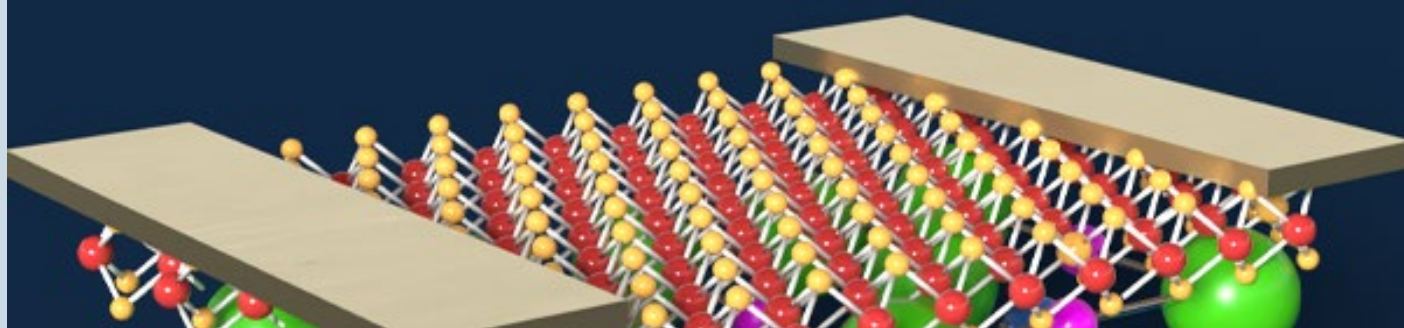




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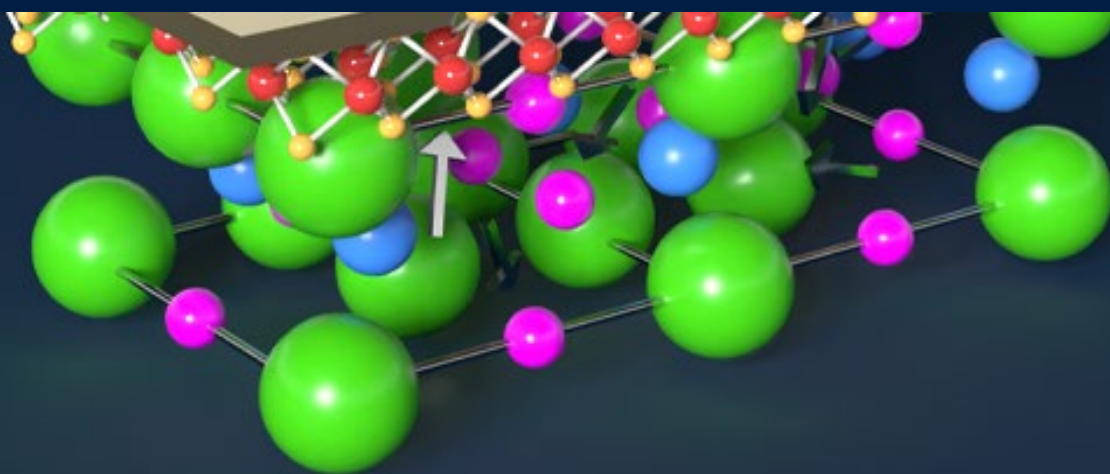
- Material's 'incipient' property could jumpstart fast, low-power electronics □
- Magnetic semiconductor preserves 2D quantum properties in 3D material □
- New smart sensor takes the pain out of wound monitoring □
- Penn State to establish new advanced semiconductor lab □
- Porous plastic sheets can cool buildings by radiating light to space □
- UPCOMING EVENTS & OPPORTUNITIES (see below) □

FEATURED STORY



MATERIAL'S 'INCIPIENT' PROPERTY COULD JUMPSTART

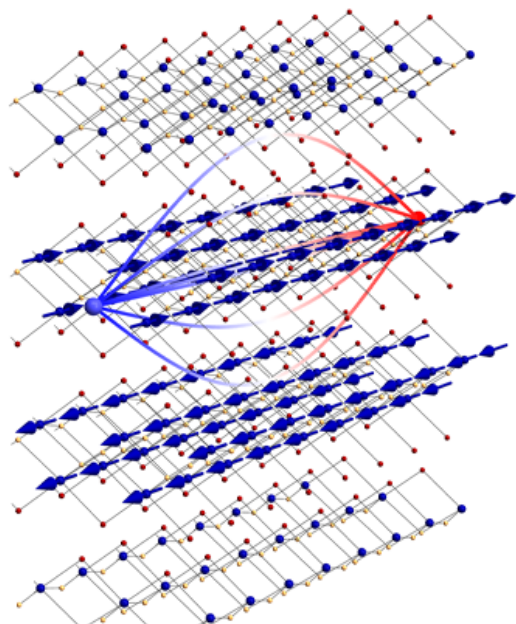
fast, low-power electronics



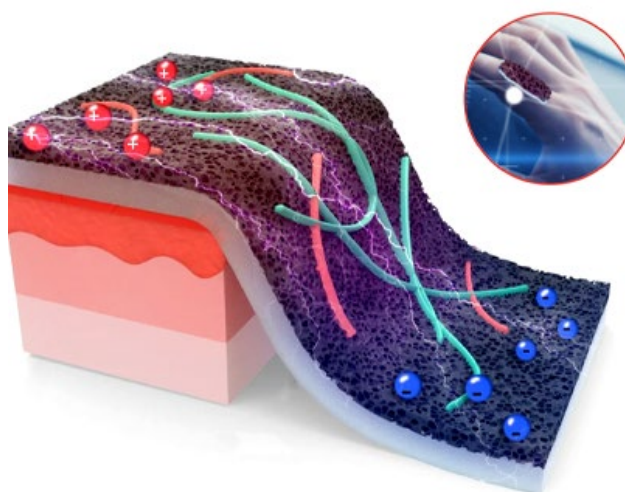
LEAD: PROFESSOR SAPTARSHI DAS

Scientists at Penn State have harnessed a unique property called incipient ferroelectricity to create a new type of computer memory that could revolutionize how our devices work, such as using much less energy and being able to work in extreme environments like outer space.

[READ THE ARTICLE](#)



Magnetic semiconductor preserves 2D quantum properties in 3D material



New smart sensor takes the pain out of wound monitoring

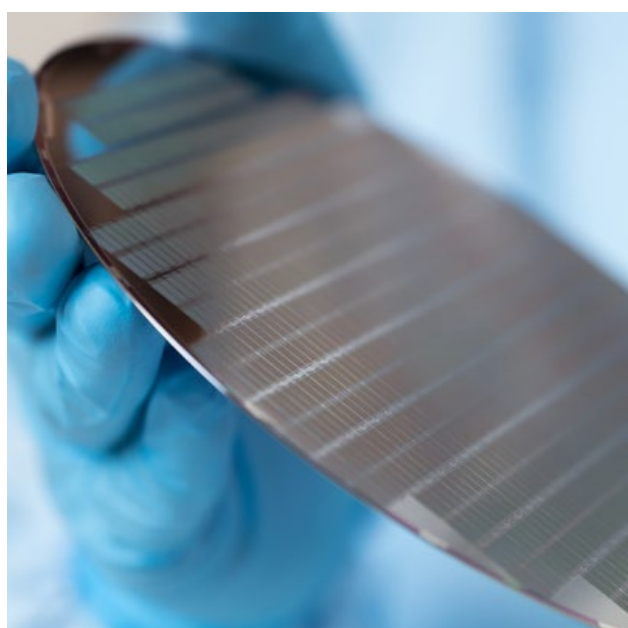
LEAD: ASSOC. PROF. HUANYU CHENG

Researchers uncover a new property of a sensor material,

LEAD: ASST. PROF. YINMING SHAO

An international team led by physicists at Penn State and Columbia University has developed a novel approach to maintain special quantum characteristics, even in three-dimensional (3D) materials.

[Read More](#)



Penn State to establish new advanced semiconductor lab

LEAD: PROF JOAN REDWING

Penn State researchers aim to enhance the University's research and development capabilities in next-generation semiconductor technology thanks to \$4.3 million in infrastructure funding and in-kind support through the University's membership in [MMEC](#), a consortium of regional partners focused on microelectronics research and development.

[Read More](#)

enabling the team to develop a new type of flexible sensor that can accurately measure both temperature and physical strain simultaneously.

[Read More](#)



Porous plastic sheets can cool buildings by radiating light to space

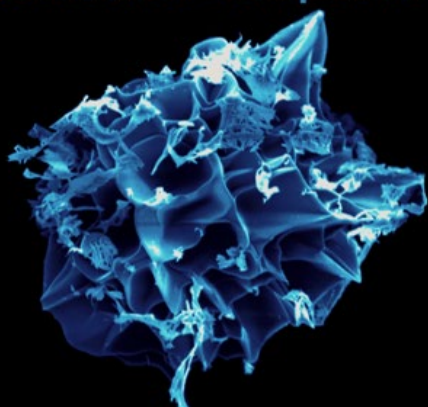
LEAD: PROF. AKHLESH LAKHTAKIA

When applied to an enclosed space, the sheets, which are made of powdered polymethyl methacrylate (PMMA) and are about one-twelfth of an inch thick, can decrease the temperature of an enclosed space by 8.4 degrees Celsius.

[Read More](#)

UPCOMING EVENTS & OPPORTUNITIES

**MVC17
2025 Materials
Visualization Competition**



ENTER NOW!

Deadline: March 7, 2025

Created to celebrate the quality of research in materials at Penn State, this competition increases awareness of materials science through the creativity and visualization of our researchers.

Entry is open to all current Penn State undergraduate students, graduate students, postdoctoral scholars, faculty, and staff working on materials-related topics.

[DETAILS / SUBMIT ENTRY](#)

**MILLENNIUM MICROSCOPY
DISTINGUISHED LECTURE SERIES**

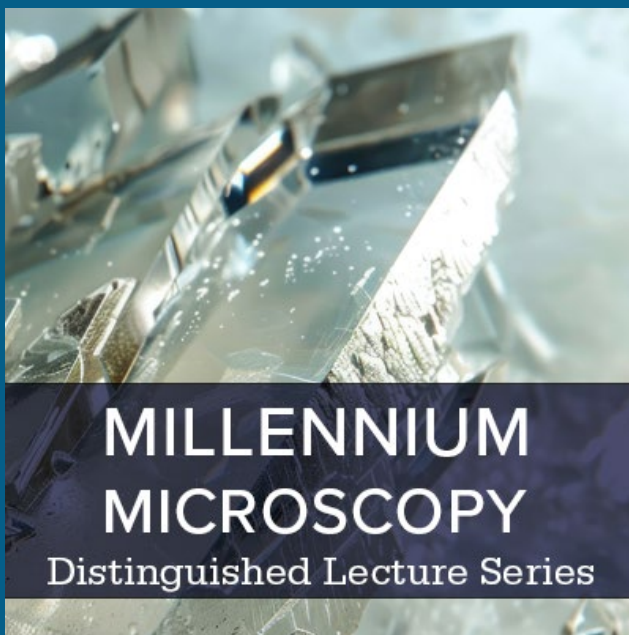
APRIL 4, 2025

High-resolution electron energy-loss spectroscopy: how recent advances have now truly put a "synchrotron in the microscope"

APRIL 29, 2025

Imaging of short-range order with electron microscopy: from high-performance alloys to semiconductor thin films

[DETAILS & REGISTRATION](#)



CIMP-3D INDUSTRY PRACTICUM

Additive Manufacturing with Metallic Materials

JUNE 3 - 5, 2025

Penn State Center for Innovative Materials Processing through Direct Digital Deposition (CIMP-3D) is offering an intensive three-day hands-on practicum for industry on additive manufacturing (AM) of metallic materials at Penn State. The practicum will feature speakers and presentations each morning, followed by afternoon demonstrations and hands-on experiments using state-of-the-art AM technologies relevant for industrial applications.



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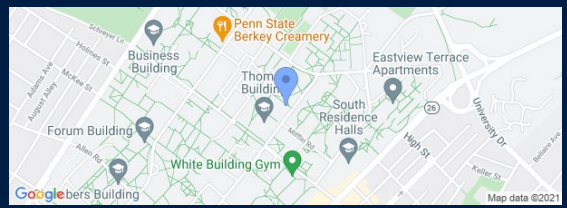


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