

FWF Projekt P 27882-N27

Starting from September 2015

Open PhD student position for 3 years

at the
Computational Physics Group
Faculty of Physics
University of Vienna

The influence of crosslinks of different coordination on the mechanical properties of polymeric systems

We search

a highly motivated PhD student for an interdisciplinary research project studying the effect of (reversible) crosslinks of different coordination (i.e. crosslinks between two, three or more monomers) on the mechanical properties of polymeric systems using computer simulation methods, like Monte Carlo and molecular dynamics. Crosslinking is a common strategy to tune the mechanical properties of polymers. In biological materials like the mussel byssus, silk or bone such crosslinks are also reversible (i.e., they may reform once they were broken) giving the material the possibility to repair and self-heal on an atomistic scale. During this research project a close collaboration with experimental groups from the Max-Planck-Institute of Colloids and Interfaces, Potsdam, will be kept that perform experiments on crosslinked biological systems.

Needed Qualifications

- Completed university study in materials science, physics, physical chemistry, or similar.
- Some experience in computer programming is preferred.
- Excellent communication and teamwork skills, as well as the ability of working independently.

Interested? Please send your application including a short CV via email to

markus.a.hartmann@gmail.com

