



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!**

In the **Faculty of Science** – Department of physics, group **Integrated Quantum Optics** – the following position is to be filled as soon as possible

PhD position (f/m/d)

(salary level according to 13 TV-L)

with 75 % of the regular working hours. This is a temporary position initially until 31st Dezember 2028 due to third-party funding within the meaning of the Wissenschaftszeitvertragsgesetz (WissZeitVG), which serves to support a PhD procedure. The position is limited for the project duration. There is an opportunity for a doctorate/ further scientific qualification.

Field of activity:

- The goal of the project is the fabrication of integrated optical components in lithium niobate tantalate mixed crystals and related material systems. This includes the fabrication and optimization of optical waveguides, the fabrication and optimization of periodic poling, and subsequent optical characterization, such as measuring optical transmission losses in optical waveguides in lithium niobate tantalate mixed crystals.
- The project is part of the DFG Research Group FOR5044, which spans 9 projects across multiple institutions and universities in Germany. The FOR5044 is dedicated to the investigation and production of novel mixed crystals of lithium niobate tantalate, which promise advantages over pure lithium niobate or tantalate in optical, electronic, or piezoelectric applications. More information can be found at www.for5044.de.
- Teaching duties typically range from 3 hours per week.

Recruitment requirements:

- A scientific university degree (Master) in physics, materials science, or a comparable field.
- Willingness to work in a cleanroom.
- Very good English language skills (spoken and written).
- Experience and knowledge in one or more of the following fields are desirable:
 - Experience and knowledge of integrated optical components, especially their fabrication.
 - Experience and knowledge of lithographic processes, e.g., photolithography or electron beam lithography.
 - Experience with lithium niobate or other ferroelectrics, especially their poling.
 - Experience working in a cleanroom environment.

We offer:

- Flexible working hours and the individual option of mobile working
- Wide range of health, counseling and prevention services
- Attractive fringe benefits such as childcare facilities and sports activities
- Opportunities for internal and external training and development
- Additional benefits in accordance with the collective agreement of the federal states (TV-L), such as annual bonuses and capital-forming benefits as well as the VBL supplementary pension scheme

Applications from women are particularly welcome and, in case of equal qualifications and experiences, will receive preferential treatment according to state law (LGG), unless there are preponderant reasons to give preference to another applicant. Part-time employment is generally possible. Applications from disabled people with appropriate suitability are explicitly welcome. This also applies to people with equal opportunities in accordance with the German social law SGB IX.

Please send your application documents (preferably in a single pdf file) using the **Ref. No. 6828 until 21st February 2025** to christine.silberhorn@upb.de and cc michael.ruesing@uni-paderborn.de.

Information regarding the processing of your personal data can be located at:
<https://www.uni-paderborn.de/en/zv/personaldatenschutz>.

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