

3

Em

2024



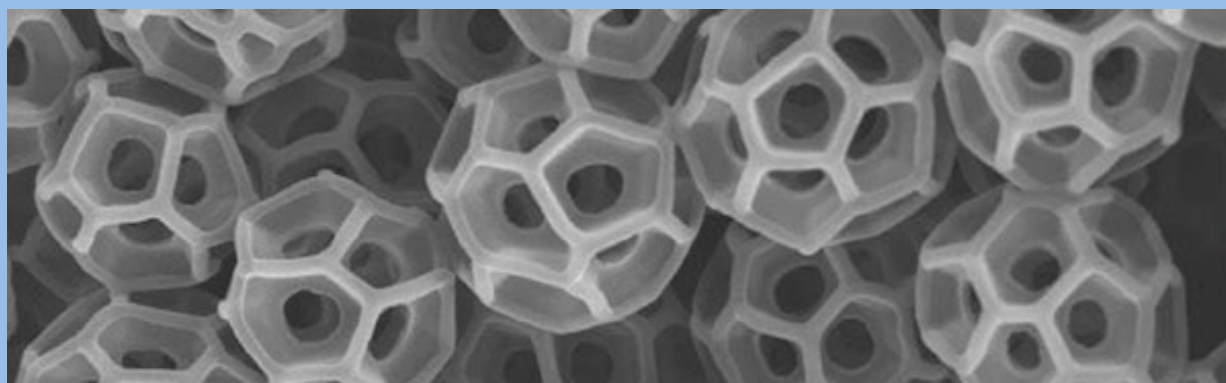
PennState
Materials Research
Institute

Ematerials

IN THIS ISSUE

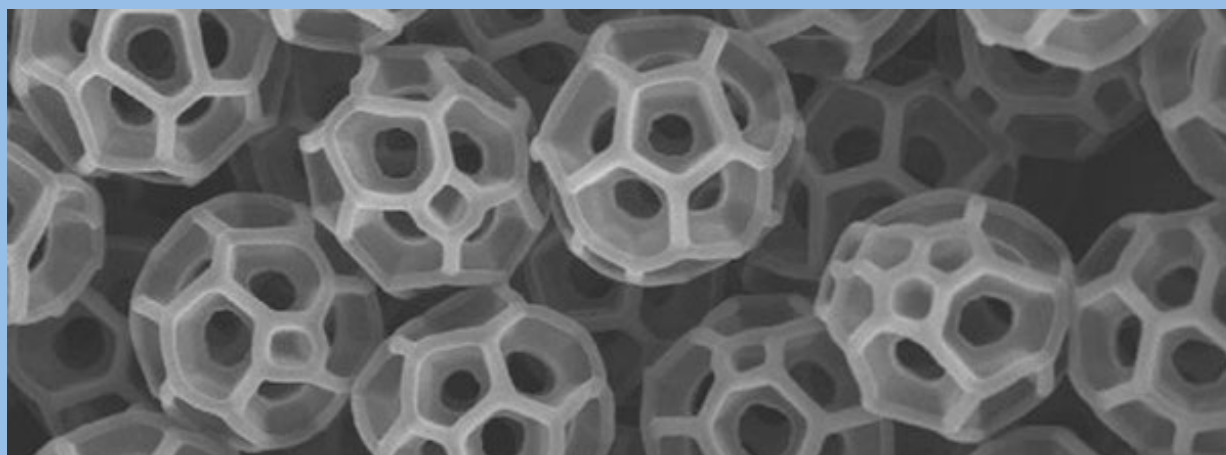
- ⇒ Backyard insect inspires invisibility devices, next gen tech ⇒
 - ⇒ Combining novel biomaterial and microsurgery might enable faster tissue recovery ⇒
 - ⇒ Membrane research moves forward with additional five years of NSF funding ⇒
 - ⇒ 3D-printed skin closes wounds and contains hair follicle precursors ⇒
 - ⇒ Engineering science and mechanics researcher Andrea Argüelles awarded NSF CAREER ⇒
- ::: UPCOMING MRI EVENTS ON CAMPUS :::

FEATURED STORY



BACKYARD INSECT INSPIRES

invisibility devices, next gen tech

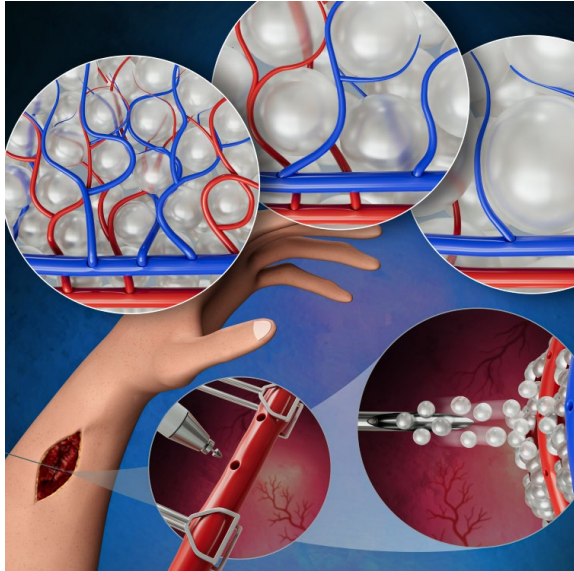


LEAD: PROFESSOR TAK SING WONG

Leafhoppers, a common backyard insect, secrete and coat themselves in tiny mysterious particles that could provide both the inspiration and the instructions for next-generation technology. In a first, a team of researchers precisely replicated the complex geometry of these particles, called brochosomes, and elucidated a better understanding of how they absorb both visible and ultraviolet light.

[Read this featured story ⇒](#)

OTHER NEWS



Combining novel biomaterial and microsurgery might enable faster tissue recovery

LEAD: ASST. PROF. AMIR SHEIKHI

To speed up the formation and patterning of new blood vessels, Penn State researchers have combined a novel biomaterial with a microsurgical approach used in reconstructive surgery, enabling improved recovery of soft tissue.

[Read more ⇒](#)

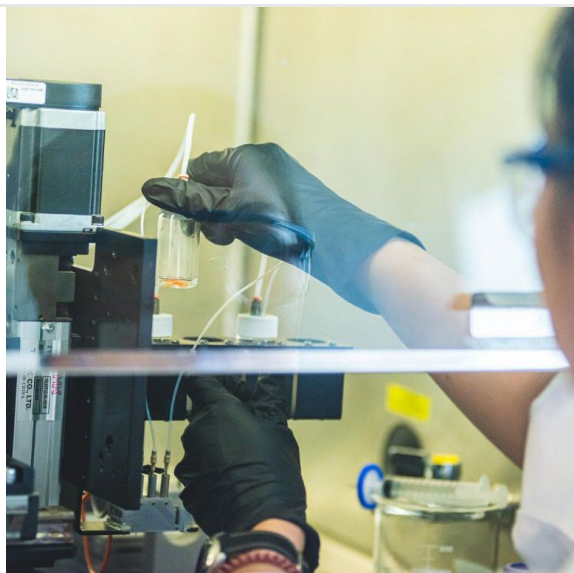


Membrane research moves forward with additional five years of NSF funding

LEAD: PROF. ANDREW ZYDNEY

The Membrane Applications, Science and Technology (MAST) Center recently received five additional years of funding. The funding will allow for an expansion of the center at Penn State, which has served as one of four of the center's partner academic institutions since 2019.

[Read more ⇒](#)



3D-printed skin closes wounds and contains hair follicle precursors

LEAD: PROF. IBRAHIM OZBOLAT

Fat tissue holds the key to 3D printing layered living skin and potentially hair follicles, according to researchers who recently harnessed fat cells and supporting structures from clinically procured human tissue to precisely correct injuries in rats. The advancement could have implications for reconstructive facial surgery and even hair growth treatments for humans.

[Read more →](#)



Engineering science and mechanics researcher awarded NSF CAREER

ANDREA ARGÜELLES

Andrea Argüelles, assistant professor of engineering science and mechanics in the Penn State College of Engineering, earned a five-year, \$696,010 U.S. National Science Foundation (NSF) Early Career Development (CAREER) Award for a project titled, "Advancing ceramic processing science through acoustic characterization."

[Read more →](#)



Coffee and Characterization on UP Campus



Join us on Thursday, April 4

1:00 p.m. - 2:30 p.m. ET
Steidle Building
Atrium, ground floor
University Park, PA

Pop-up Poster Session with coffee, dessert, and casual conversations with the Materials Characterization Lab staff about new capabilities.

Can't make the event?

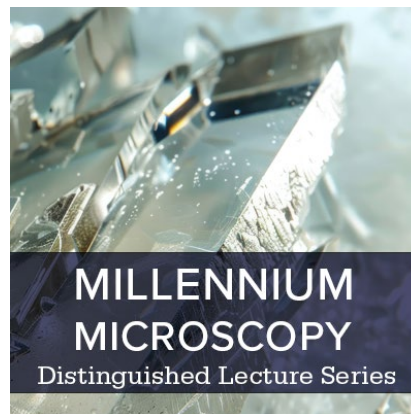
[Invite MCL to your group meeting](#)

Join us on Thursday, April 4

12:20 p.m. - 1:10 p.m. ET
N-205 Millennium Science Complex
University Park, PA

Frontiers in Glassy Materials: Spatial and Temporal Complexity at the Nanoscale Revealed by Electron Microscopy

Speaker Bio and Abstract



Follow Us:



Copyright © 2024. Penn State Materials Research Institute. All rights reserved.
You are receiving this email because you indicated you would like to receive information from the Materials Research Institute at Penn State.

Our mailing address:

Penn State Materials Research Institute
N-315 Millennium Science Complex
University Park, PA 16802

This publication is available in alternative media on request. Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status. UBR RES 24-10

What to change how you receive these emails?

[Manage my subscriptions](#)

[Click this link to opt-out](#)