Opportunity Title: Alternative coating systems for DOD platforms
Opportunity Reference Code: ARL-R-WMRD-300005

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-WMRD-300005

Application Deadline 9/10/2026 1:00:00 PM Eastern Time Zone

Description **About the Research**

Research and Development of Alternative Chemistries for Ground Vehicles and Vertical Lift Platforms:

Coating and corrosion research is an ongoing and active effort for ARL and requires extensive efforts to develop, test and verify performance of various coatings and corrosion related chemistries. Recent advances in novel pretreatments, corrosion inhibitors and topcoats chemistries have created new opportunities for improving the performance of coatings systems and subsequent stack ups; however the data and demonstration of those chemistries need to be conducted to determine the properties and performance of these chemistries. Exceptional candidates are sought in the area of coatings and corrosion science in the area of formulation and characterization, particularly pertaining to evaluation of new coatings systems. The project will require participating as part of a large application driven research team to verify and validated the performance of variety of coatings systems. The main focus will be the development of test matrixes and evaluation with emphasis on characterization tools to identify exceptional materials and improve the performance and application of new systems developed.

This research opportunity aligns with the ARL S&T Campaign in the areas of ground vehicles and vertical lift platforms in an effort to improve the performance, reliability and versatility of future Army systems.

Required qualifications: Applicants should have received a B.S. degree in Chemistry, Materials Science and Engineering or a closely related discipline. Candidates should demonstrate a strong academic background with research experience in coatings formulation, coating processing (application, testing and characterization) and mechanical testing (static and dynamic) of materials. Additional experience with accelerated test, UV-VIS spectrophotometers, gloss meters and similar devices etc.) are highly desirable. This opportunity is open to U.S. Citizens only.

Keywords: Pretreatment, primer, chemical agent resistant coatings, coating

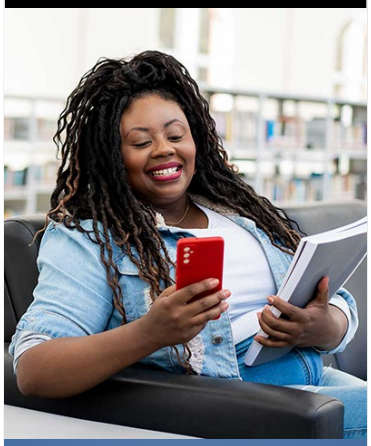
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About WMRD

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The goals of the Weapons and Materials Research Directorate (WMRD) are to enhance the lethality and survivability of weapons systems, and to meet the soldier's technology needs for advanced weaponry and protection. Research is pursued in energetic materials dynamics, propulsion/flight physics, projectile warhead mechanics, terminal effects phenomena, armor/survivability technologies, environmental chemistry, and advanced materials (energetic, metals, ceramics, polymers, composite/hybrids, and mechanics) for armor, armament, missiles, ground vehicles, helicopters, and individual soldier applications necessary for maintaining and ensuring supremacy in future land warfare.

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.

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

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- 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.

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

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree.
- **Academic Level(s):** Any academic level.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Engineering** (27 👁)