

## Postdoc Associate Position of Polymer Simulation Howard University

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Downloaded On: Jun. 9, 2023 12:10am

Posted Mar. 12, 2023, set to expire Jul. 12, 2023

**Job Title** Postdoc Associate Position of Polymer Simulation  
**Department** Chemical Engineering  
**Institution** Howard University  
Arlington, Virginia

**Date Posted** Mar. 12, 2023

**Application Deadline** Apr. 2, 2023

**Position Start Date** Available Immediately

**Job Categories** Post-Doc

**Academic Field(s)** Physics - Atomic/Molecular/Optical/Plasma

Physics - General

Materials Sciences/Polymer Sciences

Marine/Freshwater Sciences

Chemistry - Physical

Chemistry - General

Biology - Computational

**Job Website** <https://stonybrook.taleo.net/careersection/2/jobdetail.ftl?job=2204759&lang=en#.Y-vsY0uVikg.twitter>

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**Apply By  
Email**

**Job  
Description**

### **Postdoc Associate Position of Polymer Simulation (Atomistic and Coarse-grained)**

**Location:** the Prof. Hisiao's lab at Chemistry Department at **Stony Brook University**;

**Duration:** Two Years; Salary: \$58K-60K; an **Additional stipend** will be provided for working Dr. Wei's lab to cover the travel. This position **requires expertise in polymer simulations**(atomistic MD, CGMD, DPD, MC or KMC).

### **Essential Duties and Responsibilities:**

The Post-doc Associate will work in a multi-institutional effort to apply **molecular simulation techniques** to understand the underlying structure-function relationships in polymer filtration materials. Specifically, the project aims to study polymer interfacial crosslinking and polymer membranes using atomistic and coarse-grained molecular dynamics simulations in combination with experimental synthesis and characterization tools. The position will be co-supervised by Prof. Benjamin Hsiao at Stony Brook University and Prof. Tao Wei at Howard University.

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

PhD in materials science, chemical engineering, chemistry or physics, or a related field.

Experience with **molecular dynamic simulations (atomistic and coarse-grained), dissipative particle dynamics, and kinetic Monte Carlo methods.**

Experience with programming skills in Python, C++, C or Fortran.

Experience with Gromacs, LAMMPS or other related simulation software.

Ability to work effectively with a multidisciplinary team.

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

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Experience with coarse-grained forcefield parameter development.

Experience with experimental synthesis and characterization of polymer membranes (PDF, WAXS and SAXS).

Experience with polymer statistical mechanics theory.

Experience with machine learning.

Interested applicants should first send a detailed CV via email to Dr. Benjamin Hsiao (benjamin.hsiao@stonybrook.edu) and Dr. Tao Wei (tao.wei@howard.edu). In the CV, please list your publications. The shortlisted applicants will be contacted for an online interview. Applications will be accepted until the position is filled. Note: We can accept one who will graduate before July.

### **Contact Information**

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

### **Contact**