

FOAMS® 2019

17th International Conference on Advances in
Foam Materials & Technology

CONFERENCE, TUTORIAL & EXHIBITION

SEPTEMBER 30-OCTOBER 3 – VALLADOLID, SPAIN

Co-Sponsored by SPE Thermoforming Plastics Materials and Foams Division





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17th International Conference on Advances in Foam Materials & Technology

TUTORIAL

SEPTEMBER 30-OCTOBER 1 – VALLADOLID, SPAIN

CONFERENCE & EXHIBITION

OCTOBER 2-3 – VALLADOLID, SPAIN

Conference Chair:

General Conference: Prof. Dr. Miguel Angel Rodriguez-Perez, University of Valladolid

Technical Program: Dr. Javier Pinto, University of Valladolid. Dr. Stephane Costeux, Dupont

Foams Tutorials: Prof. Dr. Chul B. Park, University of Toronto

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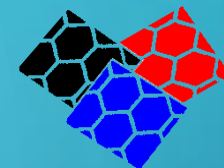
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CONFERENCE PROGRAMME OCTOBER 2-3 – VALLADOLID, SPAIN

Wednesday October 2nd

Time	Event / Speaker	Affiliation	Talk title
7:45-8:30	On-site Registration - Badge Pick-up		
8:30-8:50	Welcome / Conference Opening		
8:50-9:35	Keynote speaker: Dr. Natarajan S. Ramesh	VELCRO Group Corporation (USA)	Plastic Foam Sustainability
Session 1	Extrusion foaming process		
9:35-10:00	Gisbert Riess	University of Leoben (Austria)	Physical foaming with modified talcum as novel nucleating agent
10:00-10:25	Robert Breuer	RWTH Aachen University (Germany)	Production of flame-retardant foam boards from renewable resources
10:25-10:50	Katalin Litauszki	Budapest University of Technology and Economics (Hungary)	Extrusion foaming of poly(lactic acid) with thermally expandable microspheres
10:50-11:20	Morning break		
Session 2	Sustainable foams		
11:20-11:45	Suset Barroso-Solares	University of Valladolid (Spain)	Delivery rate control of Ibuprofen impregnated into hollow polycaprolactone fiber mats obtained by foaming procedures
11:45-12:10	Luis E. Alonso	CIDAUT (Spain)	Processing of recycled polyethylene films to produce low-density foams with the same features as virgin analogues
12:10-12:35	Giancarlo Delevati	Renewable Chemicals (Brazil)	Biobased EVA for foam applications
13:00-14:00	Conference Lunch		
Session 3	Nanocellular foams and fundamentals		
14:30-14:55	Philippe Cassagnau	University of Lyon (France)	PMMA and Silicone foams by CO ₂ : Why such a big difference in cell morphology?
14:55-15:20	Jose Antonio Reglero-Ruiz	University of Burgos (Spain)	Fabrication of microporous aramids using ionic liquids
15:20-15:45	Frederik Van Loock	Cambridge University (UK)	Exploring the limits of solid-state nanofoaming
15:45-16:10	Norman Fleck	Cambridge University (UK)	Molecular dynamics simulations of PMMA ultrathin films
16:10-16:40	Afternoon break		
Session 4	Nanocellular foams properties		
16:40-17:05	Vipin Kumar	University of Washington (USA)	Some properties of transparent PEI foams
17:05-17:30	Victoria Bernardo	University of Valladolid (Spain)	New insights on the physical properties of nanocellular foams
17:30-17:55	Zainab Patel	University of Washington (USA)	Nanostructure Development in PEI Thin Films: A unique hierarchical structure in 70 micron film
18:00-19:30	Poster Session and Cocktail		



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CONFERENCE PROGRAMME

Thursday October 3rd

Time	Event / Speaker	Affiliation	Talk title
Session 5			
In-mold foaming			
8:00-8:25	Yuta Hikima	Kyoto University (Japan)	A Simplified Foam Injection Molding Machine with Near Infrared (NIR) Monitoring System of Physical Blowing Agent Concentration
8:25-8:50	Svenja Marl	University of Kassel (Germany)	Flexible Foams made of Liquid Silicone Rubber and expandable Microspheres
8:50-9:15	Chul B. Park	University of Toronto (Canada)	PP/PET Fibrillar Composite: Microstructure, Foaming Ability, and Mechanical Performance
9:15-9:40	Gethin Llewelyn	Swansea University (UK)	Low-Pressure Microcellular Foaming of Polypropylene through Chemical, Physical and Hybrid Foaming Agents
9:40-10:15	Johannes Görl	University of Bayreuth (Germany)	Steamless pre-foaming of expandable polystyrene beads (EPS)
10:15-10:45	Morning break		
Session 6			
Nanocomposite foams			
10:45-11:10	Byung Gwan Hyun	University of Toronto (Canada)	Soft, Flexible TPU Composite Foams for Self-Powered Pressure Sensors
11:10-11:35	Akihiro Ito	Kyoto Municipal Institute of Industrial Technology and Culture (Japan)	Foam molding of cellulose-nanofiber-reinforced thermoplastic elastomer
11:35-12:00	Chul B. Park	University of Toronto (Canada)	Development of Microcellular Polyethersulfone/Graphene Nanoplatelet Composite: Effects of Composition and Cellular Morphology on Thermal and Electrical Conductivity
12:00-12:25	Raquel Verdejo	Institute of Polymer Science and Technology (CSIC) (Spain)	EPDM nanocomposite foams with excellent electrical conductivity and electromagnetic shielding behavior
12:45-13:45	Conference Lunch		
Session 7			
Chemical blowing agents and additives			
14:15-14:40	Cosimo Brondi	University of Naples (Italy)	The effect of air bubbles inclusion on polyurethane foaming - Insight into bubble nucleation and growth mechanisms
14:40-15:00	Ernesto Di Maio	University of Naples (Italy)	Matching timescales in thermosetting polyurethane foaming: slow curing vs. fast blowing agent release
15:00-15:25	Mercedes Santiago	University of Valladolid (Spain)	Understanding the kinetics of foaming in rigid PU foams as a tool to improve the physical properties
15:25-15:45	Afternoon break		
Session 8			
Foam structure and properties			
15:45-16:10	Yuxiao Zhang	RWTH Aachen University (Germany)	Investigation of the Foamability and Resulting Mechanical Properties of Foamed Thermoplastic Vulcanizates and Polyurethanes
16:10-16:35	Luigi Sorrentino	IPCB-CNR (Italy)	Visco-Hyperelastic Response of Polyurethane Foams
16:35-17:00	Conclusion and next conference announcement		
17:45-19:15	English-Guide Visit to the City Center		
19:30-21:30	"Tapas" Dinner at the City Center		



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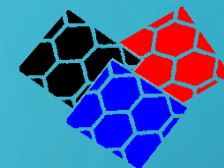
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POSTER SESSION

Wednesday October 2nd

Number	Author	Affiliation	Title
1	Alberto Ballesteros	University of Valladolid (Spain)	Cellular materials based on nanocomposites of polystyrene and nanometric inorganic fillers with a needle-like morphology. Relation between dispersion, structure, and properties
2	Beatriz Merillas	University of Valladolid (Spain)	Nitrate removal from aqueous solution by adsorption onto polyurethane/sepiolite cellular nanocomposites
3	Cosimo Brondi	University of Naples (Italy)	The influence of air bubbles inclusion on the nucleation and growth mechanisms – An insight by in-situ monitoring of rigid polyurethane foaming
4	Daniel Cuadra	University of Valladolid (Spain)	Determination of the effective glass transition temperature of PMMA by optical observation method
5	Eduardo Lopez-Gonzalez	University of Valladolid (Spain)	Flexible Low-Density Open-Cell Polyolefin-Based Foams with Tailored Levels of Tortuosity: Cellular Structure, Properties and Applications
6	Ismael Sanchez-Calderon	University of Valladolid (Spain)	Low-density PMMA/TPU nanocellular polymers with tuneable cellular structure by modifying the TPU chemistry and concentration
7	Judith Martin-de-Leon	University of Valladolid (Spain)	Homogeneous nucleation to produce nanocellular PMMA: understanding and control of the production process
8	Leandra Oliveira Salmazo	University of Valladolid (Spain)	Study of the influence of crosslinking degree on the cellular structure in natural rubber foam crosslinked by electron beam irradiation
9	Mercedes Santiago-Calvo	University of Valladolid (Spain)	A methodology for monitoring the foaming kinetics of rigid polyurethane foams applied to optimize their properties
10	Mikel Mugica-Izaguirre	University of Valladolid (Spain)	Development of an accessible laboratory steam molding system to produce foamed blocks from foamed beads
11	Paula Cimavilla-Román	University of Valladolid (Spain)	Influence of nanoporous aerogel particles on the thermal conductivity and foaming process of rigid polyurethane foams from a physicochemical perspective
12	Podchara Rattanakawin	Kyoto University (Japan)	Nanocellular Chemical Foam of Thin Film Using Blowing Agent Embedded Polymers (Proceeding also available)
13	Shu-Kai Yeh	The National Taiwan University of Science and Technology (Taiwan)	Cell Morphology and Shrinkage Ratio of TPU Foam Beads Prepared by CO ₂ Foaming
14	Shunsuke Hosoe	Kyoto University (Japan)	Near Infrared (NIR) Monitoring Technique of Physical Blowing Agent Concentration in a Microcellular Foam Injection Molding Process
15	Victoria Bernardo	University of Valladolid (Spain)	Strategies to produce PMMA-based nanocellular polymers using the heterogeneous nucleation approach



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