



## CLARK ATLANTA UNIVERSITY

### Job Description

<b>Position Title:</b>	<b>Postdoctoral Research Associate</b>
<b>Department:</b>	<b>Chemistry</b>
<b>Reports To:</b>	<b>Dr. Conrad Ingram</b>

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*The following statements are intended to describe the general nature and level of work to be performed and are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified. All duties listed are essential functions for the position. It is understood that other related duties may be assigned.*

#### ***General Function (Description):***

##### **Overview:**

We are seeking a qualified Postdoctoral Research Associate who will focus on synthesizing, characterizing, and elucidating metal-oxide interface materials. The goal of this project is to explore the fundamental and technological discoveries in interface materials with metal-oxide crystalline thin films as underlying “active substrates” to modify the electronic structure of the interface materials. This project is a vibrant NSF-Funded Partnership for Research and Education in Materials (PREM) between Clark Atlanta University, Spelman College and Cornell University’s Platform for the Accelerated Realization, Analysis, and Discovery of Interface Materials (PARADIM), an NSF-DMR-funded Materials Innovation Platform. The postdoctoral research associate will conduct the synthesis of metal-oxide interface materials guided by computational calculations. Characterization of the metal-oxide interface materials will be carried out by a plethora of analytical tools including SEM, AFM, high-resolution STEM, GIWAXS, XPS, NMR FT-IR, DSC, and TGA. Ferromagnetic properties will be evaluated using Mössbauer measurements. We are looking for applicants with a proven research background in interface materials chemistry, synthesis, and characterization. The Research Associate will work within a multidisciplinary and collaborative team involving specialists in computation, synthesis, and advanced material characterizations, from the institutions involved.

#### ***Major Duties and Responsibilities:***

- Independently design and synthesize layered interface materials.
- Preparation, simulation, characterization, and exploitation of interface materials.
- Work collaboratively with a diverse team of scientists from CAU and PARADIM on the execution of the project.
- Participate in project planning and execution; as well as, write progress reports.
- Present research results at conferences and publish scientific results in peer-reviewed journals in a timely manner.
- Assist faculty with the training of students and proposal writing.
- Work closely with graduate and undergraduate students on the execution of the project.

#### ***Knowledge, Skills and Abilities:***

##### **Basic Qualifications:**

- A Ph.D. completed in chemistry or materials science.
- Ability to perform assigned duties independently.
- Demonstrated experience in organic science, 2D layered materials synthesis, and

characterization techniques such as AFM, SEM, XRD, BET, NMR, GC-MS, TGA, UV-Vis, etc.

- Ability to follow department policies, procedures, and regulations.
- Eligibility to work in the United States

**Preferred Qualifications:**

- Excellent record of publications in high-impact peer-reviewed journals.
- Excellent written and oral communication skills.
- Motivated self-starter with the ability to work independently and to participate creatively in collaborative teams across the laboratory
- Ability to set priorities to accomplish multiple tasks within deadlines, and adapt to ever changing needs.

***Minimum Hiring Standards:***

<b>Education</b>	A Ph.D. completed in A Ph.D. completed in chemistry or materials science.
<b>Years of Experience</b>	4-5 years in research
<b>Special Requirements</b>	The position is opened until filled. The initial appointment is for one year, with renewal expected if progress is satisfactory and funds are available. Applicants must have completed all degree requirements before starting their appointment. Application review will begin immediately. Interested individual should send a cover letter, a detailed CV (including bibliography) and the names, addresses, phone numbers, and email addresses of three current professional references. The application should be sent to <a href="mailto:jobs@cau.edu">jobs@cau.edu</a>

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