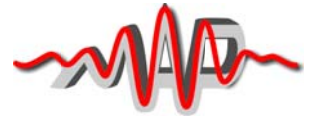




## PRESS-RELEASE

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



Garching, 13 March 2014

## **Prof. Dr. Reinhard Kienberger is going to be appointed as Max Planck Fellow at the Max-Planck-Institute of Quantum Optics**



(Graphic: Thorsten Naeser)

**Professor Dr. Reinhard Kienberger, Chair of Laser and X-Ray Physics at the Technische Universität München, will be appointed as Max Planck Fellow at the Max-Planck-Institute of Quantum Optics (MPQ) on July 1, 2014. The Max Planck Fellows program was introduced by the Max Planck Society in 2005 and aims to strengthen cooperation between Max Planck institutes and universities. In general, appointments last for five years, with a possible extension of three years. The position entails the supervision of an own research group at the institute. As a Max Planck Fellow Prof. Kienberger will continue to lead his research group “Attosecond Dynamics” which he has established a couple of years ago as part of the *Laboratory for Attosecond Physics (LAP)* of Prof. Ferenc Krausz.**

Professor Dr. Reinhard Kienberger comes from Saalfelden in Austria. In 2002 he got his doctoral degree in the group of Prof. Ferenc Krausz, then at the Technical University of Vienna, on the subject “Subfemtosecond XUV Pulse Generation and Measurement”. There he was the first ever to produce light pulses shorter than one femtosecond (a millionth of a billionth of a second). In 2004 he received the APART grant (Austrian Programme for Advanced Research and Technology) of the Austrian Academy of Sciences, which enabled him to spend 10 months at the Stanford Linear Accelerator Center (USA) in the same year. On his return from the USA in 2005 he became a research scientist in the “Attosecond Division” of Prof. Ferenc Krausz at the MPQ. In 2006 he received the Sofja Kowalevskaja Prize by the Alexander von Humboldt Foundation and set up the independent research group “Attosecond Dynamics”. In 2007 he received the “Starting Grant” of the European Research Council, and in September 2009 he became appointed professor at the Technische Universität München. In November 2010 he was presented with the prestigious ICO Prize of the International Commission for Optics.

By assuming the Chair of Laser and X-Ray Physics at the Technische Universität München in 2013 Prof. Kienberger added to the field of ultrafast spectroscopy the field of attosecond dynamics. One of the main goals of this research is to capture snapshots of the inner life of atoms. By this scientists

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expect to gain insights into the actual course of chemical reactions, the behaviour of electrons in solid materials, and the interaction between light and matter. "An attosecond is a billionth of a billionth of a second, an extremely short period of time," Kienberger says. "This is the time scale on which the motion of electrons in an atom takes place. With extremely short light pulses, we can make this motion visible and investigate it." New discoveries made through this approach could find application in chemistry, molecular biology, nanotechnology, and treatment of tumours.

Professor Kienberger participates at the new *Center for Advanced Laser Applications* (CALA) (director: Prof. Ferenc Krausz) which is presently being constructed in Garching. The physicist contributes his experience in the field of free electron lasers in the X-ray region which he gained during his stay at Stanford. Here he was the first one to prove that techniques for characterizing laser-generated X-rays could be extended to femtosecond X-rays produced by a linear accelerator.

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