



Institute of Functional Matter and Quantum Technologies

We are inviting students to apply for Master's projects in the Barz group:

## Single-photon sources on integrated photonic circuits:

The generation of identical single photons on an integrated device are key for exploiting the full potential of future integrated quantum processors. Therefore, we are looking for you!

## You will:

- Design and simulate your own photonic chip
- Characterize your circuit in our state of the art laboratory
- Learn state of the art methods for single-photon generation and characterisation
- Work on a concept to realize a single photon sources on a silicon chip
- Experience hands on quantum mechanics
- Learn and improve your skills in in key technologies like photonics, quantum computing and quantum information processing
- Build your foundation for future-oriented jobs in research and photonic industries

## We are looking for:

- MSc Students with a background in physics, photonic engineering, electrical engineering or related
- Interest in experimental quantum optics, quantum computing and quantum information processing
- Ideally programming skills (Python, Mathematica, Matlab, ...)

Master's thesis: Integrated photonics: Single-photon sources

## www.barzgroup.de

For more information, please contact **Prof. Dr. Stefanie Barz** barz@fmq.uni-stuttgart.de www.barzgroup.de @StefanieBarz