

PhD Position

At the *Experimental Physics VII* (Prof. Dr. F. Reinert) within the *Center of Excellence ct.qmat* is now open one PhD position, with the theme

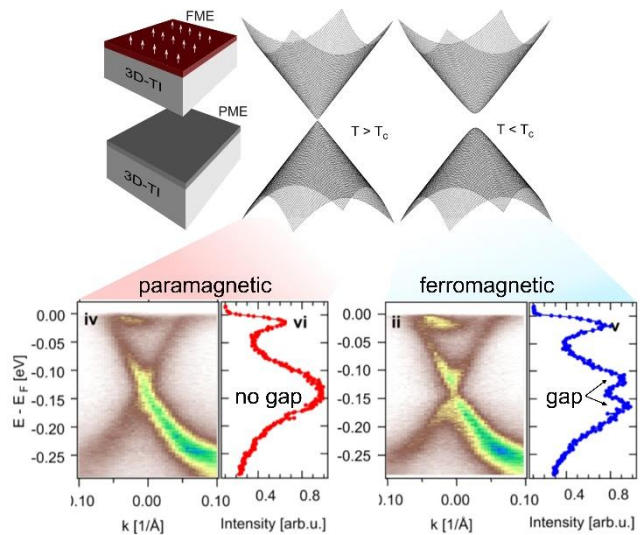
“Magnetic and superconducting proximity effects in epitaxial MnBi_2Te_4 ”

Description of project:

This project aims to explore superconducting and magnetic proximity effects on the topological surface state in epitaxial heterostructures of the intrinsic magnetic topological insulator MnBi_2Te_4 .

Your task is to improve the molecular beam epitaxial growth of high-quality MnBi_2Te_4 films down to a single septuple-layer (SL) on a wide range of van der Waals substrates. These layers will be investigated in-situ by ARPES and other surface sensitive techniques.

The aim is to understand the impact of superconducting and high temperature ferromagnetic substrates on the magnetic and topological electronic properties of thin MnBi_2Te_4 films.



Requirements:

We welcome applications from candidates with a Master degree in physics with top marks and with a background and interest in condensed matter, ultra-high vacuum, UV or X-ray spectroscopy. Candidates must prove a strong attitude towards experimental physics and the drive and capacity to tackle different aspects of a complex problem with large independence.

Application:

The application should include a CV and a letter of motivation. Selection will start immediately.

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