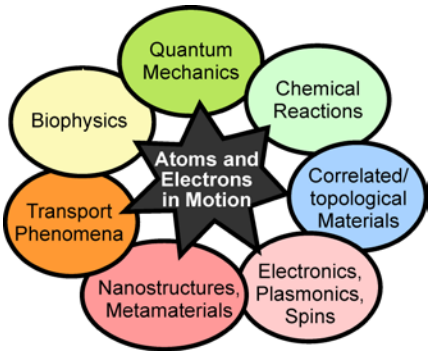
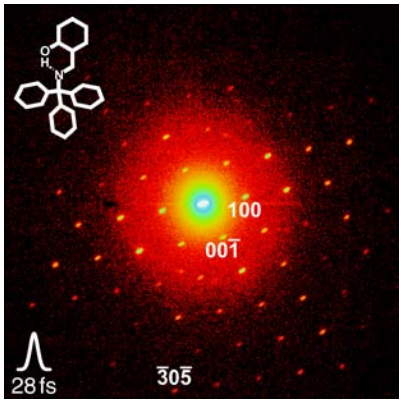
MAX-PLANCK-INSTITUT FÜR QUANTENOPTIK

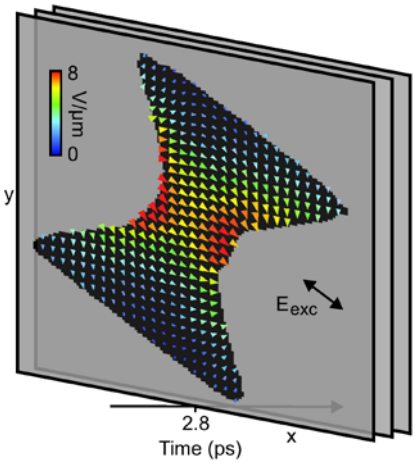
Universität Konstanz

Postdoc Position

Femtosecond / Attosecond Electron Microscopy







Pump-probe electron diffraction and microscopy (combination of femtosecond laser science with electron microscopy) allows to directly visualize the atoms and electrons in motion during almost any kind of light-matter interaction while it unfolds in space and time on picometer and attosecond dimensions (see →*www.ultrafast-electron-imaging.de*).

In Konstanz, we are currently installing several new electron microscopes and several new/exotic laser systems in order to investigate (step by step) the fundamental mechanisms in more and more complex materials with our technique. We are also studying the quantum dynamics of photon-electron interactions.

Our research is a joint effort between University Konstanz (→*www.uni-konstanz.de)* and the Max-Planck-Institute of Quantum Optics near Munich (→*www.attoworld.de*). Your work place will initially be in Munich and afterwards in Konstanz, an excellent university located directly at the shores of Lake Bodensee.

We require (a) scientific distinction, (b) leadership abilities and (c) a deep understanding of electron microscopy and/or femtosecond laser technology. (d) An additional background in ultrafast material science or nanotechnology is appreciated.

Please send your application (at least with CV, publication list, university degrees with marks) via email to →*peter.baum@uni-konstanz.de*. We are looking forward to hearing from you!

References: (clickable in the PDF)

→ THz-compression of electron pulses (*Science* 2016).
→ Sub-cycle electrodynamics in metamaterials (*Science* 2016).
→ Attosecond electron microscopy & diffraction (*Nature Phys*. 2018).
→ Movie of the metal-insulator reaction path in VO_2 (*Science* 2007).

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