

Open position for PhD

Nanoplasmonic photoactivation in chemical reactions

at

Institut de Ciències Fotòniques, ICFO, Castelldefels
Laboratory of Medicinal Chemistry, IQAC-CSIC, Barcelona

A PhD position is available for students to join the groups of Dr Amadeu Llebaria (IQAC-CSIC) and Romain Quidant (ICFO) immediately in 2014.

The student will have the opportunity of joining the research teams in a collaborative research subject with excellent perspectives and to contribute to the development of nanoplasmonic activation in chemical reactions.

CANDIDATES:

- The required candidates are graduated **chemists, chemical engineers, physicists, or material science graduates** with high knowledge of at least one of the following subjects: organic chemistry, synthesis, catalysis, photonics and experimental physical chemistry.
- Academic marks over 2,0 (system 1-4), or over 8 (in qualifications 0-10) are recommended
- Master or DEA finished or almost finished
- Experience in chemistry laboratory and instrumentation, organic synthesis and optical instrumentation (laser, molecular spectroscopy) is valuable.
- High motivation and flexibility to learn new techniques both in photophysics and in chemistry

The project is devoted to develop new applications of nanoplasmonic chemical photoactivation to organic reactions. The student will work in the laboratories at both IQAC-CSIC and ICFO.

The student will gain experience in **chemistry, nanotechnologies** and **photonics** and will study novel methodologies for light induction of chemical reactions. He will receive extensive training in the synthesis and characterisation of organic molecules and in the use of key characterization and purification techniques (including NMR spectroscopy, HPLC, HPLC-MS, chromatography, etc.) catalysis and photophysics (including laser manipulation, multiphoton spectroscopy and structural and chemical characterization of nanoparticles). Transferable skills will also be developed by presenting results at group meetings and at national/international research conferences and scientific publication.

Recent publications on nanoplasmonics in chemistry related to the PhD project:

G. Baffou, R. Quidant Chem. Soc. Rev., 2014, 43, 3898-3907

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