



TUESDAY · JUNE 27 · 2017

Room	Großer Saal	Kleiner Saal	Hörsaal	Marta-Fraenkel-Saal	SR 9	SR 5	SR 3	SR 2
09:00 – 09:30	OPENING CEREMONY							
09:30 – 9:45	Ica Manas-Zloczower Laudatio 80 th Birthday Zehev Tadmor							
9:45 – 10:30	PLENARY LECTURE Tim A. Osswald Modeling and simulating polymer processes – History, capabilities and challenges							
10:30 – 11:00	BREAK							
Chair person	I. Kühnert	C. Holzer	P. Pötschke	A. Leuteritz	H. Brünig	N. Rudolph	V. Gigante	M. Grenzer
11:00 – 11:30	S06-224 W. Six A Novel method for the prediction of adhesive strength for two-component injection moulding of thermoplastics with thermoset rubbers Keynote 	S06-192 J. Vlachopoulos Defects in industrial film extrusion	S08-424 A. Windle Carbon nanotube fibers, fifteen years of progress with challenges and prospects for the future	S04-451 C. Brinson NanoMine: Development of material data resource and analysis tools for polymer nanocomposites	S05-169 M. Sibanda Development of polyolefin bicomponent fibers as controlled release devices of repellents for malaria vector control	S14-283 J. Schmidt Production of spherical micron-sized polymer particles for additive manufacturing by liquid phase processes	S02-230 H. Khonakdar Rheological and morphological correlations in PP / EVA blends containing nanoclay in presence of a halogen-free flame retardant	S03-112 P. Spencer Measuring and modelling necking of polymers
11:30 – 11:50	S06-391 U. Heyne Injection mouldings consisting of a thermosetting plastic and an elastomer – Characterization of the adhesion mechanisms on joined thermosetting plastic / elastomer composites	S06-323 M. Burgfeld Development of a new measurement concept for the process-oriented characterization of rheological material properties	S08-398 J. Fernández-Toribio Multifunctional properties of carbon nanotube fibers	S04-289 A. D. Macheca Stiffening mechanisms in vermiculite-amorphous polyamide bio-nanocomposites	S05-34 N. H. A. Tran New fibers from PCM using the conventional melt spinning process	S14-138 J. Benz Temperature induced ageing of PA12 powder during selective laser sintering process	S02-450 N. Kardan Shapememory behavior of nanocomposite based on SBS / LLDPE / CNT	S03-276 G. Kurt Demir Peroxide crosslinking of linear low density polyethylene
11:50 – 12:10	S06-461 K. Kurth Improvement of the reproduction accuracy of a defined pole length of injection molded encoder wheels	S06-208 S. Hirschfeld Bubble-free polymer devolatilization in a simplified extruder model	S08-318 A. Clancy Reactive coagulation of single-walled nanotubes for tougher composites – Solution processing and assembly	S04-60 C. C. M. Ma Processing of electromagnetic interference shielding water-borne polyurethane composites filled with silver nanoparticles deposited on functionalized graphene	S05-32 D. Aussawasathien Bifunctional electrospun silver modified polyarylonitrile-activated carbon composite fibers	S14-78 M. Van den Eynde Flow behaviour of laser sintering powders at elevated temperatures	S02-412 C. H. Chen Lamellar assembly of poly(3-hydroxybutyric acid-co-3-hydroxyvaleric acid) spherulites crystallized with poly(vinyl methyl ether)	S03-103 J.-U. Walter Distinction of measurement-related and material-related scattering of Young's modulus of thermoplastics during tensile testing
12:10 – 12:30	S06-249 J. Heinisch Online analysis of melt viscosity during injection moulding with a hot runner rheometer	S06-237 B. Whiteside Manufacturing and characterization of lidocaine films prepared by hot melt extrusion	S08-377 H. Meeuw Development of a colored GFRP with antistatic properties	S04-473 R. Fechter Modelling and optimisation of the mechanical and other material properties of a polymer nanocomposite using statistical design of experiments	S05-422 M. Al Aiti Structural properties of carbon fibers with different elastic moduli (100–950 GPa) studied by Raman spectroscopy, WAXs and SAXs techniques	S14-458 M. Launhardt Developing a patient individualized flexible silicone implant using SLS and vacuum die casting	S02-378 G. Lugito Mechanisms of dual spherulitic morphology in poly(L-lactic acid) induced by amorphous polymer	S03-449 I. Ivaneiko Application of multi-scale approach to rubbers reinforced at different processing conditions
12:30 – 12:50	S06-310 S. M. Boorla Capability database of injection moulding process-requirements for wider suitability and higher acceptance	S06-104 E. Ramakers-van Dorp A new approach to model thermal expansion of semi crystalline polymers	S08-368 A. Mikhalchan Nanoscale chemical imaging as an advanced tool for carbon nanotube fiber nanocomposite engineering	S04-102 M. Derradji Highly filled boron nitride-phthalonitrile nanocomposites for exigent thermally conductive applications	S05-227 M. Nofar Continuous foam extrusion of high impact polystyrene (HIPS): Effect of processing parameters and blowing agent type and content	S14-457 S. Greiner A new approach for getting more homogeneous temperature fields in selective laser sintering	S02-341 M. Otady Influence of glass flake nanoparticles on thermal and dynamic mechanical properties of PP / EVA blends: Correlation with microstructure	S03-21 R. Hajiraissi Linear and non-linear viscoelastic behavior of fibrillar morphology formed via fiber spinning of PP / PA6 blend
12:50 – 14:00	LUNCH							
Chair person	W. Friesenbichler	U. Wagenknecht	B. Grady	J. Labuschagne	H. Brünig	J. Schmidt	H. Khonakdar	E. Mitsoulis
14:00 – 14:30	S06-314 G. R. Berger A study on cooling performance in injection molding. Heat conductive mold materials versus conformal cooling channels Keynote 	S06-162 J. Miethlinger Investigations with a new specific grooved barrel design, starved feeding and heuristic modeling for high capable single screw extruders	S08-344 P. Moldenaers Tuning the phase separated morphology and resulting electrical conductivity of carbon nanotube filled blends with a random or block copolymer	S04-446 D.-Y. Wang Functionalized nanomaterials based polymer nanocomposites: A way to new generation flame retardant materials	S05-272 V. Altstaedt Trends and perspectives of bead foam processing	S14-455 N. Rudolph Understanding the temperature field in fused filament fabrication for enhanced mechanical part performance	S02-355 A. Maazouz Melt strengthening of poly(lactic acid) and its blends: Shear and elongation rheological investigations for forming process	S03-425 C. Kneidinger Simulation of asymmetrical multilayer flat film coextrusion regarding slip at the wall and interfacial slip at the polymer-polymer interface

S01 Mixing and compounding

S02 Polymer Blends and Alloys

S03 Rheology and Process Simulation

S04 Functional, Nano and Bio Composites

S05 Fibers, Films and Foams

S06 Injection Molding and Extrusion

S07 Elastomer Materials and Processing

S08 Nanocarbon Based Composites, CNPComp2017

S09 Polymer Modification with Ionizing Radiation

S10 Nano- and Microstructured Surfaces and Films

S11 In-line Analytics and Process Monitoring

S12 Welding and Joining Technology

S13 Polymer Materials for Medical Applications

S14 Additive Manufacturing



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14:30 – 14:50	S06-255 K. Straka Influences of processing parameters on the melt temperature homogeneity in injection moulding	S06-106 M. Stegelmann Extrusion of high-performance polyetherimide pipes with variable wall thickness for aircrafts	S08-116 M. Adhikary Effect of mixing sequence on the fibrillation of thermo tropic liquid crystalline polymer in the blend system in presence of graphene	S04-199 C. Pawelski Effect of filler type, morphology and particle size distribution on thermal and flame retardant properties of bimodal boron nitride & boehmite-filled EP-Novolac composites	S05-51 T. Standau Development of a beadfoam from the engineering polymer polybutylene terephthalate (E-PBT)	S14-264 W. Van De Steene A novel process for tailored stiffness and strength in extrusion based additive manufacturing	S02-395 A. Rigoussen Insights on the efficiency of bio-based antioxidants in PLA / ABS blends	S03-40 G. Zitzenbacher Evaluation of the influence of the tool surface on polymer melt flow using a novel rheological extrusion slit die
14:50 – 15:10	S06-56 J. Wipperfurth A concept of an injection compression mould for non-invasive ultrasound tomographic temperature measurements	S06-217 K. Soete Simulation of the effects of using conformal cooling channels in SLM produced plastic extrusion calibrators	S08-360 D. Lellinger Influence of carbon particle dimension on formation of the filler network in a polymer melt	S04-59 G. Sanchez-Olivares Keratin fibers recovered from tannery industry wastes as fire retardant agent on PLA composites	S05-414 A. Leuteritz Cyclic testing of polyurethane foam of plastic jacket pipes for district heating	S14-172 M. Hebda Control of fused deposition modeling, melt extrusion and laydown	S02-250 N. Kassos Investigation of PLA-biopolymer blends to improve properties	S03-242 M. Schön Simulative determination of the optimization potential of additively manufactured static mixing elements for extrusion
15:10 – 15:30	S06-55 T. Koslowski Shrinkage, warpage and residual stresses of injection molded parts	S06-168 P. Thieleke Investigation of the melt quality of a wave screw in a grooved plasticizing zone with a high specific throughput rate	S08-31 R. Nadiv Optimal performance of nano-carbon polymer composite: Dimensionality matters	S04-447 L. Zhi (D.-Y. Wang) Hierarchical functionalization of halloysite nanotube and its enhancement in thermal stability, fire retardancy and mechanical property of epoxy resin	S05-336 S. Goris Experimental study of fiber length reduction of highly filled long glass fiber-reinforced polypropylene in a simple shear flow	S14-241 S. Schuschnigg Processability of perlite-filled polypropylene composites in extrusion-based additive manufacturing	S02-228 M. Nofar Development of PLA / PBAT and PLA / PBSA bioblends: Effects of processing type and PLA crystallinity on morphology and thermo-mechanical properties	S03-334 M. Öztoksoy Extrusion and injection molding nanocellulose – Polypropylene nanocomposites: Critical processing aspects
15:30 – 15:50	S06-460 B. Neubig Thermoforming – Determining temperature profiles across sheet thickness by pyrometric measurements	S06-180 J. Kettemann Experimental investigation and improved modeling of the melting process in single-screw extruders with a grooved plasticizing cylinder	S08-468 E. Bilotti Breaking the nanofiller loading / dispersion dichotomy in polymer nanocomposites	S04-322 D. Pospiech Improved flame retardancy for poly(butylene terephthalate) with phosphorus-containing polyesters	S05-223 U. A. Handge Open-celled foams based on diblock copolymers: Influence of melt elongational properties on foam morphology	S14-194 M. Green Welding of 3D printed carbon nanotube-polymer composites by locally induced microwave heating	S02-196 L. Maubane Development of highly functional butyl-etherified starch / poly [(butylene succinate)-co-adipate] nanocomposites using reactive extrusion	S03-428 V. Lenzi Molecular dynamics simulations of isocyanate-based molecules viscosity
15:50 – 16:20	BREAK							
<i>Chair person</i>	<i>S. Roth</i>	<i>J. Vlachopoulos</i>	<i>Y. Martinez-Rubi</i>	<i>D.-Y. Wang</i>	<i>C. Park</i>	<i>N. Rudolph</i>	<i>J. Pionteck</i>	<i>F. Costa</i>
16:20 – 16:40 <i>(no keynote)</i>	S06-406 D. Masato Flow visualization of thin-wall injection molding and effect of mold coatings	S06-433 C. Kneidinger The behavior of bulk solids in the solids conveying zone of smooth barrel single screw extruders: Friction, bulk density and pressure anisotropy	S08-200 S. Kihara Development of polymer composites containing nano-carbon materials by the high pressure fluid mixing method	S04-277 E. Bicer Properties of crosslinked poly-ethylene / Oib-POSS nanocomposites: "Effect of peroxide concentration"	S05-166 K. Karlsson Extrusion parameters optimisation for foaming of hydroxy-propyl methylcellulose	S14-288 F. Kaut Structure-property relationship of additive manufactured thermoplastic polymers processed with Arburg freeformer	S02-251 S. Cano Development of highly-filled polymer compounds for fused filament fabrication of ceramics and solvent debinding	S03-212 D. Altmann Simulation of the melting behaviour in an injection moulding plasticizing unit compared with pressure and ultrasound measurements
16:40 – 17:00	S06-193 S. Ma Visualization analysis on reciprocating plastication process of glass fiber reinforced resin by glass-inserted heating cylinder	S06-161 O. T. Kast Effects of pellet characteristics and feed zone design on the output of grooved-feed extruders at high screw speeds	S08-216 Y. Ma Freestanding mesoporous three-dimensional graphene bulk prepared by chemical vapor deposition on sacrificial Cu nanopowder sinter templates	S04-183 J. Thunberg Nanocellulose reinforced thermoplastic composites of poly(ethylene acrylic acid)	S05-171 J. Schuette Near-net-shape rigid foam cores for CFRP sandwich composites made from polyethylene terephthalate using thermoforming	S14-286 J. Knöchel Fatigue crack growth propagation in 3D-printed polymer structures – A comparison of different additive manufacturing technologies	S02-295 F. Memarian Development of shape memory in 3D-printed polymer structures – A comparison of different additive manufacturing technologies	S03-306 J. Muñoz Sánchez Viscoelastic effects on the roll-separating force and power input on the calendaring process of a non-Newtonian fluid
17:00 – 17:20	S06-177 C. Wang Direct visualization of cavity filling and demolding phenomena through textured glass block	S06-381 F. Baumgarten Solid-state carbon-based textile supercapacitors for energy storage applications	S08-452 A. Paleo Solid-state carbon-based textile supercapacitors for energy storage applications	S04-3 O. Koyuren Immobilization of TiO ₂ nanoparticles in PMMA nanofiber mat for photocatalytic removal of dyes from water	S05-114 A. K. Ghosh Controlled foam processing and cell structure development of gamma irradiated polypropylene / elastomer blends	S12-135 C. Das Effects of vibration welding process parameters on the weldability of the thermoplastics	S02-357 L. Duan Strain sensor with selectively distributed filler network in conductive polymer composites	S03-58 E. Mitsoulis Numerical simulation of plastic sheet solidification by using chilling rolls
17:20 – 17:40	S06-38 G. Heiderich Fiber length reduction during injection molding	S06-75 M. Dungen Characterization of bulk materials for single screw extrusion by means of fluidization testing	S08-437 D. Lellinger Fabrication and properties of electrically conductive bicomponent fiber	S04-91 M. Kodal The effects of surface modification of MWCNTs with hexanol on the non-isothermal crystallization kinetics of poly(butylene succinate)	S05-97 R. Banerjee Properties and foamability of styrene-ethylene-butylene-styrene (SEBS) / polystyrene (PS) blends	S14-430 J. Covas Polyetheretherketone hybrid nanocomposite filaments for 3D printing	S02-71 N. Tuccar Kilic Effects of epoxy-POSS nanoparticles on the compatibility of PLA / PBAT blends	S03-371 M. Mostafaiyan Tension force to reduce the spurious currents in two-phase flow
17:40 – 18:00	S06-33 S. Shimokusuzono Effect of screw design on fiber breakage and dispersion of FRTP in injection molding	S06-126 S. Yao Pelletize condition dependence of injection molded article of recycle plastic	S08-287 M. Mehranpour Compatibilizing of PP / NBR immiscible blend using modified nano graphene oxide	S04-122 P. Maji Cellulose nanomaterials: A natural biopolymer as sustainable material for future	S05-36 M. Demir Effect of trisamide based nucleating agents on the morphology and mechanical properties of isotactic polypropylene foams	S14-365 G. Chen Fused deposition modeling of poly(vinyl alcohol) based filaments	S02-315 V. Krinichnyi Spin-correlated charge transfer in low-band-gap copolymer composites	
18:00 – 22:00	POSTER SESSION							

S01	Mixing and compounding
S02	Polymer Blends and Alloys
S03	Rheology and Process Simulation
S04	Functional, Nano and Bio Composites
S05	Fibers, Films and Foams
S06	Injection Molding and Extrusion
S07	Elastomer Materials and Processing
S08	Nanocarbon Based Composites, CNPComp2017
S09	Polymer Modification with Ionizing Radiation
S10	Nano- and Microstructured Surfaces and Films
S11	In-line Analytics and Process Monitoring
S12	Welding and Joining Technology
S13	Polymer Materials for Medical Applications
S14	Additive Manufacturing

