

What Your Job Will Be Like:

We are looking for a Postdoctoral Appointee to pursue research in quantum materials under extreme conditions. Research will involve the structural and transport characterization of superconducting metal hydrides under extreme environments. Research is conducted within a diverse team with theoretical and experimental expertise in hydride chemistry, physics, and measurements under extreme conditions. On any given day, you may be called upon to:

- Design and execute experiments aimed at probing novel materials under high pressures 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.

Qualifications We Require:

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

Qualifications We Desire:

- GPA of 3.2 for bachelor's degrees and 3.5 for master's degrees or PhDs.
- Technical competency in experimental methods at high pressures as demonstrated by a track record of publications in refereed journals.
- Ability to quickly learn new experimental techniques
- Experience making effective technical presentations
- Excellent verbal and written communication skills
- Experience in analysis of X-ray diffraction spectra at high pressures
- Experience with cryogenic measurement techniques
- Scientific programming for efficient data collection and analysis
- Ability to collaborate in a team environment, and interest in interdisciplinary research.
- Independent vision, creativity, and ability to pursue and achieve R&D milestones

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. We also have ongoing work on the physics of quantum dots, quantum wells, topological insulators, and 2D materials and interfaces. The Quantum Phenomena Department at Sandia has a long history of performing cutting-edge basic research on the transmission and manipulation of quantum-based information.

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. Some of the main reasons we love our jobs:

- Challenging work with amazing impact that contributes to security, peace, and freedom worldwide
- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include: 9/80 (work 80 hours every two weeks with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work and telecommuting (a mix of onsite work and working from home)
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance* (*Benefits vary by job classification)

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Position Information:

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.

Posting Duration:

This posting will be open for application submissions for a minimum of seven (7) calendar days, including the 'posting date'. Sandia reserves the right to extend the posting date at any time.

COVID-19 Vaccination Mandate:

Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires be fully vaccinated or have an approved medical or religious accommodation before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

Security Clearance:

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 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.

EEO:

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.