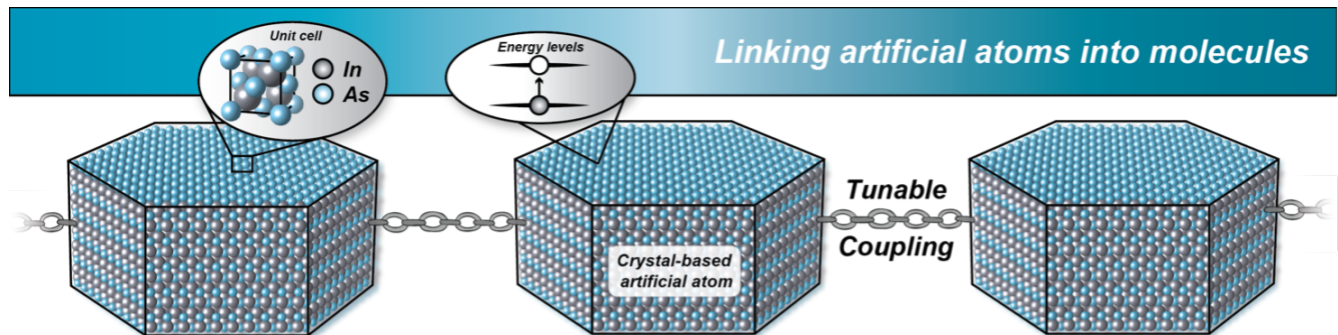


Masters project in QDev:

Artificial molecules hosted by cross-sectioned crystal fibers

A new Masters project focusing on the experimental investigation of arrays of artificial atoms is available in the Center for Quantum Devices (QDev). You will learn a unique approach to slicing nano-scale crystals and apply this knowledge to build electronic quantum devices in a new way (patent pending). These devices will be measured at sub-kelvin temperatures where you will investigate how this new technique can be used to tune the coupling between artificial atoms/quantum dots in arrays. Together we will discover how this technique can let us control the structural and electronic tuning of the coupling between quantum dots – all matters which are highly relevant to emerging topics in modern quantum physics relying on scalable lattices such as quantum simulators and unconventional phase transitions. Read about related experiments here: <https://arxiv.org/abs/2111.05098>.



You will be taught how to work as an experimental condensed matter physicist and use state-of-the-art techniques such as nanolithography, low-temperature measurements and electron microscopy. If this sounds interesting contact **Jesper Nygård** (nygard@nbi.ku.dk) or **Joachim Sestoft** (joachim.sestoft@nbi.ku.dk).