



Institute of Functional Matter and Quantum Technologies

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

# Quantum computing with integrated photonics

Quantum computing and quantum information processing is one of the key technologies of our century. To bring quantum computing to the next level, small integrated devices are needed.

Be part of our group, developing future technologies!

#### You will:

- Build your own photonic quantum processor
- Learn how to use integrated photonics for quantum computing
- Design and simulate your own photonic chip
- Characterize your circuit in our state of the art laboratory
- 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: quantum computing

### www.barzgroup.de

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