

**Opportunity Title:** Battery Materials and Manufacturing Supply Chain Fellow

**Opportunity Reference Code:** DOE-STP-MESC-2023

**Organization** U.S. Department of Energy (DOE)

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**How to Apply** Click on Apply below to start your application

*Mentors are actively seeking applicants for this opportunity and will review submitted applications for selection on an ongoing basis throughout the year.*

**Description** The U.S. Department of Energy (DOE) Science, Technology and Policy Program is designed to provide opportunities for postgraduates and faculty to participate in programs, projects, and activities at the Department. Fellows will receive hands-on experience that provides an understanding of the mission, operations, and culture of the DOE. As a result, fellows will gain deep insight into the federal government's role in the creation and implementation of energy technology policies; apply their scientific, policy, and technical knowledge to the development of solutions to issues of importance to the DOE and continue their education and involvement in areas that support the DOE mission either in a technical or policy-related role.

#### **About the Office of Manufacturing and Energy Supply Chains**

Established in 2022 as a new office under the Office of the Under Secretary for Infrastructure, The Office of Manufacturing and Energy Supply Chains (MESC) serves as the frontline of clean energy deployment, accelerating America's transition to a resilient, equitable energy future through \$20 billion of direct investments in manufacturing capacity and workforce development. MESC develops and provides the analytical tools that help to inform programs and investments across DOE and the U.S. Government. See our complete website at <https://www.energy.gov/mesc/office-manufacturing-and-energy-supply-chains>

The Bipartisan Infrastructure Law (BIL) 40207(b) Battery Materials Processing and 40207(c) Battery Manufacturing Grants will invest more than \$7 billion in the batteries supply chain over the five-year period encompassing fiscal years (FYs) 2022 through 2026. This includes sustainable sourcing of critical minerals from secondary and unconventional sources, reducing the need for new extraction and mining; sustainable processing of critical minerals; and the end-of-life battery collection and recycling.


MESC's Battery and Critical Materials Office, which oversees several BIL and Inflation Reduction Act (IRA) provisions including the 40207(b) Battery Materials Processing and 40207(c) Battery Manufacturing Grants, is interested in ORISE fellows to assist in supporting battery and critical materials supply chain development.

#### **What Will I be Doing?**


The Office of Manufacturing and Energy Supply Chains (MESC) seeks two (2) talented and committed individuals, one focused on upstream battery technologies and the other on midstream/downstream technologies. The selected fellows will learn and engage in the following:


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- Engage with private-sector companies, other Federal agencies, researchers, non-governmental organizations, and key stakeholders to collect, analyze, respond to, and share data about energy supply chains to inform future decision-making and investment.
- Participate and collaborate with the Federal Consortium for Advanced Batteries (FCAB), Li-Bridge (a public-private alliance), community stakeholders, and federal staff to better understand how DOE can further improve US infrastructure to support battery manufacturing deployment and build a consolidated and robust supply chain strategy across the battery ecosystem.
- Consolidate knowledge and complete reporting for active technology deployment and commercialization applications/projects pertaining to either:
  - Battery critical minerals, materials, and key components; or,
  - Battery manufacturing, processing, and recycling
- Write and publish technical reports documenting the data, analysis, and resulting insights of projects performed.
- Research requirements, perform analysis, and interpret technical reports and papers related to one or more of the following battery topics in the context of prominent U.S. industrial sectors (e.g. transportation, grid storage, consumer electronic, etc.):
  - Supply chains, critical materials processing, manufacturing production, and recycling
- Collect and analyze the latest science and engineering technological advances in state-of-the-art applications pertaining to electrification. Consolidate knowledge and complete reporting for active battery deployment projects in one or more of the following topics:
  - Materials technologies such as direct lithium extraction, battery cathode precursor processes, and battery salt purification, among others.
  - Manufacturing processes and techniques such as cell assembly, cathode/separator/silicon-based anode production, electrolyte solvent fabrication, and mixing, among others.
  - End-of-life technologies to recover and separate critical materials from black mass such as pyrometallurgy, hydrometallurgy, or other recycling processes.
- Collaborate with National Laboratory and headquarters contractors, DOE technical project officers, project principal investigators, and government and industry representatives.
- Collaborate and link supply chain efforts related to establishing battery materials separation and processing, manufacturing, and/or recycling.
- Participate with other members of the MESC office in the development of related documentation, presentation, and reporting for assigned activities.

#### **Participant Benefits:**

MESC will provide a supplemental stipend to offset the costs of health insurance. Participants are eligible to purchase health insurance plans offered through ORISE. Participants may receive an allowance for education and/or scientific activities up to \$10,000 as approved by MESC.

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Participants may be eligible to receive a relocation supplement up to \$5,000.

Stipends will be based on appointment level and commensurate with qualifications:

- Post-Masters: \$68,217-\$90,000/year
- Post Doctoral: \$82,992-\$129,996/year

### **Nature of Appointment**

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOE, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE letter of appointment and Terms of Appointment.

**Qualifications** Applicants must have completed their Master's or Doctoral degree within the last five years. If more than 5 years since receipt of the degree, the applicant must have an academic background and experience in a relevant field and must be seeking to gain new knowledge/experience in order to expand career opportunities or advance professionally.

Favorable candidates will have the following:

- Master's or PhD in Chemical Engineering, Mechanical Engineering, Materials Science and engineering, Physics, Chemistry, Geology, and/or related sciences.
- Lab or application experience in either:
  - Materials separation, chemical processing, and materials conversion, particularly for battery materials; or,
  - Fabrication, testing, diagnostics, and qualification of battery materials, components, cells, and/or systems
- Knowledge of engineering principles, concepts, standards, and methods.
- Experience in developing, organizing, and/or evaluating projects and programs.
- Strong written and oral communication skills to present technical results and briefings to audiences of all levels.
- Confidence and curiosity to learn, ask questions, and engage with top technology experts at the national labs, industry, and academia.

### **How to Apply**

A complete application consists of:

- Zintellect Profile and responses to opportunity specific questions.
- Transcripts/Academic Records - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate may be required to provide proof of completion of the degree before the appointment can start.
- A current resume/CV, including academic history, employment history, and relevant experiences (\*see below for instructions).
- One Recommendation - Applicants are required to provide contact information for one recommender in order to submit the application. You are encouraged to request a recommendation from professionals who

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can speak to your abilities and potential for success, as well as your scientific capabilities and personal characteristics. Recommendation requests must be sent through the Zintellect application system. Recommenders will be asked to complete a recommendation in Zintellect. Letters of recommendation submitted via email will not be accepted. Recommendations must be submitted on your behalf through Zintellect before an offer is made.

*All documents **must** be submitted via Zintellect in order to be considered and must be in English or include an official English translation. Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blacked out, blackened out, made illegible, etc.) prior to uploading into the application system.*

\*The resume/CV must include the following:

- **Basic applicant Information:** Name, address, phone, email, and other contact information.
- **Work & Research Experience:** List all work and research experiences beginning with current or most recent. Include the name of the employer, location, position held, and time period involved.
- **Leadership Experience:** List experiences (e.g., work, civic, volunteer, research) that demonstrate your leadership skills. Detail your role, type of experience, organization, location, and duration.
- **Educational History:** List all institutions from which you received or expect to receive a degree, beginning with current or most recent institution. Include the name of the academic institution, degree awarded or expected date of awarded or expected degree, and academic discipline.
- **Honors & Awards:** List in chronological order (most recent first) any awards or public recognitions. Include the name of awarding institution, title of the award or honor, and date of award or honor.

If you have questions, please send an email to [DOE-RPP@orise.orau.gov](mailto:DOE-RPP@orise.orau.gov). Please list the reference code for this opportunity in the subject line of your email: DOE-STP-2023-MESC

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**Point of Contact** [Alyson Williamson](#)

- Eligibility**
- **Citizenship:** LPR or U.S. Citizen
- Requirements**
- **Degree:** Master's Degree or Doctoral Degree.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#))
    - **Earth and Geosciences** ([16](#))
    - **Engineering** ([21](#))
  - **Age:** Must be 18 years of age