

Garching, 24<sup>th</sup> January, 2013

Press Release

**Dr. Oriol Romero-Isart gets  
'Premio Investigador Novel en Física Teórica'**



The Royal Spanish Society of Physics and the BBVA (Banco Bilbao Vizcaya Argentaria) Foundation have given the 'Premio Investigador Novel en Física Teórica' to Dr. Oriol Romero-Isart, a young Catalan research scientist working in the Theory Division of Professor Ignacio Cirac at the Max-Planck-Institute of Quantum Optics (Garching near Munich). The prize which was established in 1958 by the Royal Spanish Society of Physics is given once per year to a Spanish researcher up to 35 years old. On the election of Dr. Romero-Isart the announcement says:

**"The jury has recognized the excellence and quality of his research in leading lines of current physics among which include Quantum Information and Quantum Optics, reflected in a significant number of articles in high impact journals and in several invited communications at prestigious scientific meetings". The BBVA Group has established the foundation as an expression of its Corporate Social Responsibility. In particular, it engages in the promotion of research, advanced training and the transmission of scientific knowledge to society.**

Oriol Romero-Isart was born in Terrassa (Barcelona) in 1981. He started his physics education at the Universitat Autònoma de Barcelona where he graduated in 2004. There he continued his research as a PhD student under the supervision of Professor Anna Sanpera. For his thesis (Quantum Information with Strongly-Correlated Systems: from Engineering to Detection) which was completed in September 2008 with "summa cum laude", he received the *PhD extraordinary prize* from the Universitat Autònoma de Barcelona. He then joined the Theory group of Professor Ignacio Cirac as an Alexander von Humboldt postdoctoral fellow. Since 2011 he has been Associate researcher at the Theory group.

During the last years at MPQ he worked on proposing experiments and developing the theory to bring macroscopic objects into the quantum regime. In particular he proposed to optically levitate dielectric nanospheres inside optical cavities in order to cool down its motion to the ground state as well as to prepare non-Gaussian states. He proposed an experiment to prepare large superpositions of microspheres and analyzed how this can be used to test quantum mechanics at an unprecedented parameter regime. More recently he has been interested in superconductivity and he worked on a proposal to bring magnetically levitated superconducting microspheres to the quantum regime. His future plans are to use the fundamental properties of superconductivity to harness quantum systems, with some particular focus on ultracold neutral atoms.

The 'Premio Investigador Novel en Física Teórica' includes a certificate and prize money of 4000 Euros. The prize will be handed over to Dr. Romero-Isart

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at a public ceremony to be held at the headquarters of the BBVA Foundation in Madrid during the spring of 2013. *Olivia Meyer-Streng*

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