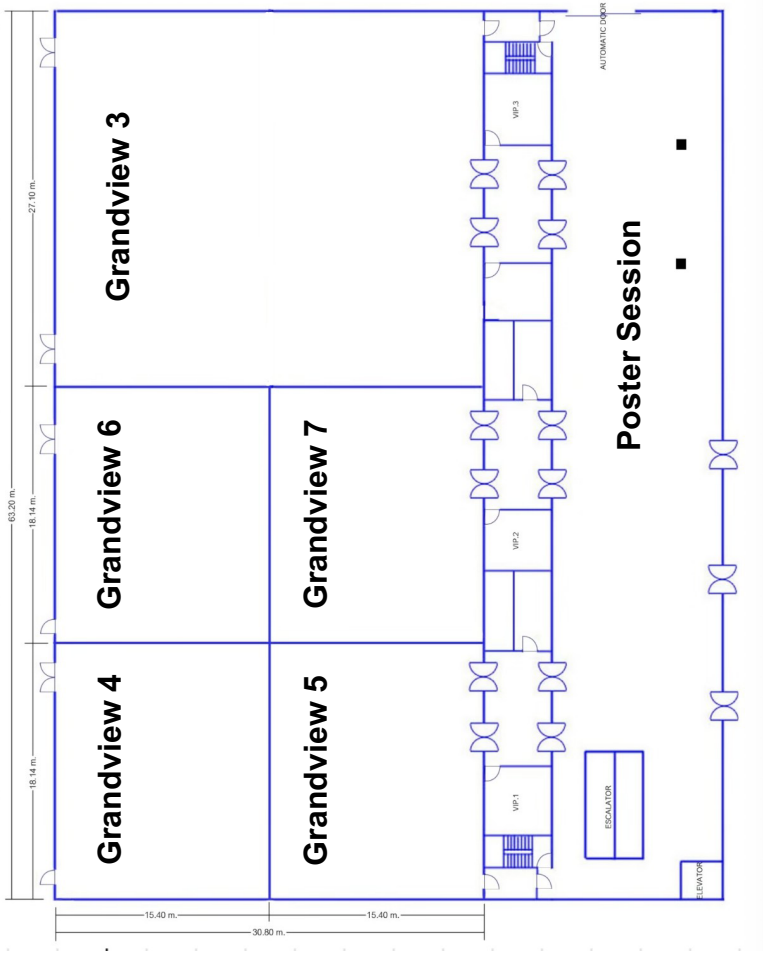
2. The poster board will be labeled with a poster ID number; therefore, presenters can find where to post their material.

3. Presenters are also expected to be present during the designated sessions to engage with participants and address any questions.

Symposia

1. Smart and Adaptive Polymeric Systems
2. Materials Recycling and Upcycling
3. Circular Polymers and Green Processing
4. Biopolymers and Biomedical Materials
5. AI and Machine Learning in Materials Discovery
6. Advanced Multi-scale Characterization Techniques
7. Bio-based and CO_2-Derived Polymers
8. Polymers for Flexible Electronics, Healthcare, and Energy Applications
9. Rheology and Processing of Polymeric Materials
10. Policy, Standards, and Roadmaps for Polymer Circularity
11. Colloids and Interface Science

Floor Plan


Grandview 3
Grandview 6
Grandview 7
Grandview 4
Grandview 5
Poster Session
AUTOMATIC DOOR
VIP-3
VIP-2
VIP-1
ESCALATOR
ELEVATOR
27.10 m.
63.20 m.
18.14 m.
18.14 m.
15.40 m.
15.40 m.
30.80 m.

	Sunday, 22 November 2026	Monday, 23 November 2026
	Thippiman	**Grandview Convention Center**
08.00		Registration
	Registration	Opening Ceremony
09.00	Opening remarks	**Plenary Talks**
	"Melissa Chan Chin Han" Conference Courses	
10.00	Morning Break	
	"Melissa Chan Chin Han" Conference Courses	Morning Break
11.00		**Plenary Talks**
12.00	Lunch *White Elephant Restaurant*	
13.00		Lunch *Chang Plai, 1st floor Grandview Convention Center*
	"Melissa Chan Chin Han" Conference Courses	
14.00		**Conference Tour/ Cultural events/Reception**
15.00	Afternoon Break	
	"Melissa Chan Chin Han" Conference Courses	
16.00		
17.00		
18.00		

Tuesday, 24 November 2026	Wednesday, 25 November 2026
Grandview Convention Center	**Grandview Convention Center**
Registration	Registration
Plenary Talks	**Plenary Talks**
Morning Break	Morning Break
Parallel Sessions	**Parallel Sessions**
Lunch *Chang Plai, 1st floor Grandview Convention Center*	Lunch *Chang Plai, 1st floor Grandview Convention Center*
Parallel Sessions	**Parallel Sessions**
Afternoon Break	Afternoon Break
Parallel Sessions	**Parallel Sessions**
Poster Session & Cocktail Reception	
	Closing ceremony/Banquet *Grandview 3*

"Melissa Chan Chin Han" Conference Courses

Sunday, 22 November 2026	**Thippiman**
8:30-9:00	**Registration**
9:00-9:10	Opening remarks by Prof. Pakorn Opaprakasit Chairman of POLY-CHAR 2026
9:10-10:00	**Polymer Thermal Properties:** DSC and Flash DSC (non-isothermal DSC, Isothermal DSC, Crystallization kinetic measurements, Flash DSC, and its applications) **Prof. Alejandro J. Müller** *University of the Basque Country UPV/EHU, Spain*
10:00-10:20	Break
10:20-11:10	**Polymer Mechanical Properties:** Stress-strain curves, Plastic deformation mechanisms, Impact testing, DMTA, etc. **Assoc. Prof. Dario Cavallo** *University of Genoa, Italy*
11:10-12:00	**Polymer Viscoelasticity:** Viscoelasticity, Dynamic response, Relaxations and different transitions, Mechanical spectroscopy, Temperature and frequency scans, TTS and other superpositions. **Prof. Mehrdad Negahban** *University of Nebraska-Lincoln, USA*
12:00-13:10	Lunch
13:10-14:00	**Electron Microscopy:** Multi-scale polymer microscopy to study morphology of polymers for environmentally friendly solutions, with some keywords like design for recycling, bio-based polymers and blends, degradation, wear, reduction of microplastic emission, light optical microscopy, TEM and SEM. **Dr. Sven Henning** *Fraunhofer IMWS, Germany*
14:00-14:50	**Wide-Angle X-ray Diffraction:** Crystalline structure, Polymorphism, Degree of crystallinity determination, Orientation, etc. **Prof. Guoming Liu** *Chinese Academy of Sciences, China*
14:50-15:10	Break
15:10-16:00	**Scattering Techniques for Polymer-based Systems:** Morphology, phase separation, Thermodynamic parameters, Molecular weight, Diffusion dynamics, etc. **Prof. Volker Abetz** *University of Hamburg & Helmholtz-Zentrum Hereon, Germany*
Discussion & Closing	

Plenary Lectures



Prof. Alejandro J. Müller

University of the Basque Country UPV/EHU, Spain

"Crystallization-Driven Design in Semicrystalline Block and Random Copolymers"

Prof. Christine Luscombe

Okinawa Institute of Science and Technology, Japan

"Synthesis as a Tool for Expanding the Scope of Semiconducting Polymers"





Prof. Zhibo Li

Qingdao University of Science and Technology, China

"Closed-Loop Recyclable Polyesters: Preparation via Ring-Opening Polymerization of Lactones"

Prof. Katja Loos

University of Groningen, The Netherlands

"Green Pathways to Functional and Renewable Polymeric Materials"



Plenary Lectures



Prof. Filip Du Prez

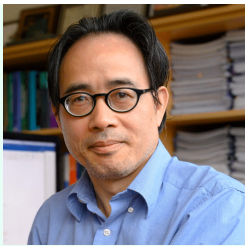
Ghent University, Belgium

"Rewriting the Rules of Thermosets: Dynamic Covalent Chemistry for a Circular Polymer Future"

Prof. Eugene Chen

Colorado State University, USA

"Molecular Design and Macromolecular Engineering Towards Circular Polymers and Monomaterials"





Prof. Sébastien Lecommandoux

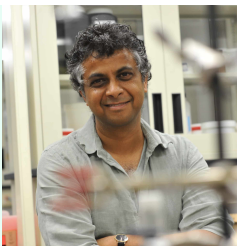
University of Bordeaux, France

"Biomimetic Polymer Self-Assembly: Engineering Living-Like Matter from Smart and Green Nanomedicine to Artificial Cell Therapy"

Prof. Sanat Kumar

Columbia University

"Micro/Nanoplastic Formation by Polymers in Under Quiescent Conditions and During Processing"



Crystallization-Driven Design in Semicrystalline Block and Random Copolymers

Alejandro J. Müller[1,2]

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Copolymerization provides a versatile way to combine the properties of different homopolymers, but when the segments are semicrystalline, the crystallization behavior becomes both complex and highly adaptable. In this lecture, I will examine how crystallization can serve as a design tool in semicrystalline block and random copolymers. For block copolymers, I will demonstrate that systems with multiple crystallizable blocks, up to five on a single chain, can self-assemble into highly ordered multicrystalline superstructures under weak melt segregation. This behavior results from sequential crystallization: the first block to crystallize forms a semicrystalline template that directs the crystallization of the remaining blocks, with outcomes influenced by composition and molecular weight. Such hierarchical structuring offers an effective way to tailor morphology and material properties.

In contrast, random copolymers display a broad range of crystallization behaviors despite their straightforward synthesis. Depending on the comonomer chemistry, three primary scenarios emerge: isomorphism, total exclusion, and isodimorphism. However, recent research by our group shows that these behaviors can coexist in certain random copolymers, further diversifying the crystallization landscape. Among these, isodimorphic systems are particularly appealing, as their pseudo-eutectic behavior allows for continuous adjustment of melting temperature, crystallinity, crystal structure, and mechanical properties by simply changing the composition. By integrating examples from copolyesters, copolycarbonates, and other semicrystalline materials, this lecture will show how molecular architecture and composition influence crystallization pathways and final properties. These ideas establish broad design principles for next-generation semicrystalline polymers, with potential applications in sustainable materials, elastomers, adhesives, and durable structural systems.

References

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Synthesis as a Tool for Expanding the Scope of Semiconducting Polymers

Christine Luscombe[1,*], Abduhlrahman Bakry[1]

Okinawa Institute of Science and Technology, Onna, Okinawa, 904-0495, Japan
*E-mail: christine.luscombe@oist.jp

The field of semiconducting polymers holds significant promise for next-generation electronics, particularly in bioelectronic sensors and organic electrochemical transistors (OECTs) where glycolated polythiophenes such as P3MEEMT are essential due to their dual ionic-electronic conductivity. However, realizing the full potential of these materials requires the development of highly reliable and reproducible synthetic methods. While direct arylation polymerization (DArP) and cross-dehydrogenative coupling (CDC) offer atom-economical routes for many conjugated systems, the precise synthesis of glycol-functionalized polymers often necessitates different approaches, such as Kumada Catalyst-Transfer Polycondensation (KCTP).

In this presentation, I will discuss our recent mechanistic investigations into the synthesis of P3MEEMT, specifically addressing why these functionalized monomers often exhibit less "living" character compared to their alkyl-substituted counterparts. Our work has identified a fundamental radical pathway that competes with the traditional catalyst-transfer mechanism, leading to reduced control over molecular weight and increased dispersity. We demonstrate that this pathway is closely linked to monomer aggregation in solution, which can be mitigated through the strategic use of additives like such as $MgCl_2$ to disrupt these interactions. By understanding the interplay between side-chain coordination, aggregation, and catalytic pathways, we can achieve the structural precision required to optimize the electronic properties of these materials.

Keywords: Semiconducting polymers, living polymerizations, metal-catalyzed cross-coupling reactions, radical-mediated reactions

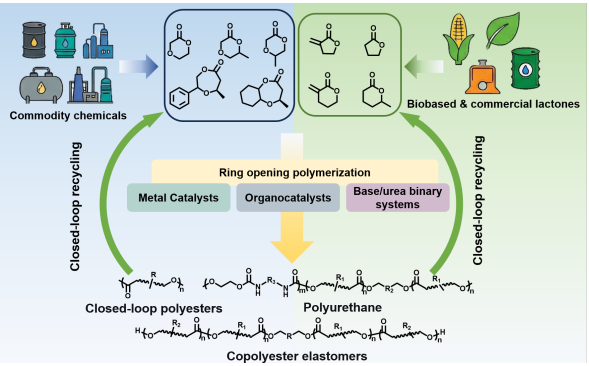
Closed-Loop Recyclable Polyesters: Preparation via Ring-Opening Polymerization of Lactones

Zhibo Li

State Key Laboratory of Chemical Engineering and Low-carbon Technology, College of Chemical and Biological Engineering, Zhejiang University, 866 Yuhangtang Road, Hangzhou, Zhejiang 310058, China
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The development of chemically recyclable polymers represents one of the most appealing solutions to address the white pollution challenge. Despite recent progress, developing chemically recyclable polymers directly from commodity chemicals or commercial monomers remains crucial for practical applications. This presentation summarizes our recent progress in developing closed-loop recyclable polyesters via ring-opening polymerization (ROP) of lactones to advance the circular plastics economy. First, regarding monomer synthesis: we utilize commodity chemicals to synthesize a series of six- and seven-membered lactones with tailored substituents. These precision-designed monomers undergo ROP to produce high-performance polyesters with excellent chemical recyclability. Second, regarding catalytic ROP: utilizing bio-based or commercial lactones (such as γ-butyrolactone, α-methylene-γ-butyrolactone, δ-caprolactone, and α-methylene-δ-valerolactone), we have developed highly selective metal catalysts, organocatalysts, and base/urea binary systems. These catalysts enable the rapid, chemoselective, and controlled ROP of inherently stable lactones, yielding polyesters with high molecular weights. Crucially, all these polyesters exhibit intrinsic closed-loop recyclability, capable of selective depolymerization back to pristine monomers under mild conditions, offering a sustainable and closed-loop solution to polymer waste. Finally, recyclable polyurethane and copolyester elastomers were produced through polymerization of diol precursors with diisocyanates or other lactones.

Keywords: Circular plastics economy, Closed-loop recyclable polymers, Ring-opening polymerization, Lactones, Organocatalysts



Green Pathways to Functional and Renewable Polymeric Materials

Katja Loos

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Recent advances in polymer chemistry are opening genuinely green routes toward functional, renewable and recyclable polymeric materials. One major avenue is the use of biocatalysis (enzymes) for polymerization of monomers derived from renewable feedstocks. For example, enzymatic polycondensation of biobased diacids (e.g., furan-based) and diols or diamines affords polyesters and polyamides under mild, solvent-efficient conditions, enabling tunable architectures, controlled end-groups and enhanced degradability. These approaches demonstrate how enzymatic polymerizations can replace harsher conventional catalysis, align with renewability goals and facilitate downstream recycling.

In parallel, strategies for chemical or physical recyclability have been explored. Designing polymer backbones (and architectures) with end-of-life pathways in mind including depolymerisation, enzymatic degradation or selective recovery of monomers enables "circular" material lifecycles without sacrificing performance. Additionally, the integration of dynamic covalent networks or vitrimer-type behaviour has emerged as a key element: reprocessable, self-healing and adaptable polymer systems derived from biobased monomers or segments enable functional materials that combine renewability and reusability.

References

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Rewriting the Rules of Thermosets: Dynamic Covalent Chemistry for a Circular Polymer Future

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Dynamic covalent chemistry (DCC) allows the development of thermally (re)processable and recyclable polymer networks, which is a highly attractive feature for new generations of thermoset materials and composite materials. However, despite a huge surge in academic interest where soon almost any imaginable DCC platform may have been applied in a thermoset formulation, dynamic or reversible covalent polymer networks have so far found only few industrial applications. This lecture will provide a perspective on the main strategies for the application of DCC in the design and development of bulk thermoset materials and presents some of the key hurdles for their industrial implementation. The polymer design strategies and associated chemistries will be placed into the perspective of how 'close to market' their development pathway is, thus providing a roadmap to achieve high-volume breakthrough applications.

Besides a general outline, this presentation will highlight a number of our actual research efforts to overcome remaining limitations for the industrial implementation of this new generation of reprocessable thermoset materials, mainly based on smart chemical design [1-7].

Keywords: Circular thermosets, Recycling, Dynamic Covalent Chemistry

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Molecular Design and Macromolecular Engineering towards Circular Polymers and Mono-Materials

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Truly sustainable polymers should exhibit *built-in functions to perform, renewable resources to produce, and circular paths to regenerate*. Towards developing such sustainable polymers, we have focused on molecular design of monomer structures and universal dynamic crosslinkers that can lead to intrinsically circular polymers and upcycle mixed waste plastics into robust and reprocessable crosslinked multiblock copolymers, respectively. The traditional design of multi-materials for commercial plastic products typically employs multiple, often non-biodegradable or non-recyclable, materials of different chemical speciation or compositions, substantially complicating mechanical, chemical, or other emerging recycling processes of the end-of-life products. To address this problem, we have developed macromolecular engineering of stereomicrostructures and architectures of circular and/or biodegradable polymers, affording emerging mono-materials made of a single building block or monomer type and enabling tailorable properties characteristic of common types of polymers, but without changing their chemical compositions or building-block monomers.

Keywords: Circular polymer, Mono-material, Molecular design, Stereomicrostructure engineering, Architecture engineering

Biomimetic Polymer Self-Assembly: Engineering Living-Like Matter from Smart and Green Nanomedicine to Artificial Cell Therapy

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Our scientific approach is rooted in biomimicry, as we design synthetic analogs of natural macromolecules (such as proteins and glycoproteins) and investigate their controlled, tunable self-assembly into structures resembling those found in nature, such as viruses or cell membranes. Within this framework, we develop polymer-based self-assembled nanoparticles, primarily polymeric vesicles, known as polymersomes.

Here, we present our latest advances in engineering complex, multi-component, multi-scale, and compartmentalized functional artificial cells. These systems mark an initial step toward the structural and functional mimicry of living cells, with the potential to autonomously detect and repair biological dysregulations in situ.

Keywords: Self-assembly, Polymersome, Polypeptides, Nanomedicine, Block copolymers

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Micro/Nanoplastic Formation by Polymers in Under Quiescent Conditions and During Processing

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Polymers are known to spontaneously produce microplastics (sizes 1μm - 3mm) and nanoplastics (10nm - 1μm). Still, the mechanisms by which Å-level random bond-breaking events lead to the formation of these relatively large fragments are unclear.

Quiescent MNPL formation: Significantly, ≈70 % of commercial polymers are semicrystalline, with a morphology comprised of alternating crystalline and amorphous layers, each tens of nanometers thick. It is well-accepted that chain scission events under quiescent conditions accumulate in the amorphous phase. We show that this leads to mechanical failure and the concurrent release of particulate nanoplastics comprised of polydisperse stacks of lamellae even under quiescent conditions. Noncrystalline analogs, which do not have a well-defined microstructure, do not form nanoplastics. While the amorphous phase of the semicrystalline nanoplastics continues to degrade, crystal fragments do not, and hence, they temporally persist in the environment. These results stress the critical role of polymer microstructure and fracture mechanics on particulate nanoplastic creation.

Producing MNPL during processing: Crushing polymers prior to mechanical recycling produces micro (sizes 1μm - 3mm) and nanoplastics (10nm - 1μm) [MNPLs] which could have deleterious health implications. Unexpectedly, we demonstrate that the process of extruding commodity polymers itself additionally produces ≈ 400 nm to ≈ 10 μm sized MNPLs. Using a synergistic combination of experiments and computer simulations, we establish that extrusion causes chain scission, with these degraded chains frequently acquiring oxygenated functionalities. This causes them to phase separate from the non-polar polymer matrix and produce MNPLs. We are surprised that MNPLs form at the film surface since the oxygenated species should have higher surface energies than the matrix. These findings highlight that mitigating MNPL release during mechanical recycling will require us to heal chain scission without functionalization by moieties that lead to phase separation.

Plenary Talks

Monday, 23 November 2026	**Grandview 3**
8:00-8:20	**Registration**
8:20-8:50	**Opening Ceremony & Group photo**
	Chair: Prof. Pakorn Opaprakasit
8:50-9:40	***PLENARY TALK:** **Prof. Alejandro J. Müller** *University of the Basque Country UPV/EHU, Spain* **Crystallization-Driven Design in Semicrystalline Block and Random Copolymers**
9:40-10:30	***PLENARY TALK:** **Prof. Christine Luscombe** *Okinawa Institute of Science and Technology, Japan* **Synthesis as a Tool for Expanding the Scope of Semiconducting Polymers**
10:30-10:40	Break
	Chair: Prof. Alejandro J. Müller
10:40-11:30	***PLENARY TALK:** **Prof. Sébastien Lecommandoux** *Université de Bordeaux (Bordeaux INP-ENSCBP), France* **Biomimetic Polymer Self-Assembly: Engineering Living-Like Matter from Smart and Green Nanomedicine to Artificial Cell Therapy**
11:30-12:20	***PLENARY TALK:** **Prof. Katja Loos** *University of Groningen, The Netherlands* **Green Pathways to Functional and Renewable Polymeric Materials**
12:20-13:20	Lunch
13:20	**Conference Tour/Cultural events/Reception**

* *Chaspark Lecture session*

Parallel Sessions: Room and Time

Room		Tuesday, 24 November 2026
Grandview 3	8:40-10:20	Plenary talk
	10:30-12:00	Chaspark Lecture Session
	13:10-14:40	Symposium 4 Biopolymers and Biomedical Materials
	15:10-16:50	Symposium 11 Colloids and Interface Science
Grandview 4	10:30-16:30	Symposium 2 Materials Recycling and Upcycling
Grandview 5	10:30-12:00	Symposium 4 Biopolymers and Biomedical Materials
	13:10-14:30	Symposium 1 Smart and Adaptive Polymeric Systems
	15:10-16:30	Symposium 7 Bio-based and CO_2-Derived Polymers
Grandview 6	10:30-16:50	Symposium 3 Circular Polymers and Green Processing
Grandview 7	10:30-16:30	Symposium 8 Polymers for Flexible Electronics, Healthcare, and Energy Applications

Plenary Talks & Parallel Sessions

Tuesday, 24 November 2026	**Grandview 3**
8:00-8:40	**Registration**
	Chair: Prof. Christine Luscombe
8:40-9:30	**PLENARY TALK:** **Prof. Filip Du Prez** *Ghent University, Belgium* **Rewriting the Rules of Thermosets:** **Dynamic Covalent Chemistry for a Circular Polymer Future**
9:30-10:20	**PLENARY TALK:** **Prof. Eugene Chen** *Colorado State University, USA* **Molecular Design and Macromolecular Engineering Towards Circular Polymers and Mono-Materials**
10:20-10:30	Break
	Chair: Prof. Suwabun Chirachanchai **Co-Chair: Prof. Syuji Fujii**
10:30-11:00	*__Keynote:__ S1_K001 **Dynamic Polymer Networks** Prof. Volker Abetz (University of Hamburg, Germany)
11:00-11:30	*__Keynote:__ S9_K001 **Operando Synchrotron X-ray Scattering during Fused Filament Fabrication** Prof. Tiberio A. Ezquerra (Instituto de Estructura de la Materia (IEM), Spain)
11:30-12:00	*__Keynote:__ S6_K002 **Coordinative Chain Transfer Polymerization (CCTP) of Butadiene Using Nickel (II) Allyl Systems: A Straightforward Route to Branched Polybutadiene** Prof. Philippe Zinck (University of Lille, France)
12:00-13:10	Lunch
	Symposium 4 **Biopolymers and Biomedical Materials**
	Chair: Prof. Volker Abetz **Co-Chair: Prof. Hathaikarn Manuspiya**

13:10-13:40	*__Keynote:__ S4_K001 **New Polymer-based Strategies to Detect and Combat Bacterial Infections in Wounds** Prof. Holger Schönherr (University of Siegen, Germany)
13:40-14:10	*__Keynote:__ S4_K002 **Bacterial Cellulose as Renewable Polymeric Platform for Biosensing and Biomedical Applications** Prof. Voravee Hoven (Chulalongkorn University, Thailand)
14:10-14:40	*__Keynote:__ S4_K006 **Beyond Curve Fitting: A Geometry-Unified, Thermodynamically Weighted Framework for Semi-Predictive Drug Release from Polymeric Devices** Prof. Pitt Supaphol (Chulalongkorn University, Thailand)
14:40-15:10	Break
	Symposium 11 **Colloids and Interface Science**
	Chair: Prof. Filip Du Prez **Co-Chair: Prof. Mehrdad Negahban**
15:10-15:40	*__Keynote:__ S11_K002 **Tiny Movements, Big Change: When Collective Small Displacements Decide How Fast Polymers Relax** Prof. Simone Napolitano (Université libre de Bruxelles, Belgium)
15:40-16:10	__Keynote:__ S11_K001 **Gas Marbles: A New Family of Particle-Stabilized Soft Dispersed Systems** Prof. Syuji Fujii (Osaka Institute of Technology, Japan)
16:10-16:30	S11_O001 **New Concept of Assembling Based on Interfacial Michael Reaction to Build Up Original Solventless, Catalyst-Free, and Green-based Thermoset Adhesives** M. Brogly, J-F. Stumbe, F. Cavodeau, F. Ponzio, R. Perrin
16:30-16:50	S11_O004 **Bimetallic Co-Ni Alloy for Electrocatalytic Oxidation of HMF to FDCA** Mohsin Pasha, Muhammad Bilal Khan Niazi
17:00-18:00	Poster Session & Cocktail Reception

* *Chaspark Lecture session*

Tuesday, 24 November 2026	**Grandview 4**
	Symposium 2 **Materials Recycling and Upcycling**
	Chair: Prof. Pakorn Opaprakasit **Co-Chair: Dr. Jirawan Jindakaew**
10:30-11:00	**Keynote:** S2_K001 **Plastic Recycling Challenges - Case Studies of Our Options** Prof. Xiao Matthew Hu (Nanyang Technological University, Singapore)
11:00-11:20	**Invited:** S2_IN001 **Post-Polymerization Modification of Hydrocarbon Polymers via Backbone Editing** Asst. Prof. Arnaud Thevenon-Kozub (Utrecht University, The Netherlands)
11:20-11:40	S2_O002 **Ultrasound-Assisted Recycling vs. Incineration: Which Route Performs Better for Brominated WEEE Plastics?** Imane Belyamani, Layla Gripon, Laurent Cauret
11:40-13:10	Lunch
	Chair: Prof. Xiao Matthew Hu **Co-Chair: Assoc. Prof. Nattakan Soykeabkaew**
13:10-13:30	**Invited:** S2_IN002 **From Plastics to Microplastics: A Materials Perspective on an Emerging Global Challenge** Prof. Dimitrios N. Bikiaris (Aristotle University of Thessaloniki, Greece)
13:30-13:50	**Invited:** S2_IN003 **Circular Material Recovery from End-of-Life Tires: Transforming Rubber Waste into Sustainable Resources** Dr. Chutima Saeheng (National Metal and Materials Technology Center, Thailand)
13:50-14:10	S2_O009 **Upcycling PET Bottle Waste into Al-Based MOF Adsorbents for Advanced Environmental Remediation in Aqueous and Non-Aqueous Systems** Jirawan Jindakaew, Chalita Ratanatawanate, Pakorn Opaprakasit, Xiao Hu, Hidetoshi Sekiguchi, Mantana Opaprakasit

14:10-14:30	S2_O005 **Tracking the Degradation of Poly(butylene succinate) during Alcoholysis with 1,4-Butanediol under Conventional Reflux Conditions** Siti Aisahasnati, Pakorn Opaprakasit
14:30-14:50	**Invited:** S10_IN001 **BRIDGING the Gap: Translating Global Polymer Circularity Regulations into National Policy and Industry Roadmaps - Lessons from Thailand** Dr. Witchuda Daud (National Metal and Materials Technology Center, Thailand)
14:50-15:10	Break
	Chair: Prof. Zhibo Li **Co-Chair: Asst. Prof. Tanyakarn Treeratanaphitak**
15:10-15:30	**Invited:** S2_IN004 **From Waste Fibers to Circular Functional Materials: Structural Engineering of High-Performance Thermal and Acoustic Insulation Panels** Assoc. Prof. Nattakan Soykeabkaew (Mae Fah Luang University, Thailand)
15:30-15:50	S2_O006 **Towards Intelligent Solvent Selection for Waste Expanded Polystyrene Recovery: An Integrated Machine Learning-Experimental Framework** Mohammad Nahid Siddiqui, Usman Bello, Abdul Gani Abdul Jameel, Chanbasha Basheer, and Dimitris S. Achilia
15:50-16:10	S2_O007 **Circular Valorization of Rice Straw Lignocellulosic Biomass into Sustainable Aviation Fuel: A Techno-Economic Assessment** Greeshma Ramachandran, Seksan Papong, Pakorn Opaprakasit
16:10-16:30	S2_O008 **Cardanol-Modified Lignin: Remarkable Pickering Emulsion Stability and Antioxidant Potency** Kwang Jen Ryan Lim, Rachael Ze Ying Low, Heshi Qu, Xiao Matthew Hu
17:00-18:00	Poster Session & Cocktail Reception

Tuesday, 24 November 2026	**Grandview 5**
	Symposium 4 **Biopolymers and Biomedical Materials**
	Chair: Prof. Voravee Hoven **Co-Chair: Prof. Amorn Chaiyasat**
10:30-11:00	**Keynote:** S4_K005 **Translating Medical-Grade Biopolymers into Medical Devices: From Resin Production to Regulatory and Clinical Evaluation** Assoc. Prof. Winita Punyodom (Chiang Mai University, Thailand)
11:00-11:20	**Invited:** S4_IN001 **NMR Characterization of Bacterial Cellulose: Structural Changes, Properties, and Polymer Chain Assembly** Prof. Ricardo Manríquez-González (University of Guadalajara, Mexico)
11:20-11:40	S4_O001 **How the PETG Structure Can Affect the Behavior of Thermoformed Clear Aligners during *In Vitro* Aging In a Saliva Simulant** Tahar Sif-eddine Bouchema, Johanna Saunier, Jessica Mauriello, Brice Savard, Najet Yagoubi
11:40-12:00	S4_O002 **mPEG-*b*-Polyester Vesicles as Drug Reservoirs in Wound Gels for the Treatment of Chronic Wounds** Stephan Schandl, Nicola Cusick, Holger Schönherr
12:00-13:10	Lunch
	Symposium 1 **Smart and Adaptive Polymeric Systems**
	Chair: Assoc. Prof. Chariya Kaewsaneha **Co-Chair: Dr. Atitsa Petchsuk**
13:10-13:30	**Invited:** S1_IN001 **Sequence-Defined Macromolecules: New Opportunities in Polymer Materials and Identification** Prof. Nezha Badi (Ghent University, Belgium)
13:30-13:50	**Invited:** S1_IN002 **Thermodynamic Principles for the Design of Thermoresponsive Polymers** Prof. Julian Xiao-Xia Zhu (Beijing Normal University Zhuhai, China)

13:50-14:10	S1_O001 **Coumarin-Tryptophan-Derived Polymer/MWCNT Fluorescent Nanocomposites for Ultrasensitive PFAS Detection** Sirilak Wangnage, Theerada Khunpiluek, Sutthira Sutthasupa
14:10-14:30	S1_O002 **Benzyl Thioether: A Dynamic Covalent Motif for Covalent Adaptable Networks** Vatsalya Gupta, Ramkrishna Sarkar
14:30-15:10	Break
	Symposium 7 **Bio-based and CO_2-Derived Polymers**
	Chair: Prof. Guoming Liu **Co-Chair: Assoc. Prof. Yeampon Nakaramontri**
15:10-15:30	**Invited:** S7_IN001 **Synthesis of Semi-Biobased Block Copolymers and Their Structuration in Polymer Materials** Prof. Maud Save (CNRS, University Pau & Pays Adour, France)
15:30-15:50	**Invited:** S7_IN002 **Crosslinkable CO_2-based Functional Terpolymers for Advanced Coating Applications** Dr. Atitsa Petchsuk (National Metal and Materials Technology Center, Thailand)
15:50-16:10	S7_O001 **Sustainable Bioplastics Synthesis from Diverse Waste Feedstocks** Joshua Yuan
16:10-16:30	S7_O002 **Bed Temperature and Nozzle Shear Effects on the Structure of the Single 3D-Printed Layer of Poly(lactic acid)** Katalee Jariyavidyanont, Mengxue Du, Paul-Maximilian Runge, Rene Sattler, Xiaoshi Zhang, Holm Altenbach, Mario Beiner, René Androsch, Rui Zhang
17:00-18:00	Poster Session & Cocktail Reception

Tuesday, 24 November 2026	**Grandview 6**
	Symposium 3 **Circular Polymers and Green Processing**
	Chair: Prof. Zhibo Li **Co-Chair: Assoc. Prof. Oratai Jongprateep**
10:30-10:50	**Invited:** S3_IN001 **Cyclic Polyethylene Brassylate** Prof. Scott M. Grayson (Tulane University, USA)
10:50-11:10	**Invited:** S3_IN002 **From Biomass to Functional Porous Materials: Blended Processing for Efficiency and Sustainability** Dr. Antonio J. Capezza (KTH Royal Institute of Technology, Sweden)
11:10-11:30	S3_O001 **Green Bio-based Acrylate Hydrogels for Efficient Dye Removal from Aqueous Systems** Alaa I.E. Abdelaziz, Manar E. Abdel-Raouf
11:30-11:50	S3_O002 **Fabrication of Poly(N, N-dimethylacrylamide) Gel Fibers and Nonwoven Fabrics** Takuya Miyazaki, Kohei Takahashi, Hiroto Sakurai, Jin Gong
11:50-13:10	Lunch
	Chair: Prof. Katja Loos **Co-Chair**: **Assoc. Prof. Ekwipoo Kalkornsurapranee**
13:10-13:30	**Invited:** S3_IN003 **Cool Plastics for a Greener World** Prof. Natalie Stingelin (Georgia Institute of Technology, USA)
13:30-13:50	**Invited:** S3_IN004 **Dynamic Crosslinking for Self-Healing and Reprocessable Elastomers: From Molecular Design to Sustainable Applications** Assoc. Prof. Yeampon Nakaramontri (King Mongkut's University of Technology Thonburi, Thailand)
13:50-14:10	**Invited:** S3_IN005 **AI-Driven Cross-Material Quality Prediction for Sustainable Injection Molding** Assoc. Prof. Kun-Cheng Ke (National Taiwan Normal University, Taiwan)

14:10-14:30	S3_O003 **Green Extraction from *Wolffia Globosa* for Protein-based Film Development** Phannita Kahohem, Pornsak Sriamornsak, Supakij Suttiruengwong
14:30-14:50	S3_O004 **Solvent-Free Synthesis on Ester Formation from Itaconic Acid and Choline Chloride** Jessada Khamsawat, Aso Yuji, Phornwalan Nanthananon, Supakij Suttiruengwong
14:50-15:10	Break
	Chair: Prof. Paul Topham **Co-Chair: Dr. Kamonchanok Thananukul**
15:10-15:30	**Invited:** S3_IN006 **Engineering Circular Composite Materials (ECCM) from Agricultural Residues and Post-Consumer PET for Sustainable Built Environments** Assoc. Prof. Supakij Suttiruengwong (Silpakorn University, Thailand)
15:30-15:50	**Invited:** S3_IN008 **Enhancing Natural Rubber Performance through Novel Crosslinking and Polymer Grafting for High-Value Applications** Assoc. Prof. Ekwipoo Kalkornsurapranee (Prince of Songkla University, Thailand)
15:50-16:10	S3_O005 **Filaments Based on Reactive Extrusion of PHB for Fused Deposition Modeling** Rattabun Saengsawat, Pat Sooksaen, Phornwalan Nanthananon, Supakij Suttiruengwong
16:10-16:30	S3_O006 **Morphology, Thermal and Hydrolytic Behaviour of PLA/EVA/Graphene oxide Composites for Water Purification** Noluthando Noxolo Sithole, Lesia Sydney Mokoena, Julia Puseletso Mofokeng, M.E. Mngomezulu
16:30-16:50	S3_O007 **Nanocellulose from Hemp Waste Extraction used as Reinforcing Fiber in PVA Hydrogel Composites** Wanida Sukaiam, Pattara Somnuake, Sirirat Wacharawichanant
17:00-18:00	Poster Session & Cocktail Reception

Tuesday, 24 November 2026	**Grandview 7**
	Symposium 8 **Polymers for Flexible Electronics, Healthcare, and Energy Applications**
	Chair: Prof. Anongnat Somwangthanaroj **Co-Chair: Assoc. Prof. Shu-Han Hsu**
10:30-10:50	**Invited:** S8_IN001 **Optimizing Morphology of Stretchable Conjugated Polymer Films to Trade Off the Charge Transport and Mechanical Properties** Prof. Yanchun Han (Chinese Academy of Sciences, China)
10:50-11:10	S8_O001 **Development and Characterization of Low-Cost Carbon Black Pressure Sensors for Smart Healthcare Applications** Krishan Munisami, Corentin Pineau, Somrudee Deepaisarn, Shu Han Hsu
11:10-11:30	S8_O002 **The Effect of Branching in Chiral Bifacial Indacenodithiophen-based π-Conjugated Polymers** Tom Wilfling, Shuang Li, Wissem Khelifi, Katherine Lei, Fumitaka Ishiwari, Christine Luscombe
11:30-11:50	S8_O003 **Design and Fabrication of Flexible MXene-PVDF Composite Sensors for Integration into Mats Towards Sleep Behavior Monitoring** Hasini Navarathne, Paiboon Sreearunothai, Somrudee Deepaisarn, Sakoolkan Boonruang, Wei Song Hung, Shu Han Hsu
11:50-13:10	Lunch
	Chair: Prof. Philippe Zinck **Co-Chair: Assoc. Prof. Jianyong Jin**
13:10-13:30	**Invited:** S8_IN002 **Multifunctional PEDOT (co)Polymers** Dr. Daniele Mantione (University of the Basque Country (UPV/EHU), Spain)
13:30-13:50	S8_O005 **3D Printing of Lignocellulose-Derived Carbon Electrode Substrate for Sustainable (photo)Electrochemical Oxygen Evolution Reaction** Khoiria Nur Atika Putri, Autchara Pangon, Varol Intasanta, Marcello B. Solomon, Deanna D. Alessandro, Voravee Hoven

13:50-14:10	S8_O006 **Polythiophene-Ruthenium Bipyridine Donor-Acceptor Double Cable Polymer for Photocatalytic CO_2 Reduction to Methanol** Faseeh Akbar, Basit Yameen
14:10-14:30	S8_O008 **Flexible $CsPbBr_3$ Quantum Dot/MXene Photodetectors with Light Trapping Grating Structures for Wearable UV/Blue Light Monitoring** Peeradon Piriya, Leena Guemida, Sakoolkan Boonruang, Shu-Han Hsu
14:30-15:10	Break
	Chair: Prof. Cattaleeya Pattamaprom **Co-Chair: Assoc. Prof. Paiboon Sreearunothai**
15:10-15:30	**Invited:** S8_IN003 **Advanced Glass-Ceramic Materials for Millimeter-Wave Ceramic and Organic Substrate Applications** Prof. Kuei-Chih Feng (Ming Chi University of Technology, Taiwan)
15:30-15:50	S8_O009 **Smart Bipolar Membranes: Bridging Molecular Design to Circular Urea-to-Hydrogen Energy Systems** Panita Insang, Pornnapa Kasemsiri, Anongnat Somwangthanaroj, Manunya Okhawilai
15:50-16:10	S8_O010 **Liquid Crystalline Elastomers: Shape Memory and Functional Development** Peerawat Prathumrat, Manunya Okhawilai
16:10-16:30	S8_O011 **Electrospinning-Enabled Design of Polymeric Materials for Sustainable Zinc-Ion Batteries** Chutiwat Likitaporn, Peerawat Prathumrat, Tawan Wongsalam, Nattapon Tanalue, Manunya Okhawilai
17:00-18:00	Poster Session & Cocktail Reception

Parallel Sessions: Room and Time

Room		Wednesday, 25 November 2026
Grandview 3	8:40-10:20	Plenary talk
	10:30-12:00	Chaspark Lecture Session
	13:10-14:40	Symposium 7 Bio-based and CO_2-Derived Polymers
Grandview 4	10:30-11:50	Symposium 3 Circular Polymers and Green Processing
	13:10-16:50	Symposium 9 Rheology and Processing of Polymeric Materials
Grandview 5	10:30-14:10	Symposium 6 Advanced Multi-scale Characterization Techniques
	14:10-14:30	Symposium 10 Policy, Standards, and Roadmaps for Polymer Circularity
	15:10-16:10	Symposium 11 Colloids and Interface Science
Grandview 6	10:30-15:10	Symposium 1 Smart and Adaptive Polymeric Systems
Grandview 7	10:30-11:50	Symposium 5 AI and Machine Learning in Materials Discovery
	13:10-15:10	Symposium 4 Biopolymers and Biomedical Materials

Plenary Talks & Parallel Sessions

Wednesday, 25 November 2026	**Grandview 3**
8:00-8:40	**Registration**
	Chair: Prof. Alejandro J. Müller
8:40-9:30	**PLENARY TALK:** **Prof. Zhibo Li** *Zhejiang University, China* **Closed-Loop Recyclable Polyesters: Preparation via Ring-Opening Polymerization of Lactones**
9:30-10:20	***PLENARY TALK:** **Prof. Sanat K Kumar** *Columbia University, USA* **Micro/Nanoplastic Formation by Polymers under Quiescent Conditions and During Processing**
10:20-10:30	Break
	Chair: Prof. Filip Du Prez **Co-Chair: Assoc. Prof. Shu Han Hsu**
10:30-11:00	***Keynote:** S4_K003 **The Chemistry of Sulfoxide Polymers** Prof. Andrew Whittaker (University of Queensland, Australia)
11:00-11:30	***Keynote:** S4_K004 **Integrating Polysaccharides with Dynamic Covalent Bonds for Functional Materials** Prof. Suwabun Chirachanchai (Chulalongkorn University, Thailand)
11:30-12:00	***Keynote:** S8_K001 **Advanced Polymeric Composite Separators for High-Performance Zinc-Based Batteries: From Flow to Air Systems** Prof. Anongnat Somwangthanaroj (Chulalongkorn University, Thailand)
12:00-13:10	Lunch
	Symposium 7 **Bio-based and CO_2-Derived Polymers**
	Chair: Prof. Natalie Stingelin **Co-Chair: Dr. Atitsa Petchsuk**

13:10-13:40	***Keynote:** S7_K001 **From Nature to Net Zero: Engineering Bacterial Cellulose-MOF Composites for Next-Generation CO_2 Capture and Separation** Prof. Hathaikarn Manuspiya (Chulalongkorn University, Thailand)
13:40-14:00	**Invited:** S7_IN003 **Mechanical, Thermal, and Structural Fabrications of Synthetic and Biodegradable Polymers Using Microcrystalline Cellulose from Different Plant Waste Resources in Polymer Composites** Asst. Prof. Jyoti Giri (Tribhuvan University, Nepal) Alexander von Humboldt Postdoc Fellow (Universität Siegen, Germany)
14:00-14:20	**Invited:** S7_IN004 **Cyclodextrins Initiated Ring-Opening Polymerization of Lactide Using an Organocatalyst** Asst. Prof. Audrey Favrelle-Huret (University of Lille, France)
14:20-14:40	S7_O003 **Structure of Cellulose Solutions in Ionic Liquids from Small-Angle X-ray and Neutron Scattering: from Core-Shell Form Factor to Rod Structure Factor** Qiang Zhang, Patrick Judeinstein, Javier Perez, Yoshiharu Nishiyama, Doru Constantin, Lionel Porcar, Anne Martel, François Boué
14:40-15:10	Break
18:00-22:00	Closing ceremony/Banquet

* *Chaspark Lecture session*

Wednesday, 25 November 2026	**Grandview 4**
	Symposium 3 **Circular Polymers and Green Processing**
	Chair: Prof. Hathaikarn Manuspiya **Co-Chair: Dr. Witchuda Daud**
10:30-10:50	**Invited:** S3_IN007 **Surface Engineering of Magnetic Nanocomposites with Functional Polymers for Sustainable Pd Catalysis** Prof. Metha Rutnakornpituk (Naresuan University, Thailand)

10:50-11:10	**Invited:** S3_IN009 **High-Performance Taciticity-Independent Crystalline Chemically Recyclable Bridged Polymers** Prof. Changxia Shi (Institute of Chemistry, Chinese Academy of Sciences, China)
11:10-11:30	S3_O008 **Development of Biodegradable Polymer PBAT/Modified Starch Composite Film for Leakage-proof Layer in Sanitary Product** Pooja Singh, Aman Saroj, Mohit Kumar Pandey, Parul Katiyar
11:30-11:50	S3_O009 **Zn/CeO_2 Catalyst for Selective Oxidative C-N Coupling of Amines and Alcohols** Nagendra Kulal, Bassam Elali, Yahaya Muhammad Abdullahi
11:50-13:10	Lunch
	Symposium 9 **Rheology and Processing of Polymeric Materials**
	Chair: Prof. Bin Zhang **Co-Chair: Assoc. Prof. Kannika Sahakaro**
13:10-13:30	**Invited:** S9_IN001 **Peculiar Aspects in the Crystallization of Polymorphic Thermoplastic Polyurethanes** Assoc. Prof. Dario Cavallo (University of Genoa, Italy)
13:30-13:50	**Invited:** S9_IN002 **Relaxation Dynamics of Complex Coacervate Core Hydrogel** Prof. Soo-Hyung Choi (Hongik University, South Korea)
13:50-14:10	S9_O001 **Shear-Induced Crystallization of Polypropylene by Addition of Talc Particles with Different Shapes** S. Kitabatake, K. Janchai, M. Yamaguchi
14:10-14:30	S9_O002 **Programming Relaxation and Printability of Complex Coacervate Core Hydrogels through Charged-Block Length Asymmetry** Moon-Chul Ryu, Soo-Hyung Choi
14:30-14:50	S9_O003 **Synthesis of Polymer Gels Exhibiting High Adhesion to Polytetrafluoroethylene** Toshiya Yamasaki, Jin Gong
14:50-15:10	Break

	Chair: Prof. Andrew Whittaker **Co-Chair: Prof. Soo-Hyung Choi**
15:10-15:30	**Invited:** S9_IN003 **Viscoelastic Responses of Silica-Reinforced Natural Rubber Compounds Associated with Silanization and Degradation** Assoc. Prof. Kannika Sahakaro (Prince of Songkla University, Thailand)
15:30-15:50	S9_O004 **Fabrication of Composite Gels Reinforced with Gel Fibers of the Same Composition** Koh Yoshida, Koki Ishikawa, Yuya Nagasawa, Jin Gong
15:50-16:10	S9_O007 **Nanostructured Epoxy Resins: From Block Copolymer Design to Bamboo Flour Composites** Rajesh Pandit, Shankar P Khatiwada, Rameshwar Adhikari
16:10-16:30	S9_O008 **pH-Controlled Interfacial Assembly and Rheological Behavior of Chitosan Nanoparticle-Stabilized Pickering Emulsions** Rizwan Ahmed Bhutto, Noor ul Ain Hira Bhutto, Shahid Iqbalc, Yuting Fand, and Jiang Yia
16:30-16:50	S9_O009 **Building, Tuning, and Disrupting Cellulose Nanofibril Networks by Probing Ion-Specific and Polymer-Mediated Interactions through Rheology** Ravisara Wattana, Chinedum O. Osuji
18:00-22:00	Closing ceremony/Banquet

Wednesday, 25 November 2026	**Grandview 5**
	Symposium 6 **Advanced Multi-scale Characterization Techniques**
	Chair: Assoc. Prof. Dario Cavallo **Co-Chair: Dr. Chutima Saeheng**
10:30-11:00	**Keynote:** S6_K001 **Atomic Force Microscopy Studies of Polymer Crystallization in Thin Film** Prof. Bin Zhang (Zhengzhou University, China)

11:00-11:20	**Invited:** S6_IN001 **Functional Polymers for Energy Applications: Multi-scale Experimental Insights into Structure and Dynamics** Dr. Jon Maiz (Centro de Física de Materiales (CFM-MPC), CSIC-EHU, Spain)
11:20-11:40	**Invited:** S6_IN002 **Investigation of Multiple Crystalline Populations for Polymer Binders within Graphene-based Nanopapers** Prof. Alberto Fina (Politecnico di Torino, Italy)
11:40-12:00	S6_O001 **Understanding Structure Formation in Thermal Sealing of Food Packaging Films: A Fast Scanning Calorimetry Study to Mimic Thermal Sealing** Katalee Jariyavidyanont, Franziska T. Bauer, Norbert Bunk, Jens-Peter Majschak, Michael Nase, René Androsch
12:00-13:10	Lunch
	Chair: Prof. Pitt Supaphol **Co-Chair: Asst. Prof. Tanyakarn Treeratanaphitak**
13:10-13:30	**Industrial talk** **Enabling Smart and Sustainable Polymers Through Advanced Analytical Technologies** Thermo Fisher Scientific
13:30-13:50	**Invited:** S6_IN005 ***PolymCryst*: A Polymer Fiber Crystal Structure Analysis Program** Prof. Guoming Liu (Chinese Academy of Sciences, China)
13:50-14:10	S6_O002 **Intraspherulitic Melting of Crystals of Poly(*L*-lactic acid) and Poly(butylene succinate): Examples of Polymers Subject to Lamellar Thickening and Insertion Crystallization** René Androsch, Katalee Jariyavidyanont, Christoph Schick
14:30-14:30	S10_O001 **Microplastics: Legislation and Analytical Challenges** Valerio Causin
14:30-15:10	Break
	Symposium 11 **Colloids and Interface Science**
	Chair: Prof. Michael Silverstein **Co-Chair: Prof. Metha Rutnakornpituk**

15:10-15:30	**Invited:** S11_IN001 **Interfacial Photocrosslinking for Stimuli-Responsive and Environmentally Friendly, Degradable Polymer Capsules** Assoc. Prof. Yukiya Kitayama (Osaka Metropolitan University, Japan)
15:30-15:50	S11_O003 **Magnetic Poly(acrylic acid-co-EGDMA) Microspheres for Adsorption of Synthetic Dyes in Single and Binary Systems** Bonusa Nabila Huda, Amorn Chaiyasat, Preeyaporn Chaiyasat
15:50-16:10	S11_O002 **Defect Engineering of Cu-BTC via Mechanochemical Benzoic Acid Modulation for Bifunctional Pt-Based Electrocatalysis** Muhammad Zahid, Muhammad Bilal, Muhammad Nawaz Tahir, Abdulmalik P. Peedikakkal
18:00-22:00	Closing ceremony/Banquet

Wednesday, 25 November 2026	**Grandview 6**
	Symposium 1 **Smart and Adaptive Polymeric Systems**
	Chair: Prof. Nezha Badi **Co-Chair: Assoc. Prof. Chariya Kaewsaneha**
10:30-11:00	**Keynote:** S1_K002 **Emulsion Templating: DIY Versatility for the Creative Design of Porous Polymers** Prof. Michael Silverstein (Technion - Israel Institute of Technology, Israel)
11:00-11:20	**Invited:** S1_IN003 **From Polymer Chains to Artificial Enzymes: the Role of Confinement** Dr. Ester Verde-Sesto (Centro de Física de Materiales (CFM-MPC), CSIC-EHU, Spain)
11:20-11:40	**Invited:** S1_IN004 **Stimuli-Responsive Thermoplastic Polyurethane and Polyamide-Based Copolymers Designed via 'Phase-Locked' Effect** Prof. Xia Dong (Institute of Chemistry, Chinese Academy of Sciences, China)

11:40-12:00	S1_O004 **Transparent, Toughened Epoxy Thermosets via Oxone®-Modified Star Block Copolymers** Shankar P. Khatiwada, Shigeru Okamoto, Ralf Lach, Gert Heinrich, Rameshwar Adhikari
12:00-13:10	Lunch
	Chair: Prof. Suwabun Chirachanchai **Co-Chair: Prof. Ricardo Manríquez-González**
13:10-13:30	**Invited:** S1_IN006 **Recent Advances in RAFT Polymer Network** Assoc. Prof. Jianyong Jin (University of Auckland, New Zealand)
13:30-13:50	**Invited:** S1_IN007 **Smart Electrodes for Phosphorus Management in Etching Wastewater** Assoc. Prof. Yi-Ting Lai (Ming Chi University of Technology, Taiwan)
13:50-14:10	S1_O006 **Tunable Network Architecture of Bio-Derived Poly(ε-Decalactone) Vitrimers for Sustainable Elastomers** Ratthapit Wuttisarn, Lars Schwarzer, Emilia Fulajtar, Sorapat Niyomsin, Autchara Pangon, Apirat Laobuthee, Seema Agarwal, Suwabun Chirachanchai
14:10-14:30	**Invited:** S1_IN008 **Host-Guest Stabilized Viologen for Electro-Thermochromic Dual-Functional Hydrogels Smart Windows** Prof. Chunye Xu (University of Science and Technology of China, China)
14:30-14:50	**Invited:** S1_IN009 **Building Functionality into the Polymer: Small-Molecule-Free Photocurable Materials** Prof. Paul Topham (Aston University, The United Kingdom)
14:50-15:10	S1_O005 **Syndioselective and Helix-Sense-Selective Polymerization of Diazoacetates Promoted by Amine-Coordinated Rh(I) Catalysts** Xunhui Xu, Jie Zhang, Xinhua Wan
18:00-22:00	Closing ceremony/Banquet

Wednesday, 25 November 2026	**Grandview 7**
	Symposium 5 **AI and Machine Learning in Materials Discovery**
	Chair: Prof. Mehrdad Negahban **Co-Chair: Asst. Prof. Tanyakarn Treeratanaphitak**
10:30-10:50	**Invited:** S5_IN001 **Neuroevolution-Based Strategy of Generating 2D Metamaterials with Desired Static and Dynamic Mechanical Properties** Prof. Zheng Li (Peking University, China)
10:50-11:10	**Keynote:** S5_IN002 **Machine Learning-Based Design of Olefin Block Copolymer Structures** Prof. Siripon Anantawaraskul (Kasetsart University, Thailand)
11:10-11:30	**Invited:** S5_IN003 **Relaxation Time Spectrum in Linear Viscoelasticity Using AI: Physics-Informed Neural Network Method** Prof. Mehrdad Negahban (University of Nebraska-Lincoln, USA)
11:30-11:50	S5_O002 **Agentic AI-Infused Machine Learning Framework for Polymer Property Predictions: Data Mining and Data-Driven Approach in Polymer Science** Ashbin Shajee, Yadukrishnan Prakash, Neelesh Ashok
11:50-13:10	Lunch
	Symposium 4 **Biopolymers and Biomedical Materials**
	Chair: Prof. Holger Schönherr **Co-Chair: Assoc. Prof. Supakij Suttiruengwong**
13:10-13:30	**Invited:** S4_IN002 **Metal Oxide-Enhanced PVA/HPMC Electrospun and Hybrid 3D-Printed Wound Dressings for Antibacterial Activity, Moisture Management, and Mechanical Performance** Assoc. Prof. Oratai Jongprateep (Kasetsart University, Thailand)
13:30-13:50	**Invited:** S4_IN003 **Tough and Heat-Resistant PLA/NR/Talc Blends: Effects of Composition and Processing Route** Prof. Cattaleeya Pattamaprom (Thammasat University, Thailand)

13:50-14:10	S4_O003 **Investigation of Water Absorption Capacity of Hydrogels Based on Functionalized Hyperbranched Polyglycerol** Romain Jagu, Sophie Bistac, Jean-François Stumbé
14:10-14:30	S4_O006 **Interplay Between Crystallization and Degradation of Poly(L-lactic acid) (PLLA) in Humid Environments** Mengxue Du, Pronob Sarker, Lucas Großmann, Katalee Jariyavidyanont, René Androsch
14:30-14:50	S4_O008 **Filler Reinforcement Effect on Mechanical, Morphological, Thermal, and Adhesion Properties of Protein-Based Composite Adhesives** Kabita Bist, Sirisha G.C., Ganesh Bhandari, Sumita Subedi, Jagadeesh Bhattarai, Rameshwar Adhikari, Netra Lal Bhandari
14:50-15:10	S4_O009 **Filler Loading Consequences on Physicochemical, Mechanical, Morphological, Thermal, and Adhesion Behaviors of Various Petro-and Bio-Based Composite Formulations** Netra Lal Bhandari, Kabita Bist, Ganesh Bhandari, Sumita Subedi, Sven Henning, Ralf Lach, Michael Nase, Rameshwar Adhikari
18:00-22:00	Closing ceremony/Banquet

POSTER SESSION

Symposium 1 **Smart and Adaptive Polymeric Systems**	
S1 _P001	**Sustainable Polybenzoxazine/ Polycaprolactone /Carbon Black Composites with Exceptional Lifting and High-Performance Shape Memory Applications** Naritsara Chaipakdee, Nattapon Chaiwichian, Sirirat Wacharawichanant, Sarawut Rimdusit, Sunan Tiptipakorn
S1_P002	**Well-defined Amphiphilic Polymer Conetworks: Synthesis, Characterization and Simulations** Costas S. Patrickios
S1_P003	**The Design and Synthesis of Photoresponsive Pi Conjugated Polymers for Organic Electrochemical Transistors** Holly E. Gill, Christine K. Luscombe
S1_P006	**Acceptor-Engineered 2D-Triphenylene-based COFs for Enhanced Photocatalytic Hydrogen Production** Islam M. A. Mekhemer
Symposium 2 **Materials Recycling and Upcycling**	
S2_P001	**ZnO-Coated Magnetized Hydrochar Derived from Mangosteen Peel for Dye Adsorption** Punyanuch Anukittirat, Anyarat Watthanaphanit
S2_P002	**The Characterisation Toolbox for Covalent Adaptable Networks** Bernhard De Meyer, Loc Tan Nguyen, Jonas Debuyck, Vincent Scholiers, Filip E. Du Prez
S2_P003	**Adsorption of Sulfur Dioxide Gas Using Heavy Metal Sludge and Layer Double Hydroxide (LDH) Adsorbent Derived from Heavy Metal Sludge** Suchada Kambangkai, Nurak Grisdanurak, Wanida Chooaksorn, Paiboon Sreearunothai
S2_P004	**Catalytic Depolymerization of PET: Utilizing Chemolysis Products for the Directed Synthesis of Advanced MOFs** Maria Konnova, Muhammad Anwar, Abdulkarem I. Amhamed

S2_P005	**Chemical Upcycling of PET Waste Coffee Cups by Glycolysis Reaction for Used as a Plasticizer in PLA Cast Films** Khemthat Srisujaritpanich, Pattara Somnuake, Kusuma Pinsuwan, Sirirat Wacharawichanant
S2_P006	**Upcycling Post-Consumer PLA Cups into UV-Cured Polyurethane Acrylate Films with Large Water Uptake and Reversible Water-Induced Opacity** Suraphot Wongphaisan, Pakorn Opaprakasit, Atitsa Petchsuk, Mantana Opaprakasit, Kusuma Pinsuwan
S2_P007	**Zn(II) Complexes Bearing N,N,O,O-tetradentate Ligands for the Chemical Recycling of Commodity Polyethylene Terephthalate Waste** Sutthikarn Promchana, Nattawut Yuntawattana
S2_P008	**Depolymerization Induced Polymer Separation: A New Avenue Towards Recycling Mixed Plastic Waste** Kathirvel Periasamy, Joseph Ng Kok Wei, Liang Yen Nan, Hu Xiao
S2_P009	**Upcycling of Carbon Dots from Natural Rubber Glove Waste: Toward Improved Product Yield and Agricultural Utility** Sirikanya Nuchong, Xiaoyong Pan, Zhongkang Wang, Heshi Qu, Xiao Hu
S2_P010	**Selective Chain Scission of L-lactide / ε-caprolactone Chain Shuttled Copolymers** Abbas Noon, Lisa Fichaux, Xavier Mosca, Phoebe Lowy, Till Bousquet, Lydie Pelinski, Fanny Bonnet, Joao Paulo Prates Ramalho, Audrey Favrelle-Huret, Philippe Zinck
S2_P011	**Chemical Recycling of HDPE, PS and PLA Wastes into UV-Curable Adhesive Materials** Kusuma Pinsuwan, Pakorn Opaprakasit, Mantana Opaprakasit, Atitsa Petchsuk
Symposium 3 Circular Polymers and Green Processing	
S3_P001	**Properties of Polysaccharides Films Derived from Green Algae (Ulva Rigida)** Satanan Sanpabopit, Supichaya Tangpranee, Chatdanai Jantaratana, Supakij Suttiruengwong

S3_P002	**Development of Smart Alginate Films Integrated with Plasma-Synthesized Carbon Dots for Food Shelf-Life Extension** Chunyapat Senee, Sasimaporn Treepet, Anyarat Watthanaphanit
S3_P003	**Surface Modification of Microcrystalline Cellulose with Alkyl Ketene Dimer and Beeswax for Compatibilization in Poly (lactic acid) Composite Films: Toward Hydrophobic Paper Plate Laminates** Supakit Udomworasap, Natthida Rodchan, Kinnapat Chauntrakul, Pattara Somnuake, Sirirat Wacharawichanant
S3_P004	**Fluorine-Free Binders from Bio-Derived Molecules for Dry Electrode Processing** Minjeong Kim, Chungryong Choi
S3_P005	**Cross-Linked Poly(carbosiloxane) (*c*PC$_2$SO): a Depolymerizable Silicone Elastomer for Closed-Loop Recycling and Functional Applications** Yubin Kang, Nawon Kang, Taejun Eom, Chungryong Choi
S3_P007	**Selective Solvent-Free Upcycling of Polyethylene to Lube-Oil-Range Hydrocarbons via Tuned Acid-Metal Interactions on TiO_2-ZrO_2/Ni** Muhammad Waqas, Muhammad Naseem Akhtar
Symposium 4 Biopolymers and Biomedical Materials	
S4_P001	**Active Packaging Nanocomposite Films Incorporating Biomass-Derived Carbon Quantum Dots with Tunable Red-Blue Emission** Supaluck Amloy, Tanachporn Lukprang, Pakorn Preechaburana
S4_P002	**Fabrication and Characterization of Injectable 45S5 Bioglass®/Gellan Gum/Silk Sericin Composite Hydrogel for Bone Tissue Engineering** Virat Kraisuriyavong, Sirikwan Ponpratep, Nawadon Petchwattana, Chanchira Jubsilp, Phattarin Mora, Patcharakamon Nooeaid
S4_P003	**Liposomes Stabilized with Zwitterionic Polymer for Sustained Drug Delivery** Pamudi Wanigasinghe, Pongsakorn Yuntasiri, Voravee Hoven
S4_P004	**Development of Ionizable Lipids and Their Lipid Nanoparticle Formation** Pimchanok Seehamontree, Pongsakorn Yuntasiri, Voravee Hoven

S4_P005	**Development of Natural Composite Hydrogel Based on Nanocellulose and Pea Protein for Dysphagia Foods** Kanokorn Limpongsanurak, Yuwaporn Pinyakit, Voravee Hoven
S4_P006	**Zwitterionic Polymer-Conjugated Cholesterol as Potential Non-PEG Stabilizer in Lipid Nanoparticle for mRNA Delivery** Pongsakorn Yuntasiri, Voravee Hoven
S4_P007	**Deformation and Degradation Behavior of Hemp Fiber-Filled Biobased Polybutylene Succinate Composites** Shiva Prasad Bhattarai, Rajesh Pandit, Ramehwar Adhikari
S4_P008	**Transdermal Patch: Synergistic Behavior of Biopolymer and Traditional Medicine** Prasamsha Panta, Rameshwar Adhikari, Holger Schönherr
S4_P009	**A Preliminary Study: The Effect of SBF Immersion on Apatite Layer Growth in nHAp-IONPs/Block and Star-Block PDLA-PCL Copolymer Composite Films for Orthopedic Implant Applications** Anisa Helmilia Putri, Atitsa Petchsuk, Pakorn Opaprakasit
S4_P010	**Silk Protein-Promoted Gelation of Semi-IPN Hydrogels for Potential Wound Care Applications** Niyada Sangkharak, Chariya Kaewsaneha, Duangporn Polpanich, Patchara Punyamoonwongsa, Pakorn Opaprakasit, Kamonchanok Thananukul
S4_P011	**Cationic Polymer Brush-Grafted Cellulose Nanomaterials as Functional Biopolymers for Water Treatment and Structural Reinforcement** Jingdan Hu, Xiao Hu
S4_P012	**Microencapsulation of Sodium Alginate Hydrogel with Mangosteen Peel Extract via the Emulsion Technique for Antibacterial Properties and Regenerative Effects in a Planarian Model** Rinrada Thanatornwong, Nitiyaporn Pichienpong, Thananat Konyoo, Witsanu Liangaumnuay, Thitima La-Ongthitirat, Pattara Somnuake, Purin Somnuake
S4_P013	**Acido-alcoholysis Polylactide for Enhanced Stereocomplex Electrospun Nanofibers with Potential for Biomedical Applications** Pattara Somnuake, Atitsa Petchsuk, Mantana Opaprakasit, Pakorn Opaprakasit

S4_P014	**Polylactide Stereocomplex Microfibers with Copper Phthalocyanine Encapsulation for Photodynamic Therapy Application** Pattara Somnuake, Zaw Winn Kyaw, Atitsa Petchsuk, Chariya Kaewsaneha, Kanjana Thumanu, Phakkhananan Pakawanit, Mantana Opaprakasit, Supakij Suttiruengwong, Pakorn Opaprakasit
S4_P015	**Synthesis of Silver-Chitosan Nanocomposites for Optical Detection of Organophosphate Pesticides in Aqueous Media** Zaw Winn Kyaw, Kamonchanok Thananukul, Paiboon Sreearunothai, Duangporn Polpanich, Pakorn Opaprakasit, Chariya Kaewsaneha
S4_P016	**3D-Printed Polylactide Composite Scaffolds with Modified Graphene for Tissue Engineering Applications** Worathep Khimlek, Jirawan Jindakeae, Teruoki Tago, Adisorn Tuantranont, Chariya Kaewsaneha, Pakorn Opaprakasit
Symposium 6 Advanced Multi-scale Characterization Techniques	
S6_P001	**Nanoscale Polymorphism of PVDF Thin Films** Lior Snarski, Idan Biran, Sukanta Nandi, Anastasiya Sedova, Haim Weissman, Iddo Pinkas, Anna Eden-Kossoy, Sidney R. Cohen, Tomer Lewi, Lothar Houben, Boris Rybtchinsk
S6_P002	**Self-Seeding Reveals Diffusion-Induced Orientation Distribution in Kinetically Roughened Monolayer Lamellae** Binghua Wang, Yuan Li, Bin Zhang
S6_P003	**Effects of Relative Humidity on Growth Rate and Morphology of PEO Lamellae in Ultrathin Films** Mengyang Cai, Binghua Wang, Bin Zhang
S6_P004	**Synthesis of P-$Bi_2Mo_3O_{12}$/Fe_2O_3 Composites: A Multi-Technique Case Study of Tunable Magnetic and Optical Behavior** Muhammad Imran
S6_P005	**β-Cyclodextrin-Based Electrospun Membranes Containing Magnetite Nanoparticles for Pesticide Removal** Natalia Calderón, Bárbara Herrera, Nicolás Yutronic, Paul Jara
S6_P006	**High-Yield C_{5+} Production from CO_2 over Zirconia-Promoted Iron Catalysts** Sheraz Ahmed, Bassam Elali

Symposium 7 **Bio-based and CO_2-Derived Polymers**	
S7_P001	**Bio-Based Hydrogenated THFDM-Abietic Diester Tackifier for Transparent Acrylic Pressure-Sensitive Adhesives** Tran Quang Linh, Kiok Kwon, Seunghan Shin
S7_P002	**Deoxygenation of Palmitic Acid over Ni-Based Catalysts: Effect of the Supercritical Solvent Medium** Wajahat Waheed Kazmi
S7_P003	**Engineering Carbon Nanotube-Integrated Bimetallic Covalent Organic Frameworks for Selective Electrochemical CO_2 Reduction to C_2 Products** Mohamed Hammad Elsayed
S7_P005	**Triptycene-Based Hypercrosslinked Polymers with Enhanced CO_2 Capture and Selectivity** Ahmed Saber
Symposium 8 **Polymers for Flexible Electronics, Healthcare, and Energy Applications**	
S8_P001	**Surface-State-Regulated Red, Green, and Blue Emission in Biomass-Derived Carbon Quantum Dots for Light-Emitting Polymers** Pakorn Preechaburana, Tanachporn Lukprang, Supaluck Amloy
S8_P002	**PVDF-HFP-Based Composite Solid Electrolytes with Enhanced Ionic Conductivity for Flexible Solid-State Sodium Metal Batteries** Mohamed Abdelaal, Firoz Khan
S8_P003	**Laser Engraving Versus FFF 3D Printing for Fabrication of Polymer Microchannels** Elizabeta Forjan, Marijan-Pere Marković, Lara Štorga, Domagoj Vrsaljko
S8_P004	**Additive Manufacturing of Multifunctional PE-LD/TiO_2/CNT Composites for Photocatalytic Applications** Marijan-Pere Marković, Irena Kereković, Igor Dejanović, Domagoj Vrsaljko

S8_P005	**Polymer-Engineered NiFe-LDH as Bifunctional Electrocatalyst for Efficient Alkaline Water Splitting** Ayesha Javaid, Sumaira Manzoor, Safyan Akram Khan
S8_P006	**Nitrogen Rich Covalent Organic Polymer for Efficient Alkaline Hydrogen Evolution** Mohsin Ejaz, Safyan Akram Khan, Shahid Ali, Muhammad Mansha
S8_P007	**Corncob-Derived Activated Carbon-Supported $NiFe_2O_4$ Hybrid Electrocatalyst for Sustainable and Efficient Oxygen Evolution** Faryal Aftab, Salman Noshear Arshad, Habiba Batool
S8_P008	**Designing of Molybdenum Sulfide Decorated on Biomass-Derived Carbon Dots as a Robust Electrocatalyst for Water Oxidation** Sumaira Manzoor, Shahid Ali, Safyan Akram Khan
S8_P009	**Single-Source Assisted Synthesis of Spin-Regulated Cobalt/Nickel co-Doped Pyrite FeS2: Enhanced Spin Channels in Co-Ni-Fe Oxyhydroxides for Efficient Alkaline Oxygen Evolution Reaction** Ahmed E. A. Aboubakr
Symposium 9 **Rheology and Processing of Polymeric Materials**	
S9_P001	**Influence of the Carbon Fillers with Phosphorus Compounds on Thermal Properties as well as Fire Hazard of Polyurethane Composites** Przemysław Rybiński, Arkadiusz Głowacki, Anna Zawierucha
S9_P002	**Synergistic Effects of Nanocrystal Network and Shear Flow on Crystallization Behavior of Poly (lactic acid)** S. Xu, H. Fan, B. Zhang
S9_P003	**Synthesis of Novel Levulinic Acid-based Plasticisers Derived from Sugarcane Bagasse** Suleshi Gedara, Lalehvash Moghaddam, Kathryn Fairfull-Smith
Symposium 11 **Colloids and Interface Science**	
S11_P001	**A Strategy for Precise Control of Size, Shell Thickness, and Structure in Alginate Capsules** Seung Hee Han, Won San Choi

S11_P002	**Structurally Engineered Solar Evaporation System with Hydrophilic-Hydrophobic Segments for High-Performance Seawater Desalination** Eun Jin Kim, Won San Choi
S11_P003	**A Water-Washable Metallic Air Filter with Photocatalytic Activity for the Removal of Particulate Matter and VOCs** Jeong Min Woo, Won San Choi
S11_P004	**Integrated Photothermal-Photocatalytic System for Rapid Oil/Water Separation and Thermally Enhanced Aqueous Pollutant Degradation** Somin Kim, Won San Choi
S11_P005	**Surface Modification of TiO_2 Nanoparticles for Improved Rheological Stability of Pickering Emulsions** Ankit Patil, Yogesh M. Nimdeo
S11_P006	**Natural Rubber Nanoparticle-Decorated Phase Change Material Microcapsules via Pickering-Like Emulsification for Thermal-Management Coatings** Kraiwut Wisetkhamsai, Netnapha Kamlangmak, Preeyaporn Chaiyasat, Amorn Chaiyasat
S11_P007	**Solar-Reflective and Self-Cleaning Cotton Textiles Enabled by Multifunctional PDMS/$CrAl_2O_4$ Hybrid Coatings** Jittipat Omsinsombon, Oraya Kullawong, Shi Hu, Mohanapriya Venkataraman, Jiri Militky, Amorn Chaiyasat, Chumphol Busabok, Preeyaporn Chaiyasat
S11_P008	**Fabrication of Multilayer Biopolymer Capsules for High-Loading Encapsulation of Volatile Clean Fire-Extinguishing Agents** Perapat Posayaanuwat, Pathomwadi Ainyotha, Preeyaporn Chaiyasat, Amorn Chaiyasat

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