

## **Post-doctoral position in development of low-cost CMOS compatible intersubband optoelectronics (photodetectors and light emitters) in the MWIR and LWIR leveraging colloidal quantum dot technology**

ICFO is offering up to two postdoctoral positions to well-qualified, highly motivated and dynamic young scientists who wish to enhance their scientific career in a friendly and stimulating environment.

The Functional Optoelectronic NanoMaterials group at ICFO, led by ICREA Prof. Gerasimos Konstantatos, is looking for outstanding, creative and highly motivated researchers to develop highly performant, CMOS compatible, infrared colloidal quantum dot photodetectors and light emitters exploiting intersubband transitions.

The project is focused in the mid and long wave infrared employing colloidal quantum dot films engineered at the atomic as well as at the supra-nanocrystalline level to address applications related to safety and security, remote sensing, environmental monitoring, thermal imaging etc.

### **Eligibility and Conditions**

Candidates must hold an internationally-recognized Ph.D.-equivalent degree (or evidence of its completion in the nearest future) in Material Science, Physics or Electrical Engineering, prior to taking up the position.

The candidates should have demonstrated experience and hands-on expertise on the fabrication, characterization and optimization of optoelectronic devices for photodetection and light emission based on intersubband transitions. Expertise of the above in the infrared and most preferably in the mid and long wave infrared would be considered a plus. The fellow should have strong background on the physics of intersubband transitions in quantum confined materials and devices and be proficient in the preparation of setups for the optical and electronic characterization of devices in this wavelength regime. Knowledge and experience on charge transport studies, low noise techniques and/or optical instrumentation in the mid and long wave infrared would be considered a plus. Direct demonstrated expertise of the afore-mentioned features in the field of colloidal quantum dot optoelectronics, albeit not required, will be positively evaluated.

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.

The position is available immediately and is available for 3 years renewable on an annual basis depending on the performance of the incumbent and the progress of the project.

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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.

### **Application procedure**

The formal application should be submitted online via <https://jobs.icfo.eu/?detail=556>.

Suitable candidates are requested to submit:

- A Cover/Presentation letter with a declaration of interest outlining past research achievements and a description of future research aspirations,
- A Curriculum Vitae with research publications, as well as your contact details,
- The contact e-mail of two potential referees, who will be contacted for their reference letters if necessary.

Candidates may contact [jobs@icfo.eu](mailto:jobs@icfo.eu) for informal enquiries regarding the application, as well as address scientific enquiries to [gerasimos.konstantatos@icfo.eu](mailto:gerasimos.konstantatos@icfo.eu).

The position is available immediately and the call will remain open until suitable candidates are identified.

For updated information about ICFO, please visit [www.icfo.eu](http://www.icfo.eu).

### **Deadline**

The call will remain open until 19/05/2023.