Sunday, June 5, 2022

ARRIVAL AND REGISTRATION

2:30 PM	REGISTRATION BEGINS	

	LECTURE SESSION I **Session Chair: Jamie Grunlan, Texas A&M University**	
3:15 PM	OPENING REMARKS	
3:30 PM	**Alexander Morgan**, University of Dayton Research Institute *Studying Smoldering to Flaming Transition in Polyurethane Furniture Sub-Assemblies: Effects of Fabrics, Flame Retardants, and Material Type*	**1**
4:00 PM	**Mauro Zammarano**, NIST *Fire Barrier Fabrics in Upholstered Furniture: An Obvious Solution to One of the Most Enduring Problems in Fire Safety*	**2**
4:30 PM	BREAK	
4:45 PM	**Isaac T. Leventon**, NIST *The NIST Material Flammability Database: Experimental Measurements for Fire Model Calibration and Validation*	**3**
5:15 PM	**Morgan C. Bruns**, St. Mary's University *Development of Automated Calibration Tools for Determining Fire Model Input Parameters*	**4**
5:45 PM	**Natallia Safronava**, Federal Aviation Administration *Microscale Combustion Calorimetry and Material Change Similarity*	**5**
6:15 PM	WELCOME RECEPTION	

Monday, June 6, 2022

7:00 AM	BREAKFAST I 7AM – 10 AM IN THE HOTEL'S ATRIUM	

	LECTURE SESSION II **Session Chair: Alexander Morgan, University of Dayton Research Institute**	
8:30 AM	**Anteneh Worku**, Pinfa North America *The Road to Flame Retardant Commercialization*	**6**
9:00 AM	**Sabyasachi Gaan**, EMPA, Switzerland *Hybrid Strategies for Improving the Fire Performance of Epoxy Resin Cured With Aliphatic Hardener*	**7**
9:30 AM	**Svetlana Tretsiakova-McNally**, Ulster University, UK *Thermal Decomposition of Styrenic Polymers Modified with Covalently Bound P- and N-containing Groups: Analysis of the Gaseous-Phase Mechanism*	**8**

Monday, June 6, 2022, cont'd

10:00 AM	BREAK	
10:15 AM	**Todd Emrick**, University of Massachusetts – Amherst *Designing Oligo- and Polymeric Flame Retardants for High Char Yields*	**9**
10:45 AM	**Sabine Fuchs**, Hamm-Lippstadt University of Applied Science, Germany *Halogen-Free Styrene Copolymers With Intrinsic Flame Retardant Properties*	**10**
11:15 AM	**Jacques A. De Beer**, University of Maryland *Milligram-scale Flame Calorimetry: Development of a Pyrolyzer System used for Accurate Emulation of the Burning Behavior of Non-thermally Thin Samples*	**11**
11:45 AM	END AM SESSION, LUNCH ON YOUR OWN	
	LECTURE SESSION III **Session Chair: Mauro Zammarano, National Institute of Standards and Technology**	
4:00 PM	**Ramaswamy Nagarajan**, University of Massachusetts Lowell *Surface functionalization Strategies for Fire Retardant Nylon, Cotton and, Nyco*	**12**
4:30 PM	**Bernhard Schartel**, BAM Federal Institute for Materials Research and Testing, Germany *Non-vegan Flame-Retardant (Adjuvants in) Biocomposites*	**13**
5:00 PM	**Helge-Otto Fabritius**, Hamm-Lippstadt University of Applied Sciences, Germany *Mechanistic Investigations of Wasp Nest Papers: Towards Environmentally Compatible Flame-Retardant Concepts for Synthetic Materials*	**14**
5:30 PM	*END DAILY LECTURES*	
6:00 PM	POSTER SESSION END DAILY SESSIONS	

Tuesday, June 7, 2022

7:00 AM	BREAKFAST I 7AM – 10 AM IN THE HOTEL'S ATRIUM	
	LECTURE SESSION IV **Session Chair: Sabyasachi Gaan, EMPA, Switzerland**	
8:30 AM	**Serge Bourbigot**, University of Lille, France *Recent Advances in Designing Fire Barriers*	**15**
9:00 AM	**Jaime Grunlan**, Texas A&M University *Water-Based, Environmentally-Benign, Polyelectrolyte-Based Flame Retardant Treatments*	**16**
9:30 AM	**Severine Bellayer**, University of Lille, France *Formulation of Thin and Thick FR Sol-Gel Coatings*	**17**

Tuesday, June 7, 2022, cont'd

10:00 AM	BREAK	
10:15 AM	**Ravi Mosurkal**, US Army CCDC *Surface Functionalization Strategies for Fire Retardant Nylon, Cotton, and Nyco*	**18**
10:45 AM	**Jeffrey Pyun**, University of Arizona *Polymers Derived From Elemental Sulfur with Enhanced Thermomechanical and Flame Retardant Properties*	**19**
11:15 AM	**Yury Brusentsev**, Åbo Akademi University, Finland *Sulfenamides, Sulfinamides and Sulfonamides as Flame Retardants – Similarities and Differences in the Mechanism of Action*	**20**
11:45 AM	END AM SESSION, LUNCH ON YOUR OWN	
	LECTURE SESSION V **Session Chair: Serge Bourbigot, University of Lille, France**	
4:00 PM	**Baljinder Kandola**, University of Bolton, United Kingdom *Effect of Crosslinkers on Charring Efficiency of Lignin-Polyamide Precursors for the Production of Carbon Fibers*	**21**
4:30 PM	**Conor McCoy**, University of Maryland *Modeling of Flame Spread on Charring, Non-charring, and Flame Retardant Polymers In UL-94V*	**22**
5:00 PM	**Lorenza Maddalena**, Politecnico di Torino-Alessandria campus, Italy *Water-Based Processes Exploiting High Aspect Ratio Nanoparticles for the Development of Flame Retardant Flexible Polyurethane Foams*	**23**
5:30 PM	BREAK	
5:45 PM	**Vitus Hupp**, Bundesanstalt für Materialforschung und -prüfung (BAM), Germany *Adhesive Tapes in Bonded Materials - Fire Risk or Protective Layer?*	**24**
6:15 PM	**Markus Wiesemann**, Hamm-Lippstadt University of Applied Sciences, Germany *Halogen-Free Syntheses of Phosphoric Esters Based on Phosphorus Pentoxide*	**25**
6:45 PM	END DAILY SESSIONS	

Wednesday, June 8, 2022

7:00 AM	BREAKFAST I 7AM – 10 AM IN THE HOTEL'S ATRIUM

	LECTURE SESSION VI **Session Chair: Baljinder Kandola, University of Bolton, UK**	
8:30 AM	**Gaëlle Fontaine**, University of Lille, France *Mechanistic Aspects of Flame Retarded Polybutylene Succinate*	**26**

Wednesday, June 8, 2022, cont'd

9:00 AM	**Thomas J. Kolibaba**, NIST *Polyelectrolyte Composites for Flame Retardant Additive Manufacturing*	**27**
9:30 AM	**Igor Jordanov**, Ss. Cyril and Methodius University, Macedonia *Lignin-Based Multilayer Nanocoating for Flame Retardant Cotton Fabric*	**28**
10:00 AM	BREAK	
10:15 AM	**Bob A. Howell**, Central Michigan University *Iron Additives as Alternatives to Antimony Oxide in Flame-Retardant Formulations*	**29**
10:45 AM	**Hatsuo Ishida**, Case Western Reserve University Polybenzoxazines: *Development of Very High Performance Noncombustible Polymers without the Need of Flame Retarding Additives*	**30**
11:15 AM	CLOSING REMARKS	

MONDAY, JUNE 6, 2022

	POSTER PROGRAM
Manon Fleurotte, **Abdenour Amokrane**, Olivier Authier, Gérald Debenest, Gaëlle Fontaine, and Serge Bourbigot EDF R&D, University of Lille, CNRS, INRAE, FRANCE *Sensitivity Analysis of the Pyrolysis Model of Non-Charring and Charring Materials Using Morris Screening Method*	**1**
Lei Chen, Byeongjin Baek, Scott Corneillie, Cheryl Patchett, Amol Prabhakar Avhad, Swamy SM, Han Goossens, and Sreekanth Pannala SABIC Corporate Technology and Innovation, UNITED STATES *Development of Computational Fluid Dynamics Models for Flame Retardant Thermoplastics in Electric Vehicle Applications*	**2**
James P. Covello, Erik J. Price, Rajib Paul, and Gary E. Wnek Case Western Reserve University, UNITED STATES *Tannic Acid-based Super-Intumescent Coatings for Prolonged Fire Protection of Cardboard and Wood*	**3**
Jacques A. De Beer, Joseph A. Alascio, Stanislav I. Stoliarov, Emily L. Dietz, Michael J. Gollner University of Maryland *Analysis of Thermal Exposure and Ignition of Western Red Cedar Subject to Glowing Firebrand Piles*	**4**
Kata Enikő Decsov, Bettina Ötvös, György Marosi, and Katalin Bocz Budapest University of Technology and Economics, HUNGARY *Development of Silica Microfibres and Application as Flame Retardant Additives in Poly(lactic acid)*	**5**
Michael V. Heck, Isaac T. Leventon*, Matthew F. Bundy, Kevin B. McGrattan, and Rick D. Davis NIST, UNITED STATES *Experimental Measurements of Full-Scale Fire Growth for Fire Model Validation*	**6**
Carl-Christoph Höhne, Volker Gettwert, and Andreas Menrath Fraunhofer Institute for Chemical Technology ICT, GERMANY *Flame Retardancy Investigations on Composites for Lightweight Electric Vehicle Battery Housings*	**7**
David J. Irvin, Kousaalya Bakthavatchalam, Rahul Harkawat, and Jennifer A. Irvin Firesafe Zone LLC, UNITED STATES *Scale-Up and Testing of New Self-Extinguishing Polymer*	**8**
Md Tahmid Islam, Gordon L. Nelson, and M. Toufiq Reza Florida Institute of Technology *Combustion Kinetics of Hydrothermally Carbonized Lignocellulosic Biomass by Cone Calorimeter*	**9**
Sourabh Kulkarni, Julie St. Cyr, Zhiyu Xia, Arjan Giaya, Ryan Bouldin, Ravi Mosurkal, and Ramaswamy Nagarajan University of Massachusetts Lowell, UNITED STATES *Simple Surface Functionalization Method for Multifunctional Textiles with Flame and Vector Protection*	**10**