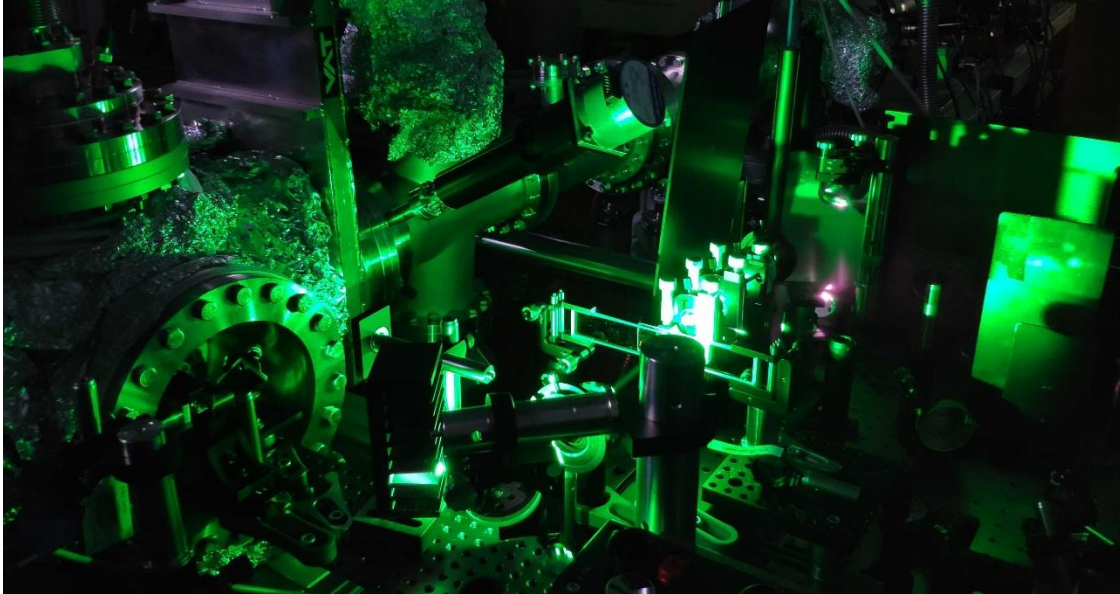


Master thesis / Research Lab (Spring 2024)

Molecular Movies Group (Dr. Kübel) / Chair of Non-linear Optics (Prof. Paulus)

Non-linear pulse compression of high-power visible femtosecond pulses



Nonlinear optics makes lasers colorful, which been essential for the development of attosecond physics¹. In this project, you will develop a non-linear pulse compression stage for green (515 nm) laser pulses and use them for strong-field experiments.

You will learn how to operate a state-of-the-art femtosecond fiber laser system and exploit non-linear optics to produce ultrashort laser pulses with desired properties. You will further have the opportunity to contribute to experiments on high-harmonic generation and photoelectron spectroscopy.

We are looking for highly motivated students with a high degree of initiative and independence, who are keen on developing new scientific instrumentation. A background in non-linear optics and programming skills are beneficial.

Contact: Dr. Matthias Kübel – Institute of Optics and Quantum Electronics, Room no. 302, Max-Wien-Platz 1, 07743 Jena, Matthias.kuebel@uni-jena.de



See our students' view on non-linear pulse compression!

¹ <https://www.nobelprize.org/prizes/physics/2023/summary/>