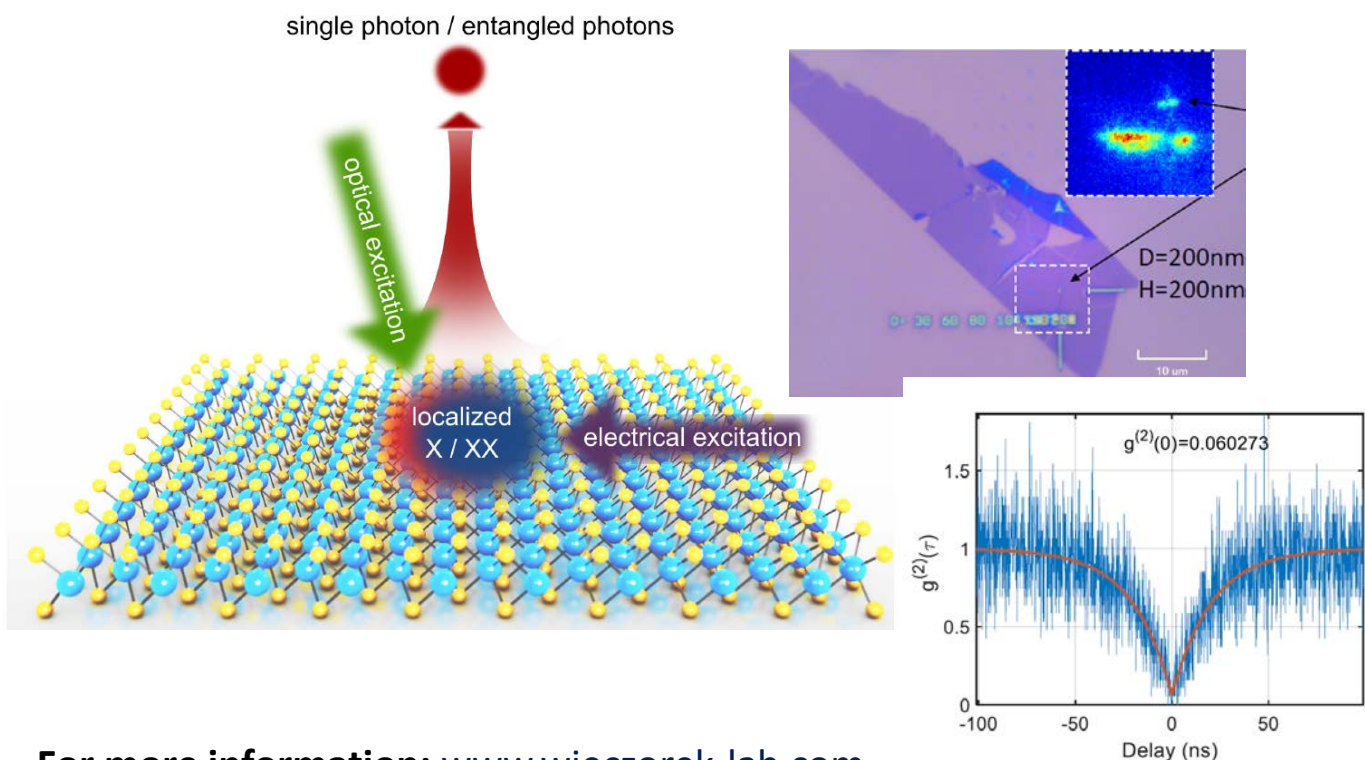


# Master thesis project

## Single photon source based on 2D-material heterostructures

Atomically thin two-dimensional (2D) materials show several extraordinary properties suggesting a huge array of novel applications. Recent studies have demonstrated that 2D materials can act as a non-classical light source, e.g., by emitting single photons. This makes these materials a promising new platform for photonic quantum technologies.

**The Master thesis project** is placed in this exciting field of research. The goal of the project is to measure single photon emission from 2D materials, in particular, from moiré superlattices (such as  $\text{WSe}_2/\text{MoSe}_2$  heterobilayers). In this project, you will learn how to fabricate 2D material-based heterostructures, how to characterize their optical properties using photoluminescence spectroscopy and how to measure non-classical light using the Hanbury Brown and Twiss experiment.



**For more information:** [www.wieczorek-lab.com](http://www.wieczorek-lab.com)

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