

Position ID	PhotonQ-WUE-PhD
Type of position	PhD
Subject Area	Physics / Experiment / Engineering
Type of institution	University
Start date	15 th March 2022, or thereafter
Type of contract	Initial duration of 36 months (67% TV-L E13)
PI	Prof. Dr. Sven Hoefling
Location	Julius-Maximilians-Universität Würzburg
Application deadline	Open until filled with the ideal candidate
Position description	<p>The Chair for Applied Physics is a leading research facility in quantum optics, polaritonics, and nanostructured opto-electronic devices. We operate the Gottfried Landwehr Laboratory for Nanotechnologies, a 550 m² cleanroom facility equipped with a complete semiconductor technology line, including epitaxial growth as well as nanostructure fabrication and characterization.</p> <p>In 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.</p> <p>What you will contribute. The successful candidate will join our multidisciplinary team of researchers and be working on:</p> <ul style="list-style-type: none"> • Development of deterministic III-V quantum light sources for Si photonic quantum information processing. • MBE growth and nanofabrication of III-V quantum dot (QD) single-photon sources emitting in the Telecom-C band at 1.55 μm. • Nanophotonic design and device fabrication in the Gottfried Landwehr Laboratory for Nanotechnologies. • Spectroscopy of the QD single-photon sources using low-temperature magneto-cryostats and quantum optical methods. <p>We have several position openings and the designation to a sub-task will be after a personal interview.</p> <p>What we offer:</p> <ul style="list-style-type: none"> • Payment based on the German TV-L scale (67 % of E13). • 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. • Mentoring and career development opportunities. • Possibility to contribute to high-impact scientific publications.

Requirements	<ul style="list-style-type: none"> • 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).
Application documents	<p>Please include the following documents within one single PDF file of no more than 10 MB size:</p> <ul style="list-style-type: none"> • Cover letter stating your research interest. • Curriculum Vitae including a list of publications. • Transcript of records and certificates. • Contact details of up to three references.
Application email	<p>Please send your application to Prof. Höfling: l-tep@physik.uni-wuerzburg.de</p>
Contact email	<p>For additional questions, please contact: svn.hoefling@physik.uni-wuerzburg.de</p>