

External Job Advertisement Reg. Nr. 5-12310/25-D
- Correction -

The Faculty of Natural Science II, Institute of Physics, at Martin Luther University Halle-Wittenberg is seeking a part-time (50%)

Research Assistant (m-f-d)

as soon as possible. The position is initially limited until 30.09.2028. An increase of the remuneration to 75% is possible. An extension for another year is planned.

Remuneration will be determined based on job duties and responsibilities and will be aligned with the fulfillment of listed personal requirements, up to pay grade 13 under the *TV-L (Tarifvertrag für den Öffentlichen Dienst der Länder – 'German Public Service Pay Agreement for the Federal States')*.

The Nonlinear Nanophotonics Group at the Department of Physics and the SiLi-nano Centre for Innovation Competence (ZIK) at Martin Luther University Halle-Wittenberg is investigating nanostructured materials for silicon-compatible active integrated photonics. As part of a research project, nonlinear optical frequency conversion processes such as second harmonic generation, difference frequency generation and spontaneous downconversion in silicon, silicon-rich nitride and oxide waveguides will be investigated. Nanostructured waveguides will be used to achieve phase matching, the generation of low group velocities and strong field enhancement in resonators to increase the efficiency of several frequency conversion processes

Job Responsibilities:

- Setting up, operating and evaluating experiments to investigate nonlinear optical frequency conversion processes such as second harmonic generation, difference frequency generation and parametric downconversion in silicon-based and hybrid nanostructures.
- Drafting reports and publications
- Taking on limited teaching duties (e.g. leading exercise groups or supervising practicals)
- Presenting results at conferences

The opportunity to obtain your own academic qualification (e.g., doctoral degree, acquisition of new methodological skills) is given.

Requirements:

- Completed scientific university degree with a Master's in Physics or a closely related subject at the time of employment (Degree must be obtained by the time of employment)
- High degree of independence, strong initiative and enthusiasm for the field of nanostructured optics
- Experience in the field of experimental optics.
- Experience with numerical simulation of light propagation and field distribution in waveguides and nanostructures is an advantage.
- Experimental experience in the investigation of nonlinear optical frequency conversion processes such as frequency doubling, sum and difference frequency generation or spontaneous downconversion is desirable

- Good command of English (equivalent B2)
- High motivation and good communication skills

We offer:

- a family-friendly, diversity-oriented, and intercultural work environment at a certified family-oriented university, including holiday childcare
- a health management framework to promote and maintain good health, as well as a broad university sports program

Applications from disabled persons, including those of equal status (as certified by the *Bundesagentur für Arbeit* / Federal Employment Agency), will be given preferential consideration if they are equally suitable and qualified. Women are strongly encouraged to apply. Applications from individuals of all nationalities are explicitly welcome. Applicants with a degree that was not obtained at a German university must submit a Statement of Comparability for Foreign Higher Education Qualifications from the Central Office for Foreign Education (ZAB) (<https://www.kmk.org/zab/central-office-for-foreign-education>) as proof of equivalence upon conclusion of the employment contract. You can find ways to apply for a financial grant for this under: <https://www.anerkennung-in-deutschland.de/html/de/pro/anererkennungszuschuss.php#>.

If you have any questions, please contact Prof. Jörg Schilling, Tel.: 0345 55-28663, Email: Joerg.schilling@physik.uni-halle.de.

Please send your application, including Reg. No.: 5-12310/25-D with the required documents to Martin Luther University Halle-Wittenberg, Institute of Physics, Prof. Jörg Schilling, 06099 Halle (Saale) until 05/01/2026.

This job posting is subject to potential budgetary restrictions.

Application costs will not be reimbursed by Martin Luther University. Application documents will only be returned if a sufficiently stamped envelope is enclosed. Electronic applications are welcome.