

Tue 08:30	OPENING CEREMONY (Room 'Sulzer Chemtech' 9.1.2) Session Chair: Altstaedt Volker, University of Bayreuth, Germany Conference chair: Hufenus Rudolf; President of PPS: Ghosh Anup K; Division President Sulzer Chemtech (Main Partner): Boltersdorf Uwe				
Tue 09:05- Tue 09:40	Plenary: Innovative pharmacopolymers for the 21st century: From synthesis to formulation and processing Schubert Ulrich S. (Friedrich Schiller University Jena, Jena, Germany)				
Coffee	Room 'Sulzer Chemtech' 9.1.2	Room 'Bodensee' 9.0 D	Room 'St. Gallen' 9.0 C	Room 'Bruker AXS' 9.0 B	Room 'Angst+Pfister' 9.0 A
Morning session	SOFT ROBOTICS Session Chair: Jusufi Ardian, Empa, Switzerland	POLYMERS AT SURFACES AND INTERFACES Session Chair: Neuhaus Sonja, University of Applied Sciences & Arts FHNW, Switzerland	MEDICAL APPLICATIONS Session Chair: Didar Tohid, McMaster University, Canada	POLYMER RECYCLING Session Chair: Ragaert Kim, Maastricht University, The Netherlands	ADDITIVE MANUFACTURING Session Chair: Drummer Dietmar, Universität Erlangen-Nürnberg, Germany
Tue 10:15	Keynote: Embodiment Design of Autonomous Material Systems Shepherd Robert F. (Cornell University Ithaca, New York, USA)	Keynote: Experimental Measurements and CFD Simulation of a Viscous Adhesive Injected into an Unsealed Channel Jousset Pierre (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Gutgsell Michael; Kuster Max; Wenig Sabine	Keynote: Reusable and Rechargeable Biocidal Fibrous Materials for Improved Medical Protection Sun Gang (University of California Davis, California, USA)	Keynote: Vitrimers: A Novel Concept to Recycle Thermoset Waste via Dynamic Chemistry Manas-Zloczower Ica (Case Western Reserve University, Ohio, USA); Bandegi Alireza	Keynote: Additive Manufacturing of Functional Materials Jana Sadhan C. (University of Akron, Ohio, USA); Gotad Pratik; Agrawal Aparna C
Tue 10:40	Synthetic growth: a new way to grow a soft robot Hausladen Matthew M. (University of Minnesota, Minnesota, USA); Zhao Boran; Kubala Matthew S.; Francis Lorraine F.; Kowalewski Timothy M.; Ellison Christopher J.	Alternating current based electrochemical deposition of pure emeraldine salt redox state of polyaniline to modify Mw-CNT/polyester microfibrer nonwoven based flexible electrode for microbial fuel cell Kandpal Rahul (IIT Delhi, New Delhi, India); Ali Syed Wazed; Ahammad Shaikh Ziauddin	Comparison of Droplet deposition manufacturing to Fused filament fabrication additive manufacturing techniques for the production of personalized oral tablets Ebrahimi Farnoosh (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Xu Han; Fuennmayor Evert; Major Ian	Towards a circular economy for carbon-fiber reinforced polyetheretherketone (CFRPEEK) composites: reusing, recycling and remanufacturing Santos Raquel M. (INEGI, Porto, Portugal); Borges Carolina; Chicharo A.; Araújo Andreia; Silva J.	3D Printing-based Advanced Composites in 1D, 2D, and 3D Systems Song Kenan (Arizona State University, Tempe, USA)
Tue 11:00	Sim-to-Real Transfer of Soft Robotic Navigation Strategies That Learns from Visual Perception Lai Jiewen (CUHK, HK, China)	An Experimental Study of Polymer-Polymer Interdiffusion under Co-Extrusion Processing Conditions Hammer Alexander (Johannes Kepler University, Linz, Austria); Leimhofer Claudia; Roland Wolfgang; Ehrmann Timo; Hild Sabine; Berger-Weber Gerald R.	Biodegradable 3D-printed/electrospun nanofibrous drug-eluting scaffolds for therapy of alveolar bone defects Liu Shih-Jung (Chang Gung University, Taoyuan, Taiwan); Chou Pang-Yun; Liao Chien-Tun	Processing induced modification of commercial and waste PET and its effect on enzymatic depolymerization Chang Allen (University of Massachusetts Lowell, Massachusetts, USA); Patel Akanksha; Mastrodonaco Abigail; AcostaDiaz Mauricio; Abid Umer; Ayafor Christian; Wong Hsi-Wu; Xie Dongming; Sobkowitz Kline Margaret J.	Heat Transfer and Rheological Effects on Maximum Feeding Rates in Fused Filament Fabrication Wolff Rebecca (SKZ - German Plastics Center, Würzburg, Germany); Damanik Hogenrich; Fatima Arooj; Malatyali Hatice; Rudloff Johannes; Baudrit Benjamin; Hochrein Thomas; Bastian Martin; Turek Stefan
Tue 11:20	Biomimetic multilayer e-skin with mechanoreceptive and thermoreceptive sensory capabilities Georgopoulou Antonia (Empa, Dübendorf, Switzerland); Hardman David; Thuruthel Thomas George; Iida Fumiya; Clemens Frank	Plasma etching of recycled PET film in Roll-to-Roll (R2R) processing Amberg Martin (Empa, St. Gallen, Switzerland); Höhener Marion; Perret Edith; Rupper Patrick; Hanselmann Barbara; Hufenus Rudolf; Hegemann Dirk	Effect of graphene oxide on the mechanical properties and release profile of PLA-drug implants Munir Nimra (Atlantic Technological University Sligo, NA, Ireland)	New approach for high-quality extrusion with low energy consumption in post-consumer recycling applications Aigner Michael (EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H, Ansfelden, Austria); Sochor Sebastian; Pachner Sophie	3D Printing thermoplastic vulcanizates based on PP/EPDM Hebda Michael (University of Bradford, Bradford, United Kingdom); Innes James R.; Shriky Bana; Nocita Davide; Thompson Glen; Coates Phil D.; Whiteside Ben; Kelly Adrian
Tue 11:40	Flexible Z oriented Columnar Piezoelectric Composite Films as Flat-Panel Transparent Loudspeakers: Application and Modeling Cakmak Mukerrem (Purdue University, West Lafayette, IN, USA); Grant Jesse; Wang Yimin; Liu Yangfan	Surfaces forces on nano-porous plasma polymer films Góra Michal (ETH Zurich, Zurich and Empa, St. Gallen, Switzerland); Navasucós Paula; Schütz Urs; Hegemann Dirk; Heuberger Manfred	Microfluidic wet spinning of bio-based polymer fibers for biomedical applications Wei Kongchang (Empa, St. Gallen, Switzerland); Wang Wuchao; Boesel Luciano F.; Rossi René M.	Challenges in Large Scale Single Screw-Extrusion in Polymer Recycling- from High Quality Application to Chemical Recycling Pachner Sophie (EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H, Ansfelden, Austria); Aigner Michael; Rächinger Patrick; Hofstätter Thomas	High-temperature thermoplastic composites reinforced with recycled carbon fibers and thermal black for Fused Filament Fabrication Arslan Dogan (Polytechnique Montréal, Québec, Canada); Norton Edward; Mihai Mihaela; Levesque Martin; Theriault Daniel
Tue 12:00	Keynote: Polar polymers in actuators, sensors, and generators Opris Dorina M. (Empa, Dübendorf, Switzerland); Sheima Yauhen; von Szczeplanski Johannes; Danner Patrick M.; Caspari Philip; Wolf Jana; Adeli Yeerlan; Owusu Francis; Nüesch Frank	Transfer of PECVD Coating Processes to other reactors by Means of Plasma Diagnostics and Coating Characterization Kusmierz Simon (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); Jenderny Jonathan; Awakowicz Peter; Dahlmann Rainer	Experimental assessment of the penetration force of injection moulded polymer hollow microneedles in artificial skin Vanwersch Pol (KU Leuven, Leuven, Belgium); Evens Tim; Van Hileghem Lorenz; Dal Dosso Francesco; Lammertyn Jeroen; Van Bael Albert; Castagne Sylvie	Investigation of the influence of sorting on the property profile of colored polyethylene recyclates Akhras M. Hassan (Competence Center CHASE GmbH, Linz, Austria); Fischer Joerg	Irreversible and Repeatable 4D Printing of FFF-printed Thermoplastic Parts Park Keun (Seoul National University of Science and Technology, Seoul, South Korea); Oh Seo-Hyeon; Lee Ju-Yoen; Goo Bona
Lunch					
Afternoon session	SOFT ROBOTICS Session Chair: Shepherd Robert F., Cornell University, USA	POLYMERS AT SURFACES AND INTERFACES Session Chair: Kristiansen Per Magnus, University of Applied Sciences & Arts FHNW, Switzerland	MEDICAL APPLICATIONS Session Chair: Wei Kongchang, Empa, Switzerland	POLYMER RECYCLING Session Chair: Manas-Zloczower Ica, Case Western Reserve University, USA	ADDITIVE MANUFACTURING Session Chair: Liu Shih-Jung, Chang Gung University, Taiwan
Tue 13:45	Keynote: Bio-Inspired Artificial Muscle-Tendon Complex with Proprioception Made of Liquid Crystal Elastomer and Room-Temperature Liquid-Metal Soft Sensors Park Yong-Lae (Seoul National University, Seoul, South Korea); Cho Jiyeon; Lee Minhee; Wang Yang; Cai Shengqiang	Keynote: Atmospheric gliding arc plasma deposition: A novel tool to selectively change the wettability, roughness and surface chemistry of substrates Michl Thomas Danny (FHNW, Aargau, Switzerland); Goel Alok; Sroka Karolina; Neuhaus Sonja	Keynote: Micro and nano engineered bio-interfaces for diagnostics, therapeutics and public health Didar Tohid F. (McMaster University, Ontario, Canada)	Keynote: Which circular economy for PLA? Technological, environmental and socio-economical points of view Massardier Valérie (Université de Lyon, Villeurbanne, France); Sandet Benjamin; Barbaut Lea; Brette Olivier; Lazarie Nathalie	Keynote: Experimental and Numerical Investigations of the dimensions of the deposited strand in the FFF Additive Manufacturing Process Agassant Jean-François (PSL Research University, Paris, France); Xu D.; Pigeonneau Franck
Tue 14:10	Soft robots with mechanical intelligence via nonlinear networks of inflatable actuators Milana Edoardo (University of Freiburg, Freiburg im Breisgau, Germany); Gorissen Benjamin	Cerium oxide nanoparticles deposition on poly(lactic acid)-tricalcium phosphate by different methods: high power impulses electrophoresis deposition and plasma surface activation Becker Daniela (Santa Catarina State University, Santa Catarina, Brazil); Rosa Luis G. S.; Fontana Luis César; Harb Samarah Vargas; Backs Eduardo; Pessan Luiz Antonio; Costa Lidiane Cristina	Therapeutic nanofibers: Stable amorphous solid dispersion of flubendazole with high loading via electrospinning De Clerck Karen (Ghent University, Ghent, Belgium); Becelaere Jana; Vervaeke Chris; Hoogenboom Richard	Recycling of non-metallic fraction in waste printed circuit board for an electronic plastics circular economy Liu Yuxin (University of Calgary, Alberta, Canada); Sundararaj Uttandaraman; Mohseni Majid	Fused Filament Fabrication (FFF) with PP-based composites: effect of fillers on thermal conductivity and flammability Bernagozzi Giulia (Politecnico di Torino, Torino, Italy); Arrigo Rossella; Battegazzore Daniele; Frache Alberto
Tue 14:30	Soft robotic fish platform with a novel control strategy for stiffness control Schwab Fabian (Max Planck Institute, Stuttgart, Germany); Rezaei Seyedreza; Jusufi Ardian	Interfacial Anchoring of Chiral Nematic Photonic Films of Organic Acid Doped Cellulose Nanocrystals in Biocomposites Laminates Verma Chhavi (Indian Institute of Technology Roorkee, Uttar Pradesh, India); Maji Pradipt K.	Micro-Injection Moulding of PEO, PVP VA64 and PCL for the Production of Extended-Release Tablets of Fenbendazole Silva Nunes Bezerra Gilberto (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Mary Colbert Declan; Geever Joseph; Geever Luke	Strategies for Improving Product Properties of Thermoformed Multilayer Cups with Contents of Post-Consumer Polypropylene Recyclate Laske Stephan (Greiner Packaging International GmbH, Austria, Austria); Traxler Ines; Fischer Joerg	Comparing thermal degradation for fused filament fabrication (FFF) with chain or step-growth polymers Trossaert Lynn (Ghent University, Ghent, Belgium); Ceretti Daniel V. A.; Fiorillo Chiara; Ohnmacht Hannelore; Cardon Ludwig; Van Steenberge Paul H. M.; D'hooge Dagmar R.; Edeleva Mariya
Tue 14:50	RoboTwin: a platform to study hydrodynamic interactions in fish schools Li Liang (University of Konstanz, Baden-Württemberg, Germany); Couzin Iain	Sub-micrometer scale cross-sectional analyses of the polymer flow modifier effects on metal-polymer injection molded direct joining Wang Shuohan (The University of Tokyo, Tokyo, Japan); Kimura Fuminobu; Yamaguchi Eiji; Ito Yuuka; Suzuki Yukinori; Sang Jing; Hirahara Hidetoshi; Kajihara Yusuke	Body temperature reverting shape memory polymer orthopaedic devices Thomson Brian (University of Bradford, Bradford, United Kingdom); Spencer Paul; Thomas Lee; Thompson Glen; Whiteside Ben; Kelly Adrian; Twigg Peter; Caton-Rose Fin; Coates Phil D.	Overcoming Gaps in Mechanical Recycling by Additive and Color solutions Sueltemeyer Jan (Avient Corporation, Ohio, USA)	Enhanced structural stability and interfacial strength of thermoplastic elastomers using dual material bi-layered filaments by material extrusion additive manufacturing Patil Nikhil Avinash (University of Massachusetts Lowell, Massachusetts, USA); Joshi Kartik; Strawhecker Kenneth; Lawton Timothy; Wetzel Eric; Park Jay
Tue 15:10	Keynote: Landing on A Wall with Morphologically Adaptive Soft Robots Jusufi Ardian (Empa, Dübendorf, Switzerland)	Determination of Hansen Solubility Parameters using Inverse Gas Chromatography Kondor Anett (Surface Measurement Systems, London, United Kingdom); Burnett Daniel J.	Development of MIP Sensor for Detection of Acetylcholine Neurotransmitter Yashwant (IIT Delhi, New Delhi, India); Shukla Anupam; Pattanayek Sudip K.	Mechanical and microstructural characterization of paint powders filled thermoplastic polymers from recycling Gelineau Pierre (Université de Lyon, Villeurbanne, France); Barick Mohamed Cheikh; Dumont Pierre; Martoña Florian; Descartes Sylvie; Philippon David	A microstructural study of the parameters affecting the interlayer bonding of semicrystalline high temperature polymers in material extrusion Nan Yi (University of Exeter, Exeter, United Kingdom); Davies Richard; Ghita Oana
Coffee	SOFT ROBOTICS Session Chair: Naguib Hani E., University of Toronto, Canada	SURFACES AND INTERFACES / BIOPOLYMERS Session Chair: Buchmeiser Michael, University of Stuttgart, Germany	MEDICAL APPLICATIONS Session Chair: Lübben Jörn, Albstadt-Sigmaringen University, Germany	POLYMER RECYCLING Session Chair: Kikutani Takeshi, Tokyo Institute of Technology, Japan	ADDITIVE MANUFACTURING Session Chair: Ghosh Anup K., Indian Institute of Technology, India
Tue 16:00	Pneumatic bending actuators with ligaments and tendons Kappel Peter (Cluster of Excellence livMatS @ FIT and Plant Biomechanics Group (PBG) Freiburg @ Botanic Garden, University of Freiburg, Freiburg im Breisgau, Germany); Kürner Lukas; Speck Thomas; Tauber Falk J.	Cold Plasma Treatment of Glass Fiber/Epoxy Composites to Enhance Surface Free Energy for Adhesive Joint Applications: A Central Composite Design of Experiment Aliheidari Nahal (University of Massachusetts, Massachusetts, USA); Ameli Amir	A long-lasting sequentially functionalised atelocollagen membrane for Guided Bone Regeneration (GBR) therapy Tronci Giuseppe (University of Leeds, West Yorkshire, United Kingdom)	Evaluating the degradation influence of reprocessing cycles for injection moulded PETG grades Ohnmacht Hannelore (Ghent University, Ghent, Belgium)	Multi-material implant structures with medical-grade polyurethanes via Arburg Plastic Freeforming Hentschel Lukas (Montanuniversität Leoben, Leoben, Austria); Petersman Sandra; Gonzalez-Gutierrez Joaquin; Arbeiter Florian; Dias Aylvin; Kynast Frank; Holzer Clemens H.
Tue 16:20	Soft robotics and the quest for modeling embodied intelligence Laschi Cecilia (National University of Singapore, Singapore, Singapore)	Studies of Surface Tensions of Molten Polymers: Influence of the surface rheological properties Yousfi Mohamed (National Institute of Applied Sciences, INSA Lyon, Villeurbanne, France); El Omari Younes; Duchet-Rumeau Yannick; Maazouz Abderrahim	Polycaprolactone fibers/bioactive glass nanoparticles composites for Guided Bone Regeneration El Mabrouk Khalil (Euromed University of Fes, Fes, Morocco); Tabia Zakaria; Bricha Merieme	Chemical Disassembly and Recycling of Electronic Devices Manufactured with Biosourced Polymers Goument Caroline (Université de Lyon, Villeurbanne, France); Gerges Tony; Da Cruz-Boisson Fernande; Crepet Agnès; Allard Bruno; Charneau Jean-Yves; Cabrera Michel	Optimization of the 3D printing process of continuous carbon fiber prepreg filament Baddour Marah (Ghent University, Ghent, Belgium); Edeleva Mariya; D'hooge Dagmar R.; Cardon Ludwig
Tue 16:40	Soft Robotic Arm with Extensible Stiffening Layer Xie Zhixin (National University of Singapore, Singapore, Singapore); Laschi Cecilia	High Performance Biopolymer Fibers Derived by the HighPerCell® Process Yocht Marc (German Institutes of Textile and Fiber Research (DITF), Denckendorf, Germany); Hermanutz Frank; Ota Antje; Buchmeiser Michael R.	Novel biodegradable subcutaneous implants manufactured via high-resolution 3D-printing Brandl Bianca (Research Center Pharmaceutical Engineering GmbH, Graz, Austria); Eder Simone; Terzic Ivan; Nguyen Thanh; Heupl Sarah; Senek Sascha; Katschnig Matthias; Roblegg Eva; Spoerk Martin	Chemometrics and Machine Learning Techniques for Polymer Processing: Sustainability and Quality Improvements Teng Sin Yong (Maastricht University, Maastricht, Netherlands)	Liquid Additive Manufacturing - Investigation of the influence of additives and process parameters on mechanical and optical properties of liquid silicone rubber. Klier Kevin (University of Kassel, Kassel, Germany); Heim Hans-Peter; Giesen Ralf-Urs
Tue 17:00	Keynote: Locally Programmable Multi-stimuli Dually-responsive Intelligent Woven Structures Kamkar Milad (University of Waterloo, Waterloo, Canada); Panahi-Sarma Mahyar; Xiao Xueliang	Polyethylene Furanate (PEF): the next-generation high performance bio-polyester Distante Francesco (Sulzer Chemtech AG, Zurich, Switzerland)	Fabrication of a collagen-based hydrogel wound dressing with visual infection-sensing capability Brooker Charles (University of Leeds, West Yorkshire, United Kingdom); Tronci Giuseppe	Keynote: Towards effective upcycling of polypropylene: evaluation of the introduction of a chain extender on the processability and mechanical properties of recyclates Arrigo Rossella (Politecnico di Torino, Alessandria, Italy); Frache Alberto	Development of Lower Crystalline Reactor Made 3D Printable Polypropylene: A Unique Synthetic Pathways Bhajiwala Hiren Manojkumar (Reliance Industries LTD, Maharashtra, India); Gupta Virendrakumar
Tue 17:30	Guided city tour				

<p align="center">OPENING CEREMONY (Room 'Sulzer Chemtech' 9.1.2) Session Chair: Altstaedt Volker, University of Bayreuth, Germany Conference chair: Hufenus Rudolf; President of PPS: Ghosh Anup K; Division President Sulzer Chemtech (Main Partner): Boltersdorf Uwe</p>					
<p align="center">Plenary: Innovative pharmacopolymers for the 21st century: From synthesis to formulation and processing Schubert Ulrich S. (Friedrich Schiller University Jena, Jena, Germany)</p>					
Time	Room 'EMS-Chemie' 9.2 A	Room 'Olma' 9.2 D	Room 'Monossuisse' 9.2 C	Room 'Mettler Toledo' 9.2 B	Room 'Empa' 9.1 Rosso
Tue 08:30					
Tue 09:05-Tue 09:40					
Coffee					
Morning session	POLYMER COMPOSITES Session Chair: Medina Jorge Alberto, Universidad de los Andes, Colombia	NANOTECHNOLOGY Session Chair: Ray Suprakas Sinha, DST/CSIR Nanostructured Materials, South Africa	FOAMS AND MEMBRANES Session Chair: Park Chul B., University of Toronto, Canada	POWDER BED FUSION Session Chair: Schmid Manfred, Inspire AG, Switzerland	MODELING AND SIMULATION Session Chair: Sundararaj Uttandaraman, The University of Calgary, Canada
Tue 10:15	Keynote: A Virtual Process Chain for Glass Mat Thermoplastics <u>Hrymak Andrew</u> (Western University, Ontario, Canada); <u>Dorr Dominik</u> ; <u>Singh-Heer Navraj</u> ; <u>Xu Cheng</u> ; <u>Chang Thomas</u> ; <u>Gergely Ryan</u> ; <u>Henning Frank</u> ; <u>Straatman Anthony</u>	Keynote: The effect of Photo-active Nanoparticles on Radiation Curing and Reinforcement of Acrylates <u>Kenig Samuel</u> (Shenkar College, Ramat Gan, Israel); <u>Dodiuk Hanna</u> ; <u>Yosef Tal Natalie</u>	Keynote: Separation of metal/polymer composites' interface by gas bubble nucleation for multi material products' recycling <u>Taki Kentaro</u> (Kanazawa University, Ishikawa, Japan); <u>Mori Yuto</u> ; <u>Sharma Rajesh Kumar</u> ; <u>Miyata Ken</u> ; <u>Ito Hiroshi</u>	Keynote: SLS 3D Printing for Polymer Self Healing Lattice Structures <u>Xia Hesheng</u> (Sichuan University, Sichuan, China)	Keynote: Generalized CFD/DEM Global Modeling of Polymer Extrusion <u>Wilezyński Krzysztof</u> (Warsaw University of Technology, Mazowieckie, Poland); <u>Nastaj Andrzej</u> ; <u>Lewandowski Adrian</u> ; <u>Wilezyński Krzysztof J.</u> ; <u>Buziak Kamila</u>
Tue 10:40	Effect of fibre orientation and volume fraction on mechanical properties of all-polyamide composites <u>Cordin Michael</u> (University of Innsbruck, Dornbirn, Austria)	Simplistic hydrothermal synthesis approach for fabricating photoluminescent carbon dots and its potential application as an efficient sensor probe for toxic lead (II) ion detection <u>Ghosh Trisita</u> (Rubber Technology Centre Indian Institute of Technology Kharagpur, West Bengal, India); <u>Das Narayan Chandra</u>	Super-Thermal Insulating Polyimide-Graphene Composite Aerogels with Exceptionally High Surface Area for High-Temperature Applications <u>Aghababaei Tafreshi Omid</u> (University of Toronto, Ontario, Canada); <u>Ghaffari-Mosannenzadeh Shahriar</u> ; <u>Rastegardoost Mohammad Mahdi</u> ; <u>Saadatnia Zia</u> ; <u>Park Chul B.</u> ; <u>Naguib Hani E.</u>	Experimental and numerical investigations on the influence of the interlayer time in powder bed fusion of PA 12 <u>Grünwald Moritz</u> (SKZ – German Plastics Center, Würzburg, Germany); <u>Popp Kevin</u> ; <u>Rudloff Johannes</u> ; <u>Hochrein Thomas</u> ; <u>Bastian Martin</u> ; <u>Bierwisch Claas</u>	Design of the plastic composter for home and educational purposes <u>Ratković Jakob</u> (FMENA, Zagreb, Croatia); <u>Tujmer Mislav</u> ; <u>Pilipović Ana</u>
Tue 11:00	Macro-mechanical analysis of nettle yarn (Girardinia diversifolia) reinforced PLA biocomposites under tensile stress <u>Nandi Parma</u> (IIT Delhi, New Delhi, India); <u>Das Dipayan</u>	In-situ assembled 3-dimensional (3-D) nanostructures of polyphenol tannic acid surface treated Ti3C2Tx and graphene nanoribbons (GNRs) for physiological sensing applications <u>Mohseni Taromsari Sara</u> (University of Toronto, Ontario, Canada); <u>Shi HaoTian Harvey</u> ; <u>Salari Meysam</u> ; <u>Eskandarian Ladan</u> ; <u>Park Chul B.</u> ; <u>Naguib Hani E.</u>	Fleece Composites as Membrane in Alkaline Electrolyzers <u>Altmann Hagen J.</u> (German Institutes of Textile and Fiber Research (DITF), Denkendorf, Germany); <u>Ringger Simon</u> ; <u>Dauner Martin</u> ; <u>Steinmann Mark</u>	Ageing Behavior of Polyamide Powders for Powder Bed Fusion <u>Freihart Karl</u> (EOS GmbH Electro Optical Systems, Bavaria, Germany)	LCA meets Moldflow: integrating sustainability metrics into plastic injection mould simulation <u>Keck Armin</u> (Robert Bosch GmbH, Renningen, Germany); <u>Prenzel Tobias</u> ; <u>Moennich Sebastian</u>
Tue 11:20	Development of hybrid composites with the use of novel sustainable reinforcing system <u>Islam Aminul</u> (Technical University of Denmark, Kgs. Lyngby, Denmark); <u>Andrzejewski Jacek</u>	CuInS2-quantum dot filled films for the use in luminescent solar concentrators <u>Koch Matthias</u> (University of Kassel, Kassel, Germany); <u>Hartung Michael</u> ; <u>Heim Hans-Peter</u>	Evaluation of the potential of polybutylene terephthalate / poly(phenylene oxide) blends for bead foam production <u>Standau Tobias</u> (University of Bayreuth, Bavaria, Germany); <u>Lindner Kathrin</u> ; <u>Altstaedt Volker</u> ; <u>Ruckdäschel Holger</u>	Powder-based 3D printing with focused ultrasound transducers <u>van Berlo Frank</u> (Eindhoven University of Technology, Eindhoven, Netherlands); <u>Anderson Patrick D.</u> ; <u>van Breemen Lambert</u>	Modeling the Pressure-Volume-Temperature Behavior of Amorphous Polymers: About the Logistic Model Equation of State <u>Corbisieri Claudio</u> (Technische Universität Dresden, Dresden, Germany)
Tue 11:40	Improvement of thermal conductivity by adding boron nitride and expanded graphite to the HDPE <u>Travaš Lovro</u> (FMENA, Zagreb, Croatia); <u>Rujnić Havstad Maja</u> ; <u>Pilipović Ana</u>	An Experimental Study on the Geometrical Effects of Nanomaterials on the Conductive Network Formation and Dielectric Properties in Microcellular Polymer Nanocomposites <u>Salari Meysam</u> (University of Toronto, Ontario, Canada); <u>Habibpour Saeed</u> ; <u>Mohseni Taromsari Sara</u> ; <u>Hamidinejad Mahdi</u> ; <u>Naguib Hani E.</u> ; <u>Yu Aiping</u> ; <u>Park Chul B.</u>	Understanding chemical foaming of highly filled ceramic feedstocks for injection molding <u>Forstner Thomas</u> (Institute of Polymer Technology, Friedrich-Alexander-University Erlangen-Nürnberg, Bavaria, Germany); <u>Drummer Dietmar</u>	Energy conversion aspect in laser powder bed fusion of nanoparticle supported PA12 powder feedstocks <u>Rudloff Johannes</u> (SKZ – German Plastics Center, Würzburg, Germany); <u>Grünwald Moritz</u> ; <u>Popp Kevin</u> ; <u>Chehreh Abootob</u> ; <u>Kusoglu Ihsan Murat</u> ; <u>Barcikowski Stephan</u> ; <u>Nowicki Alexander</u> ; <u>Schuffenhauer Thomas</u> ; <u>Bastian Martin</u>	Dispersion in Creeping Flows: Analytical Model <u>Kaufman Miron</u> (Cleveland State University, Ohio, USA)
Tue 12:00	Manufacturing of hybrid thermoplastic fiber reinforced profiles with thermoplastic coating layer – Process development and mechanical recycling <u>Lorenz Niklas</u> (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); <u>Stolz Patrick</u> ; <u>Rosenbach Dominic</u> ; <u>Foerges Dominik</u> ; <u>Schön Malte</u> ; <u>Hopmann Christian</u>	Ionic liquids as n-dopants in polymer/SWCNT composites for thermoelectric applications <u>Krause Beate</u> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <u>Voigt Oliver</u> ; <u>Konidakis Ioannis</u> ; <u>Stratakis Emmanuel</u> ; <u>Pötschke Petra</u>	Development of temperature-resistant, recycled PET/PBT bead foams using reactive extrusion <u>Himmelsbach Andreas</u> (University of Bayreuth, Bavaria, Germany); <u>Gröschel Sebastian</u> ; <u>Akdevelioğlu Yavuz</u> ; <u>Nofar Reza</u> ; <u>Ruckdäschel Holger</u>	Novel Bio-Based Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) Powders for Selective Laser Sintering Additive Manufacturing <u>Colucci Giovanna</u> (Politecnico di Torino, Torino, Italy); <u>Giubilini Alberto</u> ; <u>De Trane Giorgio</u> ; <u>Lupone Federico</u> ; <u>Badini Claudio</u> ; <u>Minetola Paolo</u> ; <u>Bondoli Federica</u> ; <u>Messori Massimo</u>	Modeling the bonding behavior of thermoplastic UD-Tapes during hot stamp spot welding <u>Kobler Eva</u> (Competence Center CHASE GmbH, Linz, Austria); <u>Birba János</u> ; <u>Marschik Christian</u> ; <u>Straka Klaus</u> ; <u>Steinbichler Georg</u> ; <u>Schlecht Sven</u>
Lunch					
Afternoon session	POLYMER COMPOSITES Session Chair: Saha Petr, Tomas Bata University in Zlín, Czech Republic	NANOTECHNOLOGY Session Chair: Sun Ya-Ping, Clemson University, USA	FOAMS AND MEMBRANES Session Chair: Di Maio Ernesto, Università degli Studi di Napoli Federico II, Italy	POWDER BED FUSION Session Chair: Xia Hesheng, Sichuan University, China	MODELING AND SIMULATION Session Chair: Jousset Pierre, Eastern Switzerland University of Applied Sciences, Switzerland
Tue 13:45	Keynote: Flexible and Durable Conductive Fiber Polymer Nanocomposites for Stretchable EMI Shielding Materials <u>Sundararaj Uttandaraman</u> (University of Calgary, Alberta, Canada); <u>Shajari Shaghayegh</u>	Keynote: A Novel Polymer Nanotechnology Approach to Food Packaging <u>Ray Suprakas Sinha</u> (Council for Scientific and Industrial Research, Gauteng, South Africa); <u>Bandyopadhyay Jayita</u> ; <u>Scriba Manfred</u> ; <u>Lekalaka Rakgoshi</u> ; <u>Bothoko Orebotse J</u> ; <u>Mekoa Caroline</u> ; <u>Motloung Mpho</u> ; <u>Ojijo Vincent</u>	Keynote: Stretching-induced Foaming of Gas-laden Thermoplastic Elastomer <u>Ohshima Masahiro</u> (Kyoto University, Kyoto, Japan); <u>Lin Weiyuan</u> ; <u>Hikima Yuta</u>	Keynote: In-situ monitoring of powder bed fusion of polymers <u>Schmid Manfred</u> (Inspire AG, St. Gallen, Switzerland); <u>Sillani Francesco</u> ; <u>Wegener Konrad</u>	Keynote: Morphology of injection molding polypropylene parts induced by in-mold annealing: modeling and analysis <u>Titomanlio Giuseppe</u> (University of Salerno, Fisciano, Italy); <u>Salomone Rita</u> ; <u>Speranza Vito</u> ; <u>Liparoti Sara</u> ; <u>Pantani Roberto</u>
Tue 14:10	Production of flexible and highly thermally conductive polymer pipes by targeted alignment of filler particles <u>Buchalik Kevin</u> (University of Duisburg-Essen, Duisburg, Germany); <u>Schiffers Reinhard</u> ; <u>Grundler Marco</u> ; <u>Kaysers André</u>	Influence of annealing-induced phase separation on the shape memory effect of graphene-based thermoplastic polyurethane nanocomposites <u>Andrade Ricardo</u> (Mackenzie Presbyterian University, São Paulo, Brazil); <u>Valim Fernanda</u> ; <u>Oliveira Gustavo</u> ; <u>Paiva Lucilene</u> ; <u>Amurin Leice</u> ; <u>Santillo Chiara</u> ; <u>Lavorgna Marino</u>	Poly(lactic acid) bead foams produced by extrusion foaming <u>Ballesteros Alberto</u> (Sulzer Chemtech AG, Zurich, Switzerland); <u>Trommsdorff Ulla</u>	Advanced Characterisation of the Ageing Effects of Polymer Powders for Additive Manufacturing <u>Marsh Shona</u> (NETZSCH, Wolverhampton, United Kingdom); <u>Rudolph Natalie</u> ; <u>Duffy John</u> ; <u>Agostini Serena</u> ; <u>Majewski Candice</u> ; <u>Strasser Claire</u>	Elasto-vcoplastic modelling of polystyrene in the rubbery state <u>Schwarz Florian</u> (Cooperative State University, Baden-Württemberg, Germany)
Tue 14:30	Evaluating The Optimum Settings for The Inline Defect Detection of Glass-Fiber-Reinforced Unidirectional Thermoplastic Tapes by Optical Coherence Tomography <u>Weninger Michael</u> (Competence Center CHASE GmbH, Linz, Austria); <u>Marschik Christian</u> ; <u>Schnaitter Mathias</u> ; <u>Hochleitner Gernot</u> ; <u>Berger-Weber Gerald R.</u> ; <u>Steinbichler Georg</u>	Dispersion and selective localization of carbon nanotubes in nanostructured block copolymers <u>Staudinger Ulrike</u> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <u>Pospiech Doris</u> ; <u>Janke Andreas</u> ; <u>Jakisch Lothar</u> ; <u>Simon Frank</u>	Effect of Polyamide and Crosslinking Agent on the Foam ability of PEBAX Foam <u>Yeh Shu-Kai</u> (National Taiwan University of Science and Technology, Taiwan, Taiwan); <u>Huang Yen-Ming</u> ; <u>Demewoz Nigus Maregu</u> ; <u>Rangappa Raghavendrakumar</u> ; <u>Chao Shaohun</u> ; <u>Chen Tzu-Yu</u> ; <u>Wu Yu-Hsuan</u>	Thermal conductivity of glass/talc filled Polyamide 12 as function of tapping level <u>Seigler Dylan Joseph</u> (IMT Mines Alès, Alès, France); <u>Lopez-Cuesta José-Marie</u> ; <u>Le-Maoulit Yannick</u> ; <u>Batistella Marcos</u> ; <u>Regazzi Arnaud</u> ; <u>Gilblas Rémi</u> ; <u>Schmidt Fabrice</u>	Contactless detection of the parison geometry and wall thickness during extrusion blow moulding <u>Foerges Dominik</u> (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); <u>Hopmann Christian</u>
Tue 14:50	Induction heating direct joining of carbon fiber reinforced thermoplastic and galvanized steel with hot water treatment <u>Chen Weiyan</u> (The University of Tokyo, Tokyo, Japan); <u>Kimura Fuminobu</u> ; <u>Kajihara Yusuke</u>	In-line modification of Ca-Al LDH with stearic acid <u>Ooshuizen Hester</u> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <u>Leuteritz Andreas</u> ; <u>Schöne Erik</u> ; <u>Labuschagné Frederick J. W. J.</u> ; <u>Kühnert Ines</u>	Service life analysis of district heat PU pipes via calculation of activation energy <u>Naseem Sajid</u> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <u>Below Heiko</u> ; <u>Leuteritz Andreas</u>	Impact of layer time and hatch conformity on the behavior of thin-walled components in powder bed fusion of polymers <u>Jaksch Andreas</u> (Collaborative Research Center 814 - Additive Manufacturing, Bayern, Germany); <u>Cholewa Simon</u> ; <u>Drummer Dietmar</u>	Modeling of Pharmaceutical Twin-Screw Extrusion Processes through Experimental Characterization of Screw Parameters <u>Kimml Vincent</u> (Invite GmbH, Cologne, Germany); <u>Winck Judith</u> ; <u>Thommes Markus</u>
Tue 15:10	Study of carbon nanotube and organoclay-filled PLA/PVDF/PMMA ternary blend-based nanocomposites <u>Chiu Fang-Chyoun</u> (Chang Gung University, Taoyuan, Taiwan); <u>Behera Kartik</u> ; <u>Chen Jing-Feng</u> ; <u>Chang Yen-Hsiang</u>	Fabrication of Hydrophobic self cleaning Nano-coatings for Photovoltaic applications <u>Bishnoi Swati</u> (IIT Delhi, New Delhi, India); <u>Pattanayek Sudip K.</u>	A flexible polypyrrole membrane with ultrahigh areal specific capacitance <u>Roohi Zahra</u> (Laval university, Québec, Canada)	Powder bed fusion of poly(ethylene terephthalate) (PET) <u>Bashir Zahir</u> (Catenated Carbon Consultancy Ltd., West Midlands, United Kingdom); <u>Alfayez Fayez</u> ; <u>Wimmer Marco</u> ; <u>Pezold Daniel</u> ; <u>Döpfer Frank</u> ; <u>Gu Hao</u>	Developing HME-Based Drug Products Using QbD and Emerging Science <u>Matic Josip</u> (Research Center Pharmaceutical Engineering GmbH, Graz, Austria); <u>Khinast Johannes</u>
Coffee					
Tue 16:00	Synthesis and characterization of poly(lactic acid) biobased composites with Lignin/Nanolignin additives <u>Bikiaris Dimitrios N.</u> (Aristotle University of Thessaloniki, Thessaloniki, Greece); <u>Makri Sofia P.</u> ; <u>Terzopoulou Zoi</u> ; <u>Xanthopoulou Eleftheria</u> ; <u>Pardalis Nikolaos</u> ; <u>Grigoropoulos Alexios</u> ; <u>Deligkiozi Ioanna</u> ; <u>Pappa Christina P.</u> ; <u>Nikolaidis Nikolaos</u>	Green Polyamide 1010 Nanocomposites Based on Hybrid Two-Dimensional Nanomaterials: Effects on Microstructure and Crystallization Kinetics <u>Demarquette Nicole R.</u> (École de Technologie Supérieure, Montréal, Canada); <u>Pinto Gabriel M.</u> ; <u>Ribeiro Hélio</u> ; <u>David Eric</u> ; <u>Fechine Guilhermino J. M.</u>	Tuning Thermal performance of Low density and high strength nanofibrillated cellulose/polymethylsiloxane aerogel with surfactant <u>Maji Pradip K.</u> (Indian Institute of Technology Roorkee, Uttar Pradesh, India); <u>Gupta Pragy</u> ; <u>Bhardwaj Shakshi</u>	Local integration of electrically conductive paths using an in situ x-y positioning system in selective laser sintering <u>Lindbüchl Matthias Sebastian</u> (Lehrstuhl für Kunststofftechnik, Erlangen Bayern, Germany)	Simulation-based Optimization Approach for the Gate Location Optimization of Injection Molded Plastic Parts <u>Porcher Felipe</u> (Technical University of Berlin, Berlin, Germany); <u>Gruber Georg F.</u> ; <u>Borger Paul</u> ; <u>Piotrowski Bartłomiej</u> ; <u>Rohnstock Falk</u> ; <u>Auhl Dietmar W.</u>
Tue 16:20	3D-Consolidation Process for Direct Manufacture of Advanced Continuous Fiber-Reinforced Thermoplastic Composite Components <u>Laesser Daniel</u> (Competence Center CHASE GmbH, Linz, Austria); <u>Birba János</u> ; <u>Kobler Eva</u> ; <u>Adam Rene</u> ; <u>Guerocek Maximilian</u> ; <u>Miron Matei-Constantin</u>	Effects of stereocomplex crystallization on the electrical properties of PLLA/PDLA/PVDF immiscible blends filled with MWNTs <u>Ahmadi Hamid</u> (Eindhoven University of Technology, Eindhoven, Netherlands); <u>Anderson Patrick D.</u> ; <u>Cardinaels Ruth</u> ; <u>Ahmadi Zahed</u> ; <u>Nazockdast Hossein</u>	Improving Foaming Ability of Polyolefins Using Thermoplastic Elastomer Nanofibrils <u>Kheradmandkevsomi Mohamad</u> (University of Toronto, Ontario, Canada); <u>Salehi Amirmehd</u> ; <u>Akrami Hamidreza</u> ; <u>Park Chul B.</u>	Investigating the influence of heat treatment in a pressurised atmosphere on the ductility of SLS-printed PA12 <u>Dijkstra Paul</u> (University of Applied Sciences Windesheim, Overijssel, Netherlands); <u>Boks Niels P.</u> ; <u>Heideman Geert</u> ; <u>Topp Margie D. C.</u>	Controlling temperature gradients to increase inter- and intralayer bond strength in fused filament fabrication: a 3D modelling study and design <u>Van Waelghem Tom</u> (Ghent University, Ghent, Belgium); <u>Marchesini Flavio H.</u> ; <u>Cardon Ludwig</u> ; <u>D'hooge Dagmar R.</u>
Tue 16:40	Multi-layer Co-extrusion of Highly-Filled Polymer Composites via the Layer Multiplication Technique <u>Steinmetz Erik</u> (Case Western Reserve University, Ohio, USA); <u>Maia João</u>	Fabrication of Thermally Conductive Anisotropic Polymeric Nanocomposite using Boron Nitride Nanotubes <u>Zandieh Azadeh</u> (University of Toronto, Ontario, Canada); <u>Kim Keun Su</u> ; <u>Park Chul B.</u>	The dissolution mechanism of a blowing agent in the novel foam injection molding process, SOFIT® (RIC-FOAM) <u>Yoshikawa Itsuki</u> (Kyoto University, Kyoto, Japan); <u>Naito Akihiro</u> ; <u>Hosoe Shunsuke</u> ; <u>Hikima Yuta</u> ; <u>Ohshima Masahiro</u>	Selective laser sintering on the way to industrial application: A holistic approach for a digitized demonstration factory <u>Neumeier Thomas</u> (Neue Materialien Bayreuth GmbH, Bayern, Germany); <u>Gensel Julia</u> ; <u>Ruckdäschel Holger</u>	Estimation of hygro-thermo-mechanical properties of thermoplastics via Molecular Dynamics <u>Cruz Camilo</u> (Robert Bosch GmbH, Renningen, Germany); <u>Gadelrab Karim</u>
Tue 17:00					
Tue 17:30	Guided city tour	Keynote: Development of Nanocomposites with Boron Nitride Nanosheets for Thermal Transport and Related Applications <u>Sun Ya-Ping</u> (Clemson University, South Carolina, USA)	foAiming: artificial intelligence in foaming <u>Di Maio Ernesto</u> (University of Naples Federico II, Naples, Italy); <u>Loianno Valerio</u> ; <u>Caccavale Riccardo</u> ; <u>Fontanelli Andrea</u> ; <u>Villone Massimiliano Maria</u> ; <u>Finzi Alberto</u>	Polypropylene in Laser-Based Powder Bed Fusion of Polymers <u>Cholewa Simon</u> (Collaborative Research Center 814 - Additive Manufacturing, Bayern, Germany); <u>Jaksch Andreas</u> ; <u>Drummer Dietmar</u>	

**Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Heuberger Manfred, Empa, Switzerland**

Wed 08:30	Efficient processing of high interfacial area soft materials using advective processing Vermant Jan (ETH Zurich, Zurich, Switzerland)				
Wed 09:05- Wed 09:40	Micro- and nanoplastics: sources and release Nowack Bernd (Empa, St. Gallen, Switzerland)				
Coffee	Room 'Sulzer Chemtech' 9.1.2	Room 'Bodensee' 9.0 D	Room 'St. Gallen' 9.0 C	Room 'Bruker AXS' 9.0 B	Room 'Angst+Pfister' 9.0 A
Morning session	MICROPLASTICS Session Chair: Nowack Bernd, Empa, Switzerland	BIOPOLYMERS Session Chair: Kelly Adrian, University of Bradford, UK	POLYMER BLENDS AND ALLOYS Session Chair: Maazouz Abderrahim, Institut National des Sciences Appliquées de Lyon, France	POLYMER RECYCLING Session Chair: Massardier-Nageotte Valérie, Institut National des Sciences Appliquées de Lyon, France	ADDITIVE MANUFACTURING Session Chair: Kontopoulou Marianna, Queen's University, Canada
Wed 10:15	Keynote: Considerations and implications for regulations of intentionally added microplastics in the EU Mitrano Denise M. (ETH Zurich, Zurich, Switzerland); Amberg Stefano	Keynote: Fabrication of electrically conductive PLA composite via secondary polymer-induced particle aggregation and variation of the electrical conductivity during 3D printing Hong Joung Sook (Seoul National University, Seoul, South Korea); Kim Ji Hwan; Ahn Kyung Hyun	Keynote: Effects of adding PMMA to PA6/carbon nanotube composites on the morphology, rheology, and thermoelectric properties of the blends Pötschke Petra (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); Liguoro Alice; Krause Beate	Keynote: Verification of the Effect of Processing History of Recycled Polypropylene through on-line Measurement of Melt-spinning Behavior Kikutani Takeshi (Tokyo Institute of Technology, Tokyo, Japan); Takarada Wataru; Kunimitsu Kazuma; Barique Mohammad A.	Keynote: Optimization of polypropylene-based materials for 3D printing processes: a detailed rheological study Frache Alberto (Politecnico di Torino, Alessandria, Italy); Bernagozzi Giulia; Battezzare Daniele; Arrigo Rossella
Wed 10:40	Primary and secondary polyolefin-related microplastics: A lifecycle perspective Gahleitner Markus (Borealis Polyolefine GmbH, Schwechat, Austria); Eder Gabriele; Huber Miriam; Pomakhina Elena; Archodoulaki Vasiliki-Maria; Washüt Michael; Zinöcker Erich	Influence of Addition of PP-g-MA on the Mechanical Properties of Walnut Shell Powder Filled Plant-Derived Polyamide 1010 Biomass Composites Morino Maiko (Kogakuin University, Tokyo, Japan); Saito Keiichiro; Nishitani Yosuke	Investigation of reactive/non-reactive compatibilizer effects on mechanical, thermal and rheological properties of thermoplastic starch and PLA blend Farshbaf Taghinezhad Soheil (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Mansourieh Mohammadreza; Fitzpatrick Daniel P.; Hesabi Mohammadnabi; Major Ian; Pezzoli Romina	Investigation of the Fiber Length and its Distribution during the Recycling of Endless Fiber Reinforced Thermoplastics Neitzel Benedikt (Technical University Ilmenau, Thüringen, Germany); Richter Bastian; Puch Florian	Influence of printing direction on the thermal conductivity of 3D printed polymer heat sinks Wolfsgruber Nina (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); Strasser Christoph; Tada Andreas; Archodoulaki Vasiliki-Maria; Burgstaller Christoph
Wed 11:00	From Macro- to Microplastic: Determining Degradation Rates and Microplastic Release of Commodity Polymers Ruckdäschel Holger (University of Bayreuth, Bavaria, Germany); Menzel Teresa; Meides Nora; Mauel Anika; Senker Jürgen; Strohmriegel Peter	Fast biodegradation, and high mechanical properties – a contradictio in terminis? Krins Bas (Senbis Polymer Innovations BV, Drenthe, Netherlands)	The effect of adding high density polyethylene to a polypropylene matrix to thermo-shear degradation in the melt phase. Haenen Sam (KU Leuven, Leuven, Belgium); Desplentere Frederik; Buffel Bart; Ginzburg Anton; Cardinaels Ruth	3D printing fused filament fabrication (FFF) with recycled PP Battezzare Daniele (Politecnico di Torino, Torino, Italy); Bernagozzi Giulia; Cravero Fulvia; Arrigo Rossella; Frache Alberto	Influence of process parameters on the porosity of 3D printed components by fused filament fabrication Strasser Christoph (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); Burgstaller Christoph
Wed 11:20	Elaboration of weathered model microparticles of polyethylene suited for transport study, characterized in Raman, FTIR and NMR spectroscopies. Mostefaoui Okba (INSA Lyon, Villeurbanne, France); Courty Laura; Salami Catherine; Fernandez de Alba Carlos; Massardier Valérie	Sugar-Based Polymer - from Reactive Natural Low Transition Temperature Mixtures: Towards sustainable organic binders for carbonaceous refractory materials Fleury Etienne (Université de Lyon, Villeurbanne, France); Duaux Gabriel; Gadiou Roger; Dentzer Joseph; Portinha Daniel	Effects of SEBS-g-MAH addition on the vibration damping and mechanical properties of MABS/VDT blend Sujon Mohammad Abu Shaïd (Technical University of Denmark, Kgs. Lyngby, Denmark); Merino Inigo Trueba; Quaaed Thomas Sørensen; Andriollo Tito; Islam Aminul	Pack2theLoop – Closing the circle of polyolefin packaging Krempf Nina (Montanuniversität Leoben, Leoben, Austria); Holzer Clemens H.; Pinter E.; Archodoulaki Vasiliki-Maria; Bichler L.; Jahn E.	Applying bi-component melt-spinning technology on filaments for 3D-printing Dul Sithiprumee (Empa, St. Gallen, Switzerland); Hufenus Rudolf
Wed 11:40	Microplastics pollution caused by the face masks, their evaluation and associated product safety Patnaik Asis (Cape Peninsula University of Technology Clothing & Textile Technology, Western Cape, South Africa); Maduna Lebo	Rheological and Thermal Evaluation of Polydioxanone and Bioresorbable Polymers for the Optimization of Downstream Processing Parameters Fitzpatrick Daniel P. (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Farshbaf Taghinezhad Soheil; Mansourieh Mohammadreza	Rheological and Electrical Properties of amorphous PLA through generation of fibre-like oriented crystal network and incorporation of multiwalled carbon nanotubes Mohammadi Mojtaba (Polytechnique Montréal, Québec, Canada); Nofar Mohammadreza; Heuzey Marie-Claude; Carreau Pierre J.	Optimization and recycling of biocomposites : a case study on polybutylene succinate reinforced by maple fibers Rodríguez Denis (Laval University, Québec, Canada); Primard Etienne	Investigation of the Volume Flow in the FFF Process as an Influencing Factor on the Resulting Orientation of Thermally Conductive Filler Particles Elsner Christian Lennart (Paderborn University, Paderborn, Germany); Moritzer Elmar; Deupmann Kevin
Wed 12:00	Coupled techniques: the best tool for the identification of microplastics Ferrer-Crespo Juan Fran (AIMPLAS, Paterna, Spain); Furió-Sanz Cristina	Sustainable building blocks for a viable plastics economy - Novel technologies to produce biomonomers from renewable feedstocks Geven Mike Alexander (Sulzer Chemtech AG, Zurich, Switzerland); Distanto Francesco; Luk Harris; Rima Simonetta; Farquet Patrick	Formation of interfacial stereocomplex crystal by reactive blending: New strategy to high performance immiscible polymer blends Li Yongjin (Hangzhou Normal University, Zhejiang, China); Wang Hengti	Design and Production of Packing Films in line with Recycling Rodrigues Pedro A. (University of Minho, Guimarães, Portugal); Barros Carolina; Carneiro Olga S.; Cruz Vasco; Machado Ana Vera	Laser-Based Additive Manufacturing of Polypropylene-Agarose Composites: Processing Properties and Compressive Mechanical Properties Schlicht Samuel (Institute of Polymer Technology, Friedrich-Alexander-University Erlangen-Nürnberg, Bavaria, Germany); Drummer Dietmar
Lunch					
Afternoon session	MICROPLASTICS Session Chair: Mitrano Denise, ETH Zurich, Switzerland	BIOPOLYMERS Session Chair: Zinn Manfred, HES-SO Valais-Wallis, Switzerland	POLYMER BLENDS AND ALLOYS Session Chair: Pötschke Petra, Leibniz-Institut für Polymerforschung Dresden, Germany	POLYMER RECYCLING Session Chair: Dahmann Rainer, RWTH Aachen, Germany	ADDITIVE MANUFACTURING Session Chair: Sun Luyi, University of Connecticut, USA
Wed 13:45	Keynote: Sustainable alternatives to single-use plastics and circular economy Mohanty Amar K. (University of Guelph, Ontario, Canada)	Keynote: Biobased polyurethanes with different renewable macromolecular architectures. Towards green applications in the frame of circular bioeconomy. Averous Luc (University of Strasbourg CNRS, Alsace, France)	Keynote: Modified halloysite nanotubes (HNT) used as part of a flame retardant system for a LLDPE/EVA blend Taguet Aurélie (IMT Mines Alès, Alès, France); Viretto Amandine; Otazaghine Belkacem; Sonnier Rodolphe; Jasinski Euphrasie; Bounor-Legare Veronique; Beyou Emmanuel; Auvray Thierry; Gyppez Franck	Keynote: In-Process Melt Separation of PET/PE Blends. Part I: Chain-Extension and Coalescing of PET Maia João (Case Western Reserve University, Ohio, USA); Hampton Lauren; Kone Ezra; Vecchi Steven; Ghassemi Hossein; Schiraldi David	Keynote: Drop-on-Demand Electropainting of Complex Fluids Kornev Konstantin (Clemson University, South Carolina, USA); Sun Yueming
Wed 14:10	Biofilm-influenced weathering of polypropylene films in various aqueous environments Candlen Kerry (University of Massachusetts Lowell, Massachusetts, USA); Reimonn Gregory; Haque Md. Akiful; Hosterman Olivia; Chen Wan-Ting	Preparation of cross-linked canola protein films by wet casting and compression method Liu Qiang (Agriculture and Agri-Food Canada, Ontario, Canada); Li Shuzhao; Donner Elizabeth; Thompson Michael; Rempel Curtis	Construction of quasi block copolymer (qBCP) induced by stereocomplexation of enantiomeric PLA-grafts and its application as compatibilizer for immiscible polymer blends Wang Hengti (Hangzhou Normal University, Zhejiang, China); Li Yongjin	In-Process Melt Separation of PET/PE Blends. Part 2: SC CO2-assisted separation of depolymerized PET Vecchi Steven (Case Western Reserve University, Ohio, USA); Hampton Lauren; Kone Ezra; Ghassemi Hossein; Schiraldi David; Maia João	Two-photon polymerization printing of micro-dimpled surfaces: Optimization of Tribological Properties against Rubber Bornillo Kristal Aubrey (University of Padova, Padova, Italy); Rappo Davide; Sorgato Marco; Lucchetta Giovanni
Wed 14:30	Shape as a controlling factor in weathering of PET as a pre-cursor to microplastic formation Pinlova Barbora (Empa, St. Gallen, Switzerland); Borz Aurelio; Nowack Bernd	Monitoring the enzyme catalysed hydrolysis stage of poly(lactic acid) fibre surface by nanoscale thermal analysis Pham Tung (University of Innsbruck, Dornbirn, Austria); Nguyen Huong Lan; Bechtold Thomas; Fabbri Filippo; Pellis Alessandro; Gütbitz Georg M.	Extensional Flow Effect on Dispersion in twin-screw extruder : DURABIO/PMMA Polymer Alloys Tanaka Birei (Doshisha University, Kyoto-fu, Japan); Tanaka Tatsuya; Sasada Masahiro; Matsumoto Akikazu	Investigation of enzymatic hydrolysis conditions on PET properties Ostner Doris (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); Burgstaller Christoph	First steps of the melting of an amorphous polymer through a hot-end of a material extrusion additive manufacturing Pigeonneau Franck (PSL Research University, Paris, France); Marion Sarah; Sardo Lucas; Joffre Thomas
Wed 14:50		Resistance of PLA starch blends to weathering effects Goetjes Victoria (University of Kassel, Kassel, Germany); Heim Hans-Peter; Gemmeke Nicole; Zarges Jan-Christoph	Tuning dielectric material properties of miscible thermoplastic blends for high frequency applications Scherzer Tim (University of Bayreuth, Bavaria, Germany); Ruckdäschel Holger	Dihydroxy polyethylene additives for compatibilization and mechanical recycling of polyethylene terephthalate/polyethylene mixed plastic waste Zervoudakis Aristotle J. (University of Minnesota, Minnesota, USA); Sample Caitlin S.; Peng Xiayu; Lake Davis; Hillmyer Marc A.; Ellison Christopher J.	Fused Granular Fabrication (FGF) of Thermoplastic Polyurethane (TPU) Elastomers Rochman Arif (University of Malta, Msida, Malta); Bonello Stephen
Wed 15:10		Activation of bio-based keratinous fibres as prerequisite for subsequent functionalisation: Monitoring the reduction state of wool fibre surface. Buchacher-Kröll Madita (University of Innsbruck, Dornbirn, Austria)	Oxygen Barrier Properties of PHA-Based Bioblend Flexible Packaging Films Prepared by Blown Extrusion Yolaçan Öznür (Yildiz Technical University, Istanbul, Turkey); Çokkuvvetli Ayşe Tuğçe; Deniz Sennur	Material recycling of post-consumer flexible polyethylene packaging waste Boz Noyan Ezgi Ceren (Chalmers University of Technology, Göteborg, Sweden); Venkatesh Abhijit; Boldizar Antal	Characterization of 3D Printed Polyether ether ketone (PEEK) samples by Fused Filament Fabrication (FFF) with a direct annealing system Giubilini Alberto (Politecnico di Torino, Torino, Italy); Lannunziata Erika; Saboori Abdollah; Minetola Paolo; Iuliano Luca
Coffee	MIXING AND COMPOUNDING Session Chair: Hirsch Patrick, Fraunhofer-Institute for Microstructure of Materials and Systems, Germany	BIOPOLYMERS Session Chair: Perret Edith, Empa, Switzerland	INJECTION MOLDING AND MOLDS Session Chair: Wilczyński Krzysztof, Warsaw University of Technology, Poland	POLYMER RECYCLING Session Chair: Garcia Vargas Jesús Manuel, Universidad de Castilla-La Mancha, Spain	ADDITIVE MANUFACTURING Session Chair: Hopmann Christian, RWTH Aachen, Germany
Wed 16:00	Development of an asymmetric torque model for the two screws of a twin screw extruder Austermeier Laura (Paderborn University, Paderborn, Germany); Schöppner Volker	Quantification of process-induced degradation: the effect of processing conditions on the degradation of PLA during single-screw extrusion Velghe Ineke (KU Leuven, Leuven, Belgium)	Over-moulding of dissimilar polymers with optimized interfacial bonding strength enhancement due to interfacial surface modification Chen Ge (Singapore Institute of Manufacturing Technology, Singapore); Yang Jingyi; Sia Kah Wee; Tan Clara; Tan Corrine	Vitrimerization of Crosslinked Poly (Ethylene-Vinyl Acetate): A Mechanochemical Approach for Recycling Thermoset Polymers Bandezi Alireza (Case Western Reserve University, Ohio, USA); Gray Thomas G.; Jamei Oskoue Amin; Miller McLoughlin Kimberly; Kennedy Jayme; Mitchell Sarah; Manas-Zloczower Ica	Viscous Heating Fused Filament Fabrication: Accelerating Print Speeds Román Allen Jonathan (University of Wisconsin-Madison, Wisconsin, USA); Osswald Tim Andreas; Blanco Juan
Wed 16:20	Extension of the Melting Model for Co-Kneaders regarding the Plastic Energy Dissipation Malatyali Hatice (SKZ – German Plastics Center, Würzburg, Germany); Wolff Rebecca; Rudloff Johannes; Baudrit Benjamin; Hochrein Thomas; Bastian Martin	Morphology and mechanical properties of blends of poly(lactic acid) and proteinous bio-based thermoplastics. Verbeek Casparus Johannes Reinhard (University of Auckland, Auckland, New Zealand); Izuchukwu Sandra	Monitoring and control of plasticizing quality in regrind polymer injection molding Huang Ming-Shyan (National Kaohsiung University of Science and Technology, Kaohsiung City, Taiwan); Chen Jian-Yu; Wong Liang-Ci	Mechanical Recycling of Polyethylene and Polypropylene Wastes via Organometallic Complexes Girişken Çağla (Sabanci University, Istanbul, Turkey); Kurucu Oguz Alp	Compression mode analysis of lightweight, patterned magnetoactive elastomeric structures developed with additive manufacturing Mondal Somashree (Empa, Dübendorf, Switzerland); Clemens Frank
Wed 16:40	PCU Twin Screw, a new machine concept focusing on homogenization & degassing of recycling material streams (regrind, films) Stritzinger Ursula (EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H, Ansfelden, Austria); Aigner Michael; Huber Roland; Pachner Sophie	Improvement of the thermo-oxidative process stability of biopolyesters by biogenic wine by-products as sustainable functional fillers Hiller Benedikt Theodor (Institute for Biopolymers at Hof University, Bavaria, Germany)	Investigation of surface quality of talc and rubber contained in PP material for automotive plastic parts Mizutani Atsushi (Nissan Motor Co. Ltd, Kanagawa, Japan)	Polymer composites based on non-metallic fractions of electronic waste materials as fillers Mohseni Majid (University of Calgary, Alberta, Canada); Liu Yuxin; Sundararaj Uttandaraman	Material qualification and multi material combinations in additive manufacturing Schöne Erik (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); Plettner Tom; Seifert Anton; Kühnert Ines
Wed 17:00	Keynote: Numerical Simulation and Experimental Validation of Twin-Screw Compounding of Polylactide and Polybutylene Succinate Blends Hirsch Patrick (Fraunhofer-Institute for Microstructure of Materials and Systems IMWS, Sachsen-Anhalt, Germany); Jarubula Raviteja; Adalat Arman; Teuscher Nico	Highly oriented stereocomplex crystals in PLLA/PDLA bicomponent fibers prepared through laser-heated melt electrospinning and subsequent annealing processes Hou Zongzi (Kyoto Institute of Technology, Kyoto, Japan); Sumaru Takuto; Kobayashi Haruki; Tanaka Katsufumi; Takarada Wataru; Kikutani Takeshi; Takasaki Midori	Mechanism Analysis of Rib Sink Depression Using Internal Pressure Taga Masakatsu (Nissan Motor Co. Ltd, Kanagawa, Japan); Seto Masahiro; Yamabe Masashi; Mizutani Atsushi	Keynote: Multiblock Copolymers for Compatibilization of Mixed Stream Recyclates Macosko Chris (University of Minnesota, Minnesota, USA)	Keynote: Camphene as a Mild, Bio-Derived Porogen for Near-Ambient Processing and 3D Printing of Porous Polymers Ellison Chris (University of Minnesota, Minnesota, USA); Self Jeffrey; Xiao Han; Hausladen Matt; Bramant Rafael; Usgaonkar Saurabh
Wed 17:30	Transfer to Empa: Lab tour and Bratwurst party				

Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Heuberger Manfred, Empa, Switzerland

Efficient processing of high interfacial area soft materials using advective processing Vermant Jan (ETH Zurich, Zurich, Switzerland)						
Micro- and nanoplastics: sources and release Nowack Bernd (Empa, St. Gallen, Switzerland)						
Room 'EMS-Chemie' 9.2 A		Room 'Olma' 9.2 D		Room 'Monosuisse' 9.2 C	Room 'Mettler Toledo' 9.2 B	Room 'Empa' 9.1 Rosso
Morning session	POLYMER COMPOSITES Session Chair: Verbeek Johan, University of Auckland, New Zealand	NANOTECHNOLOGY / FIBERS AND FILMS Session Chair: Jana Sadhan C., University of Akron, USA	FOAMS AND MEMBRANES Session Chair: Holzer Clemens, Montanuniversität Leoben, Austria	FUNCTIONAL ADDITIVES AND REACTIVE PROCESSING Session Chair: Wu Klingler Wenyu, Empa, Switzerland	MODELING AND SIMULATION Session Chair: Huang Chao-Tsai, Tamkang University, Taiwan	
Wed 10:15	Keynote: Hierarchical Graphene Nanoplatelet and Glass Fiber Hybrid Composites with Synergy-Induced Gradient Interphase Lee Patrick C. (University of Toronto, Ontario, Canada); Sansone Nello D.; Jung Jiyoung; Serles Peter; Filleter Tobin; Ryu Seunghwa	Keynote: Multifunctional Biomimetic Nanocoatings Sun Luyi (University of Connecticut, Connecticut, USA)	Keynote: Improvement of Foamability and Properties of PC Foams by Governing the Crystallinity of PC Foaming with the Existence and Advantage of the Rubbery Nanofibrillar Network Park Chul B. (University of Toronto, Ontario, Canada); Akrami Hamidreza	Keynote: Flame retardant modification of PA6 via reactive extrusion Gaan Sabyasachi (Empa, St. Gallen, Switzerland)	Keynote: Calibration of Material Properties Using Measured Shrinkage Molding Data for Improved Part Shape Prediction Costa Franco S. (Autodesk Australia Pty Ltd, Victoria, Australia); Bakharev Alex; Yuan Zhongshuang; Wang Jin	
Wed 10:40	Ultrasound-assisted extrusion of graphitics materials reinforced HDPE Favre Manon (École de Technologie Supérieure, Montréal, Canada); Helal Emma; Gutierrez Giovanna; Moghimian Nima; David Éric; Demarquette Nicole R.	The influence of aging on the viscoelastic behavior of plastic films Tucman Ines (FMENA, Zagreb, Croatia)	Preparation of PP-TiO₂/Graphene hybrid Nanocomposites Foams for EMI Shielding Applications Prakash Mayank (IIT Delhi, New Delhi, India)	Radiation cross-linking of polyamides for highly loaded structural parts Affolter Samuel (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Wick Curdin; Hollender Jasper	Estimation of demolding forces in injection molding with simulation Iten Ramon (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Wick Curdin	
Wed 11:00	Automated Quality Assessment of UD Tapes Kloiber Karin (Competence Center CHASE GmbH, Linz, Austria); Marschik Christian; Weninger Michael; Kohl Stefan; Hochleitner Gernot	Strengthening Polyamide 66 Interfaces by Grafting Polymerisation of 2-hydroxyethylmethacrylate Gleissner Carolin (University of Innsbruck, Dornbirn, Austria); Bechtold Thomas; Pham Tung	Rheology-driven design of pizza gas foaming Di Lorenzo Emilia (University of Naples Federico II, Naples, Italy); Di Maio Ernesto; Lacarino Paolo; Avallone Pietro Renato; Grizzuti Nino; Pasquino Rossana	Acylated industrial lignins as new biobased antioxidant additives for polypropylene stabilization Sarieddine Aya (INRAE, FARE, Reims, France and INRAE, AgroParisTech, Université Paris-Saclay, Versailles, France); Aguié-Béghin Véronique; Pion Florian; Ducrot Paul-Henri; Berzin Françoise	Warpage prediction for UD-reinforced thermoplastic extruded profiles Lippens Willem (KU Leuven, Leuven, Belgium); Desplentere Frederik; Ivens Jan	
Wed 11:20	Changes in physical-chemical properties in thermosetting-composite-based printed circuit board materials induced by friction-based joining processes Rodrigues Camila Fernanda (Institute of Materials Mechanics Helmholtz-Zentrum hereon, Geesthacht, Germany); Blaga Lucian; Klusemann Benjamin	Development of Phase Change Material based Electrospun Fibers for Thermal Management at Low Temperature Das Madhurima (AGH University of Science and Technology, Krakow, Poland); Ura Daniel; Berniak Krzysztof; Stachewicz Urszula	Hybrid Silica-based Aerogels for Efficient Water Treatment Applications Ben Rejeb Zeineb (University of Toronto, Ontario, Canada); Fashandi Maryam; Abidli Abdelnasser; Zaoui Aniss; Naguib Hani E.; Park Chul B.	Importance of PLA Grade on Its Reactivity with Joncryl Chain Extender Nofar Mohammadreza (Istanbul Technical University, Istanbul, Turkey); Akdevelioğlu Yavuz; Özdemir Burcu; Alanalp M. Begum; Durmus Ali	Modeling of the Orientation of Liquid Crystal Polymers in a Slit Die under Wall Slip Conditions Zitzenbacher Gernot (University of Applied Sciences Upper Austria, Upper Austria, Austria)	
Wed 11:40	Synthesis and characterization of biodegradable poly(ethylene succinate)/hemp fiber composites as alternative WPCs Chrysafi Iouliana (Aristotle University of Thessaloniki, Thessaloniki, Greece); Xanthopoulou Eleftheria; Zampoulis Alexandra; Bikiaris Dimitrios N.	Strategies for controlling the piezoelectric properties of PVDF fibers with reduced graphene oxide (rGO) for energy harvesting application Sukumaran Sunija (AGH University of Science and Technology, Krakow, Poland); Szewczyk Piotr K.; Stachewicz Urszula	Foaming thermoplastic polyurethane with methyal Miele Lorenzo (University of Naples Federico II, Naples, Italy); Di Lorenzo Emilia; Guissart Céline; Di Maio Ernesto	Developing polymeric low-pressure hydrogen storage tanks for mobile applications Surisetty Jyothisna (Montanuniversität Leoben, Leoben, Austria); Holzer Clemens H.; Lucyshyn Thomas	Enhancing vibro-acoustic performance predictions of injection moulded lightweight metamaterial solutions by including manufacturing process simulations Steijvers Kristof (KU Leuven, Leuven, Belgium); Claeys Claus; Van Belle Lucas; Deckers Elke	
Wed 12:00		Investigating the influence of UHMWPE fibers as a toughening agent for PMMA in denture base Joupari Navid (Iran Polymer and Petrochemical Institute, Tehran, Iran); Atai Mohammad; Nodehi Azizollah		Effect of Different Compatibilizers on Mechanical and Thermal Properties of Biodegradable PHB/PLA blends Mansourieh Mohammadreza (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Farshaf Taghinezhad Soheil; Fitzpatrick Daniel P.; Chen Yuanyuan; Devine Declan; Murray James	Response of Shear Thickening Fluids Impregnated fabrics for Soft Body Armor Kumar Nitin (IIT Delhi, New Delhi, India); Ghosh Anup K.; Majumdar Abhijit; Pattanayek Sudip K.	
Lunch						
Afternoon session	POLYMER COMPOSITES Session Chair: Hrymak Andrew N., Western University, Canada	FIBERS AND FILMS Session Chair: Lee Patrick C., University of Toronto, Canada	POLYMERIZATION AND SYNTHESIS Session Chair: Gaan Sabyasachi, Empa, Switzerland	FUNCTIONAL ADDITIVES AND REACTIVE PROCESSING Session Chair: Lopez-Cuesta José-Marie, Centre des Matériaux, IMT Mines Alès, France	MODELING AND SIMULATION Session Chair: Pantani Roberto, Università degli Studi di Salerno, Italy	
Wed 13:45	Keynote: Development of self-healing soft sensor using thermoplastic elastomer materials Clemens Frank (Empa, Dübendorf, Switzerland); Georgopoulou Antonia; Kein Jana; Susoff Markus	Keynote: PVDF-based electrospun mats with exceptionally high dielectric properties for triboelectric nanogenerator (TENG) energy harvesting applications Naguib Hani E. (University of Toronto, Ontario, Canada); Rastegardoost Mohammad Mahdi; Aghababaei Tafreshi Omid; Saadatnia Zia; Ghaffari-Mosanezhadeh Shahriar; Park Chul B.	Keynote: From melt- to solid-stage polycondensation: how to revolutionize the design of environmentally friendly polymers with advanced properties Raquez Jean-Marie (University of Mons, Mons, Belgium); Mincheva Rosica	Keynote: Upcycling marine waste Machado Ana Vera (University of Minho, Guimarães, Portugal); Rodrigues Pedro A.; Cestari Sibebe	Keynote: 60 Years of the K-BKZ Constitutive Relation for Polymers Mitsoulis Evan (NTUA, Athens, Greece); Hatzikiriakos Savvas G.	
Wed 14:10	Back-injection of unidirectional tapes: an efficient way to lightweight composite parts Stapf Dominik (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Zahne Philipp; Barandun Gion Andrea; Wick Curdin; Rudolph Martin	Photo-degradation of Surface Starch to Facilitate a Combined Pretreatment Panda Sanjay Kumar Bhikari Charan (IIT Delhi, New Delhi, India); Sen Kushal; Mukhopadhyay Samrat	Machine Learning-Assisted Design of Charge Transfer Polymers with Full Color-Tunable Emission Bao Yinyin (ETH Zurich, Zurich, Switzerland)	Enabling reprocessability and recyclability of epoxy thermosets via reactive incorporation of phosphonate moieties Wu Klingler Wenyu (Empa, St. Gallen, Switzerland); Rougier Valentin; Huang Zhenyu; Barandun Gion Andrea; Michaud Véronique; Gaan Sabyasachi	A retrofit solution for substituting a conventional primary distribution by using additive manufacturing in a spiral mandrel die assembly in blown film extrusion Ulbrich Chris (University of Duisburg-Essen, Duisburg, Germany); Schiffers Reinhard	
Wed 14:30	Surface, mechanical, and thermal properties of multifunctional polymer nanocomposite PVDF-HFP/PVP/MoO₃ with antimicrobial activity Gradišar Centa Urška (University of Ljubljana Faculty of Mechanical Engineering, Ljubljana, Slovenia); Slemenik Perše Lidija	In-situ Polymerization Electrospinning of Amine-Epoxy/Poly(vinyl alcohol) Nanofiber Webs for Direct CO₂ Capture from the Air Goto Chisato (Nitto Denko Corporation, Osaka, Japan); Zongzi Hou; Imoto Hiroaki; Naka Kensuke; Kikutani Takeshi; Takasaki Midori	From polycondensation to mechanochemistry: the tender for sustainability fulfilled Mincheva Rosica (University of Mons, Mons, Belgium); Raquez Jean-Marie; Carolane Gerbeyeh	Reactive melt processing of heat-shrinking biocomposites Avela Angelica (Chalmers University of Technology, Göteborg, Sweden); Mincheva Rosica; Salse Mathieu; Lo Re Giada	Significance of curvature for balancing polymer melt channels in injection molding manifold systems and extrusion dies Schulz Lucas (University of Duisburg-Essen, Duisburg, Germany); Ulbrich Chris; Schiffers Reinhard	
Wed 14:50	Experimental investigation toward processing of high performance nanocomposites with the fully sustainable PLA and well dispersed cellulose nanocrystals (CNCs) Qiao Hu (Université de Lyon, Villeurbanne, France); Maazouz Abderrahim; Lamnawar Khalid	Bicomponent spinning of biodegradable polymers: Melt-spun PHBV micro fibers Erdogan Umit Halis (Dokuz Eylul University, Izmir, Turkey); Selli Figen	Structure property relationships for network polymers starting from in silico generated molecular distributors D'hooge Dagmar R. (Ghent University, Ghent, Belgium); Van Steenberge Paul H. M.	Polymer Assisted Reduction of Metal Salts Alfayez Favez Abdullah (Empa, St. Gallen, Switzerland)	The influence of material properties and process parameters on energy consumption in the single-screw extrusion of PVC tubes Bovo Enrico (University of Padova, Padova, Italy); Sorgato Marco; Lucchetta Giovanni	
Wed 15:10	Fabrication of PBAT/HDPE blend-based nanocomposites with improved anti-dripping and physical properties Behera Kartik (Chang Gung University, Taoyuan, Taiwan); Chang Yen-Hsiang; Chiu Fang-Chyou	Development of Mosquito repellent-UV protective polyester using a Disperse dye synthesized from 4-hydroxy coumarin Singh Ankit Kumar (IIT Delhi, New Delhi, India); Sheikh Javed	In-line monitoring of the evolution of reaction and morphology during reactive polymer blending Zhang Cai-Liang (Zhejiang University, Zhejiang, China); Li Tian-Tian; Feng Lian-Fang; Gu Xue-Ping; Hu Guo-Hua	Designing Hierarchically Porous Graphene Monoliths Using Polymer Blends As a Novel Templating Method Habibiyan Aylin (University of Calgary, Alberta, Canada); Trifkovic Milana	A Tailored Modelling Approach to Predict the Three-Dimensional Flow of Polymer Melts in Helical Screw Channels Herzog Daniel (Johannes Kepler University, Linz, Austria); Roland Wolfgang; Marschik Christian; Berger-Weber Gerald R.	
Coffee						
	POLYMER COMPOSITES Session Chair: Kamkar Milad, University of Waterloo, Canada	FIBERS AND FILMS Session Chair: Herwig Gordon, Empa, Switzerland	POLYMERIZATION AND SYNTHESIS Session Chair: D'hooge Dagmar R., Ghent University, Belgium	RHEOLOGY AND CHARACTERIZATION Session Chair: Agassant Jean-François, MINES ParisTech, France	MODELING AND SIMULATION Session Chair: Koopmans Rudolf, Hochschule für Technik & Architektur Freiburg, Switzerland	
Wed 16:00	Cellulose nanofiber reinforced TPE for biomedical applications Maji Purbasha (IIT Kharagpur, West Bengal, India); Naskar Kinsuk	The Influence of Zn/Al LDH nanoplatelets on the mechanical and gas barrierity of PLA/PBAT packaging films Ansari Mahsa (Iran Polymer and Petrochemical Institute, Tehran, Iran); Joupari Navid; Beglou Mohammad	Comparing techniques for determining the non-catalytic polycondensation kinetics of poly(ϵ-caprolactone) diol and citric acid Kennedy Shueh Wah (RMIT, VIC, Australia); Choudhury Namita Roy; Parthasarathy Rajarathinam	Characterization of the Rheological Behavior of Mixed Miscible Polymers with a High-Pressure Capillary Rheometer Kneidinger Christian (University of Applied Sciences Upper Austria, Upper Austria, Austria); Aydogan Abdulkemir; Manlig Daniel; Zitzenbacher Gernot	Coupling Fiber Orientation and Polymer Flow in Molding Simulations of Composites Wang Jin (Autodesk Inc., NY, USA); Costa Franco S.	
Wed 16:20	Development of novel thermoplastic resin with low processing temperature and excellent adhesion to carbon fibers for aircraft structural composites Yi Jin Woo (Korea Institute of Materials Science, Gyeongangnam-do, South Korea); Kim Sang Woo; Kim Yoon Sang; Kim Jungsoo; Oh Youngsook; Lee Jungwan; Roh Hyung Doh; Um Moon-Kwang	Development of sustained controlled release of chlorine dioxide films for food active packaging applications Safaei Maryam (Polytechnique Montréal, Québec, Canada); Aji Abdullah; Kessler Samuel J.; Saffar Amir	A Facile Approach for Preparation of Ion-Exchanged and Intrinsic Porosity-Containing Electrochromic Polymer for Enhancing Redox Switching Performance Li Hou-Lin (National Taiwan University, Taipei, Taiwan); Chang Cha-Wen; Liou Guey-Sheng	Rheology in two dimensions - Observing structural changes during processing Schwab Lukas (Waters GmbH TA Instruments, Hessen, Germany)	Numerical Simulation of the Pressure, Power and Mixing Characteristics of Twin Screw and Planetary Roller Extruders Winck Judith (TU Dortmund University, Dortmund, Germany); Kimmel Vincent; Thommes Markus	
Wed 16:40	Micro and nano-structured multicomponent composites for ultra-high absorbance of Electro-Magnetic Radiation Masghouni Emma (Université de Lyon, Villeurbanne, France); Maazouz Abderrahim; Lamnawar Khalid	Effect of Material Modification on Structure Development and Characteristics of Syndiotactic Polystyrene Fibers Iwamoto Takechiro (Idemitsu Kosan Co.Ltd., Chiba Pref., Japan); Oishi Ori; Kohri Yohei; Tamura Satoshi; Takebe Tomoaki; Yang Yu; Takarada Wataru; Kikutani Takeshi	Synthesis of Collagen Modified PLA Biocomposites for Tissue Engineering Applications Uzuner-Demir Aysegül (Kocaeli University, Izmit, Turkey); Sancakli Aykut; Arican Fatih; Özkoç Güralp; Kodal Mehmet	Revealing the long chain branching influence on the properties of polypropylene/carbon nanotube systems before and after shear flows in terms of both linear and nonlinear rheology Li Jixiang (Université de Lyon, Villeurbanne, France); Maazouz Abderrahim; Lamnawar Khalid	Validation of a multiscale simulation for precise warpage prediction of injection moulded semi-crystalline parts Alms Jonathan (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); Kahve Cemi; Laschet Gottfried; Çelik Hakan; Hopmann Christian	
Wed 17:00	Keynote: Processability of Ultrahigh Molecular Weight Polyolefin and Their Foams for High Performance Applications Ghosh Anup K. (IIT Delhi, New Delhi, India)	Keynote: Hydrogen bonds in copolyamide favor processing and properties of fibers Yan Yurong (South China University of Technology, Guangdong, China); Wang Zichao; Lin Chao; Hufenus Rudolf	Keynote: Biobased poly(butylene succinate) copolyesters for the packaging sector El Fray Mirosława (West Pomeranian University of Technology Szczecin, Zachodniopomorskie, Poland); Sokolowska Martyna; Kantor-Majuldy Nina; Vogel Wouter; Zdanowicz Magdalena	Keynote: Small-scale extruders for in-process materials characterization Covas Jose Antonio (University of Minho, Guimarães, Portugal); Hilliou Loic Gilles	Keynote: An Improved Approach to Model the Temperature Control in Polymer Extrusion Nóbrega João Miguel (University of Minho, Guimarães, Portugal); Oliveira Vidal João Paulo	
Wed 17:30	Transfer to Empa: Lab tour and Bratwurst party					

Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Koopmans Rudolf, Hochschule für Technik & Architektur Freiburg, Switzerland

Thu 08:30	Fungal biorefinery: Upcycling waste to chitin-glucan nanomaterials with a promising future Bismark Alexander (University of Vienna, Vienna, Austria)				
Thu 09:05-Thu 09:40	The complexity of redesigning the plastics system for circularity Ragaert Kim (Maastricht University, Maastricht, Netherlands)				
Coffee	Room 'Sulzer Chemtech' 9.1.2	Room 'Bodensee' 9.0 D	Room 'St. Gallen' 9.0 C	Room 'Bruker AXS' 9.0 B	Room 'Angst+Pfister' 9.0 A
Morning session	MIXING AND COMPOUNDING Session Chair: Raquez Jean-Marie, University of Mons, Belgium	BIOPOLYMERS Session Chair: Lamnawar Khalid, Institut National des Sciences Appliquées de Lyon, France	INJECTION MOLDING AND MOLDS Session Chair: Ito Hiroshi, Yamagata University, Japan	POLYMER RECYCLING Session Chair: Maia João, Case Western Reserve University, USA	ADDITIVE MANUFACTURING Session Chair: Zhang Chuhong, Sichuan University, China
Thu 10:15	Keynote: Investigation of the influence of screw geometry on the resulting melt quality for cast film extrusion Trienens Dorte (Paderborn University, Paderborn, Germany); Schöppner Volker	Keynote: Development of future-oriented biocomposite material from 3-component system in terms of sustainability based on natural/renewable raw materials Leuteritz Andreas (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); Naseem Sajid; Heckel Sandra; Al-Isma'il Abdullah; Zahel Martin	Keynote: Pelletization and Injection Molding of Ultra-high Molecular Weight Polyethylene (UHMWPE) Turng Lih-Sheng (University of Wisconsin-Madison, Wisconsin, USA)	Keynote: How surface treatment and/or reactive agents allow closed loop recycling of PLA/Flax and PLA/Bamboo reinforced composites to be performed? Lopez-Cuesta José-Marie (IMT Mines Alès, Alès, France); Nlandu-Mayamba Hervé; Taguet Aurélie; Perrin Didier; Delor-Jestin Florence; Askarian Haroutioun; Joannes Sebastien	Keynote: Biofabrication using spider silk proteins Scheibel Thomas (University of Bayreuth, Bavaria, Germany)
Thu 10:40	Production of eco-friendly PLA composite by using waste cellulose and vermiculite Aritürk Gizem (Sabanci University, Istanbul, Turkey); Girişken Çağla; Menceoğlu Yusuf Ziya; Seven Merve Senem	Tuned processability and mechanical properties of PHBV copolymers by using Boron Nitride (BN) and medium-chain-length-PHA (mcl-PHA) as additives Alfano Sara (La Sapienza University of Rome, Rome, Italy); Doineau Estelle; Perdrier Coline; Martinelli Andrea; Angellier-Coussy Hélène	Data-driven prediction of quality characteristics of injection moulded parts Hollender Jasper (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Wick Curdin; Studer Mario; Grab Tobias	The influence of multiple mechanical recycling on the properties of glass fibre reinforced composites made from organosheets Liedl Barbara (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); Höftberger Thomas; Burgstaller Christoph	Fused Filament Fabrication (FFF) of Aluminium Feedstock by Using Poly(lactic Acid (PLA) as the Backbone: Thermal Properties, Rheological Behavior, and Printability Momeni Vahid (Montanuniversität Leoben, Leoben, Austria); Shahroodi Zahra; Hentschel Lukas; Schuschnigg Stephan; Kukla Christian; Holzer Clemens H.
Thu 11:00	Improvement of flowability of PP/GF by high-shear rate processing in the specially designed single screw extruder Sasai Yuya (Shibaura Machine, Shizuoka, Japan); Iizuka Yoshio; Osada Kahor; Taki Kentaro	Polyesters for Flexible Film Applications based on Pentanediol Grady Brian (University of Oklahoma, Oklahoma, USA); Singh Onkar; Aboukeila Hesham; Klier John	Properties of polypropylene/polyamide 6/multiwalled carbon nanotubes micromoldings Zhou Shengtai (Sichuan University, Sichuan, China); Lei Xue; Liang Mei; Zou Huawei	Effect of mechanical recycling on short glass fibre reinforced polyamide 6,6 from post-industrial waste Salvi Alessandro (Politecnico di Milano, Milano, Italy); Lucyshyn Thomas; Marano Claudia; Ostrowska Marlena; Briatico Vangosa Francesco; Dotelli Giovanni; Holzer Clemens H.	Direct ink writing of high-permittivity dielectric elastomer transducers Danner Patrick M. (Empa, Dübendorf, Switzerland); Pleij Tazio; Siqueira Gilberto; Vermant Jan; Opris Dorina M.
Thu 11:20	Study on the Behavior of Carbon Fibers in the Kneading Process Using Twin-Screw Extruders Horiguchi Shiori (Doshisha University, Kyoto-fu, Japan); Tanaka Tatsuya; Sasada Masahiro; Ishikawa Takeshi	Influence of polyethylene glycol on the morphological and mechanical properties of poly(lactic acid)/melt flowable lignin biocomposites Ameli Amir (University of Massachusetts Lowell, Massachusetts, USA); Shallal Alshammari	Study on the Fiber Bending Phenomena in FRP Injection Molding Parts Huang Chao-Tsai (Tamkang University, New Taipei City, Taiwan); Tsai Meng-Che; Wang Jun-Zheng; Hwang Sheng-Jye; Peng Hsin-Shu	Kinetics of Poly(ethylene terephthalate) Fiber With Different Morphologies Glycolysis in Ethylene Glycol Chen Long (Donghua University, Shanghai, China); Liu Gaozhe; Zuo Weiwei; Yu Xiangnan	Improved core-shell filament for accelerated annealing of fused filament fabrication (FFF) thermoplastic parts Pugatch Michael (University of Massachusetts Lowell, Massachusetts, USA); Teece Molly; Park Jay
Thu 11:40	The effect of mixing factors on dispersion, degradation, and tensile properties of HDPE/UHMWPE blends Watanabe Shiori (Kobe Steel Ltd., Hyogo, Japan); Yamada Sayaka; Jotatsu Yuki; Takeshita Hiroki; Tokumitsu Katsuhisa	Chitosan-modified dressings with improved antibacterial properties for hemostatic applications Bikiaris Rizos-Evangelos (Aristotle University of Thessaloniki, Thessaloniki, Greece); Papageorgiou George Z.; Koumentakou Ioanna; Lazaridou Maria	Optimization of injection moulding parameters for thermoplastic composter bottom Tujmer Mislav (FMENA, Zagreb, Croatia); Godec Damir; Pilipović Ana	Insights into the Mechanical Deformation Behavior of High-density Polyethylene Contaminated Polypropylene Seyed Khabbaz Hamid (Maastricht University, Maastricht, Netherlands); Gooneie Ali; Ragaert Kim; Demets Ruben	In situ characterisation of flow-induced phenomena during FDM of polymer composites using 3D X-ray microtomography Dumont Pierre (Université de Lyon, Villeurbanne, France); Betene Achille; Barick Mohamed Cheikh; Martoia Florian; Pelletreau Stéphane; Salvan Claudia; Joffre Thomas
Thu 12:00	Thermodynamics of water-assisted compounding Schmid Dominik (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Schwendemann Daniel; Hollender Jasper	Multifunctional superhydrophobic and underwater oleophobic cellulose paper for separation of hazardous organic pollutants from water Chhajed Monika Surendra (Indian Institute of Technology Roorkee, Uttar Pradesh, India); Maji Pradip K.	A comparative study of different color sensors for inline color measurements in the injection moulding of recyclates Pöttinger Magdalena (Competence Center CHASE GmbH, Linz, Austria); Marschik Christian; Straka Klaus; Fellner Klaus; Steinbichler Georg	Incremental cost analysis and exploration of an improved mechanical recycling process for post-consumer flexible plastics Van Camp Nicola (Maastricht University & Ghent University, Flanders, Belgium); Lase Indarto Saputra; De Meester Steven; Hoozee Sophie; Ragaert Kim	Influence of the fiber content of different Fiber types on the mechanical properties and the printing accuracy for FFF-3D printing Höftberger Thomas (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); Burgstaller Christoph
Lunch					
Afternoon session	MORPHOLOGY AND STRUCTURAL DEVELOPMENT Session Chair: Coates Phil, University of Bradford, UK	BIOPOLYMERS Session Chair: Heim Hans-Peter, Universität Kassel, Germany	INJECTION MOLDING AND MOLDS Session Chair: Ehrig Frank, Eastern Switzerland University of Applied Sciences, Switzerland	POLYMER RECYCLING Session Chair: Schwendemann Daniel, Eastern Switzerland University of Applied Sciences, Switzerland	ADDITIVE MANUFACTURING Session Chair: Brauner Christian, University of Applied Sciences & Arts FH NW, Switzerland
Thu 13:45	Keynote: Variety of structure in the extruded strands of PC containing PMMA Yamaguchi Masayuki (Japan Advanced Institute of Science and Technology, Ishikawa, Japan)	Keynote: Injection moulding of stereocomplex PLA blends produced via melt processing for improved thermal stability Kelly Adrian (University of Bradford, Bradford, United Kingdom); Kassos Nikolaos; Gough Tim; Gill Andy	Keynote: Evaluation of Molding Behaviors and Micro-/Nano-structure Replication of Liquid Silicone Rubber by Injection Molding Ito Hiroshi (Yamagata University, Yamagata, Japan); Kawagoe Tetsuya; Nemoto Akihiko; Kobayashi Yutaka	Keynote: Synergistic Effects of Hybrid Phosphorus Flame Retardants in Mechanical Recycling of PET Gooneie Ali (Maastricht University, Maastricht, Netherlands); Chen Jiuke; Dul Sithiprumsa; Lehner Sandro; Hufenus Rudolf	Keynote: Molecular Engineering and Additive Manufacturing of Polyisobutylene-Based Functional Elastomers Xu Weinan (University of Akron, Ohio, USA)
Thu 14:10	Correlation between morphology and processing parameters in polymer blends: preliminary results towards hierarchical structures Cravero Fulvia (Politecnico di Torino, Torino, Italy); Frache Alberto; Arrigo Rossella	Processability study of modified thermoplastic starch/poly(butylene succinate) adipate blends with couple agents Medina-Perilla Jorge Alberto (Universidad de los Andes, Bogotá, Colombia); Vargas-Rojas Manuela; Salcedo-Galan Felipe	Inline optimization for injection molding processes for abrupt and gradual process behavior alterations Lockner Yannik (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); Hopmann Christian	The role of the hard segment content in the foaming of thermoplastic polythiourethanes with supercritical CO₂ García Vargas Jesús Manuel (UCLM, Ciudad Real, Spain); Belmonte López Pablo; Ramos Marcos María Jesús; Rodríguez Romero Juan Francisco	Fused Filament Fabrication of Functionally Graded Microcellular Foams with Variable Density Kalia Karun (University of Massachusetts Lowell, Massachusetts, USA); Ameli Amir
Thu 14:30	Impact of Orientation Temperature and Resin Density in structural evolution and morphology of MDO-PE films Guleria Dixit (Eindhoven University of Technology, Eindhoven, Netherlands); Doelder Jaap den; Vervoort Sylvie; Ragaert Kim; Ge Shouren	Controlling the surface functionality of graphene-based quantum dots for multifunctional poly(L-lactide) nanocomposites Tuccitto Anthony V. (University of Toronto, Ontario, Canada); Sansone Nello D.; Park Chul B.; Lee Patrick C.	Experimental Analysis of Transient Behavior of Melt Filling Through Gate Based on Polymer Compressibility Chen Jian-Yu (Feng Chia University, Taichung City, Taiwan); Huang Ming-Shyan; Chen Xiang-Ping	Effect of recycling on reprocessed PHB modified with virgin PHB and characterization of thermal and mechanical properties Main Priyanka (Montanuniversität Leoben, Leoben, Austria); Lucyshyn Thomas	How to 3D-print personalized vaginal inserts from highly elastic polymers Spoerk Martin (Research Center Pharmaceutical Engineering GmbH, Graz, Austria); Kuchler Lisa; Brand Bianca; Katschnig Matthias; Roblegg Eva; Eder Simone
Thu 14:50	ZIF-8 decorated DNA-shaped polymer strips for efficient removal of methylene blue from aqueous solution Li Shichen (Chonnam National University, Gwangju, South Korea); Lee Bong-Kee	Increasing the Bio-content of Superabsorbent Polymers: Assessment of Long-Term Water Absorption Capability and Biodegradability Rodop Ogeday (Sabanci University, Istanbul, Turkey)	Mechanical properties of injection-moulded glass fibre reinforced Polyamide with flowing weld-lines Mokarizadeh Haghighi Shirazi Majid (KU Leuven, Leuven, Belgium); Buffel Bart; Lomov Stepan V.; Desplentere Frederik	Effect of Reprocessing Method on the Molecular Structure of an Impact Copolymer Polypropylene Alotaibi Mansour (University of Massachusetts Lowell, Massachusetts, USA); Barry Carol Forance	Prototyping of Degradable Meshes through Direct Ink Writing for Fertilizer Release Ay Ayse (Sabanci University, Istanbul, Turkey); Arel Isik; Dumanli Ahu Gumrah; Akbulut Ozge
Thu 15:10	Adhesion modified polypropylene: a sticky situation Looijmans Stan F.S.P. (Eindhoven University of Technology, Eindhoven, Netherlands); Anderson Patrick D.; van Breemen Lambert	Influence of injection moulding process parameters on industrial Polyhydroxyalkanoates properties for medical device applications Delaunay Yohann (Novo Nordisk & Technical University of Denmark, Hillerød, Denmark); Islam Aminul; Bogelund Jesper; Zhang Yang	Efficiency of extrusion of polyethylene nanocomposite with a new generation extruder Sikora Janusz Wojciech (Lublin University of Technology, Lubelskie, Poland)	Reincorporation of plastic wastes in an integrated circular process: strategies towards sustainability Borges Carolina (INEGI, Porto, Portugal); Araújo Andreia; Santos Raquel M.	The Role of Interlayer Adhesion on the Mechanical Performances in Fused Filament Fabrication of PLA Liparoti Sara (University of Salerno, Fisciano, Italy); Alfieri Vittorio; Fabbricatore Annalaura; Caiazza Fabrizia; Pantani Roberto
Coffee					
Thu 16:00	Producing tough, stiff PC nanocomposites with enhanced properties by improvement of compatibility of PC matrix and EPDM rubbery nanofibril network with coupling agent and in-situ nanofibrillation Akrami Hamidreza (University of Toronto, Ontario, Canada); Zaoui Aniss; Kheradmandkeysomi Mohamad; Salehi Amirmehdi; Park Chul B.	Fogging behavior of selected biopolymers Passinger Tim (University of Kassel, Kassel, Germany); Heim Hans-Peter	Effects of in-process wear of laser induced mould surface features within an injection moulding process Evens Tim (KU Leuven, Leuven, Belgium); Vanwersch Pol; Castagne Sylvie; Malek Olivier; Van Bael Albert	Determination of polyethylene (PE) and polypropylene (PP) content in post-consumer recycled flexible plastics using machine learning assisted differential scanning calorimetry (DSC) Bashirgonbadi Amir (Ghent University, Ghent, Belgium); Delva Laurens; Ureel Yannick; Van Geem Kevin; Ragaert Kim	Bridging experimental data and flow modelling to maximize the lifetime of additive manufactured moulds Fernandez Ellen (Ghent University, Ghent, Belgium); Debrie Simon; Edeleva Mariya; D'hooge Dagmar R.; Cardon Ludwig
Thu 16:20	Orientation control of carbon films by addition of graphene oxide in the precursor film Takarada Wataru (Tokyo Institute of Technology, Tokyo, Japan); Yokoyama Takehito; Shioya Masatoshi	Scale-up studies of bio-based monomers and polymers production from biomass derived xylose Cattaneo Alessandro (HEIA-FR, Fribourg, Switzerland)	Development of a Self-Adjusting Injection Molding Production Cell: A Step towards Autonomous Sampling Stricker Michael (TH Köln - University of Applied Sciences, NW Gummersbach, Germany); Bay Till Ole; Lake Simone	Performance Analysis of Solid-State Shear Milling of Waste Plastic Particles Benkreira Hadj (University of Bradford, Bradford, United Kingdom); Caton-Rose P.; Coates Phil D.; Innes James R.; Kelly Adrian; Canhui Lu; Siddique Nehnah; Wang Qi; Shuangqiao Yang	Aerosol Jet Printing of 3D Pillar Arrays from Photopolymer Ink Vlnieska Vitor (Empa, Dübendorf, Switzerland)
Thu 16:40	Keynote: Melt-spun biopolyester fibers for sustainable and biomedical applications Perret Edith (Empa, St. Gallen, Switzerland); Röthlisberger Moritz; Dul Sithiprumsa; Giovannini Giorgia; Hufenus Rudolf	Degradation study of PHB/PLA/PCL blends under a seawater environment Galli Engler Leonardo (Technological University of the Shannon, Athlone Campus, Westmeath, Ireland); Crespo Janaina S.; Gately Noel M.; Major Ian; Devine Declan M.	Sample preparation and thermal conditioning of PC and PP on thermal and mechanical properties Mihelčić Mohor (University of Ljubljana Faculty of Mechanical Engineering, Ljubljana, Slovenia); Oseli Alen; Zafošnik Boštjan; Slemenik Perse Lidija		Accuracy of a 3D-Printed Polymer Model for producing Casting mold Carvalho Benjamin de Melo (State University of Ponta Grossa, Paraná, Brazil); Hauer Dias Filho Ariangelo; de Carvalho Gustavo Antoniacomi; Luiz Ferreira Rafael Thiago
Thu 17:00	POSTER SESSION				
Thu 18:30	Banquet				

Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Koopmans Rudolf, Hochschule für Technik & Architektur Freiburg, Switzerland

Thu 08:30	Fungal biorefinery: Upcycling waste to chitin-glucan nanomaterials with a promising future Bismarck Alexander (University of Vienna, Vienna, Austria)				
Thu 09:05- Thu 09:40	The complexity of redesigning the plastics system for circularity Ragaert Kim (Maastricht University, Maastricht, Netherlands)				
Coffee	Room 'EMS-Chemie' 9.2 A	Room 'Olma' 9.2 D	Room 'Monosuisse' 9.2 C	Room 'Mettler Toledo' 9.2 B	Room 'Empa' 9.1 Rosso
Morning session	POLYMER COMPOSITES Session Chair: McNally Tony, University of Warwick, UK	FIBERS AND FILMS Session Chair: Sun Gang, University of California Davis, USA	RUBBER AND ELASTOMERS Session Chair: Clemens Frank, Empa, Switzerland	RHEOLOGY AND CHARACTERIZATION Session Chair: Vermant Jan, ETH Zurich, Switzerland	MODELING AND SIMULATION Session Chair: Costa Franco, Autodesk, Australia
Thu 10:15	Keynote: Non-covalent modification of graphene nanoplatelets to produce electrically and thermally conductive polyamide composites Kontopoulou Marianna (Queen's University, Ontario, Canada); Haridas Haritha	Keynote: Development of Various Formulations for Active Polymer Flexible Packaging Aji Abdellah (Polytechnique Montréal, Québec, Canada)	Keynote: Evaluating the electromechanical performance of dielectric elastomer actuators in uniaxial tension state by Smart Rubber Analyzer Wießner Sven (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); Tahir Muhammad	Keynote: Evaluating the molecular weight distribution of linear and branched ultrahigh molecular weight polyolefins by the linear viscoelastic rheology of their solutions Grizzuti Nino (University of Naples Federico II, Naples, Italy); Ianniello Vincenzo; Costanzo Salvatore; Gupta Virendra K.; Tervoort Theo	Keynote: Dynamics and self-healing of amine functionalized polyolefins Hatzikiriakos Savvas G. (University of British Columbia, British Columbia, Canada); Yavitt Benjamin M.; Gilmour Damon M.; Zhang Ziyue; Moradnik Nafiseh; Kuan Nirmla; van Ruymbeke Evelyn; Schafer Laurel L.
Thu 10:40	Investigation of multifunctional architectures by tailoring flexible domains in inherently brittle epoxy-based composites through gradient interphase formation with bio-based thermoplastic elastomer grades Zweifel Lucian (FHNW Institute of Polymer Engineering, Aargau, Switzerland); Brauner Christian	The main factors influencing glass fiber shortening in the processing of bulk molding compounds (BMC) Scholle Maximilian (Paderborn University, Paderborn, Germany); Moritzer Elmar	Fuel-efficient Green Tire tread compound: Optimization of mixing parameters Neethirajan Jeevanandham (IIT Kharapur, West Bengal, India); Naskar Kinsuk	Inverse approach to Calibrate the Non-linear Viscoelastic Model by means of a Bubble Inflation Test on ABS using DIC Varedi Rasoul (KU Leuven, Leuven, Belgium); Buffel Bart; Mergan Sander; Scheuer Adrien; Coppieters Sam; Desplentere Frederik	Coat hanger die design through constant shear rate flow network method and adaptive deflection analysis Razeghyadaki Amin (Nazarbayev University, Akmol, Kazakhstan); Wei Dongming; Perveen Asma; Zhang Dichuan
Thu 11:00	Flax/polypropylene composites for lightened structures Doumbia Awa Soronfé (Cerfitex, Ségou, Mali); Castro Mickaël; Jouannet Denis; Kervoelen Antoine; Falher Thierry; Cauret Laurent; Bourmaud Alain	Simultaneous polymerisation and wet spinning of thermosetting polydimethylsiloxane monofilament with circular section for transparent composite Watel Quentin (University of Lille, Lille, France); Boussu François; Salatin Fabien; Cayla Aurélie	Solid-phase orientation for stiff and tough thermoplastic vulcanizates Innes James R. (University of Bradford, Bradford, United Kingdom)	Inline quality measurement of preheated thermoplastic composite parts using passive thermography Birtha János (Competence Center CHASE GmbH, Linz, Austria); Kobler Eva; Marschik Christian; Straka Klaus; Steinbichler Georg; Schlecht Sven; Zwicklhuber Paul	Optimizing the mixing quality of a single screw extruder with CFD simulations Mateboer Tjmen (University of Applied Sciences Windesheim, Overijssel, Netherlands); Buist Jakob
Thu 11:20	Investigation of Electrical Conductivity Properties Wood-Based Panels Kocoglu Özden Beste (Kastamonu Entegre Agac Sanayi, Kocaeli University, Istanbul, Turkey); Özkoç Güralp; Kodal Mehmet; Bengü Başak	Fabrication of the colorimetric sheath/core type polyamide 6-RhYK/polypropylene bicomponent fiber sensor for acid gas detection Oh Hyun Ju (Korea Institute of Industrial Technology, Ansan-si Gyeonggi-do, South Korea); Bae Jong-Hyuk; Kim Dokun; Hahn Wan-Gyu	Microwave heating of rubber extrudates Petzke Jonas (Paderborn University, Paderborn, Germany); Schöppner Volker	Examining the rheological properties of highly concentrated deformable polymer particle suspensions in a polymer melt Ramakrishnan Shashank (University of Calgary, Alberta, Canada); Oriani Steven; Sundararaj Uttandaraman	Investigation of the Particle Distribution in Injection Molding of Mineral-Filled Polyamide Using CFD Simulation Buschmann Jan (University of Duisburg-Essen, Duisburg, Germany); Janßen Marius; Schiffers Reinhard
Thu 11:40	Reducing the supercritical CO2 permeation of pressure vessels at elevated temperatures using nanocomposites of high-density polyethylene and graphene nanoplatelets Dargahi Ashkan (University of Toronto, Ontario, Canada); Duncan Mark; Runka Joel; Hammami Ahmed; Naguib Hani E.	Polymeric core-shell and mono-material fibers for concrete reinforcement Herz Jonas (Rosenheim Technical University of Applied Sciences, Rosenheim, Germany); Lorenz Katharina; Muscat Dirk; Strübbe Nicole	Influence of the blowing agent type on the foam properties of high consistency silicone rubber Hofmann Timo (University of Kassel, Kassel, Germany); Heim Hans-Peter; Giesen Ralf-Urs	Investigation of Microstructures of Thermal Protection Systems Materials Using Synchrotron Hard X-Ray Micro-Tomography Koo Joseph H. (The University of Texas at Austin, Texas, USA); Bernstein Samantha; Yee Colin; Kim Steven; Li Wei; Parkinson Dula	Finite Element modelling of solid-phase tube die-drawing: production of Shape Memory Polymer for bone-fixation devices Spencer Paul (University of Bradford, Bradford, United Kingdom); Thomas Lee; Thomson Brian; Sweeney John; Thompson Glen; Kelly Adrian; Caton-Rose Fin; Coates Phil D.
Thu 12:00	Novel approaches for compression molding of LT-PEM fuel cell bipolar plates Kaysner André (The Hydrogen and Fuel Cell Center ZBT GmbH, Nordrhein-Westfalen, Germany)	Soft Multi-Material Magnetic Fibers and Textiles Banerjee Hritwick (EPFL, Lausanne, Switzerland); Sorin Fabien	Synthesis Magnetic Core-shell Fe3O4@Al2O3 as material used to remove Protein from Natural Rubber Latex Nghia Phan Trung (School of Chemical Engineering Hanoi University of Science and Technology, Hanoi, Vietnam); Mai Linh Khanh; Nguyen Thang Ngoc; Kawahara Seiichi	Determination of the Bulk Density of Differently Shaped Plastic Granules as a Function of Pressure and Temperature Brunmayr Thomas Günter (University of Applied Sciences Upper Austria, Upper Austria, Austria); Kneidinger Christian; Burgstaller Christoph; Zitzenbacher Gernot	Experimental validation of a simulation model for the non-return valve performance during the injection phase of an injection molding cycle Wagner Alexander (Johannes Kepler University, Linz, Austria); Kleindl Stefan; Steinbichler Georg
Lunch					
Afternoon session	POLYMER COMPOSITES Session Chair: Bismarck Alexander, University of Vienna, Austria	FIBERS AND FILMS Session Chair: Aji Abdellah, Polytechnique Montreal, Canada	RUBBER AND ELASTOMERS Session Chair: Nghia Phan Trung, Hanoi University of Science & Technology, Vietnam	RHEOLOGY AND CHARACTERIZATION Session Chair: Moldenaers Paula, KU Leuven, Belgium	MODELING AND SIMULATION Session Chair: Eberlein Robert, Zurich University of Applied Sciences, Switzerland
Thu 13:45	Keynote: Processing-Structure-Property Relationships for Composites of Block Copolymers and Graphene Nanoplatelets McNally Tony (University of Warwick, Coventry, United Kingdom); Reinoso Arenas Davide	Keynote: Sustainability in Electrospinning - "Greener" industrial scale manufacturing and application Herwig Gordon (Empa, St. Gallen, Switzerland); Rossi René M.	Keynote: Self-repairable and reprocessable thermoset polyolefin elastomer based on dynamic covalent bonds prepared by reactive melt blending Chang Young-Wook (Hanyang University, Gyeonggi-Do, Korea); Ahn Hyeok Jun; Kang E-Seul	Keynote: Interfacial shear and elongation Rheology towards Unveiling the Effects of In Situ Layer-Layer Interfacial Reaction in Multilayer Polymer Films via Multilayered Assembly: From Microlayers to Nanolayers Lamnawar Khalid (Université de Lyon, Villeurbanne, France)	Keynote: Morphology distribution within injection molded parts obtained with fast cavity heating cycles and different packing pressures Speranza Vito (University of Salerno, Fisciano, Italy); Liparoti Sara; Pantani Roberto
Thu 14:10	Design and production of polymer nanocomposite multilayers for efficient EMI shielding De Smedt Stijn (KU Leuven, Leuven, Belgium); Van Loock Frederik; Li Xiangmeng; Anderson Patrick D.; Cardinaels Ruth	Sustainable manufacturing of fabric supercapacitors from biowaste for wearable applications Tadesse Melkie Getnet (Albstadt-Sigmaringen University, Sigmaringen, Germany); Lübben Jörn Felix	Process-induced anisotropy and its effect on swelling of elastomers: theory and experiments De Focatiis Davide S. A. (University of Nottingham, Nottingham, United Kingdom); Fernandes Vanessa A.	Balancing mechanical properties for the synthesis of polyacrylic casts Reyes Pablo (Ghent University, Ghent, Belgium); Edeleva Mariya; D'hooge Dagmar R.; Cardon Ludwig; Cornillie Pieter	Modeling the pressure-throughput behavior of double wave zones by means of network analysis and heuristic melt-conveying models Luger Hans-Jürgen (SML Maschinengesellschaft mbH JKU Linz - Kompetenzzentrum Holz GmbH, Upper Austria, Austria); Mithlinger Juergen
Thu 14:30	Role of gelation and filler amount on mechanical properties of composite PVC highly filled CaCO3 Drif Yassine (IMT Nord-Europe, Douai, France); Soulestin J.; Lacrampe M-F.	Soft electronic polymer fibers for mechanical sensing applications Laperrousaz Stella (EPFL, Lausanne, Switzerland); Leber Andreas; Dong Chaoqun; Richard Inès; Sorin Fabien	The Influence of Soft Segment on Physical Properties of Polyurethanes crosslinked by Polyrotaxanes Murakami Hiroto (Nagasaki University, Nagasaki, Japan)	Analysis of material degradation during serial hot gas welding Albrecht Mirko (Chemnitz University of Technology, Chemnitz, Germany); Gehde Michael; Seefried Andreas	On the prediction of parameters for the glass-rubber model for polyethylene terephthalate (PET) based on observed data in the injection stretch blow moulding (ISBM) process Petrausch Julius (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); Klein Daniel; Bittrich Lars; Stommel Markus; Briois Jean-Francois
Thu 14:50	Investigation of the Hybridisation Effect of Cost-effectively Compounded Pre-impregnated Glass Fabric on Sheet Moulding Compound Wang Hao (Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, North Rhine-Westphalia, Germany); Fischer Kai; Emonts Michael	Laser-Heated Melt Electrospinning of Poly(L-lactide-co-ε-caprolactone): Fiber Formation Behavior and Characteristics of Prepared Fiber Webs Takasaki Midori (Kyoto Institute of Technology, Kyoto, Japan); Hou Zongzi; Kobayashi Haruki; Tanaka Katsufumi; Takarada Wataru; Kikutani Takeshi	Lifetime Prediction Method for Elastomeric Polyurethane Components based on Nonlinear Damage Accumulation and Finite Element Simulations Rayer Moritz (University of Duisburg-Essen, Duisburg, Germany); Schiffers Reinhard	On finding the fundamental elastic response of polymer melts: polyethylene Shaw Montgomery (University of Connecticut, Connecticut, USA); Weiss R. A.	Discrepancies in Injection Molding Simulation and Reality: An Analysis Kvaktun Dimitri (University of Duisburg-Essen, Duisburg, Germany); Schmidt Niko; Schiffers Reinhard
Thu 15:10	An efficient interface model to develop scalable methodology of melt processing of polypropylene with graphene oxide produced by an improved and eco-friendly electrochemical exfoliation Sahin Dündar Gülayse (Sabanci University, Istanbul, Turkey); Saner Okan Burcu	Sustainable and green fabrication of PLA fibers spun by microfluidic wet spinning Wang Wuchao (Empa, St. Gallen, Switzerland); Wei Kongchang; Boesel Luciano F.; Rossi René M.	Analysis of the center load influence of dynamically stressed elastomers on the lifetime in drive engineering applications Ternes Sabrina (University of Duisburg-Essen, Duisburg, Germany); Mrzyk Pascal; Schiffers Reinhard	Effect of molecular structure changes on melt rheological properties of polyamide (nylon 6) Seo Yongsok (Seoul National University, Seoul, South Korea)	Reducing the discrepancies in Injection Molding Simulation and Reality Schmidt Niko (University of Duisburg-Essen, Duisburg, Germany); Kvaktun Dimitri; Schiffers Reinhard
Coffee					
Thu 16:00	Highly thermally conductive PEEK/hexagonal boron nitride composites realized by scalable twin-screw extrusion: thermal transport properties and rheological behavior Gul Saher (Sabanci University, Istanbul, Turkey); Arican Selin; Cansever Murat; Beylergil Bertan; Yildiz Mehmet; Saner Okan Burcu	Surface Replication and Mechanical Properties of Cellulose Nanofiber Composites by Thermal Imprinting Process Ueda Tsubasa (Yamagata University, Yamagata, Japan); Nemoto Akihiko; Ishigami Akira; Kobayashi Yutaka; Ito Hiroshi	Calcium based layered double hydroxides as reinforcing fillers in natural rubber Jones Louise (University of Pretoria, Gauteng, South Africa); Labuschagné Frederick J. W. J.	Weld strength of thick-walled parts in heated tool welding Friedrich Fabian (Chemnitz University of Technology, Chemnitz, Germany); Gehde Michael; Seefried Andreas	Modeling Large Amplitude Oscillatory Shear Deformation in Semi-crystalline High-Density Polyethylene Hussain Mohammed Althaf (Fukuoka University, Fukuoka, Japan); Yamamoto Takashi; Yao Shigeru
Thu 16:20	Optimized processing of Polyurethane/PET Composites manufactured by RTM Richle Stefan (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland); Barandun Gion Andrea; Eggenschwiler Hannes; Gerdes Lars; Tauchner Jürgen	Linkage Effect of Solution-Processable Arylamine-Based Polymers on the Electrochromic Energy-Harvesting Behaviors Shao Yu-Jen (National Taiwan University, Taipei, Taiwan); Liou Guey-Sheng	Investigation of the interaction between thermal conductivity and foam morphology of elastomers foamed by expanding thermoplastic microspheres Frohberg Richard (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); Çelik Hakan; Hopmann Christian	PVdF/Organocarbonate Thermoreversible Gels: A Thermal, Rheological and Conformational study Nocita Davide (University of Bradford, Bradford, United Kingdom); Gough Tim; Kelly Adrian; Thompson Glen; Coates Phil D.	Fatigue life analysis of POM gears with transient material modelling Düzel Sven (ZHAW, Zurich, Switzerland); Eberlein Robert; Dennig Hans-Jörg
Thu 16:40	Toward the minimization of residual stress in thermoplastic composite wound parts Barasinski Anais (E2S UPPA IPREM, Pau Cedex, France); El Bayssari Anna Maria	Viscoelastic flow simulation of film extrusion process involving flow-induced crystallization: Investigating role of radiation, natural and forced convection Zatloukal Martin (Tomas Bata University, Zlin, Czech Republic); Barborik Tomas	Understanding the recycling of tyres by devulcanization and reulcanization Siddique Nehmah (University of Bradford, Bradford, United Kingdom)	Composition Processing Properties Relationship of Vitrimers Based on Polyethyleneimine Jarach Natanel (Shenkar College, Ramat Gan, Israel); Dodiuk Hanna; Kenig Samuel; Naveh Naum	Static mixers producible by additive manufacturing: Operating point specific geometries through automatic optimisation Sasse Jana (Institute for Plastics Processing (IKV) at RWTH Aachen University, North Rhine-Westphalia, Germany); Hopmann Christian
Thu 17:00	POSTER SESSION				
Thu 18:30	Banquet				

Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Mohanty Amar, University of Guelph, Canada

Fri 08:30	3D Printing for Energy Storage: Customized Processing towards High Energy/Power Density <i>Zhang Chuhong</i> (Sichuan University, Sichuan, China)			
Fri 09:05- Fri 09:40	Innovative developments in the area of Polymer Processing with recent commercial impact <i>Altstädt Volker</i> (University of Bayreuth, Bavaria, Germany)			
Coffee	Room 'Sulzer Chemtech' 9.1.2	Room 'Bodensee' 9.0 D	Room 'St. Gallen' 9.0 C	Room 'Bruker AXS' 9.0 B
Morning session	MORPHOLOGY AND STRUCTURAL DEVELOPMENT Session Chair: Nüesch Frank, Empa, Switzerland	BIOPOLYMERS Session Chair: Avérous Luc, University of Strasbourg, France	INJECTION MOLDING AND MOLDS Session Chair: Turng Lih-Sheng, University of Wisconsin Madison, USA	POLYMER RECYCLING Session Chair: Hong Joung Sook, Seoul National University, Korea
Fri 10:15	Keynote: Solid phase biaxial orientation of polymers <i>Coates Phil D.</i> (University of Bradford, Bradford, United Kingdom); <i>Caton-Rose Fin</i>	Keynote: High performance sustainable biopolymers and their blends based on PLA and their filled systems incorporating CNCs. Structure- rheology- forming and properties relationships. <i>Maazouz Abderrahim Abdou</i> (Université de Lyon, Villeurbanne, France); <i>Lamawar Khalid</i>	Keynote: Negative Impact of Viscous Dissipation in Polymer Processing <i>Holzer Clemens H.</i> (Montanuniversität Leoben, Leoben, Austria); <i>Zidar David</i> ; <i>Pock Alexander</i> ; <i>Glushko Oleksandr</i> ; <i>Schnitzer Ronald</i>	Keynote: Hybrid Chemical and Mechanical Approaches to Advance Plastic Film Recycling <i>Sobkowiec Kline Margaret J.</i> (University of Massachusetts Lowell, Massachusetts, USA); <i>Ferki Olivia</i> ; <i>Jamalzadeh Mansoureh</i> ; <i>Martey Shawn</i> ; <i>Chen Wan-Ting</i> ; <i>Masato Davide</i>
Fri 10:40	High strength of PP by a high-pressure press <i>Nishitsuji Shotaro</i> (Yamagata University, Yamagata, Japan); <i>Ito Yukino</i> ; <i>Sano Hironari</i> ; <i>Ishikawa Masaru</i> ; <i>Inoue Takashi</i> ; <i>Ito Hiroshi</i>	A Novel Sustainable Biobased Polyester: Processing, Characterization and Applications <i>Tran Kelly</i> (School of Engineering and Architecture of Fribourg, Fribourg, Switzerland); <i>Koopmans Rudolf</i>	Mechanical Properties of Hot Runner and Cold Runner Injection Molded Bioplastics <i>Bowen Nicholas</i> (University of Massachusetts Lowell, Massachusetts, USA); <i>Gao Peng</i> ; <i>Johnston Stephen</i> ; <i>Masato Davide</i>	Inks as a potential source of contamination for PE film recycling <i>Lisiecki Manon</i> (Technical University of Denmark, Kgs. Lyngby, Denmark and Maastricht University, Maastricht, Netherlands); <i>Üğdüler Sibel</i> ; <i>DeMeester Steven</i> ; <i>Ragaert Kim</i> ; <i>Astrup Thomas F.</i>
Fri 11:00	Effect of biaxial orientation on polyethylene microstructure <i>Gentile Francesca</i> (University of Salerno, Fisciano, Italy and DPL, Eindhoven, the Netherlands); <i>Liparoti Sara</i> ; <i>Volpe Valentina</i> ; <i>Pantani Roberto</i>	Properties of cowpea lignocellulosic sidestream reinforced Poly (butylene succinate-co-adipate)/ Poly (hydroxy butyrate-co-valerate) biocomposites for packaging materials. <i>Masanabo Mondli Abednicko</i> (University of Pretoria, Gauteng, South Africa); <i>Tribot Amélie</i> ; <i>Luoma Enni</i> ; <i>Sharmin Nusrat</i> ; <i>Sivertsvik Morten</i> ; <i>Keränen Janne</i> ; <i>Ray Suprakas Sinha</i> ; <i>Emmambux Naushad</i>	Development of a Micro Injection Molding Machine for Small to Medium Series <i>Bay Till Ole</i> (TH Köln - University of Applied Sciences, NW Gummersbach, Germany); <i>Lake Simone</i> ; <i>Stricker Michael</i>	Glycolysis of sorted end-of-life polyurethane wastes <i>del Amo León Jesús</i> (UCLM, Ciudad Real, Spain); <i>Borreguero Simón Ana María</i> ; <i>Rodríguez Romero Juan Francisco</i>
Fri 11:20	Development of toughening elastomeric nanofibril by in-situ fibrillation and post-crosslinking in SAN <i>Monfared Ali Reza</i> (University of Toronto, Ontario, Canada); <i>Rezaei Sasan</i> ; <i>Park Chul B.</i>	Effect of lignin modification on the interaction at the interface with biodegradable polyesters <i>Lo Re Giada</i> (Chalmers University of Technology, Göteborg, Sweden); <i>Avella Angelica</i> ; <i>Gioia Claudio</i> ; <i>Sessini Valentina</i>	Comparison of the Mechanical and Crystalline Properties of Injection Molded Virgin and Recycled Polypropylene <i>Masato Davide</i> (University of Massachusetts Lowell, Massachusetts, USA); <i>Bowen Nicholas</i> ; <i>Guyer Cameron</i> ; <i>Rippon Terrence</i> ; <i>Daly Michael</i> ; <i>Johnston Stephen</i>	Impact of Recycled-Polypropylene Viscosity on the Embodied Energy of Injection Molded Parts <i>Nieduzak Zarek</i> (University of Massachusetts Lowell, Massachusetts, USA); <i>Krantz Joshua</i> ; <i>Licata Juliana</i> ; <i>Ferki Olivia</i> ; <i>Perry Sarah</i> ; <i>Gao Peng</i> ; <i>Sobkowiec Kline Margaret J.</i> ; <i>Masato Davide</i>
Fri 11:40	Characterization of process-induced morphology of injection molded PLA specimens and its influence on mechanical properties at multiple scales <i>Boldt Regine</i> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <i>Meinig Laura</i> ; <i>Spoerer Yvonne</i> ; <i>Kühnert Ines</i>	Research 4.0: A Modular Approach to Boost the Development of Innovative Biobased Fibres <i>Canga Rodriguez José</i> (Dienes Apparatebau GmbH, Mühlheim am Main, Germany); <i>Müller-Probandt Steffen</i>	In-Mold Rheology and Automated Process Control for Injection Molding of Rheologically-Modified Polyolefins <i>Krantz Joshua</i> (University of Massachusetts Lowell, Massachusetts, USA); <i>Nieduzak Zarek</i> ; <i>Licata Juliana</i> ; <i>Ferki Olivia</i> ; <i>Perry Sarah</i> ; <i>Gao Peng</i> ; <i>Sobkowiec Kline Margaret J.</i> ; <i>Masato Davide</i>	Effect of molding pressure on lamellar structures and mechanical properties of mechanical recycled low-density polyethylene <i>Phanthong Patchiya</i> (Fukuoka University, Fukuoka, Japan); <i>Yao Shigeru</i>
Fri 12:00	Effect of biaxial stretching on the structure-properties relationship of multi-layered PE/EVOH films <i>Mallamaci Gianmarco</i> (PIMM Arts et Métiers ParisTech CNRS CNAM, Paris, France); <i>Gaucher Valerie</i> ; <i>Marin Adeline</i> ; <i>Guinault Alain</i> ; <i>Gervais Matthieu</i> ; <i>Sollogoub Cyrille</i>	3D Printed Composite Scaffolds of Nanoparticle-Doped GelMA for Bone Tissue Engineering <i>Uvak Ileyana</i> (Sabanci University, Istanbul, Turkey); <i>Demir Gizem</i> ; <i>Sahin Sevilyay Burcu</i> ; <i>Demir Ebru</i> ; <i>Cetinel Sibel</i> ; <i>Akbulut Ozge</i>	Weld line studies on polyolefins and post-consumer recyclates <i>Purgleitner Bianca</i> (Transfercenter für Kunststofftechnik GmbH, Wels, Austria); <i>Heidlmayr Thomas</i> ; <i>Burgstaller Christoph</i>	Ecological and economical evaluation of available recycling technologies for polyester-containing textiles <i>Kocks Christian</i> (RWTH Aachen University, Aachen, Germany); <i>Becker Amrei</i> ; <i>Gausmann Marcel</i> ; <i>Jupke Andreas</i> ; <i>Gries Thomas</i>
Lunch				
Afternoon session	MORPHOLOGY AND STRUCTURAL DEVELOPMENT Session Chair: Kühnert Ines, Leibniz-Institut für Polymerforschung Dresden, Germany	BIOPOLYMERS Session Chair: El Fray Mirosława, West Pomeranian University of Technology, Poland	INJECTION MOLDING AND MOLDS Session Chair: Titomanlio Giuseppe, Università degli Studi di Salerno, Italy	
Fri 13:45	Keynote: New insights into crystallization of heterophase isotactic polypropylene by fast scanning calorimetry <i>Mileva Daniela</i> (Borealis Polyolefine GmbH, Schwechat, Austria); <i>Gahleitner Markus</i> ; <i>Jariyavidyanon Katalee</i> ; <i>Androsch René</i>	Keynote: Thermoforming process of biopolymer composites with coffee husk <i>Duarte Fernando Moura</i> (University of Minho, Guimarães, Portugal); <i>Barbosa Sara Costa</i> ; <i>Leite Rocha Filipa</i> ; <i>Castro Maria Cidália R.</i> ; <i>Martins Carla Isabel</i>	Keynote: Prediction and Optimization of Blush Defect in Plastic Injection Molding using Machine Learning Methods <i>Mollaei Ardestani Alireza</i> (Technical University of Denmark, Kgs. Lyngby, Denmark); <i>Azamirad Ghasem</i> ; <i>Shokrollahi Yasin</i> ; <i>Calaon Matteo</i> ; <i>Hattel Jesper Henry</i> ; <i>Kulachi Murat</i> ; <i>Soltani Roya</i> ; <i>Tosello Guido</i>	
Fri 14:10	Shear Anisotropy-Driven Sectorization Imaging of Macromolecular Single Crystals <i>Hamidi Mahdi</i> (University of Alberta, Edmonton, Canada); <i>Taylor Hayden K.</i> ; <i>Park Chul B.</i> ; <i>Filleter Tobin</i>	Investigation of Barrier and Mechanical Properties of Biopolymer Based Flexible Laminated Packaging Films <i>Çokkuvvetli Ayşe Tuğçe</i> (Yıldız Technical University, Istanbul, Turkey); <i>Yolaçan Öznur</i> ; <i>Deniz Sennur</i>	Competitive study of injection moulded and 3D printed conductive thermoplastic elastomer structures <i>Eckey Louisa Marie</i> (Empa, Dübendorf, Switzerland)	
Fri 14:30	Transparent biaxially stretched films from polyolefin nanocomposites <i>Jayaraman Krishnamurthy</i> (Michigan State University, Michigan, USA); <i>Lu Xing</i>	Biopolymer-based systems with bioactive agents as a future solution for food packaging of perishable products <i>Castro Maria Cidália R.</i> (University of Minho, Guimarães, Portugal); <i>Rodrigues Pedro A.</i> ; <i>Cunha Ana Beatriz</i> ; <i>Machado Ana Vera</i>	Thermography in injection molding process for in-line defect characterization of molded parts <i>Müller Dennis</i> (Technical University Ilmenau, Thüringen, Germany); <i>Puch Florian</i>	
Fri 14:50	Chemical Treatment and Relatively Low-Pressure Effects on the Nucleation of Poly (L-lactide)/Glass Fiber Composites <i>Boyer Severine A. E.</i> (PSL Research University, Paris, France); <i>Fenni S. E.</i> ; <i>De Almeida O.</i> ; <i>Burr A.</i>	Moving a step forward from poly(lactic acid) to bio-copolymers <i>Luk Harris</i> (Sulzer Chemtech AG, Zurich, Switzerland)	Tuning the performances of injection molding polypropylene parts by in-mold annealing. <i>Salomone Rita</i> (University of Salerno, Fisciano, Italy); <i>Speranza Vito</i> ; <i>Liparoti Sara</i> ; <i>Pantani Roberto</i>	
Fri 15:10	Closing ceremony and farewell coffee			

Plenary (Room 'Sulzer Chemtech' 9.1.2)
Session Chair: Mohanty Amar, University of Guelph, Canada

Fri 08:30	3D Printing for Energy Storage: Customized Processing towards High Energy/Power Density <i>Zhang Chuhong</i> (Sichuan University, Sichuan, China)				
Fri 09:05- Fri 09:40	Innovative developments in the area of Polymer Processing with recent commercial impact <i>Altstädt Volker</i> (University of Bayreuth, Bavaria, Germany)				
Coffee	Room 'EMS-Chemie' 9.2 A	Room 'Olma' 9.2 D	Room 'Monosuisse' 9.2 C	Room 'Mettler Toledo' 9.2 B	Room 'Empa' 9.1 Rosso
Morning session	POLYMER COMPOSITES Session Chair: Xu Weinan, University of Akron, USA	FIBERS AND FILMS Session Chair: Yan Yurong, South China University of Technology, China	RUBBER AND ELASTOMERS Session Chair: Jayaraman Krishnamurthy, Michigan State University, USA	RHEOLOGY AND CHARACTERIZATION Session Chair: Hatzikiriakos Savvas G., University of British Columbia, Canada	MODELING AND SIMULATION Session Chair: Gooneie Ali, Maastricht University, The Netherlands
Fri 10:15	Keynote: Advanced Biocarbons from Sustainable Resources and their Lightweight Polymer Composite Materials: Current Status and Future Opportunities <i>Misra Manjusri</i> (University of Guelph, Ontario, Canada)	Keynote: Polymer material developments for melt spinning technology and fiber applications <i>Kühnert Ines</i> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <i>Huang Ying</i> ; <i>Mueller Michael Thomas</i> ; <i>Elschner Cindy</i> ; <i>Enders Marcel</i> ; <i>Reichenbacher Rudi</i> ; <i>Meinig Laura</i> ; <i>Boldt Regine</i> ; <i>Scheffler Christina</i>	Keynote: Influence of binary graphene/carbon black hybrid fillers on thermal and mechanical properties of natural rubber nanocomposites <i>Mighri Frej</i> (Laval University, Québec, Canada); <i>Shahamatifard Farnaz</i> ; <i>Rodrigue Denis</i>	Keynote: The influence of profile extrusion process variables on the heat transfer coefficient at the polymer-calibrator interface <i>Carneiro Olga S.</i> (University of Minho, Guimarães, Portugal); <i>Aali Mohammadreza</i> ; <i>Nóbrega João Miguel</i>	Keynote: Effect of Network Defects on the Microscopic and Spatially heterogeneous dynamics of Vitrimers <i>Khabaz Fardin</i> (University of Akron, Ohio, USA); <i>Pandya Harsh</i>
Fri 10:40	Developing Nano-fibrillated Flame Retardant Polymer Composites: Addressing Deteriorated Mechanical Properties <i>Amirabadi Shahab</i> (University of Toronto, Ontario, Canada); <i>Chen Eldon</i> ; <i>Kheradmandkeysoni Mohamad</i> ; <i>Zandieh Azadeh</i> ; <i>Sain Mohini</i> ; <i>Park Chul B.</i>	Silk Revitalization for Bactericidal Suture Applications <i>Fei Bin</i> (Hong Kong Polytechnic University, Hong Kong, China); <i>Liu Chang</i> ; <i>Yu Rujun</i> ; <i>Hu Xin</i>	Effect of dispersant on the mechanical properties of Fluoroelastomers/VGCF composite <i>Ishida Yuki</i> (Tokyo Institute of Technology, Tokyo, Japan); <i>Takarada Wataru</i> ; <i>Shioya Masatoshi</i>	Effect of processing condition on the thermophysical and rheological properties of polyhydroxyalkanoates (PHAs) <i>Behzadfar Ehsan</i> (Toronto Metropolitan University, Toronto, Canada); <i>Mondol Anindita</i> ; <i>Ein-Mozaffari Farhad</i>	Study of Residence time and Filling ratio inside Counter-rotating continuous mixer using Partially filled flow simulation <i>Kajiwara Toshihisa</i> ; <i>Nakayama Yasuya</i>
Fri 11:00	Tailoring asymmetric filler arrangement towards enhanced through-plane thermal conductivity of polymer composites <i>Ye Lijun</i> (Hangzhou Normal University, Zhejiang, China); <i>Hong Jiahui</i> ; <i>Jin Yucong</i> ; <i>Li Yongjin</i>	Microfluidic wet spinning of soft polymer optical fibres <i>Sharma Khushdeep</i> (Empa, St. Gallen, Switzerland); <i>Wei Kongchang</i> ; <i>Rossi René M.</i> ; <i>Sorin Fabien</i> ; <i>Boesel Luciano F.</i>	Electro active polymers and soft dry electrodes – innovative applications based on elastomers <i>Schön Frank</i> (Dätwyler Schweiz AG, UR, Switzerland); <i>Wiesmath Anette</i> ; <i>Lucchini Mattia</i>	Mechanical characterization methods for micro-injection molded specimens in the field of polymer material development <i>Fischer Matthieu</i> (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany); <i>Wiegand Jan-Joris</i> ; <i>Kühnert Ines</i>	Effect of a shear flow on the rupture of a thin polymer film <i>Sollogoub Cyrille</i> (PIMM Arts et Métiers ParisTech CNRS CNAM, Paris, France); <i>Kadri Khareiddine</i> ; <i>Dhaliwal Vira</i> ; <i>Pedersen Christian</i> ; <i>Carlson Andreas</i> ; <i>Salez Thomas</i> ; <i>Miquelard-Garnier Guillaume</i> ; <i>Peixinho Jorge</i>
Fri 11:20	New reinforcing approach for bio-based UV-curing resins: hybrid lignocellulose fillers with improved synergy and wood structure mimics <i>Barkane Anda</i> (Riga Technical University, Riga, Latvia); <i>Gaidukovs Sergejs</i>	Surface-coated high-density polyethylene microfibers as reinforcement for mortar materials <i>Zaoui Aniss</i> (University of Toronto, Ontario, Canada); <i>Kwon Oh-Sung</i> ; <i>Park Chul B.</i>	Investigation of Self-Healing Properties of Bromobutyl Rubber in the Presence of Novel Hybrid Nanoparticles <i>Kodal Mehmet</i> (Kocaeli University, Sabanci University Nanotechnology Research and Application Center, Izmit, Turkey); <i>Kavacik Öznur</i> ; <i>Gökçesulur Sezgin</i> ; <i>Mert Olcay</i> ; <i>Özkoç Güralp</i>	Influence on rheological behavior of additives for rigid PVC processing with slit die extrusion using inverse method <i>Vandaele A. R. Ward</i> (KU Leuven, Leuven, Belgium); <i>Han Yixun</i> ; <i>De Kuyper Alec</i> ; <i>Deceur Sofie</i> ; <i>Desplentere Frederik</i>	Validated Modelling of Complex Geometry Dies for Extrusion Foaming of Starch-Based Mixtures <i>Esposito Claudio</i> (University of Naples Federico II, Naples, Italy); <i>Tammara Daniele</i> ; <i>D'Avino Gaetano</i> ; <i>Schennink Gerald</i> ; <i>Wietze Huisman Jan</i> ; <i>Geerts Mark</i> ; <i>Alvarado Chacon Fresia</i> ; <i>Maffettone Pier Luca</i>
Fri 11:40	Polymer Blend/Composites for Single-Use Applications <i>Dhamaniya Sunil</i> (Reliance Industries LTD, Maharashtra, India); <i>Gupta Virendrakumar</i>	Antiplasticizing interactions between biobased small molecules and vinyl polymers for improved gel-spinning: A molecular dynamics simulation study <i>Dedmon Hannah</i> (North Carolina State University, NC, USA); <i>Rahmani Farzin</i> ; <i>Pasquinelli Melissa A.</i> ; <i>Ford Ericka</i>	Understanding the influence of pressure and viscous heat on slippage for commercial styrene-butadiene rubbers during extrusion <i>Georgantopoulos Christos</i> (Vat Vakuumventile AG, St. Gallen, Switzerland); <i>Esfahani Masood</i> ; <i>Pollard Michael</i> ; <i>Ellwagner Felix</i> ; <i>Zhang Ziyue</i> ; <i>Naue Ingo</i> ; <i>Causa Andrea</i> ; <i>Kadar Roland</i> ; <i>Hatzikiriakos Savvas</i>	Determination of polyethylene content in polypropylene pellet blends using near-infrared spectroscopy <i>Agerer Andreas</i> (Metrohm, Herisau, Switzerland); <i>Schmid Dominik</i> ; <i>Schwendemann Daniel</i> ; <i>Baur Monika</i> ; <i>van Staveren Dave</i>	Digital twin of the profile extrusion process <i>Walker Silvan</i> (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland)
Fri 12:00	High-performance EMI shielding polyester / carbon nanoparticles composites with tailored structure <i>Gaidukovs Sergejs</i> (Riga Technical University, Riga, Latvia); <i>Bleija Miks</i>	Effects of extrusion variables on the crystalline structures and mechanical properties of the melt spun fibers from recycled Polypropylene copolymer <i>Barique Mohammad A.</i> (Tokyo Institute of Technology, Tokyo, Japan); <i>Takarada Wataru</i> ; <i>Kikutani Takeshi</i>	Preparation and mechanical property study of polyurethane/silicone rubber composites based on polymerization induced phase separation <i>Yu Bing</i> (Beijing University of Chemical Technology, Beijing, China); <i>Tian Ming</i>	Integrative material characterization of CNC (crystalline nanocellulose) reinforced filaments for 3D printing applications. <i>Walluch Matthias</i> (Anton Paar GmbH, Styria, Austria); <i>Weingrill Helena</i> ; <i>Gonzalez-Gutierrez Joamin</i>	Product lifecycle management in injection molding <i>Studer Mario</i> (OST Eastern Switzerland University of Applied Sciences, Rapperswil-Jona, Switzerland)
Lunch					
Afternoon session					
Fri 13:45					
Fri 14:10					
Fri 14:30					
Fri 14:50					
Fri 15:10					