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## Niels Bohr Medal for Peter Zoller

**On the 15th of November in Copenhagen, professor Peter Zoller will be awarded the UNESCO's Niels Bohr Gold Medal for his outstanding contributions to the field of quantum optics and quantum information. In this the International Year of Physics another two distinguished scientists, professor Martin Rees of Trinity College, Cambridge, and professor Herwig Schopper, long-standing director of CERN, will receive the medal.**

The award in Copenhagen is a recognition of Professor Zoller's outstanding contributions to developments in quantum optics and quantum information and in particular for his pioneering work on the theory of entanglement, quantum computing and quantum communication. "After the Max Planck Medal this is the second international award for my work this year," Peter Zoller commented on this accolade. "As someone who focuses on basic research and theory, I am particularly pleased that the science organization of the United Nations recognizes my work."

### **In prominent footsteps**

The award ceremony is taking place on Tuesday evening in the Royal Danish Academy of Arts and Sciences in Copenhagen. Koichiru Matsuura, Director General of UNESCO, will present the medals. Previous award winners include famous names such as the Nobel Prize winner for Chemistry, Walter Kohn, and Physics Nobel Prize winner Vitaly Ginzburg. In addition to Peter Zoller, British scientist Martin Rees will receive a Niels Bohr Gold Medal for his major contributions to modern astrophysics. German scientist Herwig Schopper will receive his award for research with large particle accelerators and in high energy physics and for his efforts in creating large international cooperation projects such as the Geneva research centre CERN.

### **World-famous scientist**

Peter Zoller has a chair at the University of Innsbruck and is one of the scientific directors of the Institute for Quantum Optics and Quantum Information (IQOQI) at the Austrian Academy of Sciences (ÖAW). His theoretical work is years ahead of its experimental realization and attracts worldwide



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interest before its eventual realization in the laboratory. Zoller, born 1952 in Innsbruck, studied physics there, got his doctorate in 1977 and his *venia legendi* in 1980. He has been guest professor in numerous universities of world renown and has been offered a chair by the University of Ulm, Germany, the University of Colorado in Boulder and by Harvard University, to name but a few. For several years Peter Zoller had a professorship at the Joint Institute for Laboratory Astrophysics (JILA) in Boulder before taking up a chair at the University of Innsbruck in 1994. In 1998 he received the Wittgenstein Prize of the Austrian Science Fund FWF, the highest Austrian accolade for scientists. In the same year he was awarded the Schrödinger Prize and the Max Born Prize. In 2002 the federal state of Tyrol acknowledged Zoller's work by awarding him the Tiroler Landespreis für Wissenschaft. In March 2005 he received the Max Planck Medal of the Deutsche Physikalische Gesellschaft (DPG).

### **The Niels Bohr Gold Medal**

In 1985 UNESCO coined the Niels Bohr Medal for the 100th anniversary of the birth of Niels Bohr, one of the most outstanding scientists of the 20th century. Born in Denmark in 1885, Bohr is considered one of the fathers of quantum physics. His reflections on the ethics of science have had a lasting influence on the work of UNESCO. The medal was designed by Swedish artist Siv Holme-Muse and produced by the Paris mint. On the front it shows the Nobel Prize winner of 1922 in profile and on the back is Bohr's own drawing of electrons circling around an atomic structure and the formula  $E_2 - E_1 = h\nu$ . It bears the inscription "Contraria sunt complementa" which sums up the principle of complementarity that Bohr proposed for quantum physics.

You can find pictures of Prof. Peter Zoller on: <http://www.iqoqi.at/media/download/>.

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