PPS-40

April 22-25, 2025
Auckland, New Zealand

CENTRE FOR ADVANCED MATERIALS
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Fisher & Paykel HEALTHCARE

NILO

Anton Paar

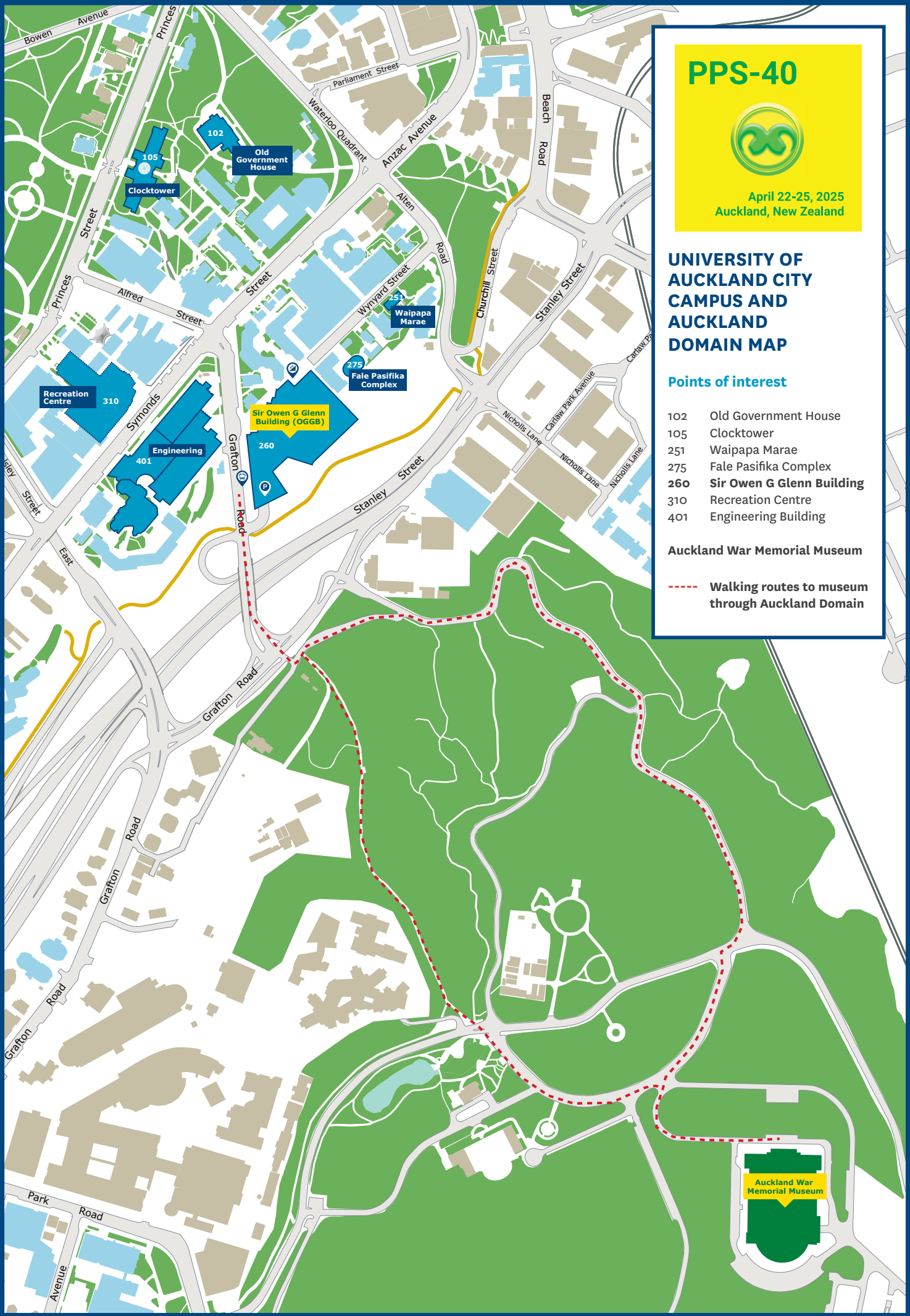
PPS-40

April 22-25, 2025
Auckland, New Zealand

University of Auckland| Sir Owen G Glenn Building
12 Grafton Road, Auckland

Level 1

Level 0


PPS-40
April 22-25, 2025
Auckland, New Zealand
UNIVERSITY OF AUCKLAND CITY CAMPUS AND AUCKLAND DOMAIN MAP
Points of interest
102 Old Government House
105 Clocktower
251 Waipapa Marae
275 Fale Pasifika Complex
260 Sir Owen G Glenn Building
310 Recreation Centre
401 Engineering Building
Auckland War Memorial Museum
Walking routes to museum through Auckland Domain
Bowen Avenue
Princes Street
Parliament Street
Waterloo Quadrant
Anzac Avenue
Beach Road
Alfred Street
Wynyard Street
Alten Road
Churchill Street
Stanley Street
Carlaw Park Avenue
Nicholls Lane
Symonds Street
Grafton Road
East Street
Park Road
Avenue
Recreation Centre
Engineering
Sir Owen G Glenn Building (OGGB)
Old Government House
Clocktower
Waipapa Marae
Fale Pasifika Complex
Auckland War Memorial Museum

Organising Committee

Conference Chair

Johan Verbeek	University of Auckland

Maedeh Amirpour	University of Auckland
Tom Allen	University of Auckland
Jesna Ashraf	University of Auckland
Mark Battley	University of Auckland
Debes Bhattacharyya	University of Auckland
Simon Bickerton	University of Auckland
Graeme Finch	University of Auckland
Chanelle Gavin	University of Waikato
Krishnan Jayaraman	University of Auckland
Nam Kim	University of Auckland
Erin Leitao	University of Auckland
Mark Steiger	Canterbury University
Jadranka Travas-Sejdic	University of Auckland

Scientific Committee

Additive manufacturing

Patrick David Anderson	Netherlands
Shih-Jung Liu	Taiwan
Allen Jonathan Roman	USA
Luyi Sun	USA
Hesheng Xia	China
Mostafa Yourdkhani	USA

Biomedical applications

Tohid Didar	Canada
Edith Perret	Switzerland
Caroline Schauer	USA
Lih-Sheng Turng	USA

Biopolymers

Luc Averous	France
Clement Chan	Australia
Pete Halley	Australia
Joung Sook Hong	Korea
Ana Machado	Portugal
Jean-Marie Raquez	Belgium

Circular Economy for Plastics and Recycling

Dagmar Dhooge	Belgium
Rudinei Fiorio	Netherlands
Samuel Kenig	Israel
Ica Manas-Zloczower	USA
Florian Puch	Germany
Kim Ragaert	Netherlands
Pablo Alberto Raimonda	Uruguay
John Vlachopoulos	Canada

Degradation, biodegradation and composting

Suprakas Sinha Ray	South Africa
Petr Saha	Czech

Extrusion

Patrick Lee	Canada
Chris Rauwendaal	USA

Fibres and Films

Abdellah Ajji	Canada
Takeshi Kikutani	Japan
Konstantin Kornev	USA
Yenigun Elif Ozden	United Kingdom

Foams and Membranes

Volker Altstädt	Germany
Reza Foudazi	USA
M Reza Nofar	Turkey
Kentaro Taki	Japan

Functional Additives and Reactive Processing

Sadhan Jana	USA
Meg Sobkowicz	USA

Industry 4.0 and AI

Andrew Hrymak	Canada
Jie Zhang	United Kingdom

Injection moulding

Maria Virginia Candal	Spain
Phil Coates	United Kingdom
Camilo Cruz	Germany
Ines Kühnert	Germany
Roberto Pantani	Italy
Albert Van Bael	Belgium

Mixing and Compounding

Rosales Carmen	Venezuela
Sven Wiessner	Germany

Modelling and Simulation

Rodrigo Albuquerque	Germany
M. Cengiz Altan,	USA
Franco Costa	Australia
Ali Gooneie	Netherlands
Evan Mitsoulis	Greece

Morphology and Structural Development

Miko Cakmak,	USA
Masayuki Yamaguchi	Japan

Nanotechnology

Tony McNally	United Kingdom
Uttandaraman Subdararaj	Canada

Polymer Blends and Alloys

Kinsuk Naskar	India
Toshiaki Ougizawa	Japan

Polymer Composites

Julio Acosta-Sullcahuamán	Peru
Maria Arnal	Venezuela
Celina Bernal	Argentina
Sylvie Dagreou	France
Aurelio De Paoli	Brazil
Jose Kenny	Italy
Juan Leon-Becerra	Colombia
Yusuf Menceloglu	Turkey
Michael Thomas Mueller	Germany
Jinwen Zhang	USA

Polymerisation and synthesis

Jianyong Jin	New Zealand
Juan Carlos Rueda-Sanchez	Peru

Rheology and characterisation

Patricia Frontini	Argentina
Nino Grizzuti	Italy

Rubbers and elastomers

Larissa Alexandrova	Mexico
Sabu Thomas	India

General Information

Registration Times

All attendees must check in and pick up their name tags at the registration desk at level 1 of the Sir Owen G Glenn Building (OGGB Level 1) on Grafton Road. The registration desk will open at 08:00 on Tuesday 22 April 2025. Onsite registration will also be available from midday to 17:00 on Monday 21 April 2025 for those who would like to pick up their name tags or set up their posters prior to the conference.

Wifi

Username:pps-40@uoa.wifi.com

Password:aLN6N4P1

or

Username:pps40@uoa.wifi.com

Password:qY5CEhIX

Group photo

We invite you to join us for a group photo to be taken before the welcome reception at the end of day 1 (22 April). The group photo provides a great opportunity to capture a memorable moment with fellow conference delegates. Please make your way to the large stairs between level 1 and level 0 at the designated time, to ensure a smooth and timely photo session.

Quiet space

If you need a moment of peace and relaxation, we have a designated ‘Quiet Space’ (260-041) available for you. This space is here for you if you’re feeling overwhelmed or if you just need a break from the hustle and bustle of the conference. To ensure easy access, the ‘Quiet Space’ is clearly marked on the conference floorplan.

Presentation Guidelines

Oral Presentation

Oral presentations last for 15 minutes with 3 minutes of questions. Keynote talks last for 25 minutes with 3 minutes of questions. We invite you to stick strictly to these time limits.

The presentation format is widescreen (33.87 × 19.05 cm). Please use the presentation template as the first page of your presentation. Please leave the PPS conference logo and replace other logos with your own.

The session rooms will have a designated computer, and presenters must use the provided system.

Please bring your presentation on a USB and load it to the system in the assigned room during a break before your session begins. A student volunteer will be available to assist you.

Note that the lectern computers in the conference venue do not support presenter view. Please bring any notes in printed form.

Photocopying/Printing: The printers onsite can only be accessed by University of Auckland staff members. If you need to print something, please ask one of the staff at the registration desk for assistance. Please be mindful about printing: we urge you to choose the sustainable option and save our trees!

Poster Session

The poster session will be held during the welcome function on 22 April, the first day of the conference sponsored by MDPI.

Poster boards will be available for setting up from midday on 21 April and all day on 22 April at level 1 of the conference venue.

Please identify and use the poster board spot that matches your assigned abstract ID. Once you have found your place, please display your poster on the board, using the Velcro stickers provided at the registration desk. Staff at the registration desk will be available to help with any questions.

All posters must be in place by the end of the sessions on 22 April 2025 and removed from the poster boards by the end of the day on 25 April 2025. Poster presenters are expected to be present at their posters to engage with attendees during the poster session.

All posters will be judged on the evening of 22 April 2025. There are two prizes for the posters, each worth 100 Euros donated by Macromolecular Materials and Engineering and the Journal of Applied Polymer Science. The prize winners will be announced at the conference dinner on 24 April 2025.

Instructions for Session Chairs

Chairperson instructions

As the chairperson, your role is to support the presenters (by introducing and thanking them), moderate the questions, and ensure that the programme runs to time.

Before the session

A student volunteer has been assigned to each room to assist you and to help the speakers to load their presentations onto the lectern computer. The student volunteer should be your initial point of support.

Please check that the presenters have arrived. Please introduce yourself to the presenters and explain how the session will run. Please explain to the presenters that the session must run strictly to time and remind them to look out for the timecards.

Please check any name pronunciations that you are unsure of in advance. Please also check that you have all the presentation titles and clarify any missing information. All the abstracts and presentation titles are in the conference handbook.

During the session

At the start of the session, please introduce yourself and the session theme.

Introduce the first speaker before their presentation, facilitate the question section, and thank the speaker at the end of the presentation.

The timings allow for the presentation, questions, and changeover. Please ensure that the presenters stick strictly to the time limit and do not change the order of the presentations. The presentation titles and abstracts can be found in the conference handbook. A student volunteer will be in the room to help you.

Oral presentations last for 15 minutes with 3 minutes of questions. Keynote talks last for 25 minutes with 3 minutes of questions.

Please use the provided timecards to remind the presenters of how much time they have.

If a presenter does not show up, please leave a presentation-sized gap in the programme and then continue with the next presenter. Please keep to the programme times and presenter order so that delegates can move between sessions if they wish.

After the session

Thank the speakers and the student volunteer.

Remind delegates of any catering breaks/plenary sessions/social functions that follow the session.

Please give the timecards to the student volunteer.

Special Symposium

Commercialization and Challenges in Shaping a Circular Economy for Plastics

Date: 23 April, 9:20-10:30am (Lecture Theatre, 260-098)

Join us for a session that showcases the progress and potential of New Zealand's circular plastics industry. We will highlight one of The University of Auckland's ambitious transdisciplinary research initiatives, a project focused on developing high-end polymers from recycled plastics while envisioning the future of a circular market for plastics in New Zealand. This session will explore the journey from the initial, exploratory stages of commercializing circular innovation research to early circular economy ventures to the full-scale commercialization of circular practices within the industry. We'll examine how businesses are confronting significant challenges, including a near-total reliance on imported virgin plastics, inadequate recycling infrastructure, and the high costs of recycling due to New Zealand's dispersed geography and lengthy transportation routes, all of which exacerbate vulnerabilities in New Zealand's plastic supply chain.

To elevate our understanding and spark a dynamic discussion, **Julia Fehrer, Associate Professor of Innovation and Strategy and Director of the Circular Economy in Business (CEBUS) Research Centre at the University of Auckland,** will co-host this panel alongside **Professor Deb Polson, Professor of Digital Design at RMIT University.** Together, they will shed light on the complexities of shaping circular plastic markets and discuss how systems design can play a crucial role in getting industry stakeholders onboard to drive greater circularity.

Panelists include:

- **Saeid Baroutian (Professor of Chemical and Materials Engineering and Director of the Circular Innovations (CIRCUIT) Research Centre):** Saeid will share his expertise in developing cutting-edge circular technologies and his hands-on experience in technology commercialization through university spinouts.
- **Simon Oakley (Chief Technology Officer of Nilo):** Simon's enterprise focuses on converting problematic waste into reusable, low-energy binding agents used in manufacturing safer, environmentally friendly products.
- **David Elder:** David will share his experiences in commercializing upcycling technologies that transform waste plastics into durable fence posts, thereby keeping plastics economically active and out of landfills.
- **Alexandra Kirkham (Climate Innovation Project Lead – Energy, Auckland Council):** Alexandra will discuss the pivotal role local governments play in fostering circular innovation and supporting sustainable community projects.
- **Kim J. P. Ragaert (Professor at the Faculty of Science and Engineering and Chair of Circular Plastics, Maastricht University):** Kim will provide global insights on fostering value-chain cooperation and the importance of interdisciplinary research in driving circular innovation.

We invite attendees to participate in this critical dialogue, as we explore the intersection of technology, policy, and market dynamics that is critical for shaping a Circular Economy for plastics. Please join us for this session to gain insights into New Zealand's distinctive plastics landscape and engage in its transformative journey towards greater circularity.

Social Functions

Welcome function and Poster Session

22 April 2025 6-8pm

OGGB Level 1 Foyer + F&PAA Lobby

Poster session Sponsors

polysaccharides
an Open Access Journal by MDPI

polymers
an Open Access Journal by MDPI

macromol
an Open Access Journal by MDPI

Conference Dinner (**prior RSVP required)

24 April 2025 7-11pm

Auckland Museum

Parnell, Auckland 1010

Return Transport will be provided or 18 mins walk.

First bus departs from Sir Owen G Glenn Building to Auckland Museum at 5:15pm.

Last bus departs from Sir Owen G Glenn Building to Auckland Museum at 6:30pm.

First bus departs from Auckland Museum to Sir Owen G Glenn Building at 10:00pm.

Last bus departs from Auckland Museum to Sir Owen G Glenn Building at 11:30pm.

MONDAY 21 APRIL

12noon	**Registration**
1:30-2:30pm	**Executive meeting** - Decima Glenn Room (260-310)
2:30-3:00pm	**Afternoon tea**
3-4:30pm	**Executive meeting and International representatives** - Decima Glenn Room (260-310)

TUESDAY 22 APRIL

8am	**Registration**					
9am-9:30am	**Conference opening** - Fisher & Paykel Auditorium					
9:30-10:20am	**Plenary 1**					
10:20-10:50am	**Morning tea**					
10:50am-12:10pm **Session 1.1**	**Polymer Composites** Lecture Theatre, 260-098	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092	**Modelling and Simulation** OGGB 4, 260-073	**Additive manufacturing** OGGB 5, 260-051	**Biopolymers** Case Room 2, 260-057	**Morphology and Structural Development** Case Room 3, 260-055
12:10-1pm	**Lunch**					
1pm-1:50pm	**Plenary 2 -** Fisher & Paykel Auditorium					
2-3:30pm **Session 1.2**	**Polymer Composites** Lecture Theatre, 260-098	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092	**Modelling and Simulation** OGGB 4, 260-073	**Additive manufacturing** OGGB 5, 260-051	**Foams and Membranes** Case Room 2, 260-057	**Morphology and Structural Development** Case Room 3, 260-055
3:30-4pm	**Afternoon tea**					
4-5:30pm **Session 1.3**	**Polymer Composites** Lecture Theatre, 260-098	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092	**Fibres and Films** OGGB 4, 260-073	**Additive manufacturing** OGGB 5, 260-051	**Foams and Membranes** Case Room 2, 260-057	**Injection moulding** Case Room 3, 260-055
6-8pm	**Welcome function and Poster Session**					

WEDNESDAY 23 APRIL

8:30-9:20am	**Plenary 3** - Fisher & Paykel Auditorium					
9:20-10:30am **Session 2.1**	**Special Symposia** Lecture Theatre, 260-098	**Nanotechnology** OGGB 3, 260-092	**Industry 4.0 and AI** OGGB 4, 260-073	**Rubbers and elastomers** OGGB 5, 260-051	**Biopolymers** Case Room 2, 260-057	**Rheology and characterisation** Case Room 3, 260-055
10:30-11am	**Morning tea**					
11am-12:30pm **Session 2.2**	**Polymer Composites** Lecture Theatre, 260-098	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092	**Polymerisation and synthesis** OGGB 4, 260-073	**Extrusion** OGGB 5, 260-051	**Polymer Blends and Alloys** Case Room 2, 260-057	**Mixing and Compounding** Case Room 3, 260-055
12:30-1:30pm	**Lunch** **Editorial board meeting** - Case Room 2, 260-057					
1:30-2:20pm	**Plenary 4** - Fisher & Paykel Auditorium					
2:20-3:40pm **Session 2.3**	**Extrusion** Lecture Theatre, 260-098	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092	**Modelling and Simulation** OGGB 4, 260-073	**Additive manufacturing** OGGB 5, 260-051	**Biopolymers** Case Room 2, 260-057	**Injection moulding** Case Room 3, 260-055
3:40-4:10pm	**Afternoon tea**					
4:10-5:20pm **Session 2.4**	**Polymer Composites** Lecture Theatre, 260-098	**Nanotechnology** OGGB 3, 260-092	**Modelling and Simulation** OGGB 4, 260-073	**Rubbers and elastomers** OGGB 5, 260-051	**Biopolymers** Case Room 2, 260-057	**Biomedical applications** Case Room 3, 260-055

THURSDAY 24 APRIL

8:30-9:20am	**Plenary 5** - Fisher & Paykel Auditorium					
9:20-10:20am **Session 3.1**	Industry 4.0 and AI Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Functional Additives and Reactive Processing OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Rubbers and elastomers Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
10:20-11am	**Morning tea**					
11am-12:30pm **Session 3.2**	Polymer Composites Lecture Theatre, 260-098	Fibres and Films OGGB 3, 260-092	Degradation, biodegradation and composting OGGB 4, 260-073	Injection moulding OGGB 5, 260-051	Foams and Membranes Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
12:30-1:30pm	**Lunch** **Business Lunch** - OGGB3, 260-092					
1:30-2:20pm	**Keynote: Early Career Winner 2024** - Fisher & Paykel Auditorium					
2:20-3:50pm **Session 3.3**	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Injection moulding OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Degradation, biodegradation and composting Case Room 3, 260-055
3:50-4:20pm	**Afternoon tea**					
4:20-5pm **Session 3.4**	Industry 4.0 and AI Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Polymerisation and synthesis OGGB 4, 260-073	Morphology and Structural Development OGGB 5, 260-051	Rheology and characterisation Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
7-11pm	**Conference Banquet at the Auckland Museum** (Buses depart from Owen G Glen Building from 5:15pm)					

FRIDAY 25 APRIL

1-2:30pm	**Plenary 7: Lamda Award Winner 2025 & Keynote: Early Career Winner 2025** Fisher & Paykel Auditorium					
2:30-3pm	**Afternoon tea**					
3-4:30pm **Session 4.1**	Polymer Composites Lecture Theatre, 260-098	Functional Additives and Reactive Processing OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Morphology and Structural Development OGGB 5, 260-051	Polymer Blends and Alloys Case Room 2, 260-057	Fibres and Films Case Room 3, 260-055
4:45-5:15pm	**Conference Closing** - Fisher & Paykel Auditorium					

Colour coding by topic

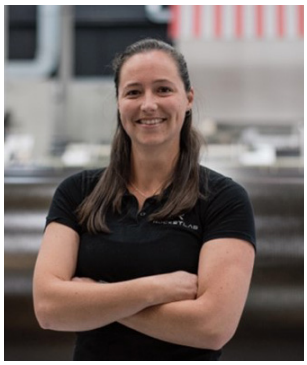
- ADDITIVE MANUFACTURING
- BIOMEDICAL APPLICATIONS
- BIOPOLYMERS
- CIRCULAR ECONOMY FOR PLASTICS AND RECYCLING
- DEGRADATION, BIODEGRADATION AND COMPOSTING
- EXTRUSION
- FIBRES AND FILMS
- INDUSTRY 4.0 AND AI
- FOAMS AND MEMBRANES
- FUNCTIONAL ADDITIVES AND REACTIVE PROCESSING
- INJECTION MOULDING
- MIXING AND COMPOUNDING
- MODELLING AND SIMULATION
- MORPHOLOGY AND STRUCTURAL DEVELOPMENT
- NANOTECHNOLOGY
- POLYMER BLENDS AND ALLOYS
- POLYMER COMPOSITES
- POLYMERISATION AND SYNTHESIS
- RHEOLOGY AND CHARACTERISATION
- RUBBERS AND ELASTOMERS

Plenary Speakers

Andrew Somervell

Fisher & Paykel Healthcare

Andrew joined Fisher & Paykel Healthcare in 2006 and has held various roles in product development and manufacturing management. He was appointed Vice President – Products & Technology in April 2016. His current responsibilities include research and development, product marketing and clinical. Before joining Fisher & Paykel Healthcare, Andrew was a Research Fellow at the University of Auckland, New Zealand, and holds a doctorate in physics from the same university.



Kim Thompson

Rocket Lab

Kim is a structural analyst at Rocket Lab who is working on the development of Neutron, a reusable carbon-composite launch vehicle that is designed for mega constellation deployment, deep space missions, and human spaceflight.

Dr. Ines Kühnert

Institute of Polymer Materials & Leibniz-IPF

Dr. Ines Kühnert is the vice d irector of the Institute of Polymer Materials and the head of the Processing Technology department at the Leibniz-Institute of Polymer Research Dresden (Leibniz-IPF). She has more than 25 years of polymer processing and material development research experience and are involved in research projects and industry cooperations related to process-controlled morphologies and interfaces, multi-material combination (injection molding, additive manufacturing), and process monitoring and simulation.

Further Activities: Spokesperson of Expert network “TPE-Forum”, International Representative Germany in Polymer Processing Society (PPS), Society of Plastics Engineers (SPE), Association of German Engineers (VDI) – contributions to the VDI-guideline 2019 “Testing the adhesion of thermoplastic elastomers (TPE) on substrates” and 2020 “Characterisation of flow behaviour of thermoplastic elastomers (TPE)”.

Plenary Speakers

Professor Kim Ragaert

Maastricht University

Kim Ragaert is a full professor at Maastricht University, where she is the Circular Plastics Chair within the Circular Chemical Engineering (CCE) Department. She leads a team of 25 researchers on the Brightlands Chemelot Campus who work on mechanical recycling of plastics and on ensuring that the overall circular plastics system works.

Kim is highly committed to training the next generation of engineers and chairs the educational programme committee of the BSc Circular Engineering at UM's Faculty of Science and Engineering.

A respected authority in her field, Kim's 2017 review paper on plastics recycling has been cited over 2500 times. She was the 2020 European Plastics Recycling Ambassador and a 2024 Royal Finalist of the Prins Friso Engineer of the Year award. She helps move the plastics industry towards circularity via her work as an Impact Committee member on the ReOcean Investment Fund and scientifically supporting major reports like the well-known 2022 ReShaping Plastics report. Kim is a founding member of the Brightlands Circular Space.

Maastricht University

Professor Peter Halley

University of Queensland

Peter is a professor in polymer engineering in the School of Chemical Engineering at The University of Queensland. He works on the underlying research for the translation to new sustainable polymer products and processes. He is involved in research projects on biopolymers, rheology and processing of plastics and biomaterials, and sustainable polymer processes.

He has had an career at the interface of academic and industrial research, especially via industry projects and many cooperative research centres (CRCs in food packaging, sugar innovation, polymers, food waste, solving plastic waste). He is currently a chief investigator in the ARC industrial training centre for bioplastics and biocomposites (ARC-ITTCBB), the solving plastic waste CRC (spwCRC), and the Food and Beverage Accelerator (FaBA).

The University Of Queensland
AUSTRALIA

ARC Training Centre for
Bioplastics and
Biocomposites

TUESDAY 22 APRIL

8am	**Registration**					
9-9:30am	**Conference opening -** Conference chair: **Johan Vereek;** President of PPS: **Sadhan Jana** - Fisher & Paykel Auditorium					
9:30-10:20am	**Plenary - The ever increasing complexity of plastics innovation and manufacturing: A medical device manufacture's perspective. Andrew Somervell,** Fisher & Paykel Heathcare - Chair: **Johan Verbeek**					
10:20-10:50am	**Morning tea**					
10:50am-12:10pm **Session 1.1**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Umasankar Patro**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Rudinei Fiorio**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Franco Costa**	**Additive manufacturing** OGGB 5, 260-051 Chair: **Shi-Jung Liu**	**Biopolymers** Case Room 2, 260-057 Chair: **Peter Halley**	**Morphology and Structural Development** Case Room 3, 260-055 Chair: **Ines Kühnert**
10:50am	Self-reinforced thermoplastic polyurethane composite with excellent mechanical properties, heat resistance and sustainable recycling **Gao, Xiulu. China**	Transforming E-Waste into Flame-Retardant Fillers for Recycled LLDPE: A Path to Sustainable Innovation **Jinfeng, Zhang. Canada**	Predicting the orientation of flake pigments in injection-molded metallic polymer using smoothed particle hydrodynamics **Sasayama, Toshiki. Japan**	Scarless support removal in vat photopolymerization: towards enhanced surface and dimensional control **Artemeva, Marina. Denmark**	Development of plant polymers-based bioplastics/biocomposites for industrial applications **Liu, Qiang. Canada**	Suppression of the Skin-Core Structure of Poly(vinyl alcohol) Films to Improve the Mechanical and Optical Properties **Han, Yanchun. China**
11:10am	Processing of polymer based ionogels and their applications in flexible sensors **Zhu, Yutian. China**	Enabling the Recyclability of Industrial Waste EPDM via Twin Screw Extrusion **Joosten, Liliana. France**	Deriving equivalent shear viscosity of polymer melt under non-isothermal state using digital twin model of slit rheometry **Chen, Jian-Yu. Taiwan**	Development of Recyclable and Halogen-Free Flame-Retardant Powders for Laser-Sintering: Material Evaluation and Performance Enhancement **Neitzel, Fabian. Germany**	Elucidating the Pyrolysis Behaviour of Extracellular Polymeric Substances-based Biomaterials from Wastewater Sludge for Flame-Retardant Applications: Effects of Component Interactions **Le, Tan. NZ**	Visualization of Polymer Chain Scission during Melt Processing Using a Mechanochromic Probe **Ito, Hiroshi. Japan**
11:30am	Boosting Flame Retardancy of Polyolefin/CaCO3 composites reinforced with Halogen-Free Flame Retardants for Construction Materials **Sundararaj, Uttandaraman. Canada**	Innovative Recycling of Crosslinked Polyethylene: Regeneration and Reincorporation for Enhanced Circularity in Cable Industry **Rigatelli, Benedetta. France**	Detailed Boundary Layer CFD-Microsimulation of Mineral-Filled Polyamid 6 using ANSYS Rocky **Buschmann, Jan. Germany**	Additive Manufacturing of Polymer Covalent Adaptable Networks **Xia, Hesheng. China**	Alternative biobased polymer additives – a comparison of the stabilization efficiency of conventional antioxidants, biobased alternatives derived from existing biomass, and their extracts **Hiller, Benedikt. Germany**	Observation of Scratch Behavior of Polystyrene with Fluorescent Molecular Probe **Yuki, Hayafuji. Japan**
11:50am	High aspect ratio carbon nanotubes as tire tread rubber reinforcement toward improved fuel efficiency **Rhue, Mason. USA**	Sintering and Densification Behaviour of Virgin/Recyclate Blends for use in Rotomoulding **Kelly-Walley, Jake. United Kingdom**	Improvement of a Numerical Two-Phase Simulation Model for the Melting Process in Single-Screw Extruders Based on Experimental Investigations **Knaup, Felix. Germany**	Metal Nanoparticle Coating of 3D Printed PLA Structures **Jin, Tingting. New Zealand**	Influence of spirulina biomass addition on the polymer properties **Becker, Daniela. Brazil**	Crystallization behavior of polypropylene blends after shear flow **Yamaguchi, Masayuki. Japan**
12:10-1pm	**Lunch**					
1-1:50pm	**Plenary -** Fisher & Paykel Auditorium **Multi-Component Technology and Material Combinations: Past and Future** **Ines Kühnert,** Leibniz-Institute of Polymer Research - Chair: **Simon Bickerton**					
2-3:30pm **Session 1.2**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Yongjin-Li**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Maedeh Amirpour**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Mohammed Althaf Hussain**	**Additive manufacturing** OGGB 5, 260-051 Chair: **Shi-Jung Liu**	**Foams and Membranes** Case Rm 2, 260-057 Chair: **Takeshi Kikutani**	**Morphology and Structural Development** Case Rm 3, 260-055 Chair: **Nam Kyeun Kim**
2pm **Keynote sessions**	Empowering Polymers with Multifunctionality: The Role of Graphene Nanoplatelets in Advanced Nanocomposites **Ma, Jun. Australia**	The conformational preference of dynamic crosslinker modulates the 'closed-loop' circular economy in polypropylene vitrimer **Misra, Ashok. India**	Leibniz Collaborative Excellence Project ML4SIM: AI and Digital Material Characterization Revolutionize Composites Process Simulation **Duhovic, Miro. Germany**	3D polymer powder printing by SAS: Selective Acoustic Sintering **Anderson, Patrick. Netherlands**	High Surface Area Polymer Gels For Oil-Water Separation **Jana, Sadhan. USA**	Revisiting structure-property relations in PP/HDPE blends: From processing to performance with recycled polyolefins **Looijmans, Stan. Netherlands**
2:30pm	Mechanical Recycling Strategies for Waste Sandwich Panels with Glass Fiber-Reinforced Polypropylene Outer Layers: Process Optimization and Fiber Length Preservation **Mohammadkarimi, Shiva. Germany**	Characterization and recycling potential of partially cross-linked EVA-foam scrap for orthopaedic insole manufacturing **Shaik, Shameem Aktar. Germany**	Assessing solids conveying in injection moulding machines using coupled numerical simulations based on the Discrete Element Method (DEM) and Multibody Systems (MBS) **Landgraeber, Jan. Germany**	Optimal Design of Soft Gripper Mechanisms Combining Finite Element Analysis and Machine Learning **Park, Keun. Korea**	Green Preparation of Biodegradable Polyester Foams with Supercritical Fluid **Hu, Dongdong. China**	Smart materials processed by spatial-temporal programming of polymer crystalline structures **Pan, Pengju. China**
2:50	Thermoelectric materials based on carbon nanoparticles for the utilization of process waste heat during photocatalytic reactions **Gültner, Marén. Germany**	Addressing the global plastics problem – value added adhesives derived from recycled plastics **Oakley, Simon. New Zealand**	Identification of a kinetic model for thermal oxidation of stabilized polypropylene **Cruz, Camilo. Germany**	Additive-Free Aqueous-Based Graphene Ink for 3D Printing Functional Aerogels **Sundararaj, Uttandaraman. Canada**	A novel semi-continuous preparation mode of ultra-low density thermoplastic polyurethane foam **Chen, Yichong. China**	New Processing Methods and Applications for Fluorinated Polymer Functional Membranes **Guo, Shaoyun. China**
3:10pm	Double-layer electromagnetic interference shielding materials with microcellular structure for low reflection **Wang, Zixuan. China**	Uncertainty in Reported Cost (Prediction), the Case of Plastics Recycling **Van Camp, Nicola. Netherlands**	Investigation the Influence of the Melt Rotation on the Fiber Orientation Variation in FRP Injection Molding Parts **Huang, Chao-Tsai. Taiwan**	Online Rheological Measurement in Screw Extrusion Additive Manufacturing for Improved Process Modelling **Curmi, Albert. Malta**	Multi-scale studies on CO2 bubble nucleation mechanism at polymer/metal interface for material recycling **Taki, Kentaro. Japan**	Morphological understanding and Comparative Analysis of HDPE/Starch-Based Blends **Verberckmoes, Annabelle. Belgium**
3:30-4pm	**Afternoon tea**					
4-5:30pm **Session 1.3**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Evan Mitsoulis**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Samuel Kenig**	**Fibres and Films** OGGB 4, 260-073 Chair: **Takeshi Kikutani**	**Additive manufacturing** OGGB 5, 260-051 Chair: **Chanelle Gavin**	**Foams and Membranes** Case Room 2, 260-057 Chair: **Volker Altstaedt**	**Injection moulding** Case Room 3, 260-055 Chair: **Franco Costa**
4pm **Keynote sessions**	Feasibility study on radar-based monitoring of fiber reinforced composites during tensile testing **Puch, Florian. Germany**	Enhancing Plastic Waste Compatibilization: Universal dynamic crosslinkers for optimized recycling **Roman, Allen. USA**	Bio-mimic hydrogel fiber: Design of Spinning process and Construction of high performance **Yan, Yurong. China**	Design automation of 3D printed polymer products **Diegel, Olaf. New Zealand**	Advancing Polyimide Aerogels for Energy and Thermal Management Applications with AI-Enhanced Design **Naguib, Hani. Canada**	Comprehensive Cause Analysis of Injection Molding Anomaly by Integrated Capacitance-Pressure-Temperature Sensor **Zheng, Wenjia. China**
4:30	Interfacial enhancement and properties of the PTFE-based composite films **Chen, Rong. China**	Breaking the Unbreakable Bond: Towards Adhesives' Sustainable Future **Dodiuk, Hanna. Israel**	Efficient circularly polarized luminescence with dual-sided opposite chirality of polar liquid crystal template-induced perovskite nanofiber composites **Lu, Mingyang. China**	Influence of Filler Type and Volume Fraction on the Electrical Conductivity and Shore Hardness of TPU Composites in Fused Filament Fabrication **Salm, Maximilian. Germany**	The Effects of Ultra High Molecular Weight and CO2 Solubility on the Structure of PMMA Nanocellular Foam **Yeh, Shu-Kai. Taiwan**	Development and Analysis of Novel Freeform Conformal Cooling Channels in Additively Manufactured Injection Moulding Tools **Clark, Rebecca. Malta**
4:50pm	Mechanical performance of in-line plasma bulk modified PA6 and PP reinforced with plasma surface treated flax fibre **Kim, Nam. New Zealand**	Innovative Processes to Improve Polymer Properties - From Mechanical Recycling to Virgin Product Production **Yao, Shigeru. Japan**	Enhanced Hydrogen Spillover on Oriented PEDOT:PSS Fibers for Highly Sensitive Detection of H2 Mixed CO via Tunable Adsorption Sites **Wu, Shiteng. China**	Organic Neuromorphic Transistors Fabricated by Direct-Ink-Writing **Huang, Ruiran. China**	Microcellular foaming of high-hardness TPU/MOF nanocomposites through combined heterogeneous nucleation and gas enrichment effects **Wang, Jun. China**	Cavity balance improvement via automated gate location and flow leader optimization **Porcher, Felipe. Germany**
5:10pm	Non-destructive fiber-matrix adhesion measurement of glass fiber reinforced thermoplastic composite laminates using ultrasound **Brandes, Philipp. Germany**	Mild chemical recycling of fiber reinforced epoxy composites and utilization of the recyclate for preparation of new composites **Zhang, Jinwen. USA**	Passive Daytime Radiative Cooling film based on Sustainable biomaterial composites **Manuspiya, Hathaikarn. Thailand**	Isotropic cellular structure design strategies based on triply periodic minimal surfaces **Daynes, Stephen. New Zealand**	Phosphorylated Bacterial Cellulose-Poly(vinyl alcohol) Membrane for Enhanced Water Purification with High Efficiency Methylene Blue Adsorption **Kocharat, Pornsuda. Thailand**	Transfer learning to predict part quality for injection molding **Huang, Ming-Shyan. Taiwan**
6-8pm	**Welcome function and Poster Session**					

WEDNESDAY 23 APRIL

8:30-9:20am	**Plenary** - Fisher & Paykel Auditorium: **Modelling Crack Propagation through Adhesives at Cryogenic Temperatures - Kim Thompson,** Rocket Lab - Chair: **Mark Battley**					
9:20-10:30am **Session 2.1**	**Special Symposaia** Lecture Theatre, 260-098 Chair: **Julia Fehrer**	**Nanotechnology** OGGB 3, 260-092 Chair: **Luyi Sun**	**Industry 4.0 and AI** OGGB 4, 260-073 Chair: **Holger Fiedler**	**Rubbers and elastomers** OGGB 5, 260-051 Chair: **Volker Altstaedt**	**Biopolymers** Case Room 2, 260-057 Chair: **Pablo Raimonda**	**Rheology and characterisation** Case Room 3, 260-055 Chair: **Jesna Ashraf**
9:20am **Keynote sessions**	Commercialization and Challenges in Shaping a Circular Economy for Plastics	Ethylene methyl acrylate copolymer (EMA) assisted dispersion of graphene nanoplatelets (GNP) in poly(ethylene terephthalate) (PET) **McNally, Tony. United Kingdom**	Digital Technologies: Catalysts for Advancing Polymer Research **Ruckdaeschel, Holger. Germany**	Design Strategies to Improve Thermo-mechanical Performance of TPUs **Manas-Zloczower, Ica. USA**	Reactively processed poly(butylene adipate terephthalate) composite-based multilayered films for sustainable packaging applications **Ray, Suprakas. South Africa**	Elucidating the effect of strain hardening on contraction flow of coextruded polymer melts using visualization and simulations **Takeda, Keiko. Japan**
9:50am		Integrative material characterization of crystalline nanocellulose reinforced filaments for fused-filament fabrication **Wurzer, Stefan. Austria**	Use of Machine Learning to Predict the Product Properties in the Cable Manufacturing Process **Lee, John. South Korea**	Review on FEM-based Fatigue Life Prediction Models for Dynamically Stressed Elastomers **Ternes, Sabrina. Germany**	Influence of fibre characteristics on PHA-based biocomposites properties **Mathel, Vincent. Australia**	Challenges in the Rheological Characterization of Heterophasic Thermoplastic Elastomers **Wiessner, Sven. Germany**
10:10am		Magnetic Field Assisted "Z" orientation of Nickel Particles along Microcolumns to Produce Thickness Functionalized Piezoelectric films on a Roll-to-Roll Manufacturing Platform **Cakmak, Miko. USA**	Can you listen to the sound of polymer melts? **Ahn, Kyung Hyun. Korea**	Defect Detection in Silicone Sealants via Ultrasonic Non-Destructive Testing and Data Analysis **Wei Yang, Chung. Taiwan**	Unlocking the Potential of Bio-Refinery Waste Humins for Functional Material Development: Esterification and Diels-Alder Reaction Strategies **Kandemir, Dilhan. Belgium**	Rheological behavior of nano-structured polymeric fluids with two-dimensional (2D) materials **Andrade, Ricardo. Brazil**
10:30-11am	**Morning tea**					
11am-12:30pm **Session 2.2**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Mark Battley**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Florian Puch**	**Polymerisation and synthesis** OGGB 4, 260-073 Chair: **Ashok Misra**	**Extrusion** OGGB 5, 260-051 Chair: **Gan-Ji Zhong**	**Polymer Blends and Alloys** Case Room 2, 260-057 Chair: **Jesna Ashraf**	**Mixing and Compounding** Case Room 3, 260-055 Chair: **Kentaro Taki**
11:00 **Keynote sessions**	(Dis)advantage of melt-mixed thermoplastic polymer composites for energy generation through the thermoelectric effect **Krause, Beate. Germany**	Time-Dependent Mechanical Enhancement of Polylactic Acid Through Biaxial Cold Rolling **Wnek, Gary. USA**	Improved mechanical properties of bioderived and biodegradable polymers via block-copolymer synthesis from polyhydroxyalkanoates (PHAs) **Kockler, Katrin. Australia**	Reactive extrusion of biomass for value chemicals and solid biofuels **Theobald, Beatrix. New Zealand**	Journey from Processing to Recycling of Multilayer Waste Films: Main Challenges and Prospects with innovative approaches **Khalid, Lamnawar. France**	Study on Carbon Fiber Breakage in Blending Process Using Twin Screw Extruder **Matsushita, Chihiro. Japan**
11:30	Hierarchically ordered structure in thermally conductive polymer composites and its application **Wu, Hong. China**	Closing the Loop: University-Industry Collaboration for a Circular Plastic Economy **Naebe, Minoo. Australia**	Synthesis and characterization of PEG-based hydrogels for pollutant sequestration **Grizzuti, Nino. Italy**	Real-time prediction of melt pressure in polymer extrusion process integrating physics-informed neural networks and random forest **Wu, Wenyu. China**	Enhancement of Vibration Damping and Viscoelastic Properties of MABS Through Novel Polymer Blends with VDT and SEBS-g-MAH Compatibilizer **Islam, Aminul. Denmark**	Dispersive and distributive mixing effect of screw elements on the co-rotating twin-screw extruder **Oldemeier, Jan Philipp. Germany**
11:50	Linking Chemical Structure to Performance: Acrylates as a Styrene Replacement in Unsaturated Polyester Resins **Max, Florian. Germany**	From PP Waste to High-Quality Products – Comparing Contamination Levels of Different Waste Streams in Mechanical Recycling Processes **Czaker, Sandra. Austria**	MOF/Photopolymer Composites for Selective Adsorption of Cationic Dyes **Zhang, J. Australia**	Experimental determination of the degassing performance of twin screw extruders for the material system Methylmethacrylate in PMMA **Biermann, Lars. Germany**	Formation of rigid core-soft shell structure of polymer blends by reactive processing **Li, Yongjin. China**	Ultrasound-assisted extrusion of nanoparticles reinforced HDPE: Cavitation impact **Demarquette, Nicole. Canada**
12:10	Synergistic Anchoring Strategy of Liquid Metal with CuS and CNTs to Achieve Homogeneous Dispersion in Silicone Rubber for Efficient Solar Energy Harvesting and Motion Sensing **Pan, Yang. China**	Research on Recycling and Utilization of Waste Polymer Materials Difficult to be Regenerated by Solid State Shear Milling (S3M) **Bai, Bing. China**	Hydroxyester mediated epoxy vitrimer systems with improved recyclability **Zhang, Jinwen. USA**	The Design and Validation of Shape Forming Elements for Architected Composites **Olanrewaju, Rebecca. USA**	Anchoring Ties: Improving Environmental Stress Crack Resistance in recycled HDPE with a Styrenic Triblock Copolymer **Khaki, Amir. Netherlands**	Tunning Mechanical Properties of Acid-grafted Polyethylene Using Ionic Interaction **Tavakoli, Negar. New Zealand**
12:30-1:30 pm	**Lunch & Editorial board meeting -** Case Room 2, 260-057					
1:30- 2:20pm	**Plenary -** Fisher & Paykel Auditorium: **Quality in Polymer Recycling: Science vs System - Kim Ragaert,** Maastricht University - Chair: **Jadranka Travas-Sejdic**					
2:20-3:40pm **Session 2.3**	**Extrusion** Lecture Theatre, 260-098 Chair: **Beatrix Theobald**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Giada Lo Re**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Roberto Pantani**	**Additive manufacturing** OGGB 5, 260-051 Chair: **Carla Martins**	**Biopolymers** Case Room 2, 260-057 Chair: **Suprakas Sinha Ray**	**Injection moulding** Case Room 3, 260-055 Chair: **Florian Puch**
2:20pm	Extrusion-based processing of cellulosic feedstocks for thermoformed packaging applications **Wade, Kelly. New Zealand**	Assessing the degradation level and stability of recycled polypropylene via chemiluminescence analysis **Fiorio, Rudinei. Netherlands**	Advanced Fan-Out Packaging Interface Strength Measurement and Hygro-Thermal Coupling Delamination Investigation **Shih, Meng-Kai. Taiwan**	Macro/Micro Synergistic Construction of Three-Dimensional Porous Piezoelectric Materials and Devices **Li, Yijun. China**	Thermoplastic polyesters in packaging applications: Tribute to furan-based polyesters **Paszkiewicz, Sandra. Poland**	Evaluating Purgeability in Additive and Conventional Manifold Systems: An Experimental and Numerical Approach **Schulz, Lucas. Germany**
2:40pm	Applications of Twin-Screw Extruder with Ultra-High Length-to-Diameter Ratio in Polymer Mixing **Wang, Jian. China**	Controlling Silicone Degradation - A First Step in Circularising the Silicone Economy. **Battley, Andrew. New Zealand**	Packing Frustration and Polymer Glass Formation **Xu, Wen-Sheng. China**	A Low-cost Pellet Extruder for Material Extrusion-based Additive Manufacturing **Chan, YukLun. New Zealand**	Development of starch film for food packaging **Gauthier, Emilie. Australia**	Data-driven optimization of part quality and energy consumption during injection molding **Müller, Dennis. Germany**
3:00	Design and Modelling of an Advanced Filament Extrusion Die with In-line Rheological Analysis **Tikhani, Farimah. Canada**	Circular bio-based polymers for the construction industry **Holzer, Clemens. Austria**	Development of a model for the temperature response of melting surfaces in ultrasonic heating systems **Inoue, Tamotsu. Japan**	Characterisation of process-induced defects in strut-based polymeric lattice structures **Amirian, Amirali. New Zealand**	Antioxidant biopolymers for prolonging food shelf life utilizing tannins derived from grape marc **Kilmartin, Paul. New Zealand**	Improvement of injection molding simulation by application of modeled pressure-dependent viscosity data **Hanselle, Felix. Germany**
3:20	Producing TPU-TPU/SWCNT muti-layered composites using melt multipliers **Covas, Jose. Portugal**	Post-consumer recycling of PA66-GF Composites from Electrical Waste: Performance Retention through Accelerated Aging Models **Salvi, Alessandro. Italy**	Development of physics-informeability measurement in resin transfer molding and process surrogate modeling **Kao, Yikai. Taiwan**	Improved FGF 3D printing using biocarbon additive **Deceur, Sofie. Belgium**	Impact of electron beam irradiation on blends made from P3HB and P3HB4HB **Krieg, David. Germany**	Determination of pVT data of thermoset moulding compounds for the simulation of the warpage behavior Schmeißer, Nils. Germany
3:40-4:10pm	**Afternoon tea**					
4:10-5:20pm **Session 2.4**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Andreas Leuteritz**	**Nanotechnology** OGGB 3, 260-092 Chair: **Tony McNally**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Miro Duhovic**	**Rubbers and elastomers** OGGB 5, 260-051 Chair: **Sven Wiessner**	**Biopolymers** Case Room 2, 260-057 Chair: **Suprakas Sinha Ray**	**Biomedical applications** Case Room 3, 260-055 Chair: **Ines Kühnert**
4:10 **Keynote sessions**	Development of Induction-Heating-Assisted Direct Joining Technology for Fabricating Polymer-Metal Hybrid Structures **Ren, Jiaxing. Japan**	Multifunctional Biomimetic Nanocoatings **Sun, Luyi. USA**	Fiber Spinning Simulations with Integral Constitutive Equations **Mitsoulis, Evan. Greece**	Processing and Properties of Electrospun Rubber-Rubber Composites **Mather, Patrick. USA**	Plastification of dialcohol cellulose for stable melt processing **Lo Re, Giada. Sweden**	Double-Expanded Polytetrafluoroethylene (PTFE)-Hydrogel Vascular Grafts with Enhanced Mechanical and Biological Properties
4:40	Characterization of Plasma-Treated Glass Fibre-Reinforced Polypropylene and Polyamide-6 Blends **Saroia, Jabran. New Zealand**	High-Performance Polymer Processing via Integration of Nanostructured Carbon Scaffolds **Park, Byeongho. South Korea**	Enhancing the synthesis of polyurethanes: controlling side reactions and solvent dependencies **Trossaert, Lynn. Belgium**	High-Performance and Recyclable Silicone Rubber based on Hybrid Cross-linked Networks **Xu, Guifa. China**	Rheological and thermal evaluation of modified thermoplastic starch/poly (butylene succinate adipate) blends with tartaric acid and dicumyl peroxide as coupling agents **Medina, Jorge. Colombia**	New Forms of Electrospun Nanofiber Materials for Biomedical Applications **Xie, Jingwei. USA**
5:00	Designing Microstructural Architecture in Butterfly-Inspired Hybrid Composites with Hierarchically Structured Fibrous Assemblies **Sansone, Nello. Canada**		Ultrasonically aided extrusion: a CFD and experimental analysis of polymer chain scission **Mateboer, Tijmen. Netherlands**	Effect of High-Pressure Fluids Mixing on Development of Carbon or Silica Nano-filler Rubber Composites **Kihara, Shin-ichi. Japan**	Tailoring of lignin based biopolymer to polyelectrolyte for dye removal in textile effluent **Raghavendar, Sivasakthi. India**	Towards a new generation of medical fibers for local drug delivery **Perret, Edith. Switzerland**

THURSDAY 24 APRIL

8:30-9:20am	**Plenary** - Fisher & Paykel Auditorium **Sustainable plastics - Case study on developing high performance bioplastics - Peter Halley,** University of Queensland - Chair: **Erin Leitao**					
9:20-10:20am **Session 3.1**	**Industry 4.0 and AI** Lecture Theatre, 260-098 Chair: **Yurong Yan**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Allen Jonathan Roman**	**Functional Additives and Reactive Processing** OGGB 4, 260-073 Chair: **Jinwen Zhang**	**Additive manufacturing** OGGB 5, 260-051 Chair: **Patrick Anderson**	**Rubbers and elastomers** Case Room 2, 260-057 Chair: **Sven Wiessner**	**Biomedical applications** Case Room 3, 260-055 Chair: **Lih-Sheng Turng**
9:20am	Predicting and Optimizing Extrusion Dies – Bypassing CFD-Simulations by Using an Artificial Neural Network **Vorjohann, Felix. Germany**	Progress in plastic mechanical recycling: Development of extrusion process for regeneration of mechanical properties and lamellar structures of recycled polyethylene **Phanthong, Patchiya. Japan**	Photocatalytic Generation of Polar Polyolefin Surfaces with Long-term Stability **Henrotte, Jules. Belgium**	Melting and crystallization phenomena in 3D printing **Pantani, Roberto. Italy**	Composites of 2D Materials and Rubber Blends **Achuthanunni, Ajitha. United Kingdom**	Degradable drug-eluting mesh/nanofibers for therapy of muscle injury **Liu, Shih-Jung. Taiwan**
9:40	Digital transformation technologies of plastic compounds **Choi, WooJin. South Korea**	Towards the circularity of thermoformed parts for packaging industry **Duarte, Fernando. Portugal**	Mechanocatalysis-Driven In-Situ Synthesis of Two-dimensional Covalent Organic Frameworks within One-Dimensional Linear Polymer Chains of Nylon 12 and Utilizing Injection Molding to Achieve Polymer Chains Weaving **Lai, shuangxin. China**	Buckling-stretch-buckling dominated hybrid mechanical metamaterials for improving mechanical properties **Nazir, Aamer. Saudi Arabia**	Stereochemistry-Tuned Hydrogen-Bonding Synergistic Covalent Adaptive Networks: Towards Recycled Elastomers with Recorded Creep-Resistant Performance **Wang, Zhanhua. China**	Adhesive hydrogel patches fabricated from the design of polymer network for the wound dressing **LAN, Bin. China**
10:00	Predicting Flow Channels in Water-Assisted Injection Molding with AI: A Step Toward Real-Time Feasibility Checks **Wimmer, Markus. Austria**	Assessing Closed-Loop Recyclability of Polyethylene Films in Food Packaging Applications **Rodrigues, PedroVeiga. Portugal**		High-Speed MEX Additive Manufacturing of High-Performance Polymers – Process and Parts' Quality Analysis **Rochman, Arif. Malta**	Superior vibration-damping silicone elastomers via combining segment motion and chain reptation **Feng, Qiang. China**	High Elastic PTFE-based Dressing with Wound Microenvironment Management Ability for Outdoor Wound Care **Qin, Jingxian. China**
10:20-11am	**Morning tea**					
11am- 12:30pm **Session 3.2**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Camilo Cruz**	**Fibres and Films** OGGB 3, 260-092 Chair: **Yurong Yan**	**Degradation, biodegradation and composting** OGGB 4, 260-073 Chair: **Pablo Raimonda**	**Injection moulding** OGGB 5, 260-051 Chair: **Roberto Pantani**	**Foams and Membranes** Case Room 2, 260-057 Chair: **Kentaro Taki**	**Biomedical applications** Case Room 3, 260-055 Chair: **Edith Perret**
11am	Preparation and Promising Use of Bacterial Cellulose **Sáha, Petr. Czech**	Impact of Low-Energy Electron Modification during Melt-Spinning of PLA/PCL Blends **Müller, Michael. Germany**	Analysis of hydrolysis reaction behavior of poly(lactic acid) (PLA) based on its solid-state structure **Koike, Takanari. Japan**	Investigation of surface-textured area affecting polymer-metal joining manufactured by injection molding **Kimura, Fuminobu. Japan**	Advancing Cryogenic Insulation: The Integration of Rigid Polyurethane Foams and Phase Change Materials **Cabulis, Ugis. Latvia**	Development of a Multifunctional Calcium-Based Polymer Composite for Bioabsorbable Implants **Oosthuizen, Hester. Germany**
11:20am	Improved toughness-stiffness balance of glass fibers reinforced Polypropylene composites through hybridization with polyolefin elastomers and polymeric fibers for automotive applications **Falath, Wail. Saudi Arabia**	Manipulation of the Shape of Fibers through Melt-Spinning Process **Kikutani, Takeshi. Japan**	Preparation and Performance of PBAT-based Composites **Chen, Ning. China**	Innovative Air Trap Mitigation in Injection Moulding: Efficiency and Effectiveness Assessment **Mifsud, Sarah. Malta**	Porous polymer nanocomposites for energy storage and environmental remediation **Patro, Umasankar. India**	Deep Eutectic Solvent as Chain Extender of Polyurethane and Its Application in Triboelectric Nanogenerator **Wang, Lian. China**
11:40am	Modelling The Mechanical Properties of Microfibrillar Composites (MFCs) **Davis, Dipin. New Zealand**	Assessing the impact of polyurethane adhesives on the recyclability of laminated polyethylene films **Ebrahimi, Ali. Netherlands**	Marine-Biodegradability and Mechanical Properties of Polybutylene Succinate with Melt-Blended Enzymes **Yamanaka, Asahi. Japan**	Advancing Projectile-Assisted Injection Molding for Non-Circular Cross-Sections **Heiml, Eva. Austria**	Nucleating Foams with Waste Mussel Shell **Gavin, Chanelle. New Zealand**	EPL-g-O3HT Copolymers as Transient Polymer Electronics for Multifunctional Applications **Sun, Xin. New Zealand**
12:00noon	The Effect of Solvent Ratio on Conductivity, EMI Shielding, and Crystallinity of PVDF/CNT/Graphene Oxide Films **Moaref, Roxana. Canada**	Fabrication of Bio-Based Poly(ethylene 2,5-furandicarboxylate) Nanofiber Webs via Laser-Heated Melt Electrospinning **Takasaki, Midori. Japan**	Enzymatic Degradation of Polybutylene Terephthalate (PBT): Influence of Material Properties on Degradability **Pongratz, Annalena. Germany**	Metal-polymer direct joining on cylindrical surfaces using injection molding **Ishioka, Eigo. Japan**	Foaming behavior of polymer blends with oriented dispersed structures and their mechanical properties **Zhang, Cai-Liang. China**	
12:30 1:30pm	**Lunch & Business Lunch** OGGB3, 260-092"					
1:30-2:20pm	**Keynote: Early Career Winner 2024** - Fisher & Paykel Auditorium **Learning from nature, mathematics, and artificial intelligence for sustainable materials design and manufacturing - Grace Gu** Chair: **Nam Kim**					
2:20-3:50pm **Session 3.3**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Miro Duhovic**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Rudinei Fiorio**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Evan Mitsoulis**	**Injection moulding** OGGB 5, 260-051 Chair: **Naum Naveh**	**Biopolymers** Case Room 2, 260-057 Chair: **Hani E Naguib**	**Degradation, biodegradation and composting** Case Room 3, 260-055 Chair: **Petr Saha**
2:20pm **Keynote sessions**	Harnessing Synergy-Induced Multifunctionality in Bio-inspired Hybrid Composites via Physio-Geometric Architecture Optimization **Lee, Patrick. Canada**	Circularity micro-indicators: a way to assess the circularity in plastic products **Martins, Carla. Portugal**	Multimodal Shear Molecular Dynamics Analysis of Semicrystalline Polymers **Hussain, Mohammed Althaf. Japan**	Ensembled Explainable Artificial Intelligence (XAI) for Quality Prediction of Injection Molded Parts **Turng, Lih-Sheng. USA**	Biopolymers and their composites for packaging applications: Scientific challenges and prospects **Maazouz, Abderrahim. France**	Processing of Biodegradable Plastics and their Biodegradability for Single-use Plastic Alternatives: Challenges and New Opportunities **Mohanty, Amar. Canada**
2:50pm	Enhanced Actuation of Liquid Crystal Elastomer Composites **Bin, Fei. China**	Modelling the New Zealand Plastics Ecosystem to Test the Efficacy of Circular Economy Strategies. A Game Design Approach. **Polson, Deb. Australia**	Robomould Product Quality Prediction and Parameter Optimization using a Bayesian Network **Goris, Mathijs. Belgium**	Challenges and opportunities in processing recycled materials by injection molding **Bruchmüller, Matthias. Germany**	Compounding of high heat service temperature Ploy(lactic acic) for hot fill food packaging applications **Meekum, Utai. Thailand**	Organic vs. enzymatic polymerization in circular polyester design **Avella, Angelica. Sweden**
3:10pm	High viscosity, lignocellulose reinforced UV curing bio-resins for 3D printing **Gromova, Anda. Latvia**	Envisioning circular futures: Enabling conditions for industry-level transitions in New Zealand's plastics sector **Fehrer, Julia. New Zealand**	Improved Accuracy of Process and Shrinkage Predictions for Talc-Filled Injection Molding Compounds **Costa, Franco. Australia**	Influence of the processing parameters on the mechanical strength of injection moulded BMC components for direct screwing **Held, Christian. Germany**	Engineered Polysaccharides and the Modification of Polysaccharides and Poly(lactic acid) for Sustainable Multiphase Polymer Development **Mekonnen, Tizazu. Canada**	PLA-LDH nanocomposites for Implants and its degradation **Leuteritz, Andreas. Germany**
3:30pm	Controlled filler exfoliation and thermal conductivity of polymer composites with hybrid fillers **Ye, Lijun. China**	Hybrid Chemical-Mechanical In-Melt Separation and Upcycling of PE/PET Blends: A First Step Towards Recycling at Scale of Mixed Plastic Waste **Maia, Joao. USA**		Transfer of powder-based direct coating in the injection molding process from two-dimensional components to three-dimensional components **Lingnau, Kai. Germany**	Investigation of novel polymer nanocomposites based on PLA/lignin-MWCNTs for printed electronics (PE) **Bikiaris, Dimitrios. Greece**	Environmentally friendly matrices for Enhanced Efficiency Fertilizers: design, release, and degradation **Faez, Roselena. Brazil**
3:50-4:20pm	**Afternoon tea**					
4:20-5pm **Session 3.4**	**Industry 4.0 and AI** Lecture Theatre, 260-098 Chair: **Stan Looijmans**	**Circular Economy for Plastics and Recycling** OGGB 3, 260-092 Chair: **Andreas Leuteritz**	**Polymerisation and synthesis** OGGB 4, 260-073 Chair: **Edith Perret**	**Morphology and Structural Development** OGGB 5, 260-051 Chair: **Giada Lo Re**	**Rheology and characterisation** Case Room 2, 260-057 Chair: **Patrick Mather**	**Biomedical applications** Case Room 3, 260-055 Chair: **Hani E Naguib**
4:20pm	Decoupling data acquisition, data analysis and decision making in an injection molding workflow, by use of Dataspaces and Asset Administration Shells **Seebach, Gabriel. Austria**	Recycling of Rigid Polyolefins: how Polymer Matrices can Mitigate the Impact of Contaminants **Siebers, Charmayne. Netherlands**	Optimisation of the process of obtaining furan-based polyesters employing the design of experiment method (DoE) **Irska, Izabela. Poland**	Toward high performance by stress-induced hierarchical structure during polymer processing **Zhong, Gan-Ji. China**	Deformation and Fracture Analysis of Glassy Polymers under Uniaxial Tension by Acoustic Emission Method **Ougizawa, Toshiaki. Japan**	Biodegradable tissue scaffolds and coronary stents using nano-/micro-fibrillar polymer composites approach **Somashekar, Arcot. New Zealand**
4:40pm	Multi-Quality Prediction in Injection Molding Using CPS and Ensemble Learning **Ke, Kun-Cheng. Taiwan**	Breakthrough strategies for recyclable cross-linked polyolefins **Zamboulis, Alexandra. Greece**	Polyethyleneimine and molecularly imprinted polymers in designed magnetic nanocomposites for extraction and determination of gallic acid in green tea **Dramou, Pierre. China**	Construction of entwined TiN-CNT hybrid network via electrostatic self-assembly: Achieving a durable and photothermal superhydrophobic surface for anti-icing/de-icing application **Li, Lingtong. China**	Influence of degree of fusion on Rigid PVC rheology for industrial processing **Desplentere, Frederik. Belgium**	A 4D-printed biopolymer triboelectric nanogenerator (TENG) device for mechanical energy harvesting **Gaidukovs, Sergejs. Latvia**
7-11pm	**Conference Banquet at the Auckland Museum** Buses depart from Owen G Glen Building from 5:15pm					

FRIDAY 25 APRIL

1-1:50pm	**Plenary: Lamda Award Winner 2025** - Fisher & Paykel Auditorium - **Flexible 3D-Printed Cellulosic Constructs for Electromagnetic Interference Shielding and Piezoresistive Sensing** **Mohammad Arjmand,** University of British Columbia					
1:50-2:30pm	**Keynote: Early Career Winner 2025 -** Fisher & Paykel Auditorium - **Polyolefin innovations for clean air and water - Zhe Qiang** - Chair: **Sadhan Jana**					
2:30-3pm	**Afternoon tea**					
3-4:30pm **Session 4.1**	**Polymer Composites** Lecture Theatre, 260-098 Chair: **Nam Kyeun Kim**	**Functional Additives and Reactive Processing** OGGB 3, 260-092 Chair: **Petr Saha**	**Modelling and Simulation** OGGB 4, 260-073 Chair: **Maedeh Amirpour**	**Morphology and Structural Development** OGGB 5, 260-051 Chair: **Hanna Dodiuk**	**Polymer Blends and Alloys** Case Room 2, 260-057 Chair: **Ashok Misra**	**Fibres and Films** Case Room 3, 260-055 Chair: **Chanelle Gavin**
3pm **Keynote sessions**	Innovations on Advanced Biocarbons and their Sustainable Composites: Materials to Real-World Applications **Misra, Manjusri. Canada**	Reactive extrusion of poly(lactic acid): a model-based design study for viscosity control **Debrie, Simon. Belgium**	Advanced Simulation of Morphology and Property Distributions in Polymer Injection Molding **Roberto, Pantani. Italy**	Synergistic Effects of Graphite Particle Size, Hybrid Graphite, and Reduced Graphene Oxide on the Properties of Co-Continuous PET/PVDF Composites **Mighri, Frej. Canada**	Toward Processable Upcycled Blends with Enhanced Mechanical Properties Using Electron Beam Irradiation **Kenig, Samuel. Israel**	Flow-Assisted Gel Spinning Technique for Fabricating Stretchable and Thermally Insulating TPU-Silica Aerogel Fibers **Park, Chul. Canada**
3:30pm	Role of biological routes in surface modification of natural fiber and biopolymer extraction **Doddipatla, Purnima. India**	Application of Cold Atmospheric Pressure Plasma Jet Treatment for Producing Functional Polymers by Melt Grafting Processes **Bertin, Maicon. New Zealand**	Influence of mold-sheet interaction in thermoforming processes **Schwär, Florian. Germany**	In-situ studies on the crystallization of stereo complex polylactic acid **Boldt, Regine. Germany**	Correlation of Processing and Aging in Styrene-butadiene-styrene (SBS) Modified Bitumen **Kaya Ozdemir, Derya. United Kingdom**	Effect of High-Temperature Local Heating in the Vicinity of Spinning Nozzle on the Structure and Properties of Poly(Ethylene Terephthalate) Fibers **Hahm, Wan-Gyu. South Korea**
3:50	Counterintuitive effect of the degree of cure of some epoxy resins on the compressive strength of continuous fibre composites **Keryvin, Vincent. New Zealand**	Laser holographic processing of plastics for augmented reality **Peng, Haiyan. China**	Modelling of Robotic Rotational Moulding Using the Discrete Element Method **Martin, Peter. United Kingdom**	Bulk Acoustic Wave resonators fabricated from modified piezoelectric polymers **Fiedler, Holger. New Zealand**	Appealing Through Annealing: Exploiting Filler-Enhanced PEEK/PEI Blend Behavior for High-Frequency PCB Applications **Scherzer, Tim. Germany**	Scalable In-Situ Micro/Nanofibrillar All-Organic Polymer Dielectric Films for Electric Energy Storage **Huang, Hua-Dong. China**
4:10	Graphene and its derivatives as fillers for biodegradable polymer matrices: Ecofriendly and performance improvements **Fechine, Guilhermino. Brazil**	Novel epoxy vitrimer chemistry with improved melt processability **Naveh, Naum. Israel**		Effects of Plasma Treatment on Morphology, Rheology and Mechanical Properties of Microfibrillar Composites **Gray, Narges. New Zealand**	Influence of blasted metal surface textures on joining strength via injection molded direct joining **Wang, Shuohan. Japan**	
4:45-5:15pm	**Conference Closing** - Fisher & Paykel Auditorium					

Poster Sessions

POSTER SESSION		
ID	**Name**	**Title**
ADDITIVE MANUFACTURING		
S01-452	**Ali, Usman.** Saudi Arabia	Nanocomposite Additive Manufacturing using Fused Deposition Modelling
S21-300	**Ares-Pernas, AnaIsabel.** Spain	Enhancing Electrical Conductivity in 3D Printing: Effects of Design and Measurement Methods in New Recycled Polymeric Composites
S21-392	**Becker, Daniela.** Brazil	Influence of remote plasma jet treatment during 3D printing on the properties of PLA
S01-164	**Han, Rui.** China	FDM of Isotactic Polypropylene/Graphene Nanoplateles Composites:Achieving Enhanced Thermal Conductivity through Filler Orientation
S22-67	**Imrie, Patrick.** New Zealand	Direct-ink-write 3D printing of "living" polymer hydrogels via type I photoinitiated RAFT polymerisation
S01-160	**Lyu, Min-Young.** South Korea	Shape recovery characteristics of additive manufactured specimens according to tool path in ME-type 3D printing
S22-421	**Misra, Manjusri.** Canada	Advancements of 3D Printing by Utilizing Machine Learning and Bayesian Optimization for Ocean-Recycled Polymer Composites
S21-251	**Senck, Sascha.** Austria	Analysis of thermal distribution in a FFF hotend using passive thermography
BIOMEDICAL APPLICATIONS		
S02-285	**Bikiaria, Rizos-Evangelos.** Greece	Enhanced Chitosan-Based Hemostatic Agents with Antimicrobial and Controlled Anticoagulant Properties for Trauma Care Applications
S02-226	**Li, Yike.** China	Preparation of Strong and Tough Hydrogels Based on the Extrusion Casting Strategy
S02-232	**Oosthuizen, Hester.** Germany	BioIMplant: Enhancing Biopolymer/Bioglass Composite Performance through Surface Modification for Bioabsorbable Implants
S23-97	**Sablaniya, Dhrmendra.** India	Improving Injection Moldability of medical grade UHMWPE by Blending with Short-Chain Maleated Polyethylene via Melt Compounding While Preserving Clinical Mechanical Properties for orthopaedic application
BIOPOLYMERS		
S24-314	**Krieg, David.** Germany	Finding the processing window for additive-free irradiation crosslinking of stereo complex Poly-(Lactide Acid)
S03-104	**Mathel, Vincent.** Australia	Influence of fibre characteristics on PHA-based biocomposites properties
S25-414	**Mohanty, Amar.** Canada	Biodegradable Composites from Poly(Hydroxybutyrate-Co-3-Hydroxyvalerate) and Cellulosic Fiber: Effect of Compatibilizer on Material Performance
CIRCULAR ECONOMY FOR PLASTICS AND RECYCLING		
S27-417	**Ahmed, Usama.** Saudi Arabia	Technoeconomic Evaluation of Integrated Systems for Ammonia Synthesis via Plastic Gasification and Partial Oxidation
S27-323	**Ashraf, Jesna.** New Zealand	Using Plasma to Enhance the Recyclability of Polyethylene/Polypropylene Blends
S26-156	**Bezeraj, Erion.** Belgium	Revisiting the state-of-the-art of PET mechanical recycling: from ideal to contaminated waste streams
S28-62	**Dey, Indranil.** India	Transforming Waste into Resources: Recycling Polypropylene Using Depolymerized PET
S04-101	**Lei, Jun.** China	Temperature controllable wood-plastic composite plate with excellent comprehensive properties
S28-425	**Martins, Carla.** Portugal	Rotational molding of recycled HDPE with organoleptic and insect repellency agents
S28-44	**Raimonda, Pablo.** Uruguay	WPC from Uruguayan industrial waste – New Advances in the project
S04-401	**Zahid, Umer.** Saudi Arabia	Design and simulation of plastic waste conversion to light olefins

Poster Sessions

DEGRADATION, BIODEGRADATION AND COMPOSTING		
S05-370	**Lambropoulou , Dimitra.** Greece	Unraveling the UV-Responsive Leaching Profiles of Polyolefin Microplastics in Aquatic Environments
S05-183	**Luo, Qiao Wen.** Taiwan	Preparing hydrogel/ZIF-8 composite materials and applying Fenton-like reactions for the degradation of Acid Orange 7(AO7)
EXTRUSION		
S06-450	**Hellmig, Clemens.** Germany	Extruder design to improve bulk functionalization of polymer blends in an in-line plasma treatment process
FIBRES AND FILMS		
S29-316	**Hahm, Wan-Gyu.** Korea	On-line Diameter Measuremet of PET Fibers Containing TiO2 Additives with in High-speed Melt Spining
S29-400	**Hahm, Wan-Gyu.** Korea	Study on Eco-friendly Poly(ethylene terephthalate) Security Fiber Utilizing Near-Infrared (NIR) Fluorescent Ceramic Particles in the Melt Spinning Process
S07-275	**Lee, Kyunbae.** Korea	Electromagnetic Shielding Efficiency in Carbon Nanotube Sheets: Distinct Role of Structural and Electrical Properties
S07-215	**Li, Zhongming.** China	Stretchable and Leakage-Free Liquid Metal Networks for Thermal Management
S29-379	**Park, Chul.** Canada	Superior Oxygen Barrier Properties and Stiffness in High-Density Polyethylene: Unveiling Novel In-situ Nanofibrillation Technique with Ethylene-Vinyl Alcohol Copolymer
FOAMS AND MEMBRANES		
S08-394	**Patro, Umasankar.** India	Modification of polyurethane foam-derived reticulated vitreous carbon foam for oil-water separation, microwave absorption and energy storage supercapacitor
INJECTION MOULDING		
S32-35	**Huang, Chao-Tsai.** Taiwan	Investigation on the molding efficiency of the cooling channel layout and its effect on the dimensional accuracy of injected parts through the differences of the conformal cooling size design
S31-337	**Kim, Jong-Su.** South Korea	AI-Based Prediction of Surface Roughness and Tool Wear Using Cutting Force and Machining Conditions in Precision Injection Mold Machining
S31-338	**Kim, Jong-Sun.** South Korea	Graph Attention Network-Based Surrogate Model for Accelerating Injection Molding Numerical Simulations
S32-373	**Lee, Sung-Hee.** South Korea	A study on the effects of gate and gusset stiffener on the bending strength of fiber-reinforced injection-molded parts
S32-60	**Lin, Chung-Chih.** Taiwan	Hollow Product Fabrication Using Salt Core and Injection Molding Method
S11-128	**Peng, Hsin-Shu.** Taiwan	Study on the Influence of Gas Pressure and Temperature Changes on the Process Characteristics of Gas-Assisted Injection Hollow Parts
MODELLING AND SIMULATION		
S33-374	**Hong, Seok-kwan.** Korea	Design of Lightweight Plastic Containers Through Optimization Analysis
S33-322	**Hong, Seokkwan.** South Korea	A study on the design of adaptive preform temperature control system based on heat transfer analysis
S33-339	**Sikora, Janusz.** Poland	Designing extrusion screws using artificial intelligence
MORPHOLOGY AND STRUCTURAL DEVELOPMENT		
S14-158	**Hussain, Syed Muhammad Shakil.** Saudi Arabia	Water Soluble Polymer for Sulfate Scale Control in Oilfields: Cutting-Edge Synthesis, Characterization, and Performance Insights
S14-145	**Kitabatake, Shion.** Japan	Shear-Induced Crystallization of Polypropylene Blends with Polymethylmethacrylate
S14-127	**Yamaguchi, Masayuki.** Japan	Effect of Triethyl Citrate on water absorption for Isosorbide-Based Polycarbonate

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NANOTECHNOLOGY		
S15-45	**Melo, Guilherme.** Canada	In situ growth of ZIF-67 at PAN nanofibers: influence of synthesis conditions on particle morphology
S15-382	**Park, Chul.** Canada	Innovative use of in-situ fibrillation for the rational design of PP/EPDM/CNT nanocomposites with simultaneously high mechanical performance and thermal/electrical conductivity
POLYMER BLENDS AND ALLOYS		
S16-191	**Kandemir, Dilhan.** Belgium	Preparation of Compatibilized Blends and Foams Using Biorefinery Waste Humins and Bio-degradable Polyesters
S16-381	**Smith, Jackson.** New Zealand	Extrusion Up-Cycling of Plastic Waste Using Atmospheric Plasma Jet Modification
POLYMER COMPOSITES		
S35-281	**Choi, Jae Ryung.** South Korea	Preparation of Electromagnetic Interference Shielding Composite of Ethylene Propylene Diene Monomer with Electroless-Plated FeCo Hollow Fibers
S36-355	**Gordon, Olivia.** New Zealand	Improving Performance of Harakeke Flax Fibre Composites Through Low-Temperature Plasma Treatment
S36-353	**Le, Hai.** South Korea	Polymeric nanocomposite triboelectric nanogenerators for antimicrobial platforms
S34-234	**Lee, Li-Ting.** Taiwan	Studies of Promoted Crystallization Kinetics and Physical Properties in Novel Multi-component Biodegradable Polymer Composites Containing Cyclodextrin Inclusion Complex
S37-58	**Rhue, Mason.** USA	Mechanochemical carbon nanotube surface functionalization for enhanced compatibility with polymers
S35-309	**Sáha, Petr.** Czech	Bacterial Cellulose and Fungal Mycelium-Based Polymer Composites for Multipurpose Applications
S36-356	**Xu, Jing.** New Zealand	Comparative Study of Mussel Shell-Derived and Commercial Calcium Carbonate as Low-Loading Fillers in Polypropylene Composites: Thermal and Mechanical Properties
S17-112	**Yi, JinWoo.** South Korea	Butt joint lamination of thermoplastic and thermosetting prepreg for manufacturing CFRP parts with optimized structural functions by area
POLYMERISATION AND SYNTHESIS		
S18-142	**Chen, Ssuchi.** Taiwan	Synthesis of P(DMSMA-co-MMA) random copolymers by ATRP for RIMPS in epoxy thermosets
S18-213	**Hsu, Junrui.** Taiwan	Synthesis of polyamides via Ugi-type multicomponent polymerization and functionalizing with α-lipoic acid for crosslinking and elastic vitrimer in application
RHEOLOGY AND CHARACTERISATION		
S19-66	**Kamal, Muhammad Shahzad.** Saudi Arabia	Rheological Behavior of in-house Synthesized Zwitterionic Surfactant-Polymer Mixtures in High-Salinity EOR Applications
S19-445	**Kuhnert, Ines.** Germany	Analysis of the pressure dependent flow and shrinkage characteristics of semi-crystalline polymers
S19-258	**Shaw, Montgomery.** USA	Revisiting a method for measuring fluid viscosity in a hermetically sealed vial
S19-192	**Wurzer, Stefan.** Austria	Rheological Characterization of Polymers in the Presence of Supercritical COα: Applications in Polymer Processing and Modification
RUBBERS AND ELASTOMERS		
S20-178	**Oh, Jeong.** Korea	α-Farnesene-based copolymer Liquid Rubbers for Sustainable Elastomer
S20-200	**Wnek, Gary.** USA	TPE/Unvulcanized Rubber Bi- and Tri-Layers: Observations of Unusual Mechanical Responses and a Survey of Potential Applications

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