



Paderborn University is a high-performance and internationally oriented university. Within interdisciplinary teams, we undertake forward-looking research, design innovative teaching concepts and actively transfer knowledge into society. As an important research and cooperation partner, the university also shapes regional development strategies. We offer our employees in research, teaching, technology and administration a lively, family-friendly and equal opportunity environment, a lean management structure and diverse opportunities. **Join us to invent the future!**

## MSc and BSc Thesis Opportunities in Optoelectronics, Nanophotonic & Quantum Photonics Department of Physics – Paderborn University

The **Quantum Photonics & Optoelectronics** research group is a newly established group in the Department of Physics. We focus on optoelectronics, nanophotonic, and quantum photonics, working towards the development of next-generation photonic devices.

We are looking for **motivated BSc and MSc students** interested in conducting their thesis projects in the fields of **nanophotonic, reconfigurable optical elements, and quantum optics**.

The **Quantum Photonics & Optoelectronics** research group focuses on the active control of quantum emitters, tunable light-matter interactions, and integrated photonic devices (see: <https://physik.uni-paderborn.de/en/quantumphotonics-optoelectronics>).

Paderborn University (UPB) has a strong research focus on integrated quantum systems, photonics, and optoelectronics, both in experimental science and theoretical work. The group is part of the Department of Physics and the Institute for Photonic Quantum Systems (PhoQS).

### Possible Thesis Areas:

- **Nanofabrication** – development and characterization of nanoscale photonic structures
- **Optics Experiments** – experimental work in our state-of-the-art optics laboratories
- **Simulations** – optical modelling and numerical studies of photonic devices.

Your thesis can range from purely simulation-based projects to hands-on experimental work. The specific topic will be tailored to your interests and background from among the research topics pursued in our group.

### Requirements:

- Ongoing BSc or MSc studies in **Physics, Electrical Engineering, Materials Science, or related fields**
- Interest in research in the fields of nanophotonic, optoelectronics, and/or quantum optics
- Strong teamwork and communication skills
- High motivation, curiosity, ability to work independently and take initiative
- Affinity for experimental work
- Good organizational skills and a structured working style

### We Offer:

- Training and education in a scientifically and technologically relevant field
- Active involvement in the establishment of a new research group and new research laboratories
- Development opportunities in science management and insights into cutting-edge research
- Hands-on experience in state-of-the-art facilities and laboratories
- Opportunities for internal and external training and professional development.

**Applications from women are expressly encouraged** and will be given preferential consideration in accordance with the *State Equal Opportunity Act (LGG)* in cases of equal qualification, aptitude, and professional performance, unless reasons related to a competing applicant prevail. Part-time employment is generally possible. Applications from individuals with severe disabilities or equivalent status under the German *Social Code Book IX (SGB IX)* are also welcomed.

Please send your application, including your CV and current academic transcript, a short **email describing your interests and motivation** to: [nicholas.guesken@uni-paderborn.de](mailto:nicholas.guesken@uni-paderborn.de)

Information on how your personal data is processed can be found at: [www.uni-paderborn.de/zv/personaldatenschutz](http://www.uni-paderborn.de/zv/personaldatenschutz)

For more information about our group and the PhoQS institute, visit:

- 🔗 [Group Website](#)
- 🔗 [PhoQS Website](#)
- 🔗 [LinkedIn](#)

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