



Energy &
Homeland Security

SNL Hydrogen's Contributions to a Decarbonized Future

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Sandia National Laboratories, September 15, 2021



Nuclear Energy & Fuel Cycle



Commercial Nuclear Power Generation,
Nuclear Energy Safety & Security

Renewable Power & Energy Infrastructure

Renewable Energy, Energy Efficiency, and Grid Modernization



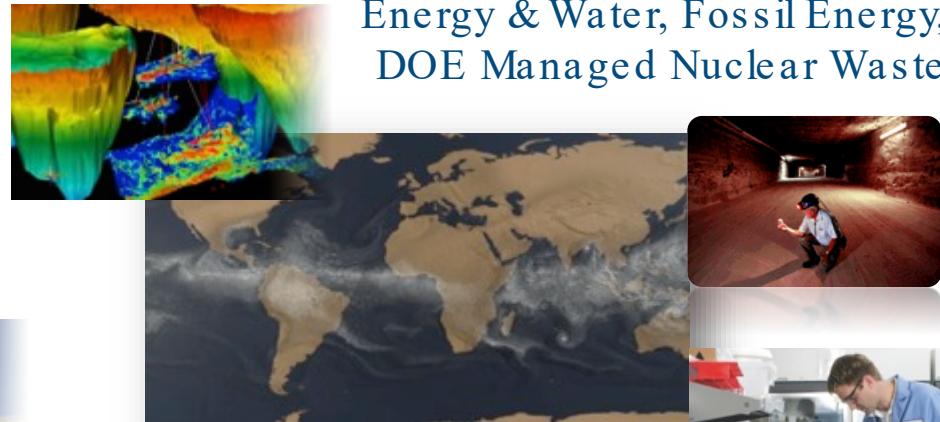
OFFICIAL USE ONLY

Fundamental Energy Research

Chemical,
Geological,
Biological,
Materials,
Computational,
and Nano
Sciences



Engineered Earth Systems



Sustainable Transportation

Vehicle Technologies, Bioenergy, Hydrogen & Fuel Cell Technology





Hydrogen Production



Water-splitting materials for large-scale hydrogen production

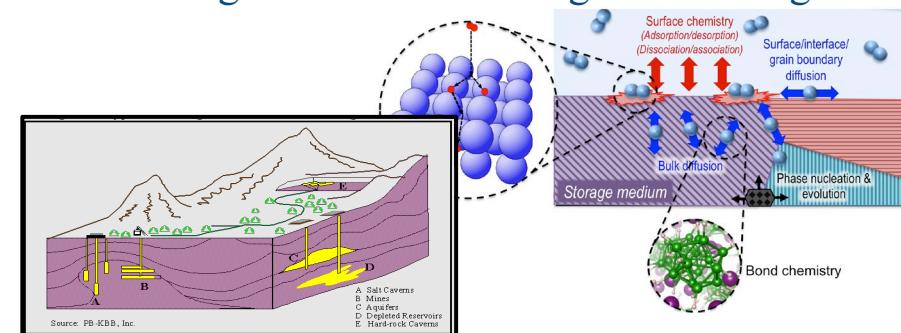
Hydrogen Delivery



Materials compatibility for hydrogen in natural gas pipelines

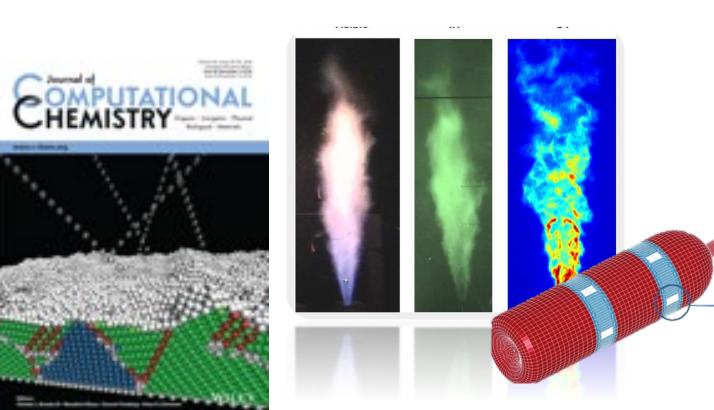
Hydrogen Storage

Discovering the behavior of solid storage materials and advancing subsurface storage technologies



Safety Codes and Standards

Structural material selection for production, storage and utilization



Systems Engineering

Demonstrate innovative engineering solutions to harness clean energy technologies



Fuel Cells

Develop synthesis toolbox and membrane chemistry for enhanced electrochemical performance



PARTNERSHIPS AND CONSORTIA ARE CRITICAL TO SANDIA'S HYDROGEN PROGRAMS

