**Sunday, April 7, 2024**

**Revision: 25**

**Date: April 4, 2024**

**12:00 PM** **Exhibition Set-up Starts**

**Monday, April 8, 2024**

**7:00 AM** **Registration & Continental Breakfast Sponsored by SPE Automotive Division**

**8:15 AM** **Welcome Remarks**: Conference Chair, Dr. Sassan Tarahomi, Alterra Holdings

**8:30 AM** **Technical Program Highlights:** Dr. Norm Kakarala / Dr. Suresh Shah

**8:45 AM** **Keynote Presenter: Electrified Corvette E-Ray; Josh Holder, Corvette Vehicle Chief Engineer, GM**

**9:15 AM Sponsors Remarks**

**9:30 AM** **Keynote Speaker: Lithium Ion Battery and Battery Cooling; John Warner, CEO, American Battery Solutions**

**10:00 AM** **BREAK Sponsored by SPE Automotive Division**

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall - III** |
| **BATTERY AND THERMAL MANAGEMENT SYSTEM**  Dhanendra Nagwanshi, SABIC  Dr. Jeff Helms, Celanese Corp.  Maggie Baumann, PPA/Pinfa NA | **MANUFACTURING ENABLING TECHNOLOGIES**  David Kosse, Ascend Materials.  Steve Vanloozen, Lotte Advanced Materials | **EVOLUTION OF EXTERIORS AND LIGHTING**  Tom Pickett, General Motors  Volker Plehn, SABIC  Mark Lapain, Advanced Composites |
| **10:30 AM** | **Polymeric Material Requirements for Batteries Used in Electric Vehicles**  **Ken Vessey**  UL | **A Composite Sandwich Structure Study for EV Battery Cover Application**  **Fred Chang**  SABIC  **Sara Simon**  Forward Engineering | **Body Exterior Design Trends for Electric Vehicles**  **Tom Pickett**  General Motors |
| **11:00 AM** | **Innovative Raw Materials Addressing Thermal Management and Thermal Runaway**  **Kerry Smith**  Nabaltec AG | **Additive Manufacturing as an Alternative for Small Series**  **Daniel Baek**  Akro Plastics GMBH | **Revolutionizing Automotive Aesthetics: Evolving Functions Enhance Design Freedom**  **Michael Angelo Osero**  SABIC |
| **11:30 AM** | **Trends and Novel Solutions for Efficient EV Glycol Thermal Management**  **Dr. Brian J. Cardwell**  Cooper Standard | **Rapid Prototyping with 3D Printed Injection Molding Inserts**  **David Constant**  BASF | **Integrated Tailgate Storage Compartment**  **Mary Reiber, Tanner Ivey**  GM |

**12:00 PM** **LUNCH: Sponsored by SPE Automotive Division**

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall - III** |
| **BATTERY AND THERMAL MANAGEMENT SYSTEM** | **MANUFACTURING ENABLING TECHNOLOGIES** | **EVOLUTION OF EXTERIORS AND LIGHTING** |
| **1:30 PM** | **Thermoplastic Solutions for Battery Module**  **Nick Compton**  GM | **Revolutionizing Battery Enclosures in Electric Vehicles Through Polyurethane Systems and Advanced Manufacturing Technologies**  **Ricardo Mercado**  BASF | **Evolving Rear Access Solutions – Lighter and Cleaner**  **Daniel Lee, Gillard Laurent**  Magna Exteriors |
| **2:00 PM** | **Solutions for Thermal Runaway**  **Dinesh Minjurulimana**  SABIC | **Optimizing EV Structural Designs with Manufacturing Process Simulations**  **Srikar Vallury**  Moldex-3D | **Innovations in Automotive Exterior Lighting**  **Tom Pickett**  GM |
| **2:30 PM** | **Electrification Outside Automotive**  **Dr. James Edmondson**  IDTechX | **PUR Overmolding of Exterior and Interior Parts for Class A Out of Mold Production**  **Stephen Beadsley**  Krauss Maffei | **Uniformly Lit Animated Tail Lamps**  **Steve Ganado**  Magna Lighting |
| **3:00 PM** |  | **Lightweight Techniques for EV DC-DC Converter**  **Jung Hwan Lee**  LG Chemicals | **Advancement in Translucent TPOs Enabling Innovative Lighting Design**  **Dr. Jane Lu**  LyondellBasell |

**3:30 PM** **BREAK: Sponsored by SPE Automotive Division**

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall - III** |
| **BATTERY AND THERMAL MANAGEMENT SYSTEM**  Dhanendra Nagwanshi, SABIC  Dr. Jeff Helms, Celanese Corp.  Maggie Baumann, PPA/Pinfa NA | **MATERIAL INNOVATIONS**  Mike Shoemaker, Borealis  Rick Luxgrant, Stellantis  Sunit Shah, LyondellBasell | **EVOLUTION OF EXTERIORS AND LIGHTING**  Tom Pickett, General Motors  Volker Plehn, SABIC  Mark Lapain, Advanced Composites |
| **4:00 PM** | **Innovative Solutions for Thermal Propagation in EV’s**  **John Waltz**  LG Chem | **Material Trends and Innovation in 2024**  **Dr. Sassan Tarahomi**  Alterra Holdings | **Environmental Stewardship Through Implementation of Thermoset BMC Recycling in Automotive Lighting**  **Bob Fraizer**  Valeo |
| **4:30 PM** | **Novel Polyester Films for EV and AV Technology Solutions**  **Jan LaRiviere**  Mylar Specialty Films | **Halogen Free Flame Retardant Polypropylenes for Electric Vehicle Applications**  **Mark Evans**  Borealis | **Coating Systems for Lighting**  **Dr. Andreas Haeuseler**  Momentive |
| **5:00 PM** | **Thermal Packing for EV’s**  **Marina Mendoza Fricke**  Parker Hannifin | **Flame Retardant Choices for Automotive Compounds in Changing Regulatory Landscape**  **Jakub Lison**  ICL Industries | **Sustainable Polyamide Solutions: Solutions for Global Challenges**  **Bernd Henkelmann**  Radici Group |
| **5:30 PM** | **Innovative Materials for Lightweight EV Battery Enclosure**  **Keith Kauffmann**  Envalior | **Flame Retardant Engineering Compounds for Electric Vehicles**  **Marc Ollig**  Akro Plastics GMBH | **Design Trends and Challenges for Front and Rear Fascia**  **Paul Henri Matha**  DVN |

**6:00 PM – 8:00 PM** **Reception: Sponsored by SPE Automotive Division**

**Tuesday, April 9, 2024**

**7:00 AM Registration & Continental Breakfast Sponsored by SPE Automotive Division**

**8:15 AM** **Welcome Remarks**: Conference Chair, Dr. Sassan Tarahomi, Alterra Holdings

**8:30 AM** **Keynote Speaker: Aligning EV Material Trends with Ford’s Sustainability Roadmap; Dr. Ellen Lee, Technology Lead, Ford Motor Company**

**9:00 AM** **Awards &** **Student Poster Competition:** Dr. Sassan Tarahomi, Alterra Holdings & Chuck Jarret,

The Materials Group

**9:30 AM** **Keynote Speaker: Benchmarking Recent Vehicle Launches; Manojdeep Jasrotia, VP of Sales, Caresoft**

**10:00 AM** **BREAK: Sponsored by SPE Automotive Division**

**10:30 AM Panel Discussion on Thermal Runaway – Detection,**

**Containment and** **Mitigation**

Participant Panelist:

- Dr. Su Jung Han – GM

- Bhaskara Boddakayala – Ford

- Kenneth R. Vessey – UL

- Brian Engle – Amphenol / NattBatt

- Dr. James Edmondson - IDTechX

- Prof. Amar K. Mohanty - University of Guelph

(Moderated by Dhanendra Nagwanshi, SABIC; Dr. Jeff Helms, Celanese & Maggie Baumann, PPA/Pinfa NA)

**12:00 PM LUNCH: Sponsored by SPE Automotive Division**

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall - III** |
| **BATTERY AND THERMAL MANAGEMENT SYSTEM**  Dhanendra Nagwanshi, SABIC  Dr. Jeff Helms, Celanese Corp.  Maggie Baumann, PPA/Pinfa NA | **MATERIAL INNOVATIONS**  Mike Shoemaker, Borealis  Rick Luxgrant, Stellantis  Sunit Shah, LyondellBasell | **EVOLUTION OF INTERIORS**  Dr. Rose Ryntz, Ryntz & Associates  Jeff Crist, Ford Motor Co. Jim Keller, Mankiewicz Coatings LLC |
| **1:30 PM** | **Mitigating Battery Cell Failures – Managing Cell Venting Events**  **Brian Engle**  Amphenol | **Long Chain Co-Polyamides in Electric Vehicle Extruded Busbar Applications**  **Mikel Petty**  Lyondellbasell | **Current & Future Direction for Seating Materials, Design, and Construction**  **Diane Murtonen**  Ford Motor Company |
| **2:00 PM** | **Battery Pack Sealing and Protection**  **Brian Engle**  Amphenol | **Bonding Polymeric Materials for Next Generation Automotive**  **Art Cawley**  DuPont | **Smart Integration Technologies Crossing Over Between Headliner Manufacturing, Lighting, and Electronics**  **Peter Barna**  Grupo Antolin |
| **2:30 PM** | **An Overview of NHTSA’s EV R&D Safety Activities**  **Dr. Tony Thampan**  NHTSA | **Polyphenylene Sulfide Compositions with a High Degree of Thermal Shock Resistance**  **Dr. Prabuddha Bansal**  Celanese | **PREPRO – Prepositioning Seam Support for Cut and Sew Covering**  **Ulrich Weissert**  Forvia |
| **3:00 PM** | **Evolving Thermal Management and Fire Protection in EV Batteries**  **James Edmondson**  IDTECHex | **Composites for Occupant and Battery Protection**  **Chris Korson**  BASF | **Peugeot Drives Car Interior Design Revolution with Stratasys**  **Fadi Abro**  Stratasys |

**3:30 PM** **BREAK: Sponsored by TBD SPE Automotive Division**

**3:45 PM** **Exhibit Hall -** **Student Poster Competition Awards:** Dr. Sassan Tarahomi, Alterra Holdings &

Chuck Jarret, The Materials Group

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall - III** |
| **BATTERY AND THERMAL MANAGEMENT SYSTEM**  Dhanendra Nagwanshi, SABIC  Dr. Jeff Helms, Celanese Corp.  Maggie Baumann, PPA/Pinfa NA | **MATERIAL INNOVATIONS**  Mike Shoemaker, Borealis  Rick Luxgrant, Stellantis  Sunit Shah, LyondellBasell | **EVOLUTION OF INTERIORS**  Dr. Rose Ryntz, Ryntz & Associates  Jeff Crist, Ford Motor Co. Jim Keller, Mankiewicz Coatings LLC |
| **4:00 PM** | **Long Chain Polyamides for Thermal Management and High Voltage Applications in BEV’s**  **Dr. Christian Kochanek**  Evonik | **Maximizing Potential: FR Plastics in EV Battery Systems**  **Hadwan Hadwan**  BASF | **UltraBlack - Anti-Glare Coatings for ADAS and HUD Applications**  **Paul Hahler**  Mankiewicz Coatings, LLC |
| **4:30 PM** | **Unique Flame Retardant PP Development and Commercialization**  **Dr. Deen Chundury**  Plastics Compounding LLC | **Expanding TPO Performance Using Novel Polyolefin Elastomers**  **Mark Jablonka**  Dow | **Elevate Every Surface: RAYN Technology – Where Elegance Meets Expression**  **Dustin Will**  RAYN Technology |
| **5:00 PM** | **Custom Tailored High Performance Polyamide Materials for Enhanced Battery Cooling Applications**  **Doug Thornhill**  EMS-GRIVORY | **Thermoplastics Solutions for Electric Vehicles**  **Dr. Fred Chang**  SABIC  **Sara Simon**  Forward | **Brominated Flame Retardants for Electric Vehicles – Safe, Sustainable, Versatile**  **Dr. Rajeev Mathur**  Albemarle |
| **5:30 PM** |  | **Post Industrial Recycled Polyamide Reinforced with Basalt Fiber for Semi-Structural Applications**  **Dr. Ellen Lee,** Ford  **Matthew Delaney,** TMG | **Flame Retarded Polyolefin Compound for Thermal Runaway Events in Electric Vehicles**  **Christopher Rudzinskas**  Lyondellbasell |

**6:00 PM- 8:00 PM** **Reception: Sponsored by SPE Automotive Division**

**Wednesday, April 10, 2024**

**7:00 AM Registration & Continental Breakfast Sponsored by SPE Automotive Division**

**8:15 AM Conference Remarks:** Conference Chair, Dr. Sassan Tarahomi, Alterra Holdings

**8:30 AM** **Keynote Speaker:** **Alternative Chemistries Delivering Significant Positive Impact on “Domestic Battery Solutions.” No Materials Tourism!; Tom Pilette, CEO, Zeta Energy**

**9:00 AM** **Keynote Speaker:** **Forecast on Electrification Outlook; Kevin Riddell, LMC GlobalData**

**9:30 AM BREAK Sponsored by SPE Automotive Division**

|  |  |  |
| --- | --- | --- |
| **Conference Hall - I** | **Conference Hall - II** | **Conference Hall – III** |
| **ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS)**  Dr. Rodrigo Orozco, Celanese  JP Wiese, Polyplastics | **NOISE AND VIBRATION**  Dr. Xian Jiang, Dow Joel Pierce, Borealis | **SUSTAINABILITY AND CARBON NEUTRALITY**  Dr. Alper Kiziltas, Amazon Dr. Prasad Soman, Amazon  Drew Geda, Hyundai-Kia America Manoj Patnala, Rivian Automotive |
| **10:00 AM** | **Automotive Market ADAS and AV Trends and Emerging Requirements for Radar**  **Dr. James Edmondson**  IDTechEx | **Overview of Capabilities to Evaluate Sound and Vibration Performance with Focus on High Resilient and Viscoelastic Polyurethane Foams**  **Josh Hand**  Dow | **Sustainable Products, Challenges and Opportunities**  **Dr. Arash Kiani**  Alterra Holdings |
| **10:30 AM** | **Radar Transparency of Exterior Trim – Considerations on The Effect of Mechanical Recycle Content**  **Carlos Pereira, Sebastian Flak**  SABIC | **Sustainable Solutions for EV Motor Mount Bushings**  **Jeff Smith**  Celanese | **Ford Mach E One-Piece Frunk in PCR TPO**  **Mahesh Bhattacharyya,**  Ford Motor Company  **Ben McComb,**  Advanced Composites |
| **11:00 AM** | **High Performance Transparent Polyamides for IR LED’s and Cameras in ADAS**  **Greg Beach**  EMS-GRIVORY | ***Overcome NVH challenges with innovative polyamide solutions for powertrain components***  ***Jason Park***  Ascend Performance Materials | **Highly Filled Short Banana Fiber – Polypropylene Composites: Fiber Concentration and Interfacial Adhesion Effects on Damping and Mechanical Performance**  **Dr. Caitlyn Clarkson**  Manufacturing Science Division, Oak Ridge National Laboratory (Knoxville, TN) |
| **11:30 AM** | **Beyond Burst Testing: Speeding Up Manufacturing for ADAS & ECUs with New Materials**  **JP Wiese**  PolyPlastics | **Changes of Plastics Used in BEV’s Compared to ICE’s & Why**  **Dr. Ashok Adur**  Everest International Consulting (LLC) | **Sustainable Products**  **Benny Zhao**  Kingfa |
| **12:00 PM** | **Laser Weldability and RF Absorber Material Solutions for Automotive Radar Sensors**  **Dr. Jeff Xu**  SABIC |  | **Sustainable Material Solutions with Bio-Based PA56**  **Dr. Julian Heinisch**  LG Chem |

**12:30 PM Conference Ends**