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| **Position ID** | PhotonQ-WUE-PostDoc-3 |
| **Type of position** | Postdoc |
| **Subject Area** | Physics / Experiment / Engineering |
| **Type of institution** | University |
| **Start date** | 15th March 2022, or thereafter |
| **Type of contract** | Up to 36 months (100% TV-L E13) |
| **PI** | Prof. Dr. Sven Hoefling |
| **Location** | Julius-Maximilians-Universität Würzburg |
| **Application deadline** | Open until filled with the ideal candidate |
| **Position description** | 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.<br>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.<br><br>**What you will contribute.** The successful candidate will join our multidisciplinary team of researchers and be working on:<br>• Development of deterministic III-V quantum light sources for Si photonic quantum information processing<br>• Build a state-of-the art setup for the deterministic generation of single-photons and higher-order entangled photonic states from III-V quantum dot (QD) single-photon sources emitting in the Telecom-C band at 1.55 µm.<br>• Optic and electronic spin initialization, manipulation and read-out of individual spins in III-V QDs.<br>• Contribute to project meetings, and conferences. Publication in peer-reviewed scientific journals.<br><br>**What we offer:**<br>• A position for a duration of up to three years.<br>• Payment based on the German TV-L scale (100% of E13).<br>• A unique opportunity to join a strong interdisciplinary multi-national team of researchers with a shared interest in quantum physics and semiconductors.<br>• State-of-the-art technological and spectroscopic infrastructure.<br>• Opportunity to grow your scientific track record. |

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| **Requirements** | • PhD in physics or related field<br>• Work experience in quantum optical spectroscopy. Experience in optical spectroscopy of individual spins and work with cryostats, preferred.<br>• Experience with semiconductor quantum dots or AMO physics.<br>• Originality and productivity in research, proven by the scientific track record.<br>• Excellent written and spoken English language skills (working language is English). |
| **Application documents** | Please include the following documents within one single PDF file of no more than 10 MB size:<br>• Cover letter stating your research interest.<br>• Curriculum Vitae including a list of publications.<br>• Transcript of records and certificates.<br>• Contact details of three references. |
| **Application email** | Please send your application to Prof. Höfling:<br>l-tep@physik.uni-wuerzburg.de |
| **Contact email** | For additional questions, please contact:<br>sven.hoefling@physik.uni-wuerzburg.de |