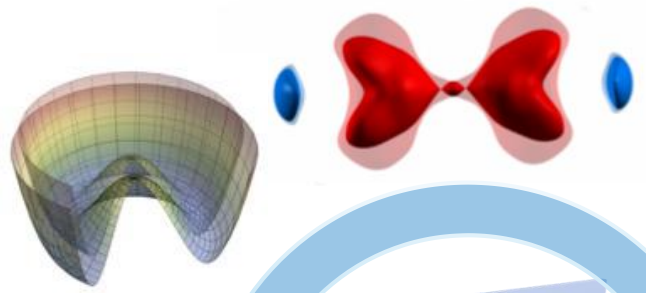
Quantum phenomenon in 2D Materials

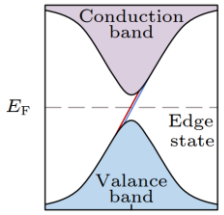
Our quantum consortium aims to discover, understand, and tune quantum states of matter utilizing transport and spectroscopic probes amalgamated with computational quantum methodologies for 2D van der waals' materials.

Designing 2D emerging quantum materials

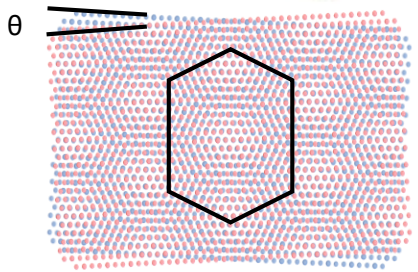
Moire superlattices

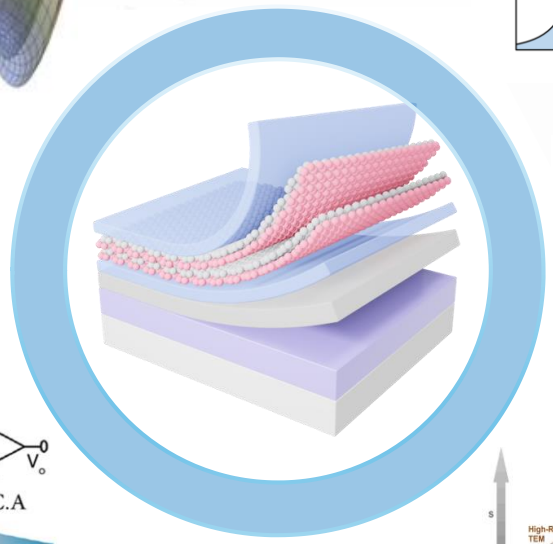
Optoelectronics in van der Waals heterostructures

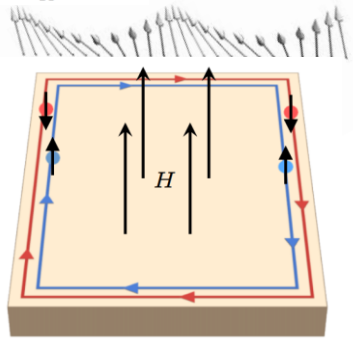




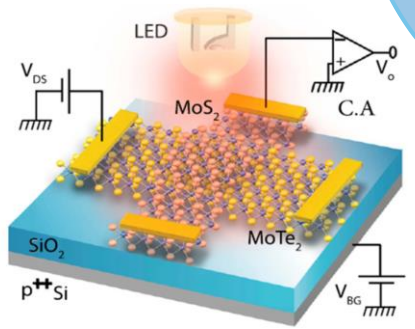
Topological devices

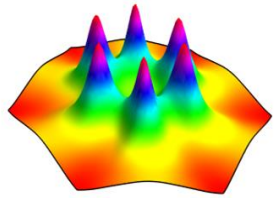


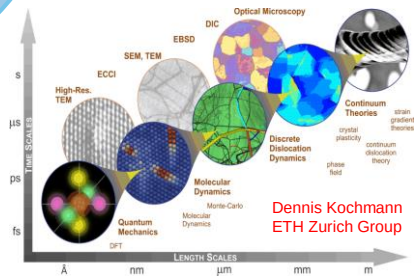




Spin susceptibility and spin spirals







Computational method development

We specialize in precise tuning of material properties and investigation of novel quantum phenomenon such as twistronics, moire patterns, excitons, phonons, topology and spintronics.

Experimental	***Theory/ Computational***
Dr. Manabendra Kuiri	Dr. Suvadip Das Lekshmi SM