

**Research Capabilities:**

- Computation, theory and modeling
- Chemical and materials synthesis and characterization
- Catalyst discovery and optimization
- Reaction kinetics and dynamics
- Engineering assessment

**Benefits of Hydrogen Storage:**

- Diversity of options
- A liquid or solid fuel infrastructure
- No handling of hydrogen by customers
- Industrial-scale regeneration away from the vehicle

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**Summary:**

Los Alamos National Laboratory researchers led the creation of a national center for researching the chemical pathways to hydrogen storage. Working with industry, academia, and other government agencies, the Hydrogen Storage Center is the nation's leading facility for solving problems surrounding the transition to a hydrogen-fueled economy. The Center is one of three U.S. Department of Energy alternative energy storage research facilities. Along with the Carbon Storage Center at the National Renewable Energy Laboratory in Golden, Colorado, and the Metal Hydride Storage Center at Sandia National Laboratories in Livermore, California, the Hydrogen Storage Center is the nation's best hope for ending the reliance on foreign and unstable sources of energy.



The goals for the Center include identifying, researching, developing, and validating advanced, on-board chemical hydrogen storage systems to overcome technical barriers and meet 2010 DOE system goals with the potential to meet 2015 goals:

- Develop materials, catalysts and new concepts to control thermochemistry and reaction pathways;
- Assess concepts and systems using engineering analysis and studies;
- Select most promising chemical systems for engineering development;
- Develop life-cycle inventory and demonstrate a 1 kg storage system.

**Status:**

Industry, government, academia, and nongovernment organizations (NGOs) will all benefit from the essential research developed at this vital facility. All U.S. institutions and companies are welcome to participate in work being done at the Center.



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