

Di-Jia Liu

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Professional Experience

- Carbon nanotube as new electrode material for proton exchange membrane fuel cell application
- Nanostructured polymeric adsorbent for hydrogen storage application
- Diesel reforming catalyst development for solid oxide fuel cell and low-emission combustion engine
- Hydrogen storage method development for fuel cell application
- Development of electrochemical CO removal technology for PEM fuel cell application
- Development of electrode catalyst and membrane electrode assembly for PEM fuel cell
- Development of a state-of-the-art ozone catalytic converter for Boeing 777 aircraft environmental control system
- Development of NOx reduction catalyst system for lean-burn automotive combustion engine emission control
- Development of catalytic coating for CO and VOC remediation for microturbine power generator
- Development of in-situ, real-time synchrotron x-ray absorption spectroscopic method for catalyst characterization under reaction conditions
- 6-Sigma Black Belt for industrial process development through statistical design and control principles

Professional Society Activities

- American Chemical Society
- North American Catalysis Society
- American Ceramic Society
- Chicago Catalysis Club, local branch of North American Catalysis Society (President, 1999, and Program Chair, 1998)

Awards

- Honeywell Aerospace Technology Achievement Award, 2001
- Honeywell Laboratory Special Recognition Award, 2001
- Honeywell Power Systems Achievement Award, 2000
- USA Today Quality Cup Award, 2000
- AlliedSignal Corporate Technical Achievement Award, 1998
- AlliedSignal Special Technical Recognition Award, 1995
- Elizabeth R. Norton Prize, The University of Chicago, 1986

Education

- Postdoctoral Fellow, The University of California at Berkeley
- PhD, Physical Chemistry, The University of Chicago
- BS, Chemistry, Beijing University

Patents and Publications

- 7 patents
- More than 40 scientific publications in peer-reviewed journals in the area of fuel cells, environmental catalysis, advanced materials characterization, and physical chemistry