Contribution ID: **21** Type: **not specified**

Generating femtosecond UV pulses from an infrared laser

In the attosecond science group at CFEL (https://atto.cfel.de), we generate ultrashort laser pulses with attosecond (1 as = 10−18 s) or few-femtosecond (1 fs = 10−15 s) duration. These pulses are used to trigger ultrafast dynamics in a variety of systems, from bio-relevant molecules to clusters and nanosystems, and to follow in real-time how the atoms and electrons move and interact. With our research we aim at understanding and potentially manipulating these ultrafast processes that govern the early steps of photochemistry.

In this project, you will be involved in our research activity and learn about experimental methods for converting the laser pulses to the ultraviolet photon energy range needed for our experiments, using soliton dynamics in a gas-filled hollow-core fibre. You will participate in building optical set-ups for this and in measuring the resulting spectra and pulse durations.

Group

FS-ATTO

Project Category

A5. Lasers and optics

Special Qualifications

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