

THURSDAY · JUNE 29 · 2017

Room	Großer Saal	Kleiner Saal	Hörsaal	Marta-Fraenkel-Saal	SR 9	SR 5	SR 3	SR 2
Chair person	Petra Pötschke							
08:30 – 09:15	PLENARY LECTURE Daniel Hanoch Wagner Bio-inspired hierarchical composites using carbon nanotubes (CNTs) and carbon nanotube fibers (CNTFs)							
Chair person	W. Friesenbichler	M. Shaffer	P. Pötschke	A. Leuteritz	A. S. Walallavita	J. Rudloff	S. Wiessner	U. Gohs
9:30 – 10:00	S03-348 F. Costa Modeling of injection overmolded stamp formed thermoplastic composites	S08-332 H. Mianehrow Mechanical properties of cellulose nanofibers-graphene oxide biocomposite	S08-158 V. Lison New insights from the optimization of melt mixing parameters in polypropylene/multi-walled carbon nanotubes nanocomposites	S04-37 Y. Nishitani Effect of addition of filler on the tribological properties of CF / PEEK composites	S05-184 R. Hufenus Structural response of poly(3-hydroxybutyrate) fibers to heat and stress	S01-252 M. Sobkowicz Kline Reactive compatibilization schemes for high speed twin screw extrusion of polymer blends	S07-462 G. Heinrich Challenges in rubber processing: Learning from game theory and complex systems	S09-464 S. Rouif Functionalization of flax fibers by radiation-grafting
10:00 – 10:20	S06-190 F. Willems The use of micromechanical models to predict fiber reinforced plastics	S08-359 A. Hajian Functional nanocomposites based on cellulose and carbon nanotubes	S08-305 G. Choong Challenges to the industrial melt-processing of conductive plastics: Can post-processing produce cost-effective conductivity uplifts?	S04-149 M. Cordin Properties of lyocell-polypropylene composites	S05-300 C. B. Park Strain-induced crystallization of PLA and PP in extrusion	S01-139 J. Benz Reactive extrusion of PA6 – Different ways to increase the viscosity	S07-307 F. Verheyen Analysis of the extrusion process of silicone rubber	S09-445 C. Zschech In-line edge layer modification of three dimensional sheet molding compounds
10:20 – 10:40	S06-456 F. Paolucci In-situ X-ray analysis during flash DSC experiments: Study of isothermal crystallization and phase transformation of polyamide 12	S08-404 Q. Li Lightweight metal composites reinforced by surface-decorated nanocarbon	S08-353 A. Lund Electrically conducting CNT / polymer composites towards 3D-printed electronics	S04-77 K. Landsecker Investigation on the thermo-formability of heat conductive polymers	S05-39 C. McGarrigle Effect of extrusion parameters and nanofillers on mechanical properties of PEEK stitching yarns	S01-366 B. C. Bonse Glycerol as plasticizer in PVC	S07-238 T. Hutterer Simulative and experimental investigation of productivity improvements obtained through rapid heat cycle molding of different rubber compounds	S09-372 N. Kukusanov DC high power electron ELV accelerators for polymer treatment
10:40 – 11:10	BREAK							
Chair person	G. Berger	M. Shaffer	P. Pötschke	W. Focke	P. Uhlmann	J. Rudloff	G. Heinrich	U. Gohs
11:10 – 11:40	S06-100 D. Schneider New approach for the efficient attainment of flame retardancy using multi component injection molding	S08-98 S. Kenig Orientation development of nanotubes during processing of polymer nanocomposites	S08-376 B. Fiedler Mechanical and electrical properties of carbon nanoparticle modified epoxy matrix with regard to the size effect	S12-477 M. Gude Design of material adapted joints – Potentials and challenges in joining fiber reinforced thermoplastics to dissimilar materials at the example of thermoclinching	S10-117 H. Naguib Bio-inspired textured composite surfaces with abrasion resistance and high friction properties	S01-87 A. Ishigami Toughening improvement of polyamide 6 with low molecular weight polyethylene	S07-431 G. Riess Novel silicone thermoplastic elastomers with tailored permeation properties	S09-463 O. Güven Controlling of radiation-induced grafting at nanoscale for the preparation of advanced functional membranes
11:40 – 12:00	S06-153 N.N. (H.-P. Heim) Integration of electrochromic devices in plastic parts by injection moulding	S08-466 O. Istrate The effect of graphene flake diameter on the performance of anti-corrosion coatings	S08-279 W. Mhike Antistatic and flame retardant rotomouldable polymer graphite nanocomposites	S12-111 C. Tuinea-Bobe Ultrasonic welding of polystyrene microinjected moulded components – Physicochemical and mechanical characterization	S10-234 R. Mukherjee Confinement induced ordering of phase segregated domains in polymer blend thin film	S01-85 B. Formisano Compounding anionic polymerized polyamide 6 using terephthalic acid	S07-94 T. Chatterjee High performance thermoplastic vulcanizates based on carboxylated acrylonitrile butadiene rubber and polyamide 12	S09-407 S. Beuermann Polymer electrolyte membranes from pre-irradiation induced graft copolymerization on ETFE
12:00 – 12:20	S06-320 G. M. Gulsozlu Investigation of the relationship IR heating and injection molding parameters of composite laminates which shaped by over-molding technique	S08-335 S. Fisher Rapid quantitative mapping of multi-walled carbon nanotube concentration in nanocomposites	S08-434 J. Blanco-Villalba Improving the processability of graphene nanoplatelets in polyamide 6 during melt compounding extrusion	S12-326 M. Constantinou Infrared welding of continuous fiber-reinforced thermoplastics – Investigations on overlapping joints	S10-236 A. Das Morphological stability of nanoparticles containing polymer blends and bilayer thin films	S01-99 S. Göttermann Modified polylactide with improved properties for extrusion foaming	S07-121 H. Naguib Novel polyurethane elastomeric composites reinforced with alumina, aramid, and poly(p-phenylene-2,6-benzobisoxazole) short fibers, development and characterization of the thermal and dynamic mechanical properties	S09-109 S. S. Banerjee Influence of reactive processing on nanomechanical properties of polyamide 6 and its blends

Chair person

Petra Pötschke

08:30 – 09:15

PLENARY LECTURE **Daniel Hanoch Wagner** Bio-inspired hierarchical composites using carbon nanotubes (CNTs) and carbon nanotube fibers (CNTFs)

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Keynote 

S03-348
F. Costa
Modeling of injection overmolded stamp formed thermoplastic composites

S08-332
H. Mianehrow
Mechanical properties of cellulose nanofibers-graphene oxide biocomposite

S08-158
V. Lison
New insights from the optimization of melt mixing parameters in polypropylene/multi-walled carbon nanotubes nanocomposites

S04-37
Y. Nishitani
Effect of addition of filler on the tribological properties of CF / PEEK composites

S05-184
R. Hufenus
Structural response of poly(3-hydroxybutyrate) fibers to heat and stress

S01-252
M. Sobkowicz Kline
Reactive compatibilization schemes for high speed twin screw extrusion of polymer blends

S07-462
G. Heinrich
Challenges in rubber processing: Learning from game theory and complex systems

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S. Rouif
Functionalization of flax fibers by radiation-grafting

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F. Willems
The use of micromechanical models to predict fiber reinforced plastics

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Functional nanocomposites based on cellulose and carbon nanotubes

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G. Choong
Challenges to the industrial melt-processing of conductive plastics: Can post-processing produce cost-effective conductivity uplifts?

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M. Cordin
Properties of lyocell-polypropylene composites

S05-300
C. B. Park
Strain-induced crystallization of PLA and PP in extrusion

S01-139
J. Benz
Reactive extrusion of PA6 – Different ways to increase the viscosity

S07-307
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Analysis of the extrusion process of silicone rubber

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In-line edge layer modification of three dimensional sheet molding compounds

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S06-456
F. Paolucci
In-situ X-ray analysis during flash DSC experiments: Study of isothermal crystallization and phase transformation of polyamide 12

S08-404
Q. Li
Lightweight metal composites reinforced by surface-decorated nanocarbon

S08-353
A. Lund
Electrically conducting CNT / polymer composites towards 3D-printed electronics

S04-77
K. Landsecker
Investigation on the thermo-formability of heat conductive polymers

S05-39
C. McGarrigle
Effect of extrusion parameters and nanofillers on mechanical properties of PEEK stitching yarns

S01-366
B. C. Bonse
Glycerol as plasticizer in PVC

S07-238
T. Hutterer
Simulative and experimental investigation of productivity improvements obtained through rapid heat cycle molding of different rubber compounds

S09-372
N. Kukusanov
DC high power electron ELV accelerators for polymer treatment

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S06-100
D. Schneider
New approach for the efficient attainment of flame retardancy using multi component injection molding

S08-98
S. Kenig
Orientation development of nanotubes during processing of polymer nanocomposites

S08-376
B. Fiedler
Mechanical and electrical properties of carbon nanoparticle modified epoxy matrix with regard to the size effect

S12-477
M. Gude
Design of material adapted joints – Potentials and challenges in joining fiber reinforced thermoplastics to dissimilar materials at the example of thermoclinching

S10-117
H. Naguib
Bio-inspired textured composite surfaces with abrasion resistance and high friction properties

S01-87
A. Ishigami
Toughening improvement of polyamide 6 with low molecular weight polyethylene

S07-431
G. Riess
Novel silicone thermoplastic elastomers with tailored permeation properties

S09-463
O. Güven
Controlling of radiation-induced grafting at nanoscale for the preparation of advanced functional membranes

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N.N. (H.-P. Heim)
Integration of electrochromic devices in plastic parts by injection moulding

S08-466
O. Istrate
The effect of graphene flake diameter on the performance of anti-corrosion coatings

S08-279
W. Mhike
Antistatic and flame retardant rotomouldable polymer graphite nanocomposites

S12-111
C. Tuinea-Bobe
Ultrasonic welding of polystyrene microinjected moulded components – Physicochemical and mechanical characterization

S10-234
R. Mukherjee
Confinement induced ordering of phase segregated domains in polymer blend thin film

S01-85
B. Formisano
Compounding anionic polymerized polyamide 6 using terephthalic acid

S07-94
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High performance thermoplastic vulcanizates based on carboxylated acrylonitrile butadiene rubber and polyamide 12

S09-407
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Polymer electrolyte membranes from pre-irradiation induced graft copolymerization on ETFE

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G. M. Gulsozlu
Investigation of the relationship IR heating and injection molding parameters of composite laminates which shaped by over-molding technique

S08-335
S. Fisher
Rapid quantitative mapping of multi-walled carbon nanotube concentration in nanocomposites

S08-434
J. Blanco-Villalba
Improving the processability of graphene nanoplatelets in polyamide 6 during melt compounding extrusion

S12-326
M. Constantinou
Infrared welding of continuous fiber-reinforced thermoplastics – Investigations on overlapping joints


S10-236
A. Das
Morphological stability of nanoparticles containing polymer blends and bilayer thin films

S01-99
S. Göttermann
Modified polylactide with improved properties for extrusion foaming

S07-121
H. Naguib
Novel polyurethane elastomeric composites reinforced with alumina, aramid, and poly(p-phenylene-2,6-benzobisoxazole) short fibers, development and characterization of the thermal and dynamic mechanical properties

S09-109
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Influence of reactive processing on nanomechanical properties of polyamide 6 and its blends



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12:20 – 12:40	S06-363 K. Anger Construction of a pipe support with overmoulded metal insert	S08-361 M. Eaton Nanoprobe investigations of viscoelastic behavior in elastomeric nanocomposites	S08-278 C. Park Thermally conductive micro-cellular polymer nanocomposites of graphene nanoplatelets (GnP)	S12-350 E. Brueckner Clinching and torsional ultra sonic welding – An innovative process combination for joining metal-polymer hybrid structures	S10-84 L. Kutscha Determination of influencing factors on adhesion and surface quality in UV-based in-mold coating process of BMC	S01-195 J. Rosjatean Friction characteristics improvement of ABS for low squeaking noises generating interior automotive parts	S07-22 C. Kiehle Morphology-property-relationships of SEBS / PP compounds for medical application	S09-448 S. Al Rahhal Melt spinning and characterization of matrix blend based on polypropylene and ethylene-octene copolymers modified by high energy electrons
12:40 – 13:00	S06-392 J. A. Puentes Parodi Influence of hygro-thermal loads on the durability of thermoplastic-polyurethane-steel-hybrids	S08-438 J. Golebiowski Polymeric CNT composites: Atomistic simulations of interfacial properties	S08-403 P. Lopes Advanced electrically conductive adhesives for high complexity PCB assembly	S12-382 K. Hofmann Joining polycarbonate – Manufacturing and evaluation of transparent joints using an innovative, objective test method	S10-342 N. Naveh Physical coloring of multi-layered elastomeric structures	S01-48 S. Rabonpoor Synergistic effect of fire retardant additives of cross-linkable polyolefin compounds toward intumescent compounds	S07-317 E. S. Bhagavatheswaran Influence of ageing on the structure-property relationship of FKM, VMQ and EPDM rubber seals	S09-1 R. Boldt Process-induced morphology and mechanical properties of HD-PE
13:00 – 14:00	LUNCH							
14:00 – 14:30	Chair person I. Kühnert	B. Fiedler	M. Paiva	H. Naguib	J. Rudloff	K. Naskar	S. Rouif	
14:00 – 14:30	Keynote  S06-273 M. K. Schaefer Automation of an ultrasound mixing head for low pressure resin transfer molding	S08-394 Y. Martinez-Rubi Polyurethane composite sheets incorporating BNNTs and CNTs at high loading: Morphological, mechanical and electrical characterization and advantages of the fabrication method	S08-66 B. Grady Nanotubes in immiscible polymer blends: Three studies	S10-141 J. Mead Superhydrophobic polymer coatings: Effect of composition and thermodynamics on the surface morphology	S01-439 A. Javadi Effect of blending methods on mechanical properties of PS / TPU blends <i>(no keynote) 20 min contribution</i>	S07-386 A. Ziegmann Evaluation of the crosslinking density and the mechanical properties of silicone elastomers filled with bariumtitanates of different particle sizes as dielectric elastomers <i>(no keynote) 20 min contribution</i>	S09-15 M. Kaci The effects of gamma irradiation on morphology and properties of nanocomposites based on PHBV / PLA blend and organo-modified montmorillonite	
14:30 – 14:50	S06-152 S. Pachner Smart data analysis for optimized manufacturing of powder coatings on co-rotating twin screw extruders	S08-213 F. Daver Enhanced mechanical properties of carbon monoxide reduced graphene / polyamide 6 nanocomposites	S08-181 W. Focke Polyethylene-graphite composites: Comparing cone calorimeter and micro-flammability test results	S10-256 B. Bolvardi Superhydrophobic and superoleophobic meshes coated by PDMS / ZnO nanocomposites or oil / water separation		S07-479 I. Recio Novel humidity sensing rGO-TPU composites	S09-444 D. Xiao Development and investigation of high performance fire retardant polypropylene composites	
14:50 – 15:10	S06-176 M. Bruchmüller Mechanical property model for fiber filled thermoplastics incorporating surface tension	S08-18 O. Regev Stronger cement	S08-280 M. R. Nobile Rheological and dynamic mechanical behavior of epoxy resins filled with multiwalled carbon nanotubes and graphene-based nanoparticles	S10-467 P. Uhlmann Multifunctional and responsive surfaces using nanostructured polymer brushes		S07-308 H. Muiambo Flame retardant properties of polymer composites of urea complex of magnesium and vermiculite	S09-475 M. T. Müller Influence of gas atmosphere on electron-induced cyclization of polyacrylonitrile powder at elevated temperature	
15:10 – 15:30		S08-408 H. Nazockdast Rheologically determined the role of nanoparticle geometry on the morphological evolution of ABA block copolymers	S08-435 E. Moschopoulou The effect of modified graphene variants on physical, mechanical and thermal properties of PP composites			S07-80 N. Farshchi Hansen solubility parameters as a tool to evaluate the compatibility potential of rubber process oils (DAE, TDAE, MES, and NAP)		

CLOSING CEREMONY

- 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

