

**PRESS RELEASE  
WINNERS ANNOUNCED FOR  
2013/1434 KING FAISAL INTERNATIONAL PRIZE  
FOR  
SCIENCE**

**Topic: PHYSICS**

**Riyadh, Monday 16 Rabi I 1434H occurring 28 January 2013G,** HRH Prince Khalid AlFaisal, Director of The King Faisal Foundation, tonight announced the winners of the King Faisal International Prize.

The King Faisal International Prize for Science (**Topic: Physics**) for the year 1434H - 2013G has been jointly awarded to:

**Professor Paul. B. Corkum (Canada)**

Research Chair in Attosecond Photonics, University of Ottawa,  
and Director, Attosecond Science,  
Steacie Institute for Molecular Science, NRC, Canada

and

**Professor Ferenc Krausz (Hungary/Austria)**

Ludwig Maximilians University, Munich,  
and Director, Laboratory for Attosecond Physics,  
Max-Planck-Institute of Quantum Optics, Garching, Germany

The prize winners 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. An attosecond is a vanishingly short time. One attosecond compared to one second is like one second compared to the age of the Universe.

When intense ultra-short laser pulses are focused into a gas, a laser-like beam of attosecond pulses of ultraviolet light is produced.

Professor Corkum was the first to explain this phenomenon with a conceptually simple model. He has harnessed this process for pioneering studies in collision physics, plasma physics, and molecular science. He has even been able to produce tomographic images of the movement of electrons in molecules.

Professor Krausz has developed powerful techniques for generating intense, tailored, waveforms of laser light, and he has applied these tools for observing and controlling the motion of electrons on a time scale of attoseconds to femtoseconds. His group was the first to generate single ultraviolet pulses with a duration as short as 80 attoseconds.

**Notes to Editors:**

- Over the past 34 years, a total of 49 scholars from 12 different countries have won the King Faisal International Prize for Science.
- The topic for the 1435H / 2014G King Faisal International Prize for Science is **Mathematics**.
- The deadline for all nominations is **Wednesday 21 JUMADA II 1434H occurring 1 May 2013G**.