MANCHESTER 1824
The University of Manchester

The University of Manchester Hydrogen Research Corridor

Just 500 metres long, The University of Manchester Hydrogen Research Corridor is a powerhouse of innovation, featuring 11 cutting-edge institutes, centres, and specialist facilities. With more than 175 experts leading groundbreaking research, it's the epicentre for advancements across the entire hydrogen and clean fuel supply chain.

With expertise spanning production (p), delivery and storage (ds), and usage, economics and sustainability (ues), the corridor consists of:

1. The Department of Chemistry, with a focus on photocatalysis, and hydrogen storage in porous materials.

2. Manchester Environmental Research Institute, leading research in hydrogen subsurface storage.

3. Photon Science Institute, whose research includes electrocatalysts for green hydrogen production.

4. Henry Royce Institute, the UK national institute for material research and innovation, with expertise in materials for low-carbon hydrogen production, and related energy carriers and chemical feedstocks, and fuel cells. Provides £150M in facilities to support academics and industry with material innovation.

5. National Graphene Institute, a world-leading interdisciplinary centre for 2D material innovation, with 150 m2 of ISO five and six cleanrooms for industry access, undertaking low TRL research in catalysis, hydrogen sieving and porous materials as membranes.

6. The Industrial Hub for Sustainable Engineering, at James Chadwick Building, a 200m2 three-story facility providing the equipment and experts to help industry partners bridge the gap between fundamental research to pilot scale (TRLs 5-6).

7. Engineering Campus, a world-leading interdisciplinary research infrastructure and capability, convening interdisciplinary experts in photocatalysis, fuel cells, redox flow batteries, electrolysers, subsurface storage and separation.

8. Tyndall Manchester, addressing policy and societal challenges by bringing together natural scientists, engineers, social scientists and economists to consider challenges including renewable sources and bio-waste, and domestic heating.

9. Dalton Nuclear Institute, with a focus on high temperature electrolysis and thermochemical processes for large scale hydrogen production.

10. Thomas Ashton Institute for Risk and Regulatory Research, which draws on the combined knowledge and experience of The University of Manchester and Health and Safety Executive, to drive research on hydrogen safety.

11. Graphene Engineering Innovation Centre, advancing lab-to-market development of fuel cells and membranes for electrolysis using graphene and 2D materials.