



# Energy Storage New Energy Battery Materials

Researchers have created a more energy dense storage material for iron-based batteries. The breakthrough could also improve applications in MRI technology and magnetic levitation.

Breakthroughs in battery technology are transforming the global energy landscape, fueling the transition to clean energy and reshaping industries from transportation to utilities.

Global demand for energy storage is surging. Lithium-ion leads today, but new contenders like sodium-ion, flow, and gravity systems are shaping the future grid.

As researchers continue to explore new materials and designs, these experimental and emerging battery technologies hold the potential to transform energy storage by addressing the limitations of traditional ...

Learn more about America's energy sources: fossil, nuclear, renewables and electricity.

Genesis Mission leverages the Department of Energy's unique scientific datasets--spanning more than 100 petabytes of experimental and simulation data across every major domain of ...

In a new study recently published by Nature Communications, the team used K-Na/S batteries that combine inexpensive, readily-found elements -- potassium (K) and sodium (Na), together with sulfur (S) ...

Explore the future of energy storage. Discover how iron-air batteries, salt-based chemistries, and AZO's material processing expertise are shaping the next gen of battery technologies.

WASHINGTON-- The U.S. Department of Energy (DOE) today announced more than \$35 million for 42 projects through DOE's Technology Commercialization Fund (TCF) to ...

With the pressing need for more American energy to meet the challenges of AI and secure our nation's energy dominance, President Trump's vision for a revitalized U.S. nuclear ...

New organizational structure for the Office of Critical Minerals and Energy Innovation will channel federal resources to the most pressing energy and national security ...

You may have heard some myths about renewable energy, and you're probably wondering how you can learn the truth about wind turbines, solar panels, and the clean energy ...

There are two main types of solar energy technologies--photovoltaics (PV) and concentrating solar-thermal



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power (CSP). On this page you'll find resources to learn what ...

From silicon anodes to AI breakthroughs - see what's next in battery materials and technologies and why it matters for the future.

From iron-air batteries to molten salt storage, a new wave of energy storage innovation is unlocking long-duration, low-cost resilience for tomorrow's grid.

The U.S. Department of Energy (DOE) today announced over \$320 million in investments to rapidly advance the Genesis Mission's artificial intelligence (AI) capabilities.

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