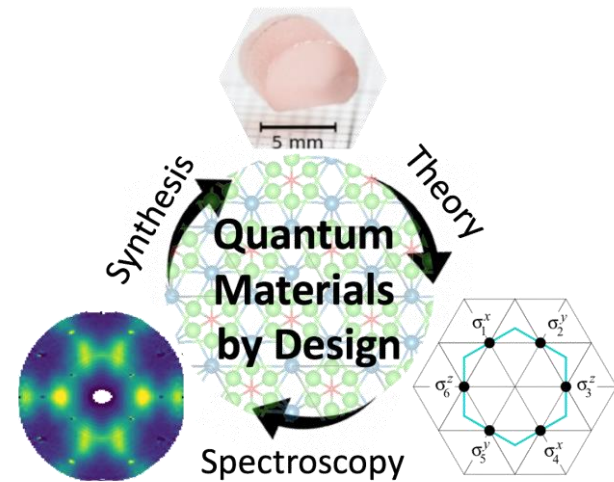


# Institute for Quantum Matter (IQM)

Collin Broholm (Johns Hopkins University); Class: 2018-2022

**MISSION:** To realize, understand, and control revolutionary quantum materials and structures where quantum effects such as entanglement and coherence find collective macroscopic manifestations.



<http://iqm.jhu.edu>

## RESEARCH PLAN

Quantum mechanics successfully describes electrons within atoms as matter waves. IQM will develop “Quantum Materials” where electronic matter waves extend beyond the atomic scale and give rise to unique physical properties. IQM theorists will identify candidate materials and nanoscale structures that will be synthesized and then probed with advanced spectroscopic and transport methods to realize and understand four new quantum states of matter and explore their potential for applications.