



RENAISSANCE PALM SPRINGS HOTEL
PALM SPRINGS, CALIFORNIA
PRELIMINARY AGENDA (as of 31 October 2025)

MONDAY, FEBRUARY 9, 2026

3:00PM - 5:00PM **Workshop Registration**

TUESDAY, FEBRUARY 10, 2026

7:00AM-8:15AM **Workshop Registration**

8:15AM-8:30AM **Opening Remarks**
Kaitlin Rigitano, University of Dayton Research Institute

8:30AM-10:00AM **Session 1: Program Overviews**
Chair:

Overview of US Navy High-Temperature Polymer Work
Ben Harvey, Naval Air Warfare Center

Overview of US Army High Temperature Composite Efforts
David Alfano, US Army DEVCOM AC, Benét Laboratories

Overview of High Temperature PMC Activities at AFRL
Michael Caton, Air Force Research Laboratory

10:00AM-10:30AM **Break**

10:30AM-12:00PM **Session 2: Testing Standardization for High Temperature Materials and Composites – I**
Chair: Kerry Necessary, GE Aerospace

Why Does Test Standardization Matter? Lessons Learned from AFRL & UDRI
Dan McCray, Kaitlin Rigitano, Heather Chaput, Kathy Schenck, University of Dayton Research Institute
Caitlin Duffner, Air Force Research Laboratory
Kara Storage, Air Force Research Laboratory

Non-Standard Interlaminar Property Methods and Specimens
Todd Bullions, Kerry Necessary, GE Aerospace

Thermomechanical Test Standardization for High-Temperature (HT) Materials: AFRL's Burner-Rig Current and Future Capabilities (STARBURST)
Patrick Walsh, Jennifer Pierce, James Sebastian, Geoffrey Frank, Robert Olding, Heather Chaput, Nicholas Jacobs, University of Dayton Research Institute
James Ritz, Ashley Hilmas, Air Force Research Laboratory

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

1:15PM-1:30PM **Group Picture**

TUESDAY, FEBRUARY 10, 2026 (continued)

1:30PM-3:00PM Session 3: High Temperature Resins and Composites – I
Chair: Gray Fowler, Textum

Advances in Materials for Extreme Environment Applications

James. D. Sitter, Loren C. Brown, Jennifer L. Dysart, Tyler J. Richardson, Matthew Laskoski, Naval Research Laboratory

Recent Developments in High Temperature Resins and Composite Materials

Jennifer Dysart, Matthew Laskoski, Naval Research Laboratory

Cambium Apex Shield 1000: Processing and Application in C/C and TPS

Joe Severino, Cambium

3:00PM-3:30PM Break

3:30PM-5:00PM Session 4: High Temperature Polymers for Preceramic Applications
Chair: Theo Dingemans, University of North Carolina at Chapel Hill

Pre-ceramic Polymers as Thermal Barriers for Polyimide Composites

Will Guzman, Renegade Materials Corporation

Program Update on High Carbon Yield BODA Resin Prepregs for Efficient Carbon-Carbon Composite Production

William W. Johnson, Mississippi State University

Ernesto I. Borrego, Gustavo A. Munoz, Tyler Richardson, Niroshani Abeynayake, Dennis W. Smith, Hand Technologies, LLC

PFAS Regulations Update & Implications for Applications of High-Temperature Resins

Vinay Mishra, Jayhawk Fine Chemicals Corporation

5:00 PM Adjourn

WEDNESDAY, FEBRUARY 11, 2026

8:00AM-10:00AM Session 5: Modeling of High Temperature Resins and Composites
Chair: Andy Guenthner, Tideway Arts and Sciences

Polymer Formulation Development with Predictive Models

Andrea Browning, Schrödinger, Inc.

Polyimide Off-Gassing Simulation and Detection Project Review & Status

Brian Coxon, Curtis Hickmott, Akila Rajan, Convergent Manufacturing Technologies US, Inc.

Methods for Predicting Glass Transition Temperature in High-Temp Composite Resins

Timothy Gardner, Cambium

Andy Guenthner, Tideway Arts and Sciences

Thermo-oxidative Degradation of Carbon Fiber Reinforced Polymer Matrix Composites: A Multi-scale Modeling Approach

Agniprobho Mazumder, Li Zheng, Michael Vallance, GE Aerospace Research

Todd Bullions, Kerry Necessary, Gregory Gemeinhardt, GE Aerospace

10:00AM-10:30AM Break

WEDNESDAY, FEBRUARY 11, 2026 (continued)

10:30AM-12:00PM **Session 6: High Temperature Resins and Composites – II**

Chair:

High-Performance Polymer Resins and Carbon Nanofillers: Promise and Reality

Theo Dingemans, Maruti Hedge, University of North Carolina at Chapel Hill

High-Temperature Resin Derived from Low-Cost Abundant Feedstock

Natalie Vest, Benjamin Harvey, Catherine Sarantes, Naval Air Warfare Center

Multifunctional Bio-Based Phthalonitrile Resins: Overcoming Processing Challenges Through Molecular Design

Catherine Sarantes, Haley Froberg, Benjamin Harvey, Naval Air Warfare Center

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

1:30PM - 3:00PM **Session 7: Applications of High Temperature Materials and Composites**

Chair:

Frontally Polymerized Landing Surfaces for Rapid High-Temp Pads in Austere Deployments

W. Jacob Monzel, Davide Simone, Christopher Kassner, Air Force Research Laboratory

Jeroen Deijkers, AeroVironment Inc.

Gabrielle Esposito, University of Dayton Research Institute

High Temperature Composites for 81mm Extended Range Mortar Tube

David Alfano, Trace Rimroth, Andrew Littlefield, US Army DEVCOM AC, Benét Laboratories

Sustainable Next-Generation Wear Liners to Enhance Aerospace Component Lifetime

Angela Martin, DuPont™ Vespel® Parts and Shapes

Hau-Nan Lee, Justine Paul, DuPont de Nemours, Inc.

3:00PM-3:30PM **Break**

3:30PM-5:00PM **Session 8: Testing Standardization for High Temperature Materials and Composites – II**

Chair: Dan McCray, University of Dayton Research Institute

Rapid Heating of Polymer Resins Systems: An Investigation on Resin Chemistry for Thermal Resistance in Extreme Environments

Brendan A. Patterson, Faheem H. Muhammed, Ngon T. Tran, DEVCOM Army Research Laboratory

Evaluation of Astroquartz®-III/Polyimide Composites with Alternate Fiber Finishes

Kevin Tomlin, Caitlin Duffner, Air Force Research Laboratory

Towards a Molecular Understanding of Hygrothermal Aging and Surface Finish Chemistry of Aerospace Composites

Davide Simone, Garrett Reinhard, Air Force Research Laboratory

Patrick Hewitt, AeroVironment

6:00PM **High Temple Social Hour**

7:00PM **High Temple Dinner Banquet**

THURSDAY, FEBRUARY 12, 2026

8:30AM-10:00AM Session 9: Thermal Management for High Temperature Materials and Composites
Chair:

Directional Thermal Conductivity in Boron Nitride Nanotube Fabrics
Joseph E. Estevez, Sara Estevez, Naval Air Warfare Center

LHMEL Evaluations of Alternative Aeroshell Materials
Kayla Stark, Joe Raymond, Jeff DeMange, ReLogic Research, Inc.

FireX® Inorganic Prepregs
Alessandra Ciappa, Nano-Tech SpA
Tim Scott, Jim Singletary, Matthijs van Leeuwen, Avient Fiber-Line LLC

10:00AM-10:30AM Break

10:30AM-12:00PM Session 10: Manufacturing of High Temperature Resins and Composites
Chair:

Multilayer 3D printed carbonaceous structures with hyperbranched pre-ceramic polymeric coatings
Timothy Long, Arko Das, Christina Birkel, Margaret Madsen, Jordan Sinclair, Garvit Nayyar, Arizona State University

Melt-Synthesized Phthalonitrile Resins: Enabling Scalable and Cost-Effective Composite Manufacturing
Tyler Richardson, Ernesto I. Borrego, Gustavo A. Munoz, Miroshani Abeynayake, William W. Johnson, Dennis W. Smith, Hand Technologies, LLC

TC890 Polyimide with T1100 Fibers Using Automated Fiber Placement vs. Hand Layup via Autoclave Curing
Erick Robles, NIAR

12:00PM Adjourn