

10 November 2022

**POSTDOCTORAL FELLOW IN MECHANICAL ENGINEERING**

Type of Position: Research

Workstudy Position: No

Job Type: Fixed Duration of Project/Grant (Fixed Term)

Sponsorship Available: No

Institution Name: University of Arkansas, Fayetteville

Founded in 1871, the University of Arkansas is a land grant institution, classified by the Carnegie Foundation among the nation's top 2 percent of universities with the highest level of research activity. The University of Arkansas works to advance Arkansas and build a better world through education, research and outreach by providing transformational opportunities and skills, promoting an inclusive and diverse culture and climate, and nurturing creativity, discovery and the spread of new ideas and innovations.

The University of Arkansas campus is located in Fayetteville, a welcoming community ranked as one of the best places to live in the U.S. The growing region surrounding Fayetteville is home to numerous Fortune 500 companies and one of the nation's strongest economies. Northwest Arkansas is also quickly gaining a national reputation for its focus on the arts and overall quality of life.

As an employer, the University of Arkansas offers a vibrant work environment and a workplace culture that promotes a healthy work-life balance. The benefits package includes university contributions to health, dental, life and disability insurance, tuition waivers for employees and their families, 12 official holidays, immediate leave accrual, and a choice of retirement programs with university contributions ranging from 5 to 10% of employee salary.

Below you will find the details for the position including any supplementary documentation and questions, you should review before applying for the opening.

If you have a disability and need assistance with the hiring process, please submit a request via the Disability Accommodations | OEOC | University of Arkansas (uark.edu) : Request an Accommodation. Applicants are required to submit a request for each position of which they have applied.

For general application assistance or if you have questions about a job posting, please contact Human Resources at 479.575.5351.

Department: Mechanical Engineering, Xiangbo Meng, Associate Professor

**Summary of Job Duties:**

The Postdoctoral Fellow will conduct research in developing advanced lithium-metal batteries (e.g., Li/NMC or Li/S) using atomic and molecular layer deposition or any feasible techniques. The position is expected to advance a better understanding of interfacial issues in lithium metal batteries during their electrochemical processes. In addition, this position is expected to develop new research directions, prepare proposals to secure external funding for research and

commercialization of research, prepare journal and conference papers, and mentor graduate and undergraduate researchers.

Regular, reliable, and non-disruptive attendance is an essential job duty, as is the ability to create and maintain collegial, harmonious working relationships with others.

Minimum Qualifications:

- Ph.D. in Electrochemistry, Engineering, Materials, Chemistry, Physics, or related fields from an accredited institution of higher education conferred by the start of employment
- Demonstrated expertise in the following areas: design and evaluation of electrochemical devices, nanomaterials fabrication and characterization, hands-on skills of battery testing, and data analysis of battery performance
- Peer-reviewed publications in areas listed above

Preferred Qualifications:

Meaningful experience and proficiency in:

- Research experience in Ni-rich NMC, e.g., NMC622, NMC811, and NMC9055
- Research experience in Li metal and Na metal anodes
- Research experience in ALD and MLD
- Electrochemical testing of battery cells
- Electrochemical analyses using EIS, E-QCM, CV, and related instruments
- Materials fabrication using CVD, PVD, and wet chemistry
- Materials characterization using SEM, TEM, XRD, XPS, and Raman
- Data analysis using Origin, Excel, and related software

Knowledge, Skills, and Abilities:

- Knowledge of using general office software and materials testing laboratory equipment
- Excellent written and oral communication skills

Additional Information:

This position is renewable annually based on continued need for the position, availability of funding, and satisfactory job performance.

***College of Engineering – Diversity & Inclusion Statement:***

The College of Engineering is dedicated to building and supporting an inclusive culture with a diverse and pluralistic faculty, staff, and administration. The College encourages applications from all qualified candidates, especially individuals who contribute to diversity of our campus community and welcomes applications without regard to race/color, sex, gender, pregnancy, age, national origin, disability, religion, marital status, protected veteran or military status, genetic information, LGBTQIA+, or any other characteristic protected under applicable federal or state law. The College invites applicants with career interruptions to share the related circumstances and explain how these interruptions have impacted their career path.

Salary Information: Commensurate with education and experience

Required Documents to Apply:

Applicants should submit **a SINGLE PDF** file that includes:

- Letter of interest (cover letter)
- Curriculum vita

- Diversity statement that includes their understanding of, prior and/or ongoing experiences engaging with individuals from a broad range of backgrounds, and plans to attract, teach, and mentor a diverse group of students
- Names and contact information of three professional references

Optional Documents: Proof of Veteran Status

All application materials must be uploaded to the University of Arkansas System Career Site [https://uasys.wd5.myworkdayjobs.com/UASYS/job/Fayetteville/Postdoctoral-Fellow-in-Mechanical-Engineering\\_R0025656](https://uasys.wd5.myworkdayjobs.com/UASYS/job/Fayetteville/Postdoctoral-Fellow-in-Mechanical-Engineering_R0025656). Please do not send to listed recruitment contact.

Pre-employment Screening Requirements: Criminal Background Check, Sex Offender Registry

The University of Arkansas is committed to providing a safe campus community. We conduct background checks for applicants being considered for employment. Background checks include a criminal background check and a sex offender registry check. For certain positions, there may also be a financial (credit) background check, a Motor Vehicle Registry (MVR) check, and/or drug screening. Required checks are identified in the position listing. A criminal conviction or arrest pending adjudication or adverse financial history information alone shall not disqualify an applicant in the absence of a relationship to the requirements of the position. Background check information will be used in a confidential, non-discriminatory manner consistent with state and federal law.

The University of Arkansas seeks to attract, develop and retain high quality faculty, staff and administrators that consistently display practices and behaviors to advance a culture and climate that embeds inclusion, diversity, equity, and access. For more information on diversity and inclusion on campus, please visit: Division of Diversity, Equity, and Inclusion

The University of Arkansas is an equal opportunity, affirmative action institution. The university welcomes applications without regard to race/color, sex, gender, pregnancy, age, national origin, disability, religion, marital or parental status, protected veteran or military status, genetic information, sexual orientation, gender identity or any other characteristic protected under applicable federal or state law.

Persons must have proof of legal authority to work in the United States on the first day of employment. All applicant information is subject to public disclosure under the Arkansas Freedom of Information Act.

Constant Physical Activity: N/A

Frequent Physical Activity: N/A

Occasional Physical Activity: N/A

Benefits Eligible: Yes