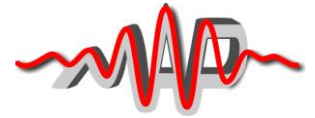




## PRESS-RELEASE

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



Garching, May 2016

### **Prof. Ferenc Krausz is elected member of the Nationale Akademie der Wissenschaften Leopoldina**

The Board of the “Deutsche Akademie der Naturforscher Leopoldina – Nationale Akademie der Wissenschaften” has elected 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, as a member in recognition of his “scientific achievements and personality”. Founded in Schweinfurt in 1652 as *Academia Naturae Curiosorum*, the *Leopoldina* is the world’s oldest continuously existing academy for medicine and the natural sciences. Among its over 7000 members in all since the Academy was founded are eminent scholars and scientists as Marie Curie, Charles Darwin, Albert Einstein, Johann Wolfgang von Goethe, Alexander von Humboldt, Justus von Liebig and Max Planck. In 2008, the *Leopoldina* was appointed “German National Academy of Sciences”. Following the tradition of an “altehrwürdige Gelehrten-gesellschaft”, the academy’s goal is not only to promote science but also to participate in discussions on social and political questions. Today, about 1500 renowned scientists from Germany, Austria, Switzerland and many other countries are active members of the society.



Photo: Thorsten Naeser

Professor Ferenc Krausz is recognized as the founder of the field of attosecond physics. In 2001 he succeeded in generating light pulses in the attosecond domain (an attosecond is a billionth of a billionth of a second) for the first time. The application of these ultrashort pulses for the observation of electrons inside atoms in 2002 was celebrated by the scientific journals *Nature* and *Science* as one of that year’s 10 most important achievements in science. These measurements have already brought amazing new insights into atomic and solid state physics.

In 2003, Professor Krausz developed a new laser technique that, using a new style of mirrors, generated light pulses consisting of only a few wave cycles with controlled waveforms for the first time. The perfectly controlled high-intensity fields of these ( $1\text{fs} = 10^{-15}\text{s}$ ) 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 at the “Munich-Centre for Advanced Photonics” (MAP), a research network carried by the LMU, 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 currently under construction on the Garching research site.

#### **Information on Ferenc 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

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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 at 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 is head of 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 as with the British "Progress Medal" of the Royal Photographic Society. In 2011 he received the "Verdienstkreuz am Bande" (order of merit) of the Federal Republic of Germany. In January 2013 he was honoured with the King Faisal International Award, in August of the same year he received the prestigious "Otto-Hahn-Preis" which is sponsored by the City of Frankfurt-am-Main, the Gesellschaft Deutscher Chemiker (GDCh) and the Deutsche Physikalische Gesellschaft (DPG).

Professor Ferenc 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 was elected member of the Academia Europaea and foreign member of the Russian Academy of Sciences. *Olivia Meyer-Streng*

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