Functional Materials and Composites  
Postdoctoral Associate at CHESS

Cornell University embraces diversity and seeks candidates who will contribute to a climate that supports students, faculty and staff of all identities and backgrounds. If you don’t meet 100% of the job qualification, but see yourself contributing, please submit an application. We strongly encourage individuals from underrepresented and/or marginalized identities to apply. Diversity and Inclusion are a part of Cornell University’s heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans and Individuals with Disabilities.

The Cornell High Energy Synchrotron Source (CHESS) is one of the most advanced scientific facilities in the world, and its pioneering capabilities are helping to keep the United States at the leading edge of scientific research. Located on the central campus of Cornell University, CHESS is internationally recognized for providing high intensity X-ray beams and advanced instrumentation to scientists and students around the world. The lab is comprised of seven state-of-the-art beamlines, each of which routinely hosts world-leading research in physics, chemistry, biology, environmental sciences, materials science, cultural heritage, and engineering. CHESS is a world leader in innovation for complex sample environments including in situ heating and loading, accelerators, detectors, and x-ray optics and plays a key role in many medical discoveries and scientific breakthroughs, including research that received Nobel Prizes in Chemistry in 2003 and 2009. The recent CHESS-U upgrade has expanded the lab’s capabilities to allow scientists to address the most pressing global challenges facing our society. CHESS is committed to engaging with industry, academia and government through its funding from the National Science Foundation, Air Force Research Lab, National Institutes of Health, and New York State.

The Materials Solutions Network at CHESS (MSN-C) at the Cornell High Energy Synchrotron Source (CHESS) seeks a postdoctoral researcher in the field of polymer composites, materials science or mechanical engineering to join our scientific team. The position is associated with the Functional Materials Beamline (FMB) at CHESS, one of several beamlines built in 2019 as part of CHESS’s major recent upgrade, CHESS-U. FMB is one of two beamlines comprising MSN-C, an Air Force Research Laboratory-sponsored facility to support critical research and manufacturing needs within DoD and industry. A central goal of FMB is to support advances in the processing and performance of next-generation materials, ranging from structural polymer composites to functional thin films. In collaboration with MSN-C and AFRL scientific and technical staff, the successful candidate will support this goal by leveraging the x-ray characterization capabilities of FMB, including microbeam SAXS/WAXS mapping, real-space imaging, and advanced computational and analysis methods. Additionally, the successful candidate will:

- Utilize FMB capabilities to conduct original research in an area commensurate with the MSN-C mission.
- Communicate results through publications in peer reviewed journals and presentations at national and international conferences.
- Contribute to the support of local and external user projects making use of FMB and MSN-C.
- Contribute to an environment that builds individual and organizational effectiveness.
- Work with diverse and interdisciplinary teams to achieve scientific and technical objectives.

This is a yearly appointment, which can be renewed annually for a total of five years based on satisfactory performance and availability of funds.

What we need:
• Ph.D. or equivalent in the physical sciences or engineering
• Record of impactful scientific publications
• Desire to work in a multidisciplinary research environment, interacting with researchers at all levels, including students and facility users
• Proficiency in science communication, written and oral, formal and informal

What we would prefer:
• Research experience in the areas of polymer physics, composites properties and/or manufacturing, and/or mechanical engineering.
• Prior experience in x-ray and/or neutron scattering or imaging at large user facilities
• Prior experience with high performance computing and/or data-intensive research
• Proficiency with scientific software for advanced data analysis and/or experimental control, especially Python, SPEC, MATLAB, etc.

For further information about the position, please contact MSN-C Director Arthur Woll (aw30@cornell.edu) or Dr. Louisa Smieska (lmb327@cornell.edu). The posting will remain open until the position is filled. Applications received before February 1, 2022 are guaranteed full consideration. A complete application package will include a Cover Letter, CV, List of Publications, Statement of Research Interests, and (3) letters of recommendation.

Applications should be submitted at https://academicjobsonline.org/ajo/jobs/20629

Cornell University requires all employees, whether they work on campus or work fully remotely, to be fully vaccinated against COVID-19, or to have obtained a university-approved medical or religious exemption. For additional information on this requirement, visit: https://hr.cornell.edu/covid/university-response/vaccination

Cornell provides great benefits that include comprehensive health care options, generous retirement contributions, educational benefits (Employee Degree, Tuition Aid, Cornell Children’s Tuition Assistance Programs), access to wellness programs, and employee discounts with local and national retail brands. Our leave provisions include three weeks of vacation and 13 holidays, including winter break from December 25th through January 1st.

Cornell has been nationally recognized as an award-winning workplace for our health, wellbeing, sustainability, and diversity initiatives. For more information, follow the link: Benefits at Cornell.

Cornell University is an innovative Ivy League university and a great place to work. Cornell’s inclusive community of scholars, students and staff impart an uncommon sense of larger purpose and contribute creative ideas to further the university's mission of teaching, discovery and engagement.

Diversity and Inclusion are a part of Cornell University’s heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans and Individuals with Disabilities. We also recognize a lawful preference in employment practices for Native Americans living on or near Indian reservations. Cornell University is an innovative Ivy League university and a great place to work. Our inclusive community of scholars, students, and staff impart an uncommon sense of larger purpose, and contribute creative ideas to further the university's mission of teaching, discovery, and engagement.