

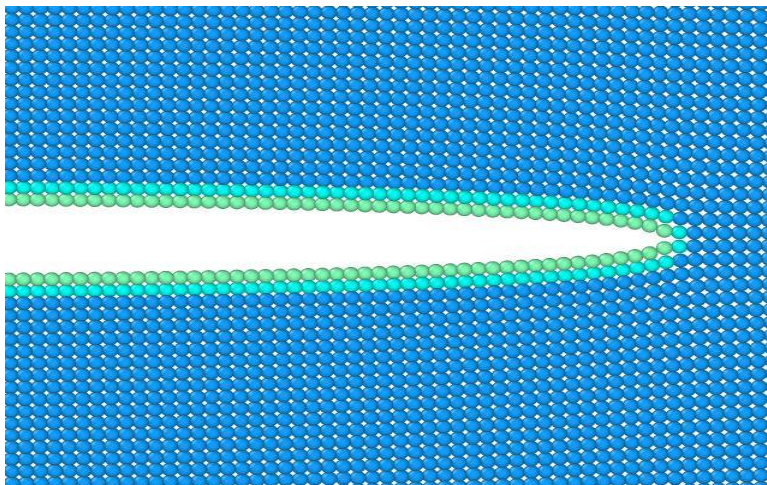
Crack Evolution in the Silicon nanotube



Project Start: 01.07.2020

In this project, we study the fracture of Silicon nanotubes. Particularly, we are interested in the evolution of pre-defined cracks into a bulk and nanotube to screen the applications of ***discrete configurational forces***. The crystalline and nanotube Silicon are widely used in the first and second generations of solar cells, thereby it is of great importance to study their fast failure behaviour.

The student who is interested in this project can learn about ***molecular statics*** simulation of atomistic structures using open source software ***LAMMPS*** and examine the results using ***OVITO***.



- We are looking for that creative student who can explore new aspects in this project.
- Basic knowledge in ***the crystalline structures*** and ***continuum mechanics*** is essential.
- Writing the thesis in ***English*** will bring considerable benefits to the student.
- S.Elmira Birang.O will provide you further information, elmira.birang@fau.de

The crack evolution into a crystalline Silicon modelled by Stillinger-Weber potential

