

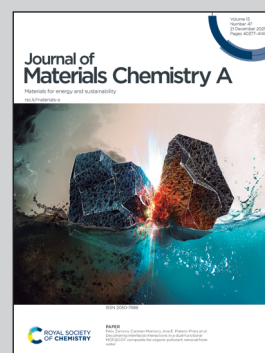
Showcasing research from Professor Craig M. Jensen's laboratory, University of Hawaii at Manoa, Hawaii, USA.

Observation of giant 3D graphenic vesicles encapsulating hydrogen

Graphenic vesicles of mesoscale proportions, which permanently confine hydrogen gas were discovered in grains of partially hydrogenated MgB_2 which was mechanochemically doped with carbon. The graphenic nature of the vesicle walls and the presence of confined hydrogen were established *via* Electron Energy Loss Spectroscopy (EELS). Additionally, NMR spectroscopy confirmed that hydrogen/deuterium is confined within a large aromatic structure. These results represent the first observation of the 3D confinement of hydrogen in a graphenic material, and possibly a new avenue for 3D graphene synthesis.

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As featured in:



See Craig M. Jensen *et al.*,
J. Mater. Chem. A, 2025, **13**, 40683.