

Upgrading an x-ray attosecond beamline for time-resolved experiments

In the attosecond science group at CFEL (<https://atto.cfel.de>), we generate ultrashort laser pulses with attosecond ($1 \text{ as} = 10^{-18} \text{ s}$) or few-femtosecond ($1 \text{ fs} = 10^{-15} \text{ s}$) 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 performing time-resolved experiments on the femtosecond and possibly attosecond time scale. Depending on your interests and the progress of the group's work until July, your project may vary between building nonlinear optical set-ups and programming acquisition software for soft x-ray spectra.

Group

FS-ATTO

Project Category

A5. Lasers and optics

Special Qualifications

Primary authors: MAANSSON, Erik (FS-ATTO (Attosecond Science and Technology)); CANNELLI, Oliviero (Eur.UPEX); WANIE, Vincent (FS-ATTO (Attosecond Science and Technology))