

High-energy, low-cost and scalable generation 5 magnesium-based batteries for mobility applications and beyond

Pioneering Sustainable Battery Solutions

The Big Idea

Revolutionising energy storage by establishing Rechargeable Magnesium Batteries (RMB) as a greener, safer, and fully sustainable alternative to today's lithium-ion technologies.

The Problem

Lithium batteries have limits – cost, materials, safety.

Our Solution

Rechargeable Magnesium Batteries (RMBs). Safer, greener, better performance.

Why Magnesium?

Abundant & Affordable

Widely available, cheaper than lithium.

More Power, Less Space

Higher energy density.

Exceptional Safety

Enhanced chemistry safety compared to Li-ion.

Sustainable & Scalable

Built on Safe and Sustainable by Design (SSbD) principles

HighMag's Innovative Technology



Developing new battery chemistries

Developing Mg-S and Mg-metal Generation-5 systems.



Advanced Materials

Active components, electrocatalysts, protective coatings, and separators.



In-depth Research

Iterative electrochemical and structural characterisation.



Manufacturing Readiness

Compatibility with current Li-ion production via aqueous processing.



Advancing technology from TRL 2 to TRL 4





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The HighMag Consortium























