

# Biocene 2023

## Transforming Materials

Wednesday, October 18

Time	Event	Location
11:30 am	Registration, Lunch and NASA tour badging	Lobby
12:30 pm	Boarding Bus to NASA Glenn	Lobby
1:00 pm	NASA Glenn tour	NASA
3:00 pm	<b>Heather Snyder- Quinn, DePaul University</b> Breaking Boundaries, Building Tomorrow: A Workshop on Interdisciplinary Collaboration for Sustainable Innovation	Sunroom
4:30 pm	<b>Welcome Reception</b>  <b>Presentation of Biocene Art and Artists</b> <b>Kate Budd, University of Akron</b> Fernando Cremades, MediaLab Matadero Madrid Kasumi, kasumifilms.com Kyoung Hee Kim, University of North Carolina, Charlotte and EcoClosure Sherry Simms, University of Akron	Lobby
5:00 pm	Networking and Art	Lobby
6:30 pm	Adjourn	

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Thursday, October 19

Time	Event	Location
7:30 am	Registration & Breakfast	Lobby
8:30 am	<p><b>Welcome</b>            John Sankovic, President, Ohio Aerospace Institute            Trisha Brown, Co-Director, Great Lakes Biomimicry</p> <p><b>Doug Piekarz, President &amp; CEO Akron Zoo</b>            "The wild side of research and development:            Tools to engage nature's wisdom to create our            future"</p>	Auditorium
9:00 am	<p><b><u>Multi-facted Melanin</u></b>  <b>Moderated by Ali Dhinojwala, University of Akron</b>  <u>Fernando Cremades, MediaLab Matadero,</u>  <u>Madrid</u> "Radiotropism"  <u>Kat Kornegay, Stanford University</u>            "Synthesis and Multi-physical Characterization            of Melanin-rich Mycelium Aerogels"  <u>Andrew Trunek, NASA Glenn Research Center</u>            "Melanin: The Amazing Multifunctional            Material for Harsh Environment Sensing and            Potential Energy Harvesting Applications"</p>	Auditorium
10:30 am	<p><b><u>The Powers of Nature's Materials</u></b>  <b>Moderated by John Sankovic, Ohio Aerospace            Institute</b>  <u>Sissi Lui, Metalmark Innovations</u>            "From Butterflies to Air Purifier: One Company's            Journey From Nature-inspired Materials to a            Disruptive Indoor Air Quality Solution"  <u>Lorenzo Mencattelli, Helicoid Industries</u>            "Bio-inspired Helicoid composites:            empowering the next generation of            ultra-efficient structural materials"  <u>Tiffany Williams, NASA Glenn Research Center</u>            "Towards Bio-inspired Materials and Processes            For Extreme Aerospace Environments"</p>	Auditorium
Noon	Lunch	Sunroom

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**Thursday, October 19, continued**

1:00 pm	<p><b><u>Building Better</u></b>  <b>Moderated by Chris Maurer, redhouse studio</b>  <u>Maggie Bump, NanoSonic</u>          "Termite Bioengineering Harnessed for Disaster Site Recovery"  <u>Kyounghee Kim, University of North Carolina, Charlotte and, EcoClosure</u>          "Zero Carbon Architecture: Nature Based Solutions To Decarbonate the Built Environment"  <u>Monika Lipinska, Newcastle University</u>          "Space to Grow"  <u>Hans Papke, DLR Group</u>          "Designing Smart Buildings Based on Desert Wisdom"</p>	Auditorium
2:30 pm	<p><b><u>Thermal Properties and Color</u></b>  <b>Moderated by Viktoria Greanya, Parallax Research</b>  <u>Jennifer Lalli, NanoSonic</u>          "Silkworm Cocoon Inspires Thermally Protective Materials"  <u>Alon Gorodetsky, University of California, Irvine</u>          "Dynamic Materials and Systems Inspired by Cephalopods"  <u>Matt Shawkey, Universitiet Ghent</u>          "A Rainbow in the Dark: Melanin-based Optical Materials"</p>	Auditorium
4:00 pm	Happy Hour Posters and Networking with Students	Lobby
5:30 pm	Adjourn	

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Friday, October 20

Time	Event	Location
7:30 am	Breakfast	Atrium
8:30 am	Convene <b>Peter Niewiarowski, University of Akron</b> “Innovation and Sustainability through Biomimicry: Guarantees or Opportunities?”	Auditorium
9:00 am	<b>The Paradox of Ice</b> <b>Moderated by Peter Niewiarowski</b> <u>Ali Dhinojwala, University of Akron</u> “Learning from Nature to Tackle Adhesion and Traction in Wet and Icy Conditions” <u>Anne Kietzig, McGill University</u> “Passive anti-icing inspired by Penguin Feathers” <u>Anish Tuteja, University of Michigan</u> “Novel Anti-Icing Molecules and Coatings”	Auditorium
10:30 am	<b>Bio-inspired Material Markets</b> <b>Moderated by Ven Ochaya, Baldwin Wallace University</b> <u>Shambuhu (Sam) Jha, Fact.MR</u> “Revolutionizing the Future: Biomimetic Industry Innovation Driven by Data and Guided by Outcomes” <u>Burak Aksak from Setex Technologies</u> “A Bioinspired Solution to Temporary Bonding at High Temperatures: The Market Landscape” <u>Dennis Tuckowski, International Council on Systems Engineering (INCOSE)</u> “Leveraging the Systems Engineering Product Development Process to Foster Adoption of Advanced Sustainable Materials”	Auditorium
Noon	Conference Wrap-Up	Auditorium
12:30 pm	Lunch	Sunroom