

The structure and themes of Biomag

Biological motivation

Understanding the dynamics of individual neurons in active neuronal networks - in active living organisms

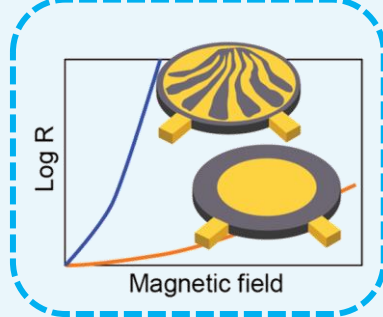
THEME 1

Theory

Pryds (PI)
Thygesen
Bjørk

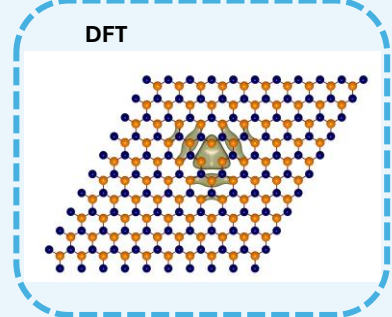
EMR

Performance-Based
Topology Optimization



Color Centers

Computational driven color center design in 2D materials



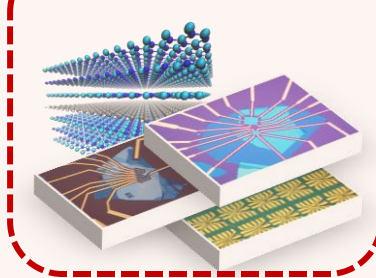
THEME 2

Materials

Bøggild (co-PI)
Booth
Jespersen

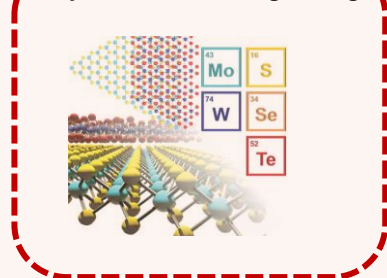
Device engineering

Assembly & Fabrication



Materials engineering

Synthesis & Defect engineering

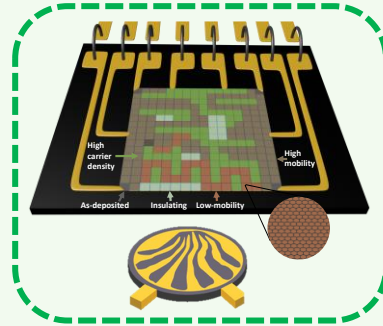


THEME 3

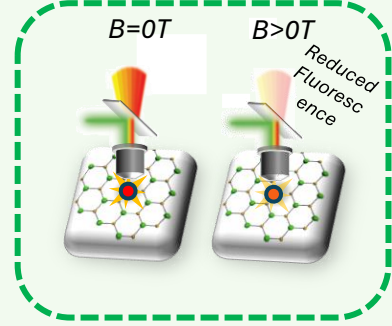
Sensors

Huck (co-PI)
Andersen
Christensen

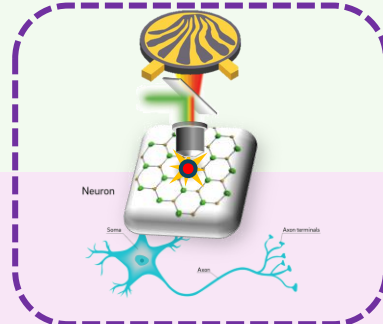
New magnetoresistance devices



New colour center devices



Single neurons



Neural bundles



THEME 4

Bio-sensing

Perrier (co-PI)

Watching neurons in action



Goals

- Recording neural activity: from single neurons to in vivo bundles
- New techniques for brain mapping and diagnosis of neurological diseases.