

Hydrogen is a promising alternative-energy source. A major challenge is to develop suitable materials to store it under a variety of conditions. New high-pressure instrumentation at the Lujan Center High Pressure Preferred Orientation spectrometer is helping technologists address the challenge, revealing details of the uptake and release, structure, and dynamics of hydrogen in compounds such as clathrates and metal organic frameworks, allowing in-situ, real-time examination of reaction kinetics with methane and hydrogen clathrates.

Neutron scattering experiments assess high-density hydrogen storage