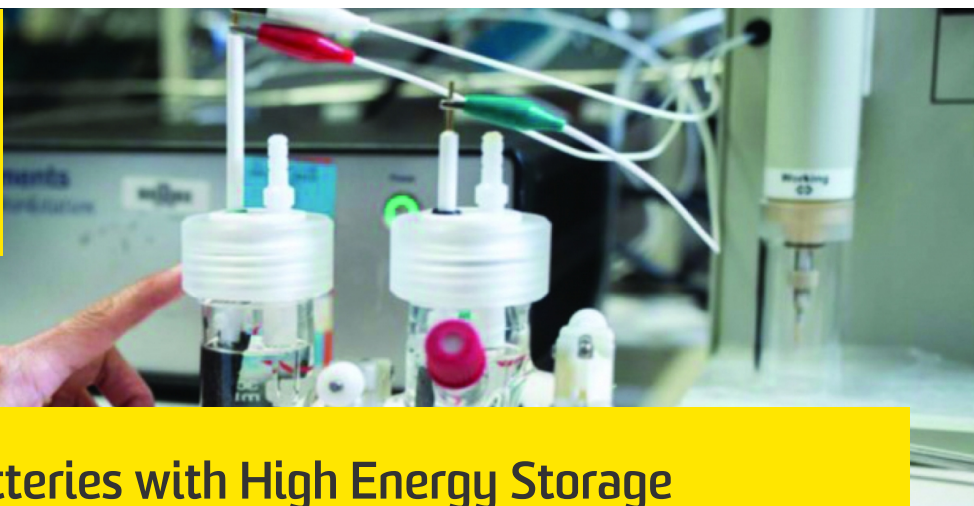




UNSW
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Sodium-Sulphur Batteries with High Energy Storage

State-of-the-art lithium-ion batteries are hindered by their limited theoretical energy density and the natural scarcity of lithium resources. Sodium-sulphur chemistry uses abundant elements to yield high specific capacity and energy density.

Competitive advantage

- Sodium-sulphur batteries provide a low-cost option for large-scale electrical energy storage applications
- New conversion chemistry that yields an energy density three times higher than that of lithium-ion batteries
- More than ten years' experience in the design, production and integration of various energy storage technologies

Impact

- Effective, inexpensive and scalable alternatives to LIB technology for the deployed war fighter
- Sodium-sulphur technology provides a sustainable and economical choice to advance widespread vehicle electrification and grid-scale energy storage
- The two elements also are highly-abundant in nature and therefore good for the environment

Successful applications

- Developed demo coin-cell prototypes and have the capacity to develop a pouch-cell demo

Capabilities and facilities

- A platform for cell fabrication and evaluation
- Advanced characterisation facilities
- In-situ analysis techniques, including X-Ray diffraction/Raman/FTIR/XAS/EPR/UV-vis

More Information

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