



MSc Position

At the Laboratory for Attosecond and High-Field Physics in the Division of Prof. Dr. Ferenc Krausz

Sensitive Measurement of Light Field Oscillations

During the past years, electro-optical sampling [1] has evolved as a powerful tool for the characterization of electric light fields, with a unique temporal resolution [2, 3]. Our group employs this technique for measurements of molecular vibrations [4], exploring the potential of new field-resolving technologies for advancements in biomedical spectroscopy. The research in the frame of this thesis will address the quest for the fundamental limits imposed by classical light on the sensitivity of field-resolved spectroscopy.

Your tasks:

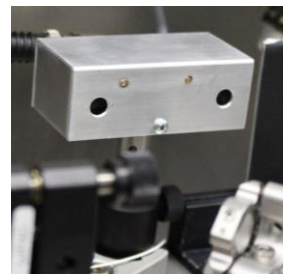
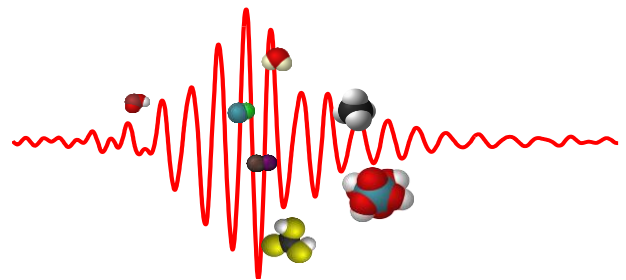
- Set up state-of-the-art nonlinear ultrashort-pulse characterization techniques
- Automatize field-resolved measurements
- Optimize detection sensitivity

Your qualifications:

- Highly motivated
- Strong academic record
- Basic knowledge in (nonlinear) optics
- Programming skills (advantageous)

We offer:

- Dynamic and friendly work environment
- Experience with cutting-edge ultrafast laser technology



You are welcome to visit our labs! Please contact:

Christina Hofer, Msc.
christina.hofer@mpq.mpg.de
<https://www.attoworld.de/frm>

Dr. Ioachim Pupeza
ioachim.pupeza@mpq.mpg.de
<https://www.attoworld.de/frm>

References:

[1] Q. Wu, X.-C. Zhang, Appl. Phys. Lett. **67**, 3525 (1995)
[2] S. Keiber et al., Nat. Phot. **10**, 159 (2016)

[3] C. Riek et al., Science **350**, 420 (2015)
[4] I. Pupeza et al., Nat. Phot. **9**, 721 (2015)