

Energy@UT News



Fire-Resistant Sodium Battery Balances Safety, Cost and Performance

Researchers at The University of Texas at Austin have developed a groundbreaking sodium battery that addresses both safety concerns and cost-effectiveness. By incorporating a salt-based solid diluent in the electrolyte, the new battery presents a significantly reduced risk of fire. Moreover, the technology relies on inexpensive and abundant materials, making it a promising alternative to traditional lithium-ion batteries. The sodium nitrate battery also boasts impressive performance, maintaining 80% capacity over 500 cycles, comparable to standard smartphone batteries. This breakthrough could revolutionize energy storage while minimizing safety hazards and environmental impact. [Learn more.](#)



Producing Hydrogen From Rocks Gains Steam as Scientists Advance New Methods

Researchers at The University of Texas at Austin are embarking on a groundbreaking endeavor: producing hydrogen gas from iron-rich rocks without emitting carbon dioxide. Leveraging

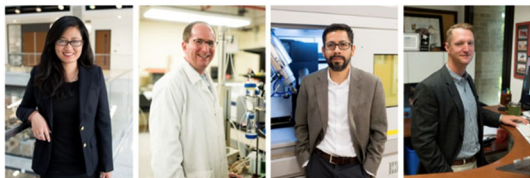
natural catalysts, they aim to stimulate a geologic process called “serpentinization”, where iron-rich rocks release hydrogen as a byproduct. If successful, this novel approach could revolutionize the energy transition by creating a low-carbon hydrogen industry, offering a sustainable alternative to fossil fuel-derived hydrogen.

[Learn more.](#)



How AI Can Bolster Power Grid's Resistance to Weather, Cyberattacks

Texas Engineer Javad Mohammadi is on a mission to fortify our power grids against the dual threats of extreme weather and cyberattacks. His ingenious approach involves artificial intelligence (AI), which enables smart devices to communicate seamlessly with each other. By weaving this web of interconnected devices, the electrical grid gains an “army” of intelligent responders, ready to adapt during emergencies. Beyond resilience, this technology could empower communities to become more self-reliant, creating microgrids that share energy and reduce strain on the larger system during peak demand. [Learn more.](#)



UT PGE Awarded First-Ever DOE Funding for Geologic H2 Research

Four faculty members from The University of Texas at Austin’s Hildebrand

Department of Petroleum and Geosystems Engineering have secured a historic achievement: receiving the first-ever Department of Energy (DOE) funding for geologic hydrogen research. Their mission? To unlock low-cost, low-emissions hydrogen production from iron-rich rocks. By harnessing natural catalysts and innovative techniques, they aim to revolutionize the energy landscape, offering a sustainable alternative to fossil fuel-derived hydrogen. [Learn more.](#)



Peter Flemings Wins Robert R. Berg Outstanding Research Award

Professor Peter Flemings, a distinguished geoscientist at The University of Texas at Austin, has been honored with the 2024 Robert R. Berg Outstanding Research Award by the American Association of Petroleum Geologists. His groundbreaking work in understanding pressure dynamics within Earth's crust has revolutionized oil exploration practices. By revealing that drilling at subsidiary structures, rather than the highest pressurized points, is safer and more successful, Flemings has significantly impacted the industry. His contributions extend beyond research, as he played a crucial role in analyzing the 2010 Deepwater Horizon blowout in the Gulf of Mexico. This prestigious award recognizes his exceptional achievements in petroleum geoscience. [Learn more.](#)



GeoFORCE Texas Leader Wins Pinnacle Award

[Leah Turner](#), a leader in the GeoFORCE Texas program at the Jackson School of Geosciences, received the 2024 Women in Energy Pinnacle Award in recognition of her impactful contributions fostering future female leaders in STEM and geosciences. Turner's leadership in the GeoFORCE Texas outreach program has been instrumental in empowering students across Austin, Houston, and Southwest Texas to pursue successful careers in these fields. [Learn more.](#)

UT ENERGY WEEK 2024

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March 25–29, 2024 | UT Austin Campus



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 The University of Texas at Austin
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UT Energy Week attendees have the opportunity to earn continuing education units (CEUs) for professional engineering (PE) licensing requirements, provided by Texas Engineering Executive Education at UT's Cockrell School of Engineering. [Sign up here](#) or learn more when you attend [UT Energy Week](#).

News from Around Campus

Energy Institute | Energy Management and Innovation Center

[Carey King](#) and [Sheridan Titman](#) were quoted in a piece in [The Daily Texan](#) challenging calls for UT to divest from fossil fuels.

Jackson School of Geosciences | Institute for Geophysics

[Danielle Touma](#) was quoted in a [BBC](#) article covering the tragic Smokehouse Creek Wildfire and its possible link with climate change.

Energy Institute

EI Research Fellow [Jorge Piñón](#) spoke with the [Wall Street Journal](#) about current supply shortages in Cuba.

Cockrell School of Engineering | Walker Department of Mechanical Engineering

[Michael Webber](#) was quoted in [The Hill](#) on how connecting the Texas power grid to neighboring states could make a big difference during future extreme weather. Dr. Webber was also featured in an [ExxonMobil article](#) highlighting the prominence of energy in the film industry.

Cockrell School of Engineering

[Roger Bonnacaze](#) spoke with [KXAN](#) about the mutual benefits for UT Austin engineering students and semiconductor companies moving to central Texas.

Jackson School of Geosciences

[Jay Banner](#) spoke with [The Hill](#) about the unique challenges that Texans may face in the future because of the interactions of climate change and population growth.

Upcoming Events



Texas Nuclear Symposium

[Monday, March 25th](#) in EER 0.806

[Tuesday, March 26th](#) in EER 3.646

[Register Now](#)



RystadEnergy

Rystad Energy - Energy Transition Marathon 2024

Thursday, April 10, 2024

9:00 AM – 6:00 PM

[More Information & Registration](#)



The Bold Leadership Download: A Conversation with Scott Sheffield

Thursday, April 10, 2024

5:00 PM – 7:00 PM

[More Information & Registration](#)



Continuing Education Course

Energy Technology & Policy

May 6 – 7, 2024

Instructed by Dr. Michael E. Webber

[More Information](#)

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