

Experimental High Pressure Materials Physics Postdoctoral Appointee

Location: Albuquerque, NM –Temporary/Full-time

This postdoctoral position is a temporary position for up to one year, which may be renewed at Sandia's discretion up to five additional years. The PhD must have been conferred within five years prior to employment. Individuals in postdoctoral positions may bid on regular Sandia positions as internal candidates, and in some cases may be converted to regular career positions during their term if warranted by ongoing operational needs, continuing availability of funds, and satisfactory job performance.

What Your Job Will Be Like

Are you looking for challenging and impactful work that contributes to security, peace and freedom worldwide? We are looking for a dedicated Postdoctoral Appointee to pursue research in materials under extreme conditions! Research will involve the structural and transport characterization of superconducting metal hydrides using diamond anvil cells, and dynamic experiments using pulsed power and hypervelocity guns. Research is conducted within a diverse team with theoretical and experimental expertise in hydride chemistry, physics, and measurements under extreme conditions. The successful candidate will work with two different teams.

On any given day, you may be called upon to:

- Design and implement experiments aimed at probing novel materials under high pressures, high temperature and low temperatures
- Collaborate with a diverse team of internal and external scientists in the area of hydride superconductivity
- Contribute to the scientific community through the presentation at international conferences and publication in peer-reviewed journals of your research

Join our team and achieve your dreams while making a difference!

Qualifications We Require

- Possess, or are pursuing, a PhD, conferred within 5 years prior to employment, in Physics, Applied Physics, Materials Science, or related field
- Ability to acquire and maintain a DOE clearance

Qualifications We Desire

- Technical proficiency in experimental methods at high pressures and high energy density physics as proven by a track record of publications in refereed journals, including experience in analysis of X-ray diffraction spectra at high pressures
- Ability to quickly learn new experimental techniques
- Experience making effective technical presentations
- Interpersonal and verbal/written communication skills
- Ability to collaborate in a team environment, and interest in interdisciplinary research

About Our Team

The Quantum Phenomena Department (01879) is part of the Material, Physical, Chemical Sciences Center at Sandia National Laboratories which creates new scientific knowledge in support of Sandia's national security mission. We provide science-based solutions to meet the needs of various offices within the Department of Energy (especially the Office of Basic Energy Sciences, various Energy Technology Offices, and the National Nuclear Security Administration) as well as other government agencies. Our work spans the spectrum from fundamental research to state-of-the-art applications. This department has a very broad range of research programs that include theory and experiment relating to quantum-based computation, communication, and fundamental science. Research topics in this department include quantum transport, quantum materials, quantum optics, as well as work on superconducting materials and devices. Quantum Phenomena Department at Sandia has a long history of performing innovative research on the transmission and manipulation of quantum-based information.

The Dynamic Materials Properties Department at Sandia National Laboratories (Department 1646) performs experimental measurements of dynamic material properties at high pressures, including material's equations of state, phase boundaries, and transport and constitutive properties. Experiments are performed with a variety of drivers, from high velocity gas guns to the most powerful pulsed-power facility in the world, the 26 million ampere Z facility. The focus of the department is dynamic material properties experiments using both high-pressure shock waves and shockless compression as well as the development, implementation, and application of new material physics diagnostics. Initiatives within the department range from basic science to highly applied national security missions. The department is responsible for designing, executing, diagnosing, and analyzing dynamic materials properties experiments on the Z facility, and at Sandia National Laboratories Dynamic Integrated Compression Experimental (DICE) and Shock Thermodynamic Applied Research (STAR) facilities.

Our team is committed to nurturing a culture compatible with a broad group of people and perspectives in accordance with the changing makeup of the workforce. In support of this vision, our center actively recruits applicants from diverse groups of backgrounds and fosters an inclusive community.

Apply online at:
sandia.gov/careers
Job #: 686712

About Sandia:

Our culture values work-life balance; we offer programs such as flexible work schedules with alternate Fridays off, on-site fitness facilities, and three weeks of vacation. Sandia provides employees with a comprehensive benefits package that includes medical, dental, vision, and a 401(k) with company-match.

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation. We are a world-class team of scientists, engineers, technologists, post docs, and visiting researchers all focused on cutting-edge technology, ranging from homeland defense, global security, biotechnology, and environmental preservation to energy and combustion research, computer security, and nuclear defense.

*World-changing technologies.
Life-changing careers.*

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www.sandia.gov

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or veteran status