CLARK ATLANTA UNIVERSITY
Job Description

Position Title:	**Postdoctoral Research Associate**
Department:	**Chemistry**
Reports To:	**Drs. Issifu Harruna and Ishrat Khan**

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 beassigned.

General Function (Description):

Overview:
Seeking a Postdoctoral Research Associate who will focus on preparing, characterizing, and studying precision sustainable polymer materials utilizing living anionic polymerization with the goal of obtaining polymers at high yields and with narrow molar mass distributions. Research will also focus on one-pot synthesis of sustainable block copolymers through an established sequential addition of monomers approach. To obtain block and functional polymers with high yields and low molar mass distribution, the researcher will explore various anionic initiators, solvent systems, and associated reaction parameters. In addition, the researcher will focus on biobased monomers that are amenable to anionic polymerization.

Materials characterization will be performed by multiple methods e.g. DSC (differential scanning calorimetry), TGA (thermogravimetric analysis), DMA (dynamic mechanical analysis), NMR and FT-IR spectroscopy, GPC (gel permeation chromatography), SEM (scanning electron microscopy), and AFM (atomic force microscopy).

We are looking for applicants with a demonstrated research background in organic/polymer chemistry synthesis and characterization. Experience in instrumental characterization in several of the instruments identified in the previous paragraph is desired. The Research Associate will also work within a multidisciplinary team involving specialists in materials, processing, characterization, synthesis, computational chemistry and materials, and data science.

Major Duties and Responsibilities:

- Work with a diverse team of scientists seeking to advance scientific understanding of advanced structural property relationships of sustainable polymers and materials.
- Carry out synthesis, characterization, and processing of functional polymers and polymer composites.
- Independently plan and conduct theoretical simulations and collaborate with other researchers to identify the best methodology for structure calculations of materials of interest.
- Participate in project planning and execution and write progress reports and manuscripts.
- Present research results at meetings/conferences and publish scientific results in peer-reviewed journals in a timely manner.
- Provide leadership working within the CAU Partnership in Research and Education in Chemistry (PREC) and the Center for Sustainable Polymers (CSP).
- Work closely with faculty, graduate and undergraduate students on the execution of projects.

Knowledge, Skills, and Abilities:

This position requires knowledge of the general area of Organic Polymer or Materials Science via a background in doctoral level research in the Chemical, Physical, or Materials Sciences. Prior experience of working within a University community is highly desired. Must have excellent written and oral communication skills. Candidates must be computer literate and familiar with laboratory safety and hygiene is necessary. Successful use of advanced scientific instruments (e.g., DSC, TGA, FT-IR, NMR, etc.) is required.

Minimum Hiring Standards:

Education	Earned doctorate in Chemical, Physical, or Materials Sciences
Years of Experience	Two years of research experience, which can include doctoral dissertation research
Years of Management/Supervisor Experience	Not required