


Master Thesis or PhD Thesis

„Epitaxial Nanostructures for Silicon Photonics Applications“

- **Background:** Silicon photonics is a disruptive technology, poised to revolutionize areas like data centers, sensing, or high-performance computation by using CMOS-like fabrication methods.
- In the FWF START Project, we aim at gaining insights into defect-nanostructure interaction and investigate the influence on their optical and electrical response. The overall goal of the team is to create CMOS-compatible light sources based on epitaxial growth of nanostructures.
- **Your task:** Growth of state of the art group-IV nanostructures by **molecular beam epitaxy** 
Characterization of the nanostructures by X-ray diffraction, atomic force microscopy and photoluminescence spectroscopy etc.
- You are interested in teamwork in a highly competitive and upcoming research field?



Start: from Jan. 2020 on
Duration: Master thesis: 6-8 months; PhD thesis 3 years
Contact: Dr. Moritz Brehm, Department of Semiconductor Physics
moritz.brehm@jku.at