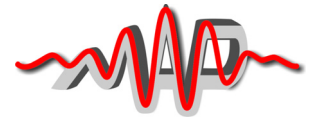




PRESS-RELEASE

Max-Planck-Institute of Quantum Optics and Munich-Centre for Advanced Photonics



Garching, 31.01.2013

Prof. Ferenc Krausz is winner of the King Faisal International Prize 2013

The King Faisal International Prize for Science (Topic: Physics) for the year 2013 has been jointly awarded to Professor Ferenc Krausz, Director at the Max-Planck-Institute of Quantum Optics in Garching and Chair of Experimental Physics at the Ludwig-Maximilians-Universität (LMU) Munich, and Professor Paul B. Corkum, Research Chair in Attosecond Photonics, University of Ottawa (Canada). Since 1978, this award has annually been given to scientists for outstanding achievements in five categories by the King Faisal Foundation in Riyadh (Saudi Arabia). Prof. Krausz and Prof. Corkum are recognized “for their independent pioneering work which has made it possible to capture the incredibly fast motion of electrons in atoms and molecules in a “movie” with a time resolution down to attoseconds.”



Photo: Thorsten Naeser

An attosecond is an extremely short period of time – a billionth of a billionth of a second. In 2001, Professor Ferenc Krausz’ group has been the first one to succeed in generating light pulses in the attosecond domain. Attosecond light pulses have allowed for the first time observation of the atomic-scale motion of electrons in real time. These measurements have already brought amazing new insights into atomic and solid state physics.

Besides having a strong focus on attosecond physics, Professor Krausz has developed pioneering laser techniques for generating light pulses consisting of only a few wave cycles with controlled waveforms. The perfectly controlled high-intensity fields of these femtosecond ($1\text{fs} = 10^{-15}\text{s}$) pulses exert forces on electrically charged elementary particles (electrons or protons) that are comparable to intra-atomic forces.

The high application potential of these laser pulses is being explored in the “Munich-Centre for Advanced Photonics” (MAP), a research network carried by the LMU, Technische Universität München (TUM) and the MPQ, for shedding light on the mysteries of microscopic motions and developing new biomedical techniques in the new *Centre for Advanced Laser Applications (CALA)* which is going to be constructed on the research site Garching in the next years.

On Professor Krausz:

Born in Mór (Hungary) in 1962, Ferenc Krausz studied electrical engineering at the Budapest University of Technology and theoretical physics at the Eötvös-Loránd University in Budapest. In 1991 he received his doctoral degree in Quantum Electronics at the Vienna University of Technology, where only two years later he received his habilitation. In 1999 he was appointed full professor at the Vienna University of Technology and in 2000 he became director of the centre for “Advanced Light Sources”. In 2003 he was offered the position of director at the Max-Planck-Institute of Quantum Optics, where he leads the “Attosecond Physics” Division. In 2004, he took over a Chair of Experimental Physics at the LMU Munich.

Professor Krausz has been the recipient of numerous scientific awards and prizes, e.g. the Gottfried Wilhelm Leibniz Prize of the Deutsche Forschungsgemeinschaft in 2005. In 2006 he was presented with the Quantum Electronics Award of the IEEE Laser and Electro-Optics Society as well

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as with the British “Progress Medal” of the Royal Photographic Society. In 2011 he has received the “Verdienstkreuz am Bande” (order of merit) of the Federal Republic of Germany. Prof. Krausz is a member of many scientific societies and academies such as the Austrian and Hungarian Academy of Sciences and the European Academy of Sciences and Arts in Salzburg (Austria). In 2012 he became elected as a foreign member of the Russian Academy of Sciences and as a member of the Academia Europaea. Professor Krausz will receive the King Faisal International Prize in an official ceremony to be held in March 2013. *Olivia Meyer-Streng*

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