

Postdoctoral researcher position
Multiscale modeling of carbon fiber fabrication and properties
Computational Materials Group, University of Virginia, USA
<http://www.faculty.virginia.edu/CompMat/>

A position of postdoctoral researcher in the Computational Materials Group at the University of Virginia is available as a result of a new collaborative project aimed at the development of advanced methods of carbon fibers fabrication from organic precursors. The postdoctoral researcher will join a multi-disciplinary research team working on optimization of atomic structure of carbon fibers through targeted experiments and multiscale modeling of chemical reactions and structural rearrangements occurring at different stages of the carbon fiber fabrication. Large-scale atomistic and coarse-grained molecular dynamics simulations of the mechanical properties of the carbon fibers are of particular interest in this project.

The postdoctoral researcher is expected to

- (1) Conduct cutting edge fundamental research in the area of computational materials science, with initial focus on modeling the structure and properties of carbon fibers. The project involves the development of new computational models and their implementation in massively parallel computer codes.
- (2) Present research findings at national and international research conferences; publish in high impact journals.
- (3) Contribute to the day-to-day operations of the Computational Materials Group at the Materials Science and Engineering Department of the University of Virginia, assist members of the Group in accessing national supercomputing resources, and provide mentoring to undergraduate and graduate students.
- (4) Interact with external collaborators to strengthen existing research projects in the Computational Materials Group. Contribute to the preparation of new funding proposals for sponsored research.

The requirements of the position include a PhD degree in Materials Science, Physics, Mechanical Engineering, Chemistry, or related discipline, established expertise in atomistic modeling and parallel programming.

Interested applicants should send their CVs and brief informal enquiries to Prof. Leonid Zhigilei at lz2n@virginia.edu