

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	Heather Snyder- Quinn, DePaul University Breaking Boundaries, Building Tomorrow: A Workshop on Interdisciplinary Collaboration for Sustainable Innovation	Sunroom
4:30 pm	Welcome Reception Presentation of Biocene Art and Artists Mathew Kolodziej, University of Akron Kate Budd, University of Akron Fernando Cremades, MediaLab Matadero Madrid Kasumi, kasumifilms Kyoung Hee Kim, University of North Carolina, Charlotte and EcoClosure Sherri Simms, University of Akron	Lobby
5:00 pm	Networking and Art	
6:30 pm	Adjourn	

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Thursday, October 19

Time	Event	Location
7:30 am	Registration & Breakfast	Lobby
8:30 am	<p>Welcome John Sankovic, President, Ohio Aerospace Institute Trisha Brown, Co-Director, Great Lakes Biomimicry</p> <p>Doug Piekarz, President & CEO Akron Zoo "The Wild Side of Research and Development: Tools to Engage Nature's Wisdom to Create Our Future"</p>	Auditorium
9:00 am	<p><u>Multi-facted Melanin</u> Moderated by Ali Dhinojwala, University of Akron <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><u>The Powers of Natural Materials</u> Moderated by John Sankovic, Ohio Aerospace Institute <u>Sissi Liu, 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><u>Building Better</u> Moderated by Chris Maurer, redhouse studio <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><u>Thermal Properties and Color</u> Moderated by Viktoria Greanya, Parallax Research <u>Maggie Bump, 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	Light refreshments Posters and Networking with Students	Lobby
5:00 pm	Adjourn	

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Friday, October 20

Time	Event	Location
7:30 am	Breakfast	Lobby
8:30 am	Convene Peter Niewiarowski, University of Akron “Innovation and Sustainability through Biomimicry: Guarantees or Opportunities?”	Auditorium
9:00 am	The Paradox of Ice Moderated by Peter Niewiarowski <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	Bio-Materials Markets Moderated by Ven Ochaya, Baldwin Wallace University <u>Shambuhu (Sam) Jha, Fact.MR</u> “Revolutionizing the Future: Biomimetic Industry Innovation Driven by Data and Guided by Outcomes” <u>Sudip Saha, Fact.MR</u> “A closed loop Model for Supply Chain Effectiveness Inspired from Circulatory System” <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
12:15 pm	Lunch	Sun Room