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FEATURED STORY



SIMPLE STABILIZING SOLUTION
leads to seven new ceramic materials



LEAD: PROF. JON-PAUL MARIA

LEAD: PROF. NASIM ALEM

Sometimes, less really is more. By removing oxygen during synthesis, a team led by materials scientists at Penn State created seven new high-entropy oxides, or HEOs: a class of ceramics composed of five or more metals with potential for applications in energy storage, electronics and protective coatings.

[READ THE LEAD STORY](#)

[OTHER NEWS](#)

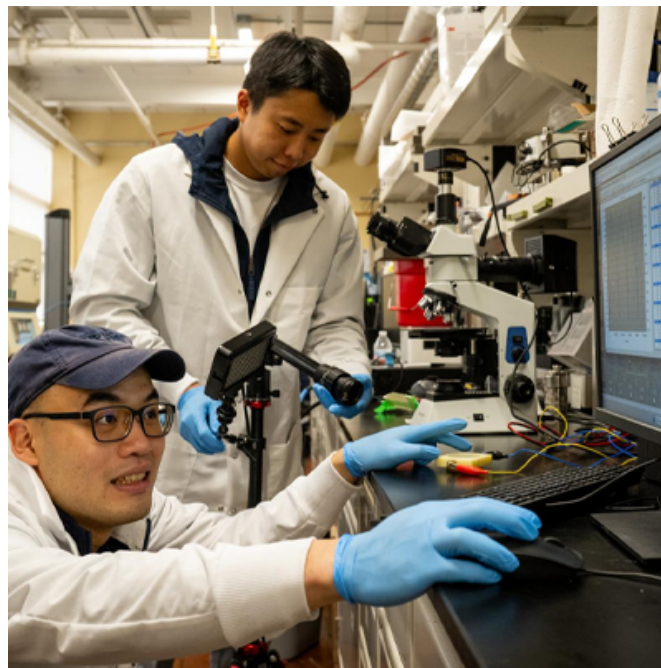


Atom-scale stencil patterns help nanoparticles take new shapes, learn new tricks

LEAD: PROF. KRISTEN FICHTHORN

Inspired by an artist's stencils, researchers have developed atomic-level precision patterning on nanoparticle surfaces, allowing them to "paint" gold nanoparticles with polymers, or long chains of small molecules, to give them an array of new shapes and functions.

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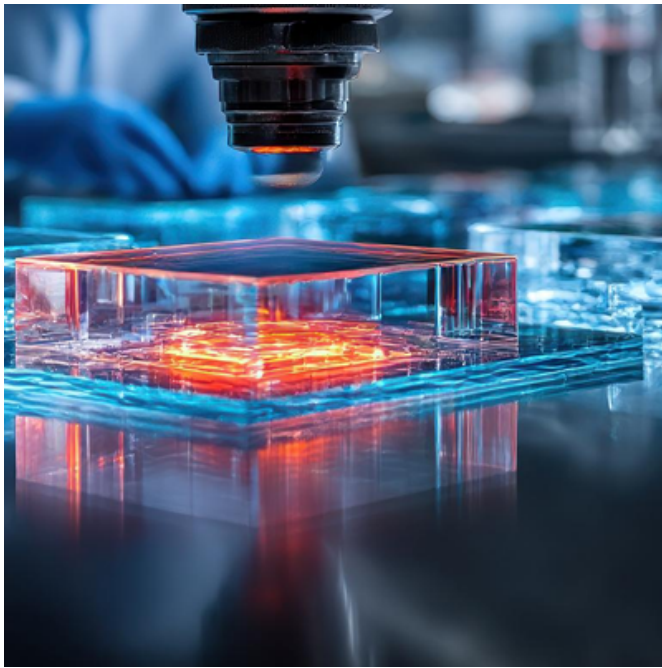


Bridging boundaries: How are researchers packing more energy into batteries?

LEAD: ASST. PROF. HONGTAO SUN

Battery power and efficiency largely hinge on the performance of these electrodes — and now a team led by researchers at Penn State has created a new design that holds promise for practical applications like mobile electronics and electric vehicles.

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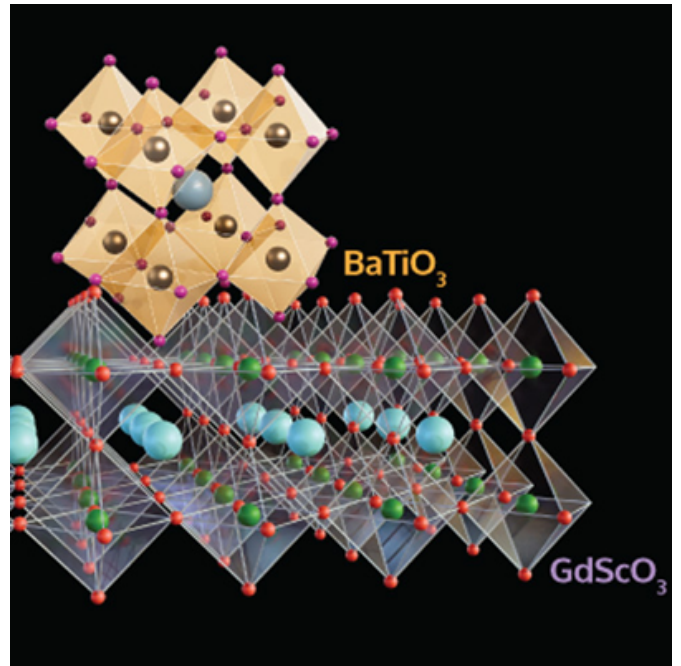
Center for Glass Research launched to revitalize innovation in glass science

LEAD: PROF. JOHN MAURO

LEAD: PROF. SEONG KIM

The mission of the Center for Glass Research is to advance glass technologies through leveraging new tools and new approaches. Resulting knowledge outcomes and technological advancements will be developed in close collaboration with industry partners.

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Old-school material could power quantum computing, cut data center energy use

LEAD: PROF. VENKATRAMAN GOPALAN

LEAD: ASST. PROF. YANG YANG

LEAD: PROF. LONG-QING CHEN

A new twist on a classic material could advance quantum computing and make modern data centers more energy efficient, according to a team led by researchers at Penn State.

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Clive Randall elected as fellow of the European Academy of Sciences



Clive Randall, Evan Pugh University Professor of Materials Science and Engineering, has been elected as a fellow of the European Academy of Sciences. The academy is an international scientific organization composed of the world's leading scientists, scholars and engineers, dedicated to promoting excellence in science and technology.

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MATERIALS DAY 2025



Materials Day 2025

October 28



VIEW PHOTO GALLERY

The experiment was a success! This year's Materials Day was a completely different event than past years. We retooled the event into a fast-paced, one-day experience with poster sessions, industry meet and greet, guided and self-guided tours of our cutting facilities including demonstrations, flash talks, a tribute to the late former MRI director Carlo Pantano, and day-end reception.

All this attracted a record crowd of more than 500 attendees from both the University and industry, and early reviews have been glowing! [View the photo gallery here.](#)

Thank you to all who attended! We would love to hear from you, get your feedback, and suggestions.

How was your experience?

[TAKE THE SURVEY](#)

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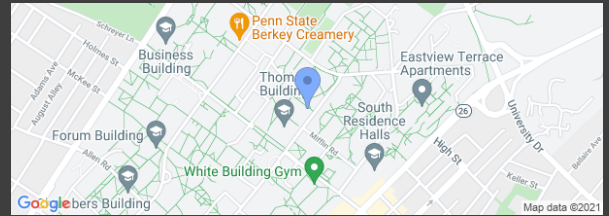
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