



Thermosetting Resins 2018 - International conference, 25 - 27 September 2018, Berlin, Germany

Advanced program, July 2018

September 25 th , 2018	
from 8.00 am	Registration
9.00 am	Welcome Tea & Coffee
	Conference Opening & Plenary Session
10.00 am	<p>Bauer, Monika (InnoMat GmbH, Teltow, Germany, Chair of the Conference)</p> <p>McGrail, Terry (University of Limerick, Irish Centre for Composites Research (IComp), Limerick, Ireland)</p>
10.15 am	<p><u>Session Chairman</u> McGrail, Terry (University of Limerick, Irish Centre for Composites Research (IComp), Limerick, Ireland)</p> <p>Plenary Lecture David Hatrick (Vice President Innovation at Huntsman Advanced Materials, University of Strathclyde, Spring, USA) <i>Trends in high performance thermosetting resins</i></p>
11.00 am	<p>Plenary Lecture David Tilbrook (Hexcel Composites Limited, Duxford, Cambridge, United Kingdom) <i>Future challenges for aerospace fibre reinforced composites</i></p>
11.45 am	<p>Plenary Lecture H. Henning Winter (Director Laboratory for Experimental Rheology, University of Massachusetts, Amherst, USA) <i>The solidification rheology of amorphous polymers – Vitrification as compared to gelation</i></p>
12.30 pm	Lunch Break
2.00 pm	<p><u>Session Chairman</u> Gérard, Jean-François (INSA de Lyon, Villeurbanne, France)</p> <p>Plenary Lecture Filip Du Prez (Group Leader Polymer Chemistry Research Group, Department of Organic and Macromolecular Chemistry, Ghent University, Ghent, Belgium) <i>Vitrimers: Upcoming recyclable and reshapable thermosets</i></p>
2.45 pm	<p>Plenary Lecture Torsten Gottschalk-Gaudig (Wacker Chemie AG, Burghausen, Germany) <i>Silicone resins – An emerging class of binders for fibre reinforced composites?</i></p>
3.30 pm	<p>Plenary Lecture Sascha Pöller & Tim Welter (Henkel AG & Co. KGaA, Duesseldorf, Germany) <i>Developing and modelling thermosetting adhesives for composites and multi-material joints</i></p>
4.15 pm	Afternoon Tea & Coffee
4.45 pm	<p>Poster Session 2-minute oral presentations (one pager) of posters. <u>Session Chairman</u> Bauer, Monika (InnoMat GmbH, Teltow, Germany)</p>
subsequently	Welcome Reception & Get Together Opening of Poster Session - The poster exhibition will be open all time



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Poster Presentations	
2min	Author (Institution): Title
	Vladislav Aleshkevich (Institute of New Carbon Carbon Materials and Technologies (INUMIT), Moskow, Russia): <i>C/C composites developed from phthalonitrile based composites</i>
	Vivien André (University of Lyon, IMP INSA Lyon, Villeurbanne, France): <i>Core-shell particles with improved dispersibility into epoxy networks</i>
	Monika Bauer (InnoMat GmbH, Teltow, Germany): <i>New adhesive films with high glass transition temperature and storage stability at room temperature</i>
	Mohamed Benachour (University of Oran, Laboratory of Polymers Chemistry, Algeria): <i>Synthesis and characterization of triblock copolymer PLA-PEG-PLA catalyzed by Maghnite-H+</i>
	Yvonne Chowdhury (InnoMat GmbH, Teltow, Germany): <i>Volume dilatometry - Online investigation of shrinkage during thermal or radiation cure</i>
	Maarten Delahaye (Ghent University, Department of Organic and Macromolecular Chemistry, Ghent, Belgium): <i>Internally carboxylic acid-catalysed CANs</i>
x	Christian Dreyer (Fraunhofer Institute for Applied Polymer Research IAP, Research Division Polymeric Materials and Composites PYCO, Teltow, Germany): <i>UV-LED curable thermosetting resins and composites thereof - Applications from micrometer to meter scale</i>
x	Andrea Glawe (KROENERT GmbH & Co. KG, Hamburg, Germany): <i>Requirements and performance of high precise functional coating technologies for the production of prepregs</i>
	Sergiy Grishchuk (Institut fuer Verbundwerkstoffe GmbH, Kaiserslautern, Germany): <i>Advanced benzoxazine/epoxy hybrid resins and composites</i>
x	Lutz Hartmann (Fraunhofer Institute for Applied Polymer Research IAP, Research Division Polymeric Materials and Composites PYCO, Teltow, Germany): <i>Microwave-assisted curing of fiber reinforced plastics - Electro-magnetic simulation</i>
	Valentina Iodice (ITT Motion Technologies, Barge, Italy): <i>A thermo-mechanical and rheological approach for the characterization of thermosets in in automotive friction materials</i>
	Helene Jeske (Thünen Institute of Agricultural Technology, Braunschweig, Germany): <i>Biobased epoxides as binders for coating electrodes in lithium-ion-batteries</i>
	Tolga Kapti (Polisan Kimya, Kocaeli, Turkey): <i>Use of condensate generated during kiln-drying step of wood as a natural formaldehyde scavenger for urea- and melamine-formaldehyde resins</i>
x	Thoralf Krahl (Humboldt-University of Berlin, Institute of Chemistry, Berlin, Germany): <i>Novel transparent organic-inorganic composites based on metal fluoride nanoparticles</i>
	Oleg Morozov (Institute of New Carbon Carbon Materials and Technologies (INUMIT), Moscow, Russia): <i>Dual-curing phthalonitril-propargyl ether resins for CFRP</i>
x	Thomas Richter (University of Applied Sciences Muenster, Department of Chemical Engineering, Steinfurt, Germany): <i>Dual curing hybrid resin</i>
x	Harald Stecher (Siemens Gamesa Renewable Energy A/S, Aalborg, Denmark): <i>How to qualify a resin for SGRE Offshore Integral Blade®</i>
	Romain Tavernier (Ecole nationale superieure de chimie de Montpellier ENSCM, Montpellier, France): <i>Towards formaldehyde-free and fully biobased resoles</i>
x	Emma Wood (The University of Sheffield, Department of Physics and Astronomy, Sheffield, UK): <i>Predicting phase separation in polymer blends that contain branched molecules</i>



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	Session 1 - Chemistry	Session 2 – Modelling & Characterization
9.00 am	<p>Invited Lecture: Dennis Smith (Advanced Composites Institute, Department of Chemistry, Mississippi State University, Mississippi, USA) Advanced polymer networks from fluoroalkenes and enediynes</p>	<p>Invited Lecture: Miroslava Dušková-Smrčková (Institute of Macromolecular Chemistry, Czech Academy of Sciences, Prague, Czech Republic) Ab initio design of binders architecture and optimization of curing conditions for cross-linked polyurethane/polyurea coatings</p>
9.25 am	<p>Jean-Francois Gerard (University de Lyon, IMP, Villeurbanne, France) High Tg thermoplastic-modified bismaleimide matrices and related composite materials - Fracture mechanics</p>	<p>Shamil Saiev (University of Mons, Mons, Belgium) Modeling polymer nanocomposites of bio-sourced thermoset resins and carbon nanotubes</p>
9.50 am	<p>Reinhard Lorenz (University of Applied Sciences Muenster, Department of Chemical Engineering, Steinfurt, Germany) A new class of fast curing high performance UP-resins yielding thermosets with significantly improved thermal properties</p>	<p>Jannick Duchet-Rumeau (University de Lyon, IMP, Villeurbanne, France) Tailoring and multiscale characterization of functional interfaces in carbon fiber based composite materials</p>
10.15 am	<p>Jan-Pierre Schneider (Schill+Seilacher "Struktol" GmbH, Hamburg, Germany) Amphiphilic block copolymers based on chain-extended polyester – Role of compatibility and reactive groups</p>	<p>Angeliki Chanteli (University of Limerick, Irish Composites Centre (IComp), Limerick, Ireland) 3D woven and non-crimp thermoplastic composites with functional surface properties</p>
10.40 am	Morning Tea & Coffee	
	Session 3 – Green Chemistry	Session 4 – Characterization Methods
11.15 am	<p>Invited Lecture: Rolf Mülhaupt (Institute for Macromolecular Chemistry, Freiburg Materials Research Center FMF, University of Freiburg, Freiburg, Germany) Isocyanate-free routes to multifunctional bio-based polyhydroxyurethane thermosets and composites</p>	<p>Antonia Neels (Empa - Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland) X-ray analytical methods to understand polymer functionality</p>
11.40 am	<p>René Saint-Loup (Roquette, Lestrem, France) Isosorbide as a building block for thermosetting resins</p>	<p>Suzanne Morsch (University of Manchester, School of Materials, Manchester, UK) AFM-IR insights into epoxy resin nanostructures</p>
12.05 pm	<p>Songqi Ma (Chinese Academy of Sciences, Ningbo Institute of Materials Technology and Engineering, Ningbo, China) High-performance recyclable thermosets from lignin derivative vanillin</p>	<p>Corinna Grosse (Berliner Nanotest and Design GmbH, Berlin, Germany) A novel sensor platform for thermal property measurements of thermosetting resins using the three-omega method</p>
12.30 pm	<p>Jocelyn Clénet (University of Lyon, IMP, Villeurbanne, France) Original route for tuning biobased polyesters structure as thermoset precursors</p>	<p>Nessa Fereshteh Saniee (University of Warwick, Coventry, UK) Cryomilling: A critical step for accurate determination of degree of cure and resin content in carbon fibre reinforced thermosetting composites</p>
1.00 pm	Lunch Break	



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	Session 5 – (Green) Chemistry	Session 6 – Influencing Network Structure & Application
2.15 pm	<p>Lérys Granado <i>(ENSCM, ICGM, Université de Montpellier, Montpellier, France)</i> Crosslinking mechanisms and kinetics of an innovative formaldehyde-free resole for aerospace applications</p>	<p>Björn Thorge Riecken <i>(Hamburg University of Technology, Institute of Polymers and Composites, Hamburg, Germany)</i> Influence of the polymer network structure on the thermal stability, the thermal and mechanical properties of epoxy</p>
2.40 pm	<p>Niamh Nash <i>(University of Limerick, Irish Composites Centre (IComp), Limerick, Ireland)</i> Bio-based epoxy resin systems as potential drop-in replacements for petroleum-based epoxy matrices in marine fibre-reinforced polymer (FRP) composites</p>	<p>Roderick Ramsdale-Capper <i>(The University of Sheffield, Materials Science and Engineering, Sheffield, UK)</i> Influence of phenyl ring substitution position on amine cured EP resin properties</p>
3.05 pm	<p>Leïla Bonnaud <i>(Materia Nova, Mons, Belgium)</i> Polybenzoxazine technology for lightweight and high-performance composites</p>	<p>Laurence Bailly <i>(LGP - ENIT, Tarbes, France)</i> Study of the difference of behaviour between two cyanate ester resins at their initial state and after thermal ageing</p>
3.30 pm	<p>Alessandro Napoli <i>(Huntsman Advanced Materials GmbH, Basel, Switzerland)</i> Novel latent hardeners and catalysts for epoxy resins</p>	<p>Agnieszka Tercjak <i>(University of the Basque Country, San Sebastian, Spain)</i> Nanostructured thermosetting systems with thermo and electro-responsive</p>
4.00 pm	Afternoon Tea & Coffee	
4.30 pm	<p>Michael Jaeger <i>(Ashland Technologies GmbH, Kehl, Germany)</i> High temperature resins and their use in hot flue gas applications</p>	<p>Belén Redondo Foj <i>(Aimplas, Valencia, Spain)</i> Development of an innovative manufacturing process for the in-LINE COATING of pultruded composites (COALINE project)</p>
4.55 pm	<p>Xiaoqing Zhang <i>(CSIRO Manufacturing, Victoria, Australia)</i> Development of thermosetting resins to improve resin performance</p>	<p>Jan Schiller <i>(CTC Stade GmbH, Stade, Germany)</i> High Pressure-RTM for Aerospace Application</p>
5.20 pm	<p>Frank Osterod <i>(Cariant Plastics & Coatings, Deutschland GmbH, Hürth, Germany)</i> Managing flame retardant performance in modern thermoset resin applications</p>	<p>Jarlath McHugh <i>(BMW Group, Landshut, Germany)</i> Characterization of release agents used in resin transfer moulding (RTM) and liquid compression moulding (LCM) processes</p>
7.00 pm	Evening Program - Conference Dinner	



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	Session 7 - Processing	Session 8 - Toughening
9.00 am	Invited Lecture: Eike Langkabel <i>(Evonik Resource Efficiency GmbH, Marl, Germany)</i> Uretdione – A versatile building block for outstanding new prepreg systems	Invited Lecture: Ambrose Taylor <i>(Faculty of Engineering, Department of Mechanical Engineering, Imperial College London, London, United Kingdom)</i> Toughening epoxies using nanoparticles
9.25 am	Dirk Achten <i>(Covestro Deutschland AG, Leverkusen, Germany)</i> New Isocyanate based thermoset composite matrix materials with extreme UV, chemical and weathering resistance	Christoph Uhlig <i>(Fraunhofer Institute for Applied Polymer Research IAP-PYCO, Teltow, Germany)</i> The relationship between thermoset resin compressive yielding behavior and toughness in addition curing resins
9.50 am	Boris Bulgakov <i>(Institute of New Carbon Carbon Materials and Technologies (INUMIT), Moscow, Russia)</i> Advanced phthalonitrile resins for out-of-autoclave composite manufacturing	Alexandre Vermogen <i>(Arkema France, Pierre Benite, France)</i> Latest innovation in core/shell toughening agents for thermosets and composites
10.15 am	Bethany Russell <i>(University of Bristol, Bristol Composites Institute (ACCIS), Bristol, UK)</i> The processing of a novel polymer matrix for use in composite wind turbine blades	Eleonore Mathis <i>(CNRS and Solvay, St. Fons, France)</i> Thermoset composites from soluble thermoplastic technology: control of morphology, in relation with applicative properties
10.40 am	Morning Tea & Coffee	
	Session 9 - Chemistry	Session 10 – Characterization & Application
11.15 am	Brigitte Voit <i>(Leibniz Institute of Polymer Research Dresden (IPF), Dresden, Germany)</i> Hyper-branched polymers as important components in coatings and resins	Jeremy Horion <i>(UCL, Lovain-la-Neuve, Belgium)</i> Using zinc oxide nanoparticles to improve the thermal stability of high performance benzoxazine resins
11.40 am	Maarten Delahaye <i>(Ghent University, Department of Organic and Macromolecular Chemistry, Ghent, Belgium)</i> Internally acid-catalysed covalent adaptable networks	Annika Wagner <i>(Profactor GmbH, Steyr-Gleink, Austria)</i> Development of novel high-temperature polyimide-like inks for PolyJet 3D printing – Curing kinetics and properties of printed material
12.05 pm	Katharina Koschek <i>(Fraunhofer IFAM, Bremen, Germany)</i> Synthetic approaches to mouldable and recyclable thermosetting lightweight materials	Sebastien Pruvost <i>(INSA Lyon, University of Lyon, IMP, Villeurbanne, France)</i> Epoxy-Boron nitride composites for high voltage application
12.30 pm	Josef Brandt <i>(Leibniz-Institute for Polymers Dresden, Dresden, Germany)</i> Temperature dependent size exclusion chromatography for the in situ investigation of thermoreversibly bonding polymers	Uwe Mueller <i>(Kompetenzzentrum Holz GmbH, Linz, Austria)</i> Inline cure monitoring in engineered wood with paper sensors - Inspiration for carbon prepreps
1.00 pm	Lunch Break	
End of Conference		