

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

PhD candidates in the field of quantum optics

What you will be working on

Within the BMBF funded project Qecs, we investigate novel, deterministic quantum light sources of photonic cluster-states as a resource for photonic quantum computing and quantum networks. This is achieved by implementing the cluster state generation into the quantum light source, therefore eliminating the need for complex probabilistic table-top setups. The photonic states are created using semiconductor quantum dots embedded in a cavity.

Your contribution to the project involves either sample fabrication, open cavity design and setup, cluster-state preparation, or theory on cluster-state verification and quantum computing with cluster states. We have several open positions and the designation to a sub task will be after a personal interview.

The theory part of the project is supported by the chair for theoretical physics 1 (TP1) in Würzburg (Prof. Dr. Ronny Thomale).

Earliest starting date is 1st May 2022.

What is required

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

What we offer

- A part-time position (65 %) for a duration of 3 years with a possible extension of 1 year
- 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 in a state-of-the-art technological and spectroscopic infrastructure
- Possibility to contribute to scientific publications

How to apply

Please send your application including your cover letter, CV, list of publications and recommendation letters in one single pdf file (no more than 10 MB) to Dr. Tobias Huber (tobias.huber@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

Dr. Tobias Huber

tobias.huber@uni-wuerzburg.de

+49 931-31 84117