



UNSW
SYDNEY



Simulation and Modelling of Solid-State Hydrogen Storage Tanks

Hydrogen is a clean energy vector that can enable storage of any form of energy including renewable with high density. Development of suitable models to enable the design of effective solid-state hydrogen storage tanks will enable the transition to a new economy based on the use of hydrogen.

Competitive advantage

- Unique world class expertise in the modelling of solid-state hydrogen storage tanks for the effective recovery of the hydrogen storage and the associated heat and hydrogen flow management.
- Optimisation of hydrogen storage solution for high energy efficiency
- Most advanced simulation packages for the design and optimisation of hydrogen storage tanks and their integration into existing infrastructures

Impact

- Potential to revolutionise the way energy is generated, distributed and used at small, intermediate and large scales.

Successful applications

- Design of solid-state hydrogen storage tanks integrated to electrolyzers and fuel cells.

Capabilities and facilities

- State-of-the-art research facility for designing and testing solid state hydrogen tanks and verification of simulation models
- Prototyping and optimisation capability

More Information

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