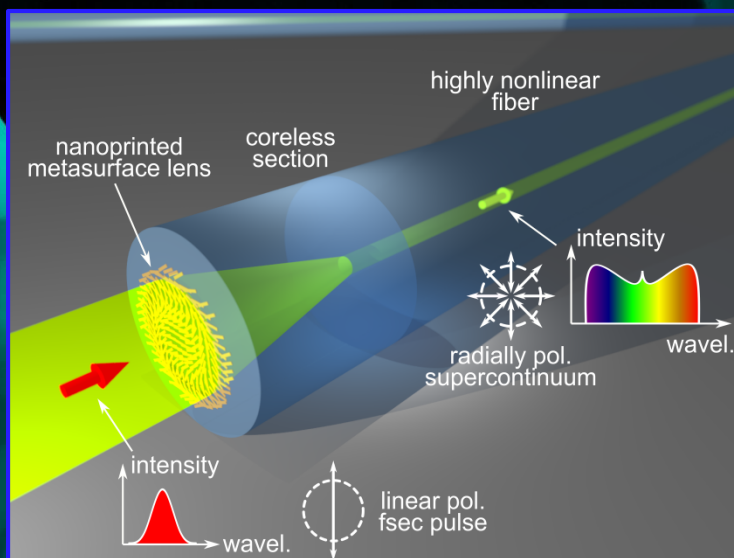


Open PhD position

Nanoprinted metasurfaces on fibers: a platform for polarization controlled nonlinear frequency conversion

The generation of new frequencies using ultrafast nonlinear optical phenomena is a fascinating research topic from a fundamental science perspective with applications in life sciences, metrology or quantum technology. One particularly effective approach is the supercontinuum generation using temporal solitons in optical fibres, with recent research looking at nonlinear frequency conversion in higher-order fiber modes.

The PhD project **Nanoprinted metasurfaces on fibers: a platform for polarization controlled nonlinear frequency conversion** aims to exploit the unique light shaping capabilities of nanoprinted metasurfaces to excite specific modes in highly nonlinear fibers. The goal is to generate broadband spectra and ultrashort pulses in modes that can only be addressed using metasurfaces, resulting in a ground-breaking scheme for nonlinear light generation. The project is mainly aimed at proof-of-concept studies and addresses scientific fields such as nanophotonics, metasurfaces, nonlinear photonics, ultrafast optics and 3D nanoprinting.



The position is within the group of Prof. Markus Schmidt at the **Leibniz Institute of Photonic Technology** (Jena, Germany), which is one of the key players in the field of fiber and waveguide optics and is funded by the German Research Foundation (DFG). The candidate should have a master degree in an area related to the topic (ideally in physics or photonics) and be able to work devotedly and independently.

For more information contact

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