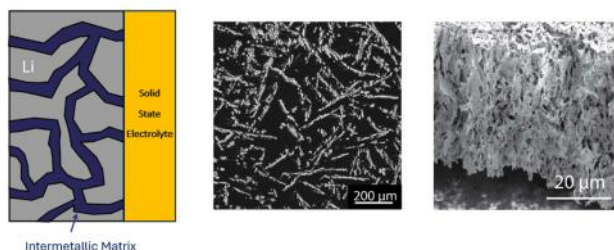


Novel lithium alloy electrode allowing fast discharge at ambient temperatures

A novel lithium alloy electrode enables fast discharge at ambient temperatures, improving battery power performance without sacrificing stability or efficiency. Lithium solid state batteries are primarily motivated by the desire to replace the incumbent lithium-ion graphitic anode, to become commercially viable. These new anodes must be capable of fast discharge, optionally, at room temperature.

Applications: Solid state batteries



Features	Benefits
Innovative microstructure allows high effective electrode diffusivity to be achieved	Improved electrode performance, enabling full discharge at a higher current density
Electrode does not require elevated temperatures, unlike currently available electrodes	The anode provides fast discharge at room temperature, where the diffusivity is three orders of magnitude higher than lithium metal
The anode retains a high energy density and a high capacity	The microstructure doesn't sacrifice energy density or capacity for increased kinetics

Features	Benefits
Different fabrication methods and metals can be used for the intermetallic matrix microstructure	Flexible method allows properties such as longevity, diffusivity, energy density, capacity and cost/speed of manufacturing to be varied and calibrated as per requirements

Patented and Available for

- Co-development
 - Consulting
 - Licensing
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To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

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