Job Description:

ASU LightWorks® and Professors Ellen B. Stechel, James E. Miller, and Ivan Ermanoski invite applications for a Postdoctoral Research Scholar in the area of solar thermochemistry. The Postdoctoral Researcher will be taking a role in projects involving solar thermochemical water and carbon dioxide splitting (solar fuels), thermochemical energy storage, and chemical production. The role will also encompass activities such as detailed engineering modeling and analysis of unit operations including chemical reaction, heat transfer, and separations; thermodynamic analysis of chemical systems; techno-economic analysis; design, construction, and characterization of novel thermochemical systems; and redox active materials development including synthesis, characterization and evaluation of chemically reactive behavior.

Essential Duties:

- Experimental design and implementation, data analysis, report/manuscript preparation, and mentorship of graduate and undergraduate students.
- Assist writing research proposals and seeking future funding.
- Coordinating among team members, which will be essential for achieving project milestones.

Minimum Qualifications:

- Applicants must have a recent Ph.D. (within the past four years) in chemical or mechanical engineering or a closely related discipline.

Desired Qualifications:

- Practical experience in at least one of the following, solar thermochemistry and concentrating solar power technology, construction and operation of high temperature systems including heterogeneous reactor systems, systems modeling and engineering, and computational fluid dynamics or thermodynamics, is highly desired;
- Familiarity with and competence in the design, assembly and operation of laboratory reactor systems, and the synthesis of oxides and/or nitrides and with standard materials characterization techniques including gas chemisorption, surface area analysis, gas chromatography, mass spectrometry, and x-ray diffraction;
- Experience with the development and/or optimization of new reactive materials or processes will also be considered an asset;
- Demonstrated motivation and aptitude for learning and taking on new challenges, collaboration, and clearly and carefully documenting results in the scientific literature is desired;
- Excellent oral and written communication skills;
- The candidate must be able to work effectively in a team environment, and effectively balance parallel work on several different projects.
Apply:

Please submit to OKEDHiring@asu.edu as a single pdf document the following materials:

1. Cover letter specifying relevant qualifications and training;
2. Curriculum vitae;
3. Statement of current research interests and expertise (2-page maximum);
4. Three professional references with contact information;
5. Two or more peer-reviewed publications.

Include "Solar Thermochemistry Postdoc" in the email subject line. Initial review of applications will begin January 1, 2019; As long as the position is not filled, a review will continue every week thereafter until the search is closed. A background check is required for employment.

Arizona State University is a new model for American higher education, an unprecedented combination of academic excellence, entrepreneurial energy and broad access. This New American University is a single, unified institution comprising four differentiated campuses positively impacting the economic, social, cultural and environmental health of the communities it serves. Its research is inspired by real world application blurring the boundaries that traditionally separate academic disciplines. ASU serves more than 100,000 students in metropolitan Phoenix, Arizona, the nation's fifth largest city. ASU champions intellectual and cultural diversity, and it welcomes students from all fifty states and more than one hundred nations across the globe. ASU is in the Phoenix metropolitan area in Tempe, Arizona, and is one of the largest universities in the U.S. The Academic Rankings of World Universities has included ASU in the top-100 list of research universities and ASU tops the 2015—2018 U.S. News & World Report list of most innovative schools in the US. ASU has recently passed the $600 million mark in annual research expenditures.

ASU LightWorks® places light-inspired and renewable energy research at the University under one strategic framework. ASU LightWorks® is a multidisciplinary effort to leverage the University's unique strengths in a broad set of emerging technologies, including energy efficiency, artificial photosynthesis, biofuels, and next-generation photovoltaics. ASU LightWorks® operates within the Office of Knowledge Enterprise Development (KED) and the Julie Ann Wrigley Global Institute of Sustainability, which seeks research funding, supports faculty researchers, nurtures partnerships with external partners, promotes innovation and entrepreneurship and shares what we learn with the community and the world.

Arizona State University is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law.