

## Sheldon H.D. Lee

Chemical Science and Engineering Division  
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### Professional Experience

- Engineering design, installation, and testing of a micro-reactor test facility for steam reforming of ethanol at elevated pressures for distributed hydrogen production
- Engineering design and installation, laboratory setup and testing, and data analysis for FASTER (Feasibility of Acceptable Start-Time Experimental Reformer) test facility
- Design, fabrication, and installation of integrated methane reformer system based on Argonne autothermal reforming technology
- Design, fabrication, installation, and testing of engineering-scale integrated fuel-flexible fuel processor based on catalytic autothermal reforming
- Development of a regenerable sorption process to remove carbon monoxide from reformat fuel gas for polymer electrolyte fuel cells in transportation applications
- Testing of the partial oxidation reformer to develop reforming catalysts for hydrocarbon fuels and to determine engineering parameters needed for scale-up
- Coal combustion studies (volatility of trace elements in coal and alkali emissions from pressurized fluidized-bed coal combustion)
- Development of a process to remove gaseous alkali metal compounds from hot pressurized fluidized-bed combustion flue gas

### Education

- Ph.D., Fuels Engineering, University of Utah, Salt Lake City, Utah
- BS, Metallurgical Engineering, National Cheng Kung University, Taiwan

### Awards

- Pacesetter Award 2002
- Argonne Quality and Safety Recognition Award 2004
- Pacesetter Award 1997
- Pacesetter Award 2008

### Professional Society Activities

- American Chemical Society
- Honor Society of Phi Kappa Phi
- Fuel Chemistry Division of American Chemical Society

### Publications & Patents

- Patents: 4
- Publications: 135