SFB-Seminar

Sprecher: Dr. Andrea Hofmann
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Ort: PHY 7.1.21

Zeit: Freitag, 17. Januar 2020, 10.30 Uhr

Thema: Two-dimensional germanium hole gases for quantum dots and hybrid devices

Abstract

We study quantum dots and proximity-induced superconductivity in Ge/SiGe heterostructures. The large spin-orbit interaction, anisotropic g-factors, small masses of light holes and a large range of tunability make this system an interesting candidate for qubits. Our measurements show that indeed, all the requirements to implement qubits are met [1].

At the same time, superconductor-semiconductor hybrid devices based on semiconductors with a large spin-orbit interaction carry the potential for topological superconductivity and Majorana bound states. Our present efforts resulted in an improved Ge-Al interface and an increase of the Ic-Rn-product compared to previous studies.


Gastgeber: Prof. Dr. Dominique Bougeard