Opportunity Title: Synthesis and Characterization of Advanced Battery Materials
Opportunity Reference Code: ARL-R-ES-400044-F1

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-ES-400044-F1

Description DEVCOM ARL's Battery Science Branch is seeking a skilled chemist, materials scientist, or scientist from a related field with experience in synthetic organic chemistry and chemical characterization for development of electrolyte and active materials for advanced batteries, including lithium-ion, multivalent, and "beyond-Li chemistries". The postdoctoral fellow will have the opportunity to develop research plans in conjunction with senior staff scientists, design and carry out chemical synthesis of battery materials and electrolyte solvents/salts/additives, and test and characterize these battery materials with electrochemical and spectroscopic methods. Through this research, the fellow will have an opportunity to generate publications, intellectual property, and present these results at professional conferences. The fellow will also have an opportunity to gain knowledge in areas related to the energy sciences as applies to the U.S. Army mission, and how the Electrolyte and Interface Science Team's research feeds into broader mission challenges in energy storage. The fellow will be expected to follow and develop standard operating procedures (SOPs) for new laboratory processes, maintain accurate records of all procedures and results in compliance with quality and safety standards, and must understand and execute appropriate disposal of liquid and solid chemical waste. The desired candidate will have strong communication and teamwork skills, and will be motivated to work independently and collaboratively with a multi-disciplinary team of Army scientists and engineers.

Advisor Name: Marshall Schroeder
Advisor Email: marshall.a.schroeder.civ@army.mil

About ARD

ARL's Army Research Directorate (ARD) focuses on exploiting concept development, discovery, technology development, and transition of the most promising disruptive science and technology to deliver to the Army fundamentally advantageous science-based capabilities through laboratory's 11 research competencies. This intramural research directorate also manages the laboratory's essential research programs, which are flagship research efforts focused on delivering defined outcomes.

About ARL-RAP

The Army Research Laboratory Research Associateship Program (ARL-RAP) is designed to significantly increase the involvement of creative and highly trained scientists and engineers from academia and industry in scientific and technical areas of interest and relevance to the Army. Scientists and Engineers at the CCDC Army Research Laboratory (ARL) help shape and execute the Army's program for meeting the challenge of

developing technologies that will support Army forces in meeting future operational needs by pursuing scientific research and technological developments in diverse fields such as: applied mathematics, atmospheric characterization, simulation and human modeling, digital/optical signal processing, nanotechnology, material science and technology, multifunctional technology, combustion processes, propulsion and flight physics, communication and networking, and computational and information sciences.

About ENERGY SCIENCES (ES)

Science of mechanical and electrical power generation, storage, conditioning and distribution; energy conversion; and emerging concepts for lasers, directed energy (DE), DE protection and propagation.

A complete application includes:

- **Curriculum Vitae or Resume**
- **Three References Forms**
  - An email with a link to the reference form will be available in Zintellect to the applicant upon completion of the on-line application. Please send this email to persons you have selected to complete a reference.
  - References should be from persons familiar with your educational and professional qualifications (include your thesis or dissertation advisor, if applicable)
- **Transcripts**
  - Transcript verifying receipt of degree must be submitted with the application. Student/unofficial copy is acceptable

If selected by an advisor the participant will also be required to write a **research proposal** to submit to the ARL-RAP review panel for :

- Research topic should relate to a specific opportunity at ARL (see Research Areas)
- The objective of the research topic should be clear and have a defined outcome
- Explain the direction you plan to pursue
- Include expected period for completing the study
- Include a brief background such as preparation and motivation for the research
- References of published efforts may be used to improve the proposal

A link to upload the proposal will be provided to the applicant once the advisor has made their selection.

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Questions about this opportunity? Please email ARLFellowship@orau.org.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Academic Level(s):** Doctoral Degree (Postdoctoral Fellow).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (2 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (2 👁)
  - **Social and Behavioral Sciences** (29 👁)