

The Chair for Applied Physics is a leading research facility in quantum optics, polaritonics, and nanostructure opto-electronic devices. We operate a 550 m² clean room facility equipped with a complete semiconductor technology line, including epitaxial growth as well as nanostructure fabrication and characterization. Our research is conducted within numerous national and international projects and collaborations with other universities, research centers and the industry.

We are looking for multiple

PhD Candidates in Epitaxial Growth of III-V Quantum Repeater Building Blocks

What you will be working on

Within the BMBF funded project QR.X, we fabricate and investigate novel, deterministic quantum light sources and spin-photon interfaces based on III-V quantum dots. These devices will be used for the demonstration of quantum repeater functionalities. Successful candidates will join our multidisciplinary team of researchers and be working on:

- Design and molecular beam epitaxial growth and III-V quantum dot (QD) based single photon sources and spin-photon interfaces on GaAs substrate.
- Structural and basic optical characterization of epitaxial layer structures and quantum devices.

We have several position openings and the designation to a sub-task will be after a personal interview. Starting date is 1st April 2022, or thereafter.

What is required

- Master's degree in physics, nanotechnology or similar.
- Basic knowledge of quantum physics and solid-state physics.
- Experience with semiconductor quantum dots or AMO physics, preferred.
- Originality and productivity in research.
- Excellent English language skills (working language is English).

What we offer

- A part-time position (67 %) for an initial duration of 3 years with a possible extension.
- Training in epitaxial growth of III-V semiconductor materials in the Gottfried Landwehr Laboratory for Nanotechnologies.
- Payment based on the German TV-L scale.
- A unique opportunity to join a strong interdisciplinary multi-national team of researchers with a shared interest in semiconductors and quantum devices.
- Working with a state-of-the-art technological and spectroscopic infrastructure.
- Mentoring and career development opportunities.
- Possibility to contribute to high-impact scientific publications.

How to apply

Please send your application including your cover letter, CV, transcript of records and certificates, list of publications and recommendation letters in one single pdf file (no more than 10 MB) to Prof. Höfling (l-tep@physik.uni-wuerzburg.de). The positions are open from now on. Applications will be accepted until the positions are filled with the ideal candidate.

The University of Würzburg is an equal opportunity employer. All qualified applicants will be considered for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or age.



For questions

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