



**UNSW**  
SYDNEY



## Advanced Energy Materials

**Recent advances in lithium-ion battery technology have seen them used in applications ranging from portable electronic devices to electric vehicles. In the future, developing energy storage applications for renewable resources will become increasingly important.**

### Competitive advantage

- Unique interdisciplinary research experience in battery engineering
- Expertise in synthetic organic chemistry, for developing next-generation energy storage systems
- Extensive research experience in design and fabrication of organic-based rechargeable batteries

### Impact

- New and novel battery technologies for better and more efficient energy storage.

### Successful applications

- Bottom-up synthesis of redox-active compounds and fundamental understanding of the reaction mechanism in rechargeable batteries
- Pioneering work to demonstrate rechargeable aluminium-ion batteries using a redox-active organic compound as the active material

### Capabilities and facilities

- Synthetic organic chemistry laboratory setup
- Battery analysis equipment

### More Information

Dong Jun Kim

School of Chemistry

T: +61 (0) 2 9385 4568

E: [dongjun.kim@unsw.edu.au](mailto:dongjun.kim@unsw.edu.au)

UNSW Knowledge Exchange

[knowledge.exchange@unsw.edu.au](mailto:knowledge.exchange@unsw.edu.au)

[www.capabilities.unsw.edu.au](http://www.capabilities.unsw.edu.au)

+61(2) 9385 5008