

SHERATON FORT WORTH DOWNTOWN HOTEL FORT WORTH, TEXAS FINAL AGENDA (as of 19 December 2023)

MONDAY, JANUARY 29, 2024

3:00PM - 5:00PM Workshop Registration

TUESDAY, JANUARY 30, 2024

- 7:00AM-8:00AM Workshop Registration
 8:00AM-8:15AM Opening Remarks Kaitlin Rigitano, University of Dayton Research Institute
- 8:15AM-8:30AM High Temple Reboot 2.0 Dan McCray, University of Dayton Research Institute
- 8:30AM-10:00AM Session 1: Program Overviews Chair: Caitlin Duffner, Air Force Research Laboratory
 - Overview of High Temperature PMC Activities at AFRL Hilmar Koerner, Air Force Research Laboratory
 - Overview of Army High Temperature Composite Efforts David Alfano, US Army DEVCOM Armaments Center
 - US Navy Overview for Advanced Materials Justin Hendrix, Naval Surface Warfare Center Dahlgren Division Matthew Laskoski, US Naval Research Laboratory
 - PFAS Regulations: What do they mean for the High Temple Community? Vinay Mishra, CABB Jayhawk Fine Chemicals

10:00AM-10:30AM Break

- 10:30AM-12:00PM Session 2: High Temperature Materials for Hypersonic Applications I Chair: Michael Rauscher, Textum
 - High-Rate Efficient Carbon-Carbon Manufacturing Michael Rauscher, Textum
 - MG 1204 High Char Yield Resin and 3D Carbon-Carbon Production Ryan Toivola, Karman Space & Defense, Systima Division

Shape Retention, In-Situ Data Collection, and Char Dynamics with Thermoplastic-Precursor Carbon/Carbon *Ryan Dunn, Mantis Composites*

12:00PM-1:00PM Lunch (provided)

TUESDAY, JANUARY 30, 2024 (continued)

1:15PM-1:30PM	Group Picture
1:30PM-3:00PM	Session 3: High Temperature Resins and Composites – I Chair: Mickey McCabe, Ohio University
	Additives for Improved Polymer Composite Properties Duane Simonson, Research Support Instruments, Inc.
	Paste Fillers and Adhesives for Extreme Environments Henry Sodano, Trimer Technologies, LLC
	Polyimide RTM Advanced Technology Engineering, PIRATE Program Overview Jesse Enlow & Joseph Begovich, GE Aerospace
3:00PM-3:30PM	Break
3:30PM-5:00PM	Session 4: High Temperature Resins and Composites – II Chair: Hilmar Koerner, Air Force Research Laboratory
	The Best of Both Worlds: Ease of Processing AND High Temperature Performance Theo Dingemans, University of North Carolina at Chapel Hill
	Vespel® Polyimide Parts and Shapes for Next-Generation Aerospace Lucas Amspacher, Omar Padilla-Velez, Richard Fiedler, & Peter Fox, DuPont de Nemours, Inc.
	Polysilazane (DI-200) Composites for High-Temperature Apertures Andrew Wallace, Ryan Truhn, Kenna Biddle & Mike Favaloro, Textron Systems
5:00 PM	Adjourn

WEDNESDAY, JANUARY 31, 2024

8:00AM-10:00AM	Session 5: Modeling of High Temperature Composites Chair: Andrew Guenthner, Tideway Arts and Sciences, LLC
	Influence of Wetting and Interfacial Phenomena on Void Formation and Transport during Liquid Composite Molding with High Temperature Resins Matthew Grasinger, Air Force Research Laboratory
	Manufacturing Core-Stiffened Structure with Next Generation Bismaleimides Evan Lloyd, Alan Rhodes, Marcos Pantoja, & Jubilee Bosch, The Boeing Company Josanlet Villegas & Andy Frazee, Syensqo
	Characterization and Modeling of Polyimide RTM Resin Chris Calebrese, Joseph Begovich, Bruce Koors, Jesse Enlow, & Doug Armstrong, GE Aerospace
	Enabling the Warfighter with Accelerated Discovery of New Materials: Applications of Data Science and Machine Learning in the Polymer Matrix Composites Team <i>Garrett Reinhard, Air Force Research Laboratory</i>

10:00AM-10:30AM Break

WEDNESDAY, JANUARY 31, 2024 (continued)

10:30AM-12:00PM Session 6: Finishes & Interfaces in High Temperature Composites

Chair: Dan McCray, University of Dayton Research Institute

Polyimide Glass and Quartz Fabric Prepreg Development for Optimized Low Dielectric Structures

Chantel Camardese, Christopher Barberi, & Stephen Smith, Toray Advanced Composites

Sizing Compatibility Issues Between Astroquartz III and High Temperature Polyimides Heritage Weems, Noor Farag, & Mohamed Gouiss, GE Aerospace

Investigation of Wet Glass Transition for Ultra High Temperature (UHTOMC) Organic Composites

Matthew Opliger & Rachael Andrulonis, Wichita State University, National Institute for Aviation Research Chantel Camardese, Christopher Barberi, & Stephen Smith, Toray Advanced Composites

12:00PM - 1:30PM Lunch (provided)

Session 7: Progress with Phthalonitrile 1:30PM - 3:00PM Chair: Gray Fowler, Textum New High Performance Phthalonitrile (PN) Resins/Composites Produced from Commodity Chemicals for Economy of Scale Matthew Laskoski, Naval Research Laboratory Improved Processability and Thermooxidative Stability of a PEEK-Based Phthalonitrile Resin Tyler Richardson, ASEE Postdoctoral Associate, Naval Research Laboratory Matthew Laskoski, Naval Research Laboratory **Development of High Temperature Phthalonitrile Formulations** Tao Tao & Kevin Wacker, Huntsman Advanced Materials 3:00PM-3:30PM Break 3:30PM-5:00PM Panel Session: "High Temple Workshop Reboot 2.0" Moderator: Hillary Huttenhower, Pratt & Whitney 6:00PM **High Temple Social Hour**

7:00PM High Temple Dinner Banquet

THURSDAY, FEBRUARY 1, 2024

8:00AM-10:00AM	Session 8: Durability of High Temperature Composites Chair: Andrew Littlefield, US Army
	Novel Thermoset Material with Improved Thermal Oxidative Stability Gaetano La Delfa, Stefan Ellinger, Roger Mazotti, Arxada AG Michael DiGiacomo, Arxada LLC
	An Updated Review of Thermal Environmental Response in Resin Transfer Molded Polyimide with a 3D Woven Preform <i>Kerry Necessary, Todd Bullions, Joseph Begovich, Jesse Enlow, Mohamed Gouiss,</i> & Greg Gemeinhardt, GE Aerospace
	Advancements in Ablative Long Fiber Compression Molding Compounds Bruce Toman & Frank Zeller, Texas Research Institute Austin Lee Wells, Sumitomo North America Bakelite Eric Smith, Saint-Gobain
	Rocket Landing Surface Environment and Infrastructure Protective Materials Characterization Jason Foley, Jacob Monzel, Ming Chen, Christopher Kassner, Davide Simone, & Malissa Lightfoot, Air Force Research Laboratory Kathryn Rutherford, Jeroen Deijkers, & Joshua Cramer, UES, Inc. Robert Jensen, Sierra Lobo, Inc. Gabrielle Esposito, University of Dayton Research Institute
10:00AM-10:30AM	Break
10:30AM-12:00PM	Session 9: High Temperature Materials for Hypersonic Applications - II Chair: Matthew Laskoski, Naval Research Laboratory
	Development of Additives to Improve Phthalonitrile-based Resin and Composite Properties Jennifer Dysart, Nova Research, Inc. Matthew Laskoski, Naval Research Laboratory
	BODA-Derived Resins (BDR) and Their PolyArylene Networks: Application as High- Temperature Polymers and High Yielding C/C Composites Ernesto Isaac Borrego, Hand Technologies LLC & Mississippi State University William Johnson, Josh Brown, Dennis Smith, Mississippi State University Kenneth Johnson, Chenggang Chen, Alexander Morgan, University of Dayton
	Research Institute
	Research Institute Introduction to the DenseFast™ Resins Michael Diener, James Raebiger, Rocky Draughon, & Taylor Ott, TDA Research
12:00PM	Research Institute Introduction to the DenseFast™ Resins Michael Diener, James Raebiger, Rocky Draughon, & Taylor Ott, TDA Research Adjourn