
Post-doctoral position in novel ultrafast spectroscopy methods for photosynthesis and bioenergetics

ICFO is offering a postdoctoral position to well-qualified, highly motivated and dynamic young scientist who wishes to enhance his/her scientific career in a friendly and stimulating environment.

The successful candidates will be joining the **Photon Harvesting in Plants and Biomolecules group led by Prof. Dr. Nicoletta Liguori**.

Our group combines state-of-the-art methods in experimental ultrafast spectroscopy and molecular dynamics simulations:

We develop and apply novel ultrafast spectroscopic methods aimed at uncovering how changes in light, environment and structure switch the function of photoactive systems on and off.

We obtain structural information of the different steps of such molecular switches by developing and applying molecular dynamics simulations approaches at different levels of temporal and spatial resolution.

The postdoctoral researcher will be involved, in developing novel ultrafast multipulse spectroscopic approaches to uncover how and how fast proteins involved in plant and animal bioenergetics respond to changes of environment and structure and modify their function.

The position is focused on experimental, spectroscopic work. However, the successful candidates will extensively collaborate with the other group members involved in exploring the same processes via molecular dynamics simulations. Amongst other tasks, the successful candidate will be extensively involved in writing scientific publications, supervising students and in dissemination at national and international conferences and visits and collaborations with laboratories across the world.

The PI has received funding from multiple prestigious national and European grants to develop the project and the successful candidates will be embedded in a large network of international collaborations (NL, ES, IT, PT, UK, DE). The successful candidate will receive full support and help from the group leader in applying for independent funding if wished (the position is however already fully funded up to 3 years). The PHPB is an international (IT, DE, IE, ES, CN, PL), fast-growing research group, established in October 2022, which has already secured several postdoctoral fellowships, e.g., 1 La Caixa Junior Leader Postdoctoral Fellowship, 2 MSCA Postdoctoral Fellowships, 1 Juan de la Cierva Postdoctoral Fellowship.

Eligibility and Conditions

Candidates must hold an internationally-recognized Ph.D.-equivalent degree (or evidence of its completion in the nearest future) preferably in physics, chemistry, biophysics, optics, material science or similar. Extensive knowledge of biophysics and/or photochemistry will be highly valued.

The postdoctoral researcher will be involved in the development of a complex ultrafast multipulse spectroscopic approach, based on the electronic synchronization of multiple, brand new custom-made femtosecond and nanosecond laser systems. We will probe ultrafast changes in the ground and excited states of a variety of photoactive systems mainly in the UV-VIS to near-IR region, using pumps that range from the UV up to the near-IR.

The ideal candidate should have proven experience with nanosecond OPOs, especially in the UV and near-IR, and in time-resolved spectroscopy and data analysis.

Previous experience with non-equilibrium ultrafast spectroscopic methods (e.g. pH-jump or temperature-jumps IR methods) will be positively valued. Previous experience in data analysis of time-resolved data (e.g. global analysis) will be positively valued as well as previous experience in handling of in vitro (possibly biological) samples and working in a wet lab.

Previous experience working in the visible (probe) with pumps ranging from the UV-VIS to the near-IR, in the femtosecond, for pump-probe based methods will be positively valued.

Samples will be provided by international collaborators or produced on site at ICFO by the group or internal collaborators.

Also, the candidates should have a proven track record in ultrafast spectroscopy with strong, independent hands-on experience in handling independently, possibly building, complex ultrafast laser setups. Hands-on experience on programming acquisition software tools (in particular, but not necessarily, in LabVIEW) will be considered a strong plus.

ICFO is an equal opportunity employer. Candidates are selected exclusively on merit and potential on the basis of submitted application material. No restrictions related to disabilities, citizenship or gender apply to ICFO positions. ICFO abides by the principles of openness, efficiency, transparency, supportiveness, and international comparability as stated in the European Charter for Researchers and the European Code of Conduct for the Recruitment of Researchers.

Salaries for ICFO Postdoctoral positions are assigned by the Selection Committee, based on experience and seniority of the applicant, as well as the assigned tasks and responsibilities within the group. Standard salaries range from a lower level aligned with national Ramon-y-Cajal fellowships to higher levels aligned with Marie Skłodowska-Curie individual fellowships.

The contract is offered for a period of 3 years.

Additionally, a family allowance is also available on request and after corresponding approval for people with family charges in the terms described in the corresponding policy.

Application procedure

The formal application should be submitted online via <https://jobs.icfo.eu/?detail=895>.

Suitable candidates are requested to submit:

- Presentation letter with a declaration of interest,
- Curriculum Vitae, including contact details,
- The contact e-mail of two potential referees.

Candidates will be assessed as they apply and the call will remain open until the suitable candidate is identified.



Candidates may contact jobs@icfo.eu for formal enquiries regarding the application, as well as address scientific enquiries to Nicoletta.Liguori@icfo.eu.

For update information about the hosting group, please visit <https://www.icfo.eu/research-group/32/photon-harvesting/home>.

For updated information about ICFO, please visit <https://www.icfo.eu>.

Deadline

The call will remain open until 14/07/2024.