

## **BASIC RESEARCH NEEDS FOR THE HYDROGEN ECONOMY**

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A summary is presented of a recent BES/DOE sponsored report that addresses the basic research needs in the areas of hydrogen production, storage, and use in fuel cells that would be necessary to bridge the large gap between present scientific knowledge/technical capabilities and what would be required for the practical realization of a hydrogen economy. In this report, research opportunities that might be effective in bridging this gap are identified in the areas of advanced materials (especially nanostructured materials), catalysis, modeling and simulations, bio-inspired approaches, and interdisciplinary efforts.