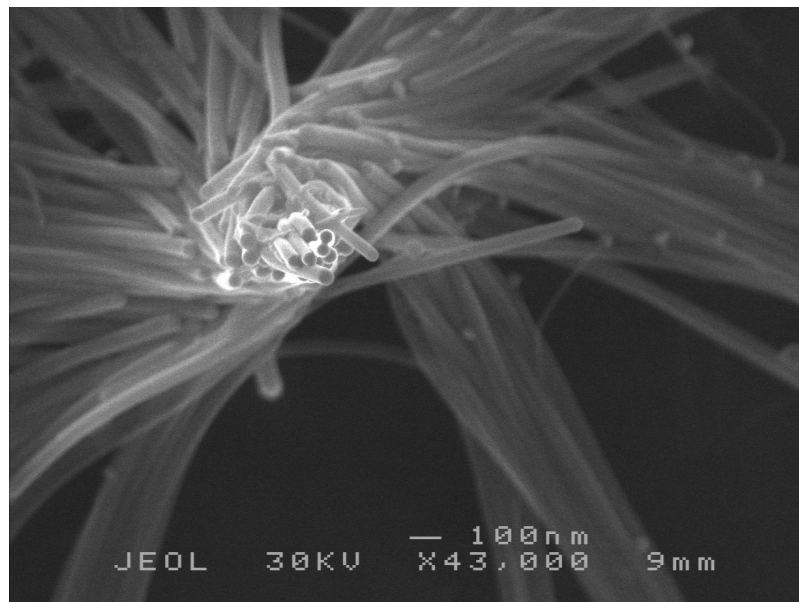




Bachelors and Masters Student Projects: Experiments on quantum wires and hybrid quantum dots

Center for Quantum Devices, Station Q Copenhagen

Student projects will focus on devices based on nanostructured materials synthesized in-house such as semiconductor nanowires or carbon-based materials. When superconducting electrodes are attached to such wires, they form quantum dots where we can study the states arising in such "artificial superconducting atoms/molecules". Recent theoretical predictions will be tested. Another target is to demonstrate entanglement of electron pairs injected from superconducting electrodes. Other projects are dedicated to tests of new semiconducting nanowires and require close interactions with researchers developing and growing these materials. Projects may involve nanoscale device fabrication, electrical transport measurements at sub-Kelvin temperatures and advanced data acquisition/analysis.



Principal supervisor is Associate Professor Kasper Grove-Rasmussen (k_grove@fys.ku.dk), co-supervisor Professor Jesper Nygård (nygard@nbi.dk). We have no openings at the moment, but can discuss opportunities for projects starting medio 2016.

