Position Opening

POSITION: Postdoctoral Researcher (Computational Chemistry)
STATUS: Full-Time / Benefited / Non-exempt
COMPENSATION: $28.00 - $39.00 per hour
DEPARTMENT: Department of Chemistry and Biochemistry
LOCATION: CSU Chico Campus; Hybrid
RECRUITMENT ID: 030

RESIDENCY: Candidate must be a California resident. Chico State Enterprises is not a sponsoring agency for staff and management positions (i.e. H-1B Visas).

ESSENTIAL JOB FUNCTIONS: Come join the dynamic Department of Chemistry and Biochemistry at the California State University, Chico (CSU, Chico) as a Postdoctoral Fellow! Sponsored by the U.S. Department of Energy (DOE) and working closely with Lawrence Livermore National Laboratory (LLNL) scientists, the candidate will be conducting research on atomistic modeling of heterogeneous interfaces for advanced energy storage. The selected applicant will focus on simulations and modeling of structure, reactivity and transport properties of lithium-containing molecular species in metal-organic frameworks for applications in lithium-sulfur batteries, which theoretically have significantly higher energy densities compared to current battery chemistries. The candidate will work closely with a multidisciplinary team with partial time expected to be spent at LLNL and San Jose State University (SJSU). This work is expected to result in publications in nationally and internationally recognized chemistry/materials journals as well as applications in projects with renewable energy missions. The Postdoctoral Fellow will also be expected to work with and mentor undergraduate research students from underrepresented groups, first-generation college backgrounds, and women subpopulations.

The major duty of the Postdoctoral Fellow is to conduct theoretical research, under the supervision of Prof. So at CSU, Chico and Dr. Wan at LLNL. More specifically, the job duties tentatively include the following:

- Perform density functional theory-based electronic structure calculations and classical molecular dynamic simulations on high-performance computing environment.
- Develop structure-composition-property relationships for optimizing transport and reactivity using statistical, analytical, and machine learning methodologies.
- Collect, prepare, and analyze research data; discuss results in group meetings.
- Contribute to and actively participate in the conception, design and execution of research to address defined problems.
- Collaborate with computational and experimental scientists at LLNL and SJSU to accomplish research goals.
- Document research, publish papers in peer-reviewed journals, and present results within the DOE community and at conferences/technical meetings.
- Supervise student personnel and coordinate research efforts for increased efficiency; participate in training of students and volunteer workers as needed.
EMPLOYMENT STANDARDS:

Required:

- PhD, earned within 5 years prior to employment, in chemistry, physics, materials science, or related field.
- Experience in the application of density functional theory to simulations of chemical reactions and/or transport phenomena in materials.
- Experience performing large-scale ab initio simulations on high-performance computing environments.
- Ability to work independently on technical tasks, influence technical objectives, to provide in depth analysis, and develop unique technical solutions.
- Ability to develop independent research directions and describe results effectively in published peer-reviewed literature.
- Proficient verbal and written communication skills to collaborate effectively in a team environment, prepare written reports and present and explain technical information.
- Interpersonal skills necessary to interact with a diverse set of scientists, engineers, undergraduate and graduate students, and other technical and administrative staff in a collaborative, multidisciplinary team environment.

Preferred:

- Strong academic background
- Experience in performing classical molecular dynamics and developing post processing tools.
- Experience with the application of statistical, analytical, or machine learning methods for analyzing the results.
- Technical experience and a proven publication record in the areas of simulation and modeling of chemical reactions and transport properties, ideally related to metal organic framework or lithium-sulfur batteries.
- Familiarity with collaboration and integration of modeling with experimental characterization techniques.

COMPLIANCE REQUIREMENTS:

- Candidate must be in possession of valid driver's license and automobile liability insurance. Participation in the DMV Employer Pull Notice Program (driving record) is required. The candidate will be required to update their insurance with Chico State Enterprises Human Resources when necessary.
- Satisfactory completion of a background check (including a criminal records check) is required for employment. Chico State Enterprises will make a conditional offer of employment, which may be rescinded if the background check reveals disqualifying information, and/or it is discovered that the candidate knowingly withheld or falsified information. Failure to satisfactorily complete the background check may affect the continued employment of a current Chico State Enterprises employee who was conditionally offered the position.

BENEFITS:
Benefits for employees working 30 hours or more per week include employer paid life insurance ($50,000) and long-term disability; options for health, dental, and vision insurance; FSA; 14 paid holidays including 1 personal holiday; vacation accrual (initially 10 days/year); sick leave (up to 12
days/year); employer contributions to your 403(b) retirement plan (up to 8%).

HOW TO APPLY:
To be considered, submit the following documents by December 4th, 2023. Documents submitted after this date may not be considered.

- Resume
- Chico State Enterprises Application
- Cover Letter
- Contact information for three professional references

BY DROP BOX: https://csuchico.app.box.com/f/d91c6af1d6a74ff19a30d92a418f8b67
BY EMAIL: csejobs@csuchico.edu

Paper applications will not be accepted; however, Chico State Enterprises is an Equal Opportunity Employer and is happy to provide reasonable accommodations to applicants at any step of the application process. If you need assistance in this regard, or are having technical difficulties, please contact the Human Resources office at 530-898-6811 or csejobs@csuchico.edu prior to 5:00 pm on the document deadline date. The employer is Chico State Enterprises, a non-profit corporation serving as an auxiliary organization of California State University, Chico. Employment is considered to be at-will.

AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER:
Chico State Enterprises is an Equal Opportunity Employer and does not discriminate against persons on the basis of race, religion, color ancestry, age, disability, genetic information, gender, gender identity, gender expression, marital status, medical condition, National origin, sex, sexual orientation, covered veteran status, or any other protected status. It is the Enterprises’ policy to hire only United States citizens and aliens lawfully authorized to work in the United States. All new employees must provide proof of identity and authorization to work.