

The Chair for Applied Physics is a leading research facility in quantum optics, polaritonics, and nanostructure opto-electronic devices. We operate the Gottfried Landwehr Laboratory for Nanotechnologies, a 550 m<sup>2</sup> 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 a

## **Post-Doctoral Candidate in Quantum Optic Device Fabrication**

### Requirements

- PhD in physics or equivalent related.
- Work experience in a semiconductor cleanroom environment. Experience in nanofabrication of III-V semiconductors is preferred.
- Experience with semiconductor processing and characterization tools.
- Originality and productivity in research, proven by the scientific track record.
- Excellent written and spoken English language skills (working language is English).

### Research project

Within the BMBF funded project PhotonQ, we investigate novel, deterministic quantum light sources of single photons and higher-order entangled photonic states. These sources will be used by our project partners to drive a Si-photonic quantum processor. The successful candidate will join our multidisciplinary team of researchers and be working on:

- Development of deterministic III-V quantum light sources for Si photonic quantum information processing
- Nanophotonic and electronic device design of broadband optical cavities for III-V quantum dot (QD) single-photon sources emitting in the Telecom-C band at 1.55  $\mu\text{m}$  using numerical simulation methods such as FDTD.
- Process development and device fabrication in our cleanroom facilities.
- Contribute to project meetings, and conferences. Publication in peer-reviewed scientific journals.

Earliest starting date is 1st May 2022.

### What we offer

- A full-time position for a duration of up to three years.
- 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 quantum physics and semiconductors.
- Working with a state-of-the-art technological and spectroscopic infrastructure.
- Opportunity to grow your scientific track record.

### How to apply

Please send your application including your cover letter, CV, transcript of records and certificates, list of publications and three recommendation letters in one single pdf file (no more than 10 MB) to Prof. Höfling ([l-tep@physik.uni-wuerzburg.de](mailto:l-tep@physik.uni-wuerzburg.de)). The deadline is 30th April 2022.

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

Prof. Dr. Sven Höfling

[sven.hoefling@uni-wuerzburg.de](mailto:sven.hoefling@uni-wuerzburg.de)

+49 931-31 83613