

**Opportunity Title:** U.S. Army CCDC - Nanomaterials Postdoctoral Fellowship

**Opportunity Reference Code:** CCDC-SC-2021-0003

**Organization** U.S. Department of Defense (DOD)

**Reference Code** CCDC-SC-2021-0003

**How to Apply** Click on *Apply* at the bottom of the opportunity to start your application.

**Description** The U.S. Army Combat Capabilities Development Command Soldier Center (CCDC-SC) is offering a doctorate level research opportunity at the Natick, Massachusetts facility.

#### What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers on a project with a primary focus on treating nanoparticles as giant atoms and constructing new "molecules" out of them. The goal of this project is to translate this atomic level reality to nanoparticles by viewing them as atoms and generating nanoparticle "molecules" that will show new optical, electronic, mechanical, and catalytic properties.

#### Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. This project will involve the controlled synthesis and characterization of nanoparticles, surface modifying the nanoparticles to add reactive moieties that can link with one another, thereby combining multiple nanoparticles in a predetermined manner, characterizing the nanoparticle based molecules using microscopic and spectroscopic techniques, and exploring optical and catalytic applications derived from these molecules.

You will collect and analyze data as it pertains to the research and join the CCDC-SC research team to develop solutions to the interpreted data. In addition, your mentor will develop learning objectives to fit your personal career development goals, while providing guidance and education that will prepare you for the labor force.

#### Where will I be located?

Natick, Massachusetts

#### What is the anticipated start date?

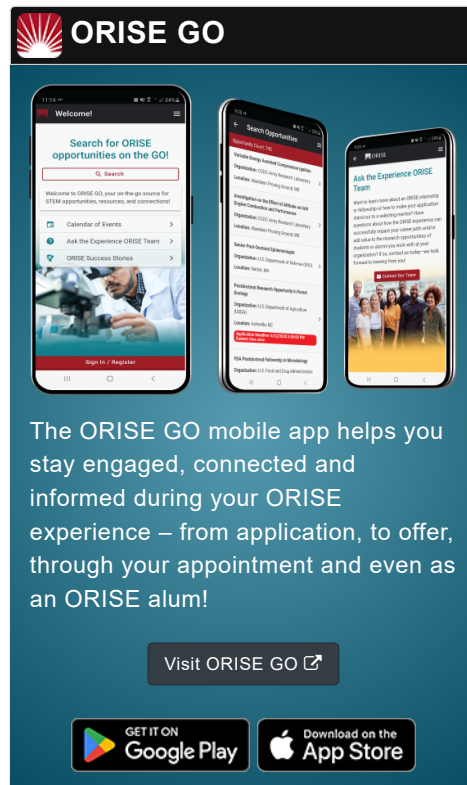
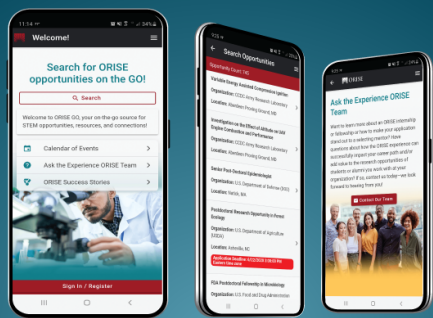
The CCDC-SC is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and internships or fellowships will be filled as qualified candidates are identified.

#### What is the appointment length?

This appointment is a twelve month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant

#### What are the benefits?



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You will receive a stipend to be determined by CCDC Soldier Center. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. *Participants are eligible to purchase health insurance through ORISE.*
- Relocation Allowance
- Training and Travel Allowance

#### **About CCDC-SC**

The U.S. Army Combat Capabilities Development Command Soldier Center (CCDC-SC) is located at the U.S. Army Natick Soldier Research Center in Natick, Massachusetts, under the Army Futures Command. CCDC-SC supports Soldier-related research, development, testing and evaluation efforts. CCDC-SC's highly skilled team of scientist perform a variety of research that includes, Soldier's uniforms, meals ready to eat (MREs), tents, sleeping bags, to parachutes and airdrop capabilities. If the Soldiers wear it, eat it, sleep under it, or have it airdropped to them, the product research and development can be traced back to the mission of CCDC-SC. Diverse expertise comprised of scientists, engineers, technologists and equipment designers, the CCDC Soldier Center provides a wide range of capabilities to the Soldier, to include field feeding and life support systems, protective clothing, precision airdrop systems, and ballistic, chemical and laser-protection systems, and human performance optimization.

#### **About ORISE**

This program, administered by Oak Ridge Associated Universities (ORAU) through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and DoD. Participants do not enter into an employee/employer relationship with ORISE, ORAU, DoD or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the [ORISE Research Participation Program at the U.S. Department of Defense](#).

#### **Qualifications**

The qualified candidate should hold a doctoral degree in one of the areas of chemical/material sciences. Degree must have been received within five years of the appointment start date.

Highly competitive applicants will have experience in the following:

- Synthesis of nanoparticles and advanced characterization methods such as microscopy techniques including TEM, spectroscopy techniques including UV-Vis-NIR, XPS and Raman is highly preferred.
- Wet chemical laboratory techniques

#### **Application Requirements**

A complete application consists of:

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- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- 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. [Click here for detailed information about acceptable transcripts.](#)
- One Recommendation

If you have questions, send an email to [Army-RDECOM@ORISE.ORAU.gov](mailto:Army-RDECOM@ORISE.ORAU.gov). Please list the reference code of this opportunity CCDC-SC-2021-0003 in the subject line of the email.

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## Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 )
  - **Computer, Information, and Data Sciences** (16 )
  - **Earth and Geosciences** (21 )
  - **Engineering** (27 )
  - **Environmental and Marine Sciences** (3 )
  - **Life Health and Medical Sciences** (45 )
  - **Mathematics and Statistics** (10 )
  - **Physics** (16 )
  - **Science & Engineering-related** (1 )
- **Age:** Must be 18 years of age