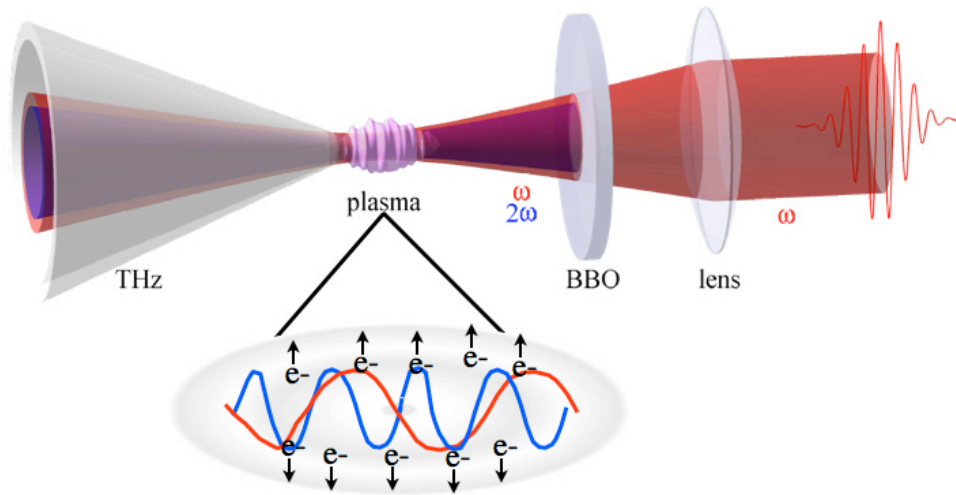


THz generation from two color plasma filaments



The goal of this project is the development of an intense source of broadband single-cycle pulses with tunable carrier frequency in the domain of 0.1 – 10 THz and repetition rate of 1 kHz based on frequency conversion of multi-color infrared laser radiation of tunable polarization in a gas medium due to the excitation of photoionization currents. You will gain knowledge on terahertz generation and detection techniques. This is an international collaboration project.

Your tasks

- Design and development and experimental characterization of two color interferometer for NIR wavelengths.
- Design, development and implementation of coherent detection diagnostic for terahertz radiation.
- Experimental investigation of THz generation using bicolor filaments with 1 kHz Ti:Saph laser system.
- Development of software for data acquisition and analysis

Your profile

- Good understanding of geometrical and nonlinear optics
- Good programming skills (e.g. MATLAB and/or LabView) and Computer skills
- Self-motivation, creativity, flexibility and the ability to work alone and in a team are highly appreciated

Interested candidates please contact: Dr. Amrutha Gopal

Institute of Optics and Quantum Electronics

Room no: 418 D, Max-Wien Platz 1, Ph:47210

Email: amrutha.gopal@uni-jena.de

https://www.hi-jena.de/en/research_areas/photon_particle_spectroscopy/laser_generated_radiation/thz/