

BENEFICIARY OF MEDEA

FEMTOLASERS

SPECTRA-PHYSICS VIENNA

VIENNA

AUSTRIA



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Useful Links

www.wien.gv.at/english/administration/civilstatus/immigration/residence.html

www.help.gv.at/Content.Node/139/Seite.1390000.html

www.vienna-life.com

www.virtualvienna.net

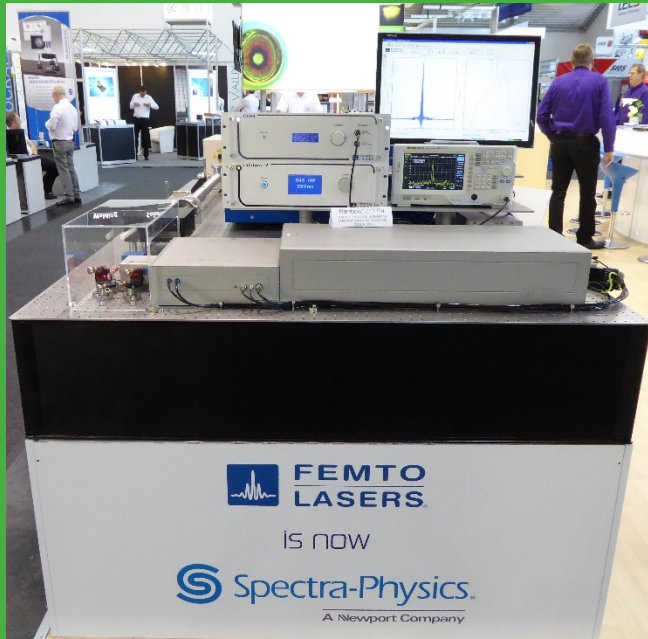
www.wienerlinien.at



Molecular Electron Dynamics investigated by Intense Fields and Attosecond Pulses



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Home Institution

Femtolasers Produktions GmbH has been the first manufacturer of ultrafast, compact and reliable laser oscillator and amplifier solutions, generating optical pulses down to 7 fs with megawatt and multi-gigawatt peak powers at MHz and kHz repetition rates.

Femtolasers began as a spin-off from the Vienna University of Technology, which is in close proximity to the company. Therefore, Femtolasers is well integrated into the local scientific community. Femtolasers is also involved in a variety of co-operations with several universities and institutes worldwide, yielding a global integration. Acquired in 2015 by Spectra-Physics, a division of Newport Inc., Femtolasers is now operating under the name Spectra-Physics Vienna.

Being a small company of 40 people, Femtolasers provides an industrial environment while still allowing each individual to have direct contact with all the departments within the company.

Femtolasers is located in the 10th district in Vienna, south of the central districts. Although densely populated, this area is known to have large recreational areas and parks, one of which is directly next to the company.



I joined Femtolasers in January 2005 as the product manager for amplifiers. Since 2015, I have been Director of Advanced Product Development at Spectra-Physics Vienna.

Prior to joining Femtolasers, I worked with ultrafast lasers on the observation and control of quantum optical phenomena in atoms and molecules, and the development of new laser analytical methods. I earned my diploma and doctorate in the group of Prof. Gerber (Universities of Freiburg and Würzburg) studying molecular dynamical effects, including coherent control of complex molecules. After a post-doctoral position with the German Space Agency (DLR), I completed my Habilitation at the University of Kassel, in the group of Prof. Baumert. His experimental work was on quantum phenomena in weak and intense femtosecond laser fields. In addition, I produced several publications on new, minimal invasive analytical methods based on femtosecond laser-induced breakdown plasmas. With a combination of laser induced breakdown spectroscopy (LIBS) and microscopy, it was possible to spatially resolve trace elements down to the femtoliter regime in living cell membranes.

Group Leader

Name: Andreas Assion
Nationality: German
Date of birth: 09 January 1964

Short CV:

1994: graduated in physics, University of Freiburg, Germany

1998: PhD in physics, University of Würzburg, Germany

2004: Habilitation in Physics, University of Kassel, Germany

Current position

Director, Advanced Product Development

Spectra-Physics Vienna

Femtolasers Produktions GmbH

Offered Training

The training modules offered by Femtolasers to ESRs within MEDEA can be tailored to the needs of individual ESRs. General topics of training modules are listed below. For further information on the modules, please contact Andreas Assion or Fabian Lücking (see title page).

Research Training Modules (RTMs)

- A. Carrier-envelope phase stabilization of oscillators and amplifiers
- B. Novel carrier-envelope phase stabilization schemes: Pros and cons

Transferrable Skills Modules (TSMs)

- A. How Not to Perform Market Analysis
- B. Research and Development in Industry



About Life in Vienna

Vienna is the capital of and the largest city in Austria. It is host to many international organizations including various United Nations offices.

Arts and culture have a strong historical tradition in Vienna. This is still true and there are a number of opera houses, theatres, museums and concert halls located throughout the city. In addition there are a variety of discos, pubs, and restaurants catering to younger people in Vienna. Some options for outdoor activity in the city are the banks of the Danube lined with an easy bike or walkway and of course the Prater with a massive green park. Outside the city the Austrian Alps are famous for year-round activities like hiking, climbing, and skiing.

Vienna is also a hub of education in Austria, being the home of many colleges and universities from the University of Vienna, to the Academy of Fine Arts.