

PhD/Postdoc positions available!

Quantum Optics with Electron-Photon Pairs

Electron microscopy is a highly developed technology that employs the wave properties of electrons to resolve structures at an atomic level. In this project we want to utilize Cherenkov radiation – which is generated by uniformly moving charged particles (electrons) with velocities exceeding the speed of light in a nearby dielectric medium – to create correlated electron-photon pairs, within a transmission electron microscope. This will enable a powerful new platform to study interesting quantum phenomena with far reaching applications, due to their different physical properties: the massive electron with picometer de Broglie wavelength, enabling atomic resolution, and the Cherenkov photon with micrometer wavelength, which is easy to guide, manipulate and detect in a phase coherent manner. **Within the next years we plan to build up experiments at the intersection of photonic quantum optics and electron microscopy.**
Be part of it!

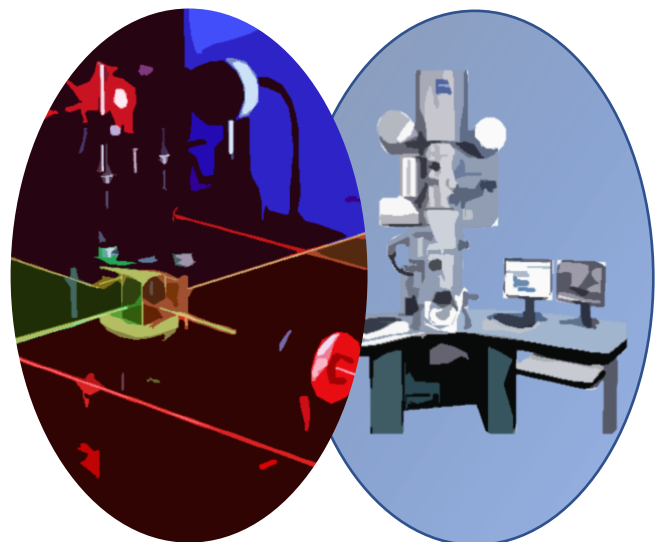
**We are looking for motivated and
experimentally talented PhD/PostDoc to join
our quantum optics group at TU Wien.**

You should hold a Master's degree in physics (or equivalent) and ideally have experience related to quantum optics or electron microscopy. You will work in an international team of 2-3 people on a cutting-edge experimental setup.

Our group is part of the Vienna Center for Quantum Science and Technology (VCQ).

If you are interested **please feel free to contact us.**
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www.haslingerlab.com



Applicants should provide the following documents:

- CV containing a list of publications and the names of at least two professional references.
- An original piece of their scientific writing (such as a first author manuscript or thesis).



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