

# Zhipei Sun

## Aalto University, Finland

**Title:** 2D materials for photonics & optoelectronics

**Abstract:**

Here, I will discuss the strategies to enhance light-matter interaction in two-dimensional layered materials (e.g., graphene, transition metal dichalcogenides) for various integrated photonic and optoelectronic applications, such as high-purity quantum emitters, wavelength converters, and ultrafast lasers. I will also present our recent results of employing hybrid structures, such as mixed-dimensional heterostructures, plasmonic structures, and silicon/fibre waveguides integrated structures.