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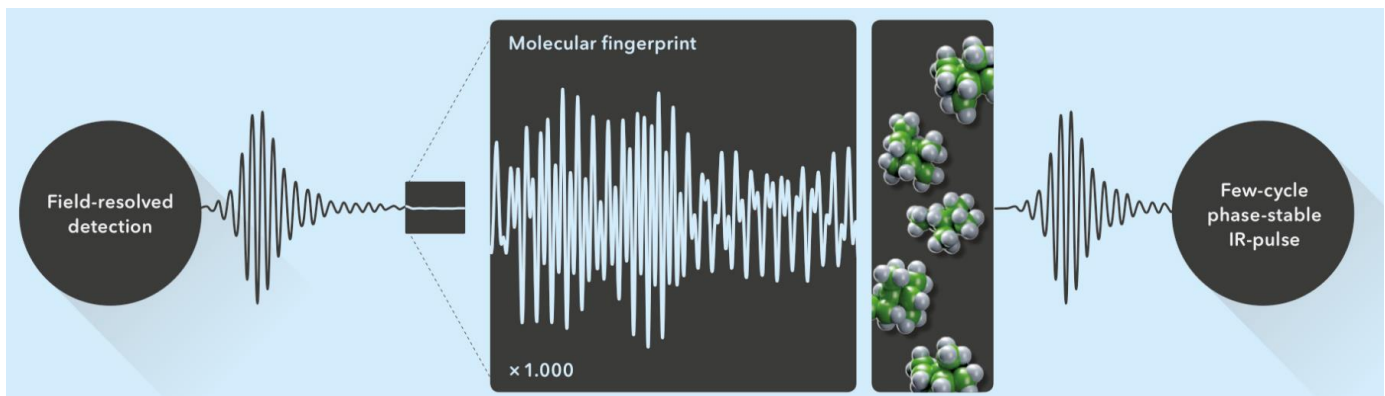


## MSc Position

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

# Highly Sensitive Measurement of Light Fields

Electro-optic sampling is a powerful and highly sensitive tool for the direct measurement of the electric field of light. In combination with the world's most brilliant sources of broadband, coherent infrared radiation developed in our group [1,2], we employ this technique for measurements of infrared molecular fingerprints, aiming at advancing biomedical spectroscopy via field-resolving metrology.



In the framework of a Master's thesis, you can join us in pushing the sensitivity of field-resolved spectroscopy towards the fundamental physical limitations.

### Your tasks:

- Setup state-of-the-art nonlinear ultrashort-pulse characterization techniques
- Investigate their fundamental limitations
- Characterize and minimize noise sources

### 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>

### 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

### References:

- [1] I. Pupeza et al., Nat. Phot. **9**, 721 (2015)
- [2] T. Butler et al., Optics Letters, in press (2019)