

- Ph. D. Position - Post Doc Position

Quantum Physics of the light-matter interaction

A Ph. D **theory position** in the Universidad Autónoma de Madrid and a post-doctoral **experimentalist position** in the Institute Nanoscience, CNR, in Lecce (Italy), funded by the European Union, are available to be filled in as soon as possible.

We are a joint group of experiments and theory working on the quantum properties of condensed matter systems in the regimes of weak and strong light-matter coupling, to study properties such as quantum correlations, photon statistics, Bose-Einstein condensation, superfluidity, etc. Details of the activities, conditions and scope of the works are to be asked directly to:

1. F.P. Laussy, fabrice.laussys@uam.es (theory)
2. D. Sanvitto, daniele.sanvitto@nano.cnr.it (experiment)

The theory applicant must have a strong command of mathematical methods, some interest in numerical modelling and in confronting their work to experimental results. All the required specialization in the field will be provided.

The experiment applicant must have a PhD in Physics, Material Science or Engineering with a background in optics, possibly in one of the following topics: microcavity polaritons, localized plasmons, single emitters both in hybrid/organic or inorganic semiconductors. The experimental team is in charge of a fully equipped and state of the art laboratory for Advanced Photonics. The group has also access to many, in-situ, state of the art facilities for growing and processing inorganic, organic and molecular semiconductors.

Both must have limitless enthusiasm to work hard in a highly competitive field with the aim of pushing the frontier of research forward. The wish to assume responsibilities and excellent team working skills in an international environment are essential as the group is small, dynamic and highly involving all of its components.

References:

- **Microcavities.** A. Kavokin, J.J. Baumberg, M. Malpuech, F.P. Laussy (Oxford University Press, 2011)
- **Exciton Polaritons in Microcavities: New Frontiers.** D. Sanvitto & V. Timofeev (Springer, 2012)
- <http://www.advanced-photonics.eu>

