



The Combustion Institute

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Postdoctoral Appointee in Measurements of Gas-Surface Reaction Systems

We seek a motivated postdoctoral appointee to join a multidisciplinary team of researchers in developing new approaches for studying coupled gas-surface chemistry and transport in catalytic reactions. The focus of this position is the development and application of laser diagnostics that will be coupled with mass spectrometry to probe the fundamental chemical physics of gas-phase systems interacting with reactive solid surfaces.

On any given day, you will:

- Work as part of a team that includes experts in optical diagnostics and spectroscopy, reacting flows, surface science, catalysis, materials physics, mass spectrometry, and the kinetics and dynamics of chemical reactions; and
- Conduct independent research under the mentorship of technical staff and will be expected to present results at national and international conferences and to publish in high-profile peer-reviewed journals.

This position spans work across two departments, whose work is primarily funded under the DOE Office of Science and addresses fundamental experimental and numerical problems, mostly in the areas of gas phase and gas-surface reaction systems and uncertainty quantification

Essential Requirements

The position requires:

- PhD degree in a physical science or engineering
- Significant experimental research in laser diagnostics

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Qualifications we desire:

- Background combining elements of the following: optical diagnostics, reacting flows, catalysis, gas-phase chemistry, surface chemistry, fluid mechanics, molecular spectroscopy and energy transfer, mass spectrometry;
- Experience with Raman scattering, LIF, CARS, photionization mass spectrometry;
- Ability to address complex problems creatively, and to work effectively both independently and in collaboration with other researchers;
- Experience with Matlab, Chemkin, and CFD of reacting laminar flows; and
- Strong interpersonal and analytical skills.

How to Apply

DIRECTIONS:

1. Select the below link to access our careers site;
2. Sign In to access your account or if you are not an existing user select the New User link to create one; and
3. Review the job description and select the Apply button to begin your application.

https://cg.sandia.gov/psp/applicant/EMPLOYEE/HRMS/c/HRS_HRAM_FL.HRS_CG_SEARCH_FL.GBL?Page=HRS_APP_JBPST_FL&Action=U&FOCUS=Applicant&SiteId=1&JobOpeningId=670958&PostingSeq=1&SiteId=1

About Our Team

The Reacting Flow Research (8351) performs experimental and computational modeling studies of reacting flow phenomena relevant to combustion processes.

About Sandia

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation, with teams of specialists focused on cutting-edge work in a broad array of areas.

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- Some of the best tools, equipment, and research facilities in the world;
- Career advancement and enrichment opportunities; and
- Flexible schedules, generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance*

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*These benefits vary by job classification.

This position does not currently require a Department of Energy (DOE) security clearance. Sandia will conduct a pre-employment drug test and background review that includes checks of personal references, credit, law enforcement records, and employment/education verifications. Furthermore, employees in New Mexico need to pass a U.S. Air Force background screen for access to Kirtland Air Force Base. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause access to be denied or terminated, resulting in the inability to perform the duties assigned and subsequent termination of employment.

If hired without a clearance and it subsequently becomes necessary to obtain and maintain one for the position, or you bid on positions that require a clearance, a pre-processing background review may be conducted prior to a required federal background investigation. Applicants for a DOE security clearance

Security Clearance need to be U.S. citizens. If you hold more than one citizenship (i.e., of the U.S. and another country), your ability to obtain a security clearance may be impacted.

Members of the workforce (MOWs) hired at Sandia who require uncleared access for greater than 179 days during their employment, are required to go through the Uncleared Personal Identity Verification (UPIV) process. Access includes physical and/or cyber (logical) access, as well as remote access to any NNSA information technology (IT) systems. UPIV requirements are not applicable to individuals who require a DOE personnel security clearance for the performance of their SNL employment or to foreign nationals. The UPIV process will include the completion of a USAccess Enrollment, SF-85 (Questionnaire for Non-Sensitive Positions) and OF-306 (Declaration of for Federal Employment). An unfavorable UPIV determination will result in immediate retrieval of the SNL issued badge, removal of cyber (logical) access and/or removal from SNL subcontract. All MOWs may appeal the unfavorable UPIV determination to DOE/NNSA immediately. If the appeal is unsuccessful, the MOW may try to go through the UPIV process one year after the decision date.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.

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