



# FOAMS<sup>®</sup> 2017



15<sup>th</sup> International Conference on Advances in Foam Materials & Technology

## CONFERENCE, TUTORIAL & EXHIBITION OCTOBER 9-12 - BAYREUTH, GERMANY

Conference Chair: Prof. Dr.-Ing Volker Altstädt

### TUTORIAL - MONDAY, 9 OCTOBER

8:00 am: Registration Starts

9:00 am - 1:00 pm: Prof. Chul Park - Foaming Technology

Lunch

2:00 - 6:00 pm: Prof. Hani Naguib - Sustainable and Multifunctional Foams

### TUTORIAL - TUESDAY, 10 OCTOBER

9:00 am - 1:00 pm: Dr. Stéphane Costeux - Nanocellular Foams

Lunch

2:30 - 5:30 pm: Plant Tour: Neue Materialien Bayreuth GmbH,\*  
afterwards visit of brewery with beer tasting

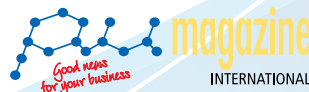
### CONFERENCE

Wednesday & Thursday | 11-12 October

Presentations, Poster Session and Exhibition

Sponsored by SPE TPM&F Division

**NETZSCH**



\*NMB and brewery tour is also open for non-tutorial participants; therefore please select NMB tour as option during the registration or email us: [info.foams2017@uni-bayreuth.de](mailto:info.foams2017@uni-bayreuth.de)

# WEDNESDAY | 11 OCTOBER

**8:00 am:** Registration Starts

**8:45 am:** Welcome Address/Announcements, Professor Volker Alstädt

**8:55 am:** Plenary Speech, Dr. Roland Hingmann (BASF SE)

*Thermoplastic Foams: An Exciting Story of Versatile Cellular Materials for Multifaceted Applications and Markets*

## Session 1: 9:40 - 10:30 am

### Polymer Design

Mahdi Abbasi, Karlsruhe Institute of Technology  
*Foaming and Rheology of Model Linear, Comb and Bottlebrush Polystyrenes*

Svenja Göttermann, University of Stuttgart  
*Modification, Preparation and Characterization of Polylactide Foams*

## Session 2: 10:50 am - 12:30 pm

### Nucleation / Cell Morphology

Merve Demir, University of Bayreuth  
*Effect of Supramolecular Nucleating Agents on the Morphology and Properties of Semi-crystalline Polymer Foams*

Anna Uray, University of Loeben  
*Modified Talcum as a Novel Nucleating Agent*

Yuxiao Zhang, RWTH Aachen  
*Investigation of the Effect of the Nucleation Process on the Foam Structure in Foam Injection Molding*

Wei-Hsiang Liu, National Taiwan University of Science and Technology  
*Preparation of Microcellular Polyamide 6 Foam by Batch Foaming*

## 12:30 - 2:00 pm Lunch Break

## Session 3: 2:00 - 3:40 pm

### Advances in Foam Processing and Novel Processes

Annerose Hüttl, Kunststoffzentrum Leipzig  
*Manufacturing of Lightweight Parts by Sandwich Injection Molding of Metalreplacement Plastics Combines with Light Foams*

Ernesto Di Maio, University of Naples  
*Thermoplastic Foaming by Using CNT and Microwaves*

Daniele Tamarro, Sulzer  
*Continuous Production of PET Foams with a Novel, Economic and Stable Process*

Masahiro Oshima, University of Kyoto  
*A Simplified Foam Injection Molding Process for Producing Microcellular Plastic Foams*

## Session 4: 4:00 - 5:40 pm

### Processing and Applications Part 1

Norbert Reichelt, Borealis  
*Sustainable and Versatile Lightweight Foam Made from Daploy™.*

Michael Hartung, University of Kassel  
*Injection Molding of Liquid Silicone Rubber Foams*

Julia Gensel, Neue Materialien Bayreuth GmbH  
*Fusion in EPP Bead Foams: Influence of Processing and Functional Additives*

Jean-Francois Koenig, DOW  
*Novel Thermal Insulating Styrenic Polymer Foam for Refrigerated Trucks*

## Poster Session: 6:00 - 7:30 pm

## Conference Dinner: 8:00 pm

# THURSDAY | 12 OCTOBER

**9:00 am:** Plenary Speech, Dr. Chris Holmes (Adidas AG)  
*Polymer Foams for Advanced Sports Applications*

## Session 5: 9:45 - 10:35am Foaming Fundamentals and Modeling

**Jochen Manara, ZAE Bayern**  
*Experimental Characterization and Theoretical Modeling of the Infrared-Optical Properties and the Radiative Thermal Conductivity of Foams*

**Piyapong Buahom, University of Toronto**  
*Clarification of the Thermal Conductivity of Nanocellular Insulation Foams*

## Session 6: 10:55 am - 12:35 pm Processing and Applications Part 2

**Harald Heitkamp, Trexel**  
*Gas Migration on Physical Foamed Parts and the Influence on Subsequent Processes*

**Josef Jančář, Brno University of Technology**  
*Structurally Gradient Impact Resistant ICPC Nano-composite Foams for Automotive Applications*

**Patricia Parlevliet, Airbus**  
*Foam Core Based Thermoplastic Composite Sandwich Materials for Structural Aerospace Applications*

**Clio Coquet, Arkema**  
*Impact of Pebax® Structure on the Mechanical Properties of Low Density Pebax® Foam*

## 12:35 - 2:05 pm Lunch Break

## Session 7: 2:05 - 3:45 pm Properties and Analysis

**Hani Naguib, University of Toronto**  
*Development and Characterization of Multifunctional Super-Insulated Organic Aerogels Nano Foams with Enhanced Mechanical Elasticity*

**Martin Günther, BAM**  
*Fire Phenomena of Rigid Polyurethane Foams*

**Luigi Sorrentino, Istituto per i Polimeri, Compositi e Biomateriali**  
*Composite Foams with Anisotropic Structural and Functional Properties*

**Eduardo Lopez-Gonzalez, University of Valladolid**  
*Low Density Open Cell Flexible Foams as Highly Efficient Materials for Oil Absorption: Influence of the Foam Tortuosity on the Oil Absorption*

## Session 8: 4:05 - 5:45 pm Advances in Foaming

**Chul B. Park, University of Toronto**  
*Controlling the Mold Cavity Pressure to Govern Foaming Phenomena in Foam Injection Molding*

**Judith-Martin de Leon, University of Valladolid**  
*Semi-Transparent Nanocellular Polymers Based on PMMA: Production and Characterization*

**Heinz Gross,**  
**Dr. Gross Kunststoff-Verfahrenstechnik**  
*Laser Melting Technologies Open Up New Possibilities to Improve the Distribution of Blowing Agents in Extrusion Dies*

**Reza Nofar, Istanbul Technical University**  
*Continuous Foam Extrusion of Polystyrene (PS) Blends and Composites*

## Closing Ceremony: 5:45 pm

## TUTORIAL

The tutorial is addressed to people from scientific institutes as well as from companies involved in thermoplastic foam development, production and application. It will provide practical information that will help enhance the attendees' technical capability in foaming. A guided tour to the facilities of Neue Materialien Bayreuth GmbH will further give an overview about foaming technologies.

## CONFERENCE

The conference is addressed to industry and academia. For 2 days, world-renowned speakers present technical papers on innovations in foam processing, nano-cellular foam technology, environmentally friendly foams and more.

**For further information and rates, please visit:  
[4spe.org/foams2017](http://4spe.org/foams2017)**

## CONFERENCE COMMITTEE

General Conference:	Prof. Volker Altstädt, University of Bayreuth
Technical Program:	Prof. Ernesto Di Maio, University of Napoli
Tutorial Program:	Prof. Chul B. Park, University of Toronto
Sponsorship Chair:	Michaela Mörl, University of Bayreuth
Student Poster:	Prof. Hans-Werner Schmidt, University of Bayreuth
Hotel Information:	Milena Spörl, University of Bayreuth
NMB Tour:	Dr. Thomas Neumeyer, Neue Materialien Bayreuth GmbH
Student Scholarship:	Kimberly McLoughlin, Braskem
Organization:	Tobias Standau

**Contact: [info.foams2017@uni-bayreuth.de](mailto:info.foams2017@uni-bayreuth.de)**