

The **COFUND** programme, which forms part of the **Horizon 2020 Marie Skłodowska-Curie Actions** programme, aims to motivate regional, national and international programmes which foster excellence in the training, mobility and professional improvement of researchers. With this overall objective, COFUND co-finances initiatives that work towards the incorporation of researchers, with a strong international and intersectoral component.

#### Project description

#### Project supervisor & hosting group

### THE P-SPHERE PROGRAMME CALL FOR POST DOCTORAL FELLOWSHIP POSITION FOR "ELECTRON MICROSCOPY (S/TEM) IN QUANTUM STRUCTURES EMBEDDED IN NANOWIRES AND OTHER NONPLANAR NANOSTRUCTURES FOR ENERGY APPLICATIONS" PROJECT - REF: 024-2015

The **European P-SPHERE project**, coordinated by the UAB (Autonomous University of Barcelona) and with the participation of UAB-CIE member centres, received funding from the latest COFUND-2014 call.

The **Catalan Institute for Nanoscience and Nanotechnology (ICN2)**, we are proud of being one of the research centres that will take the participation in this European P-SPHERE project. **Therefore we announce 5 Postdoctoral researcher positions to develop five different projects that will be funded by COFUND programme.**

One of these projects is **Electron Microscopy (S/TEM) in Quantum Structures embedded in Nanowires and other nonplanar Nanostructures for Energy Applications.**

Study of the structure and chemistry at the atomic scale correlated to the physical properties at the nanoscale by advanced Electron Nanoscopy in low-dimensional semiconductor nano and quantum structures (nanowires, quantum dots and nanoparticles) for energy applications. The candidate will apply his knowledge in S/TEM and related spectroscopies (EELS, EDX, etc.) to improve the methodologies for advanced atomic resolution characterization. Application of 3D methods as electron tomography as well as in-situ optical characterization based on light spectroscopies such as cathodoluminescence will be also applied.

Prof. Jordi Arbiol, group leader of the Advanced Electron Nanoscopy Group (GAe-N) at Institut Català de Nanociència i Nanotecnologia, ICN2 will be the project Supervisor, and his group, the hosting one. As the group has a strong transversal character, the candidate will be expected to collaborate with other groups at the ICN2 and also at the International level.



## Planned secondments

Secondments at EPFL and at ER-C Jülich are planned. At EPFL for the application of in-situ CL-spectroscopy measurements on the Solar Energy Fuel devices as well as for the use of the advanced electron microscopes placed there. The secondments at the ER-C in Jülich will promote the advancement in-situ electronic characterization of the nanostructures at the nanometer scale in their advanced microscopes, allowing a direct correlation to the physical and chemical properties at the atomic scale.

## Candidate's profile

The candidate must have a minimum of 2 years post-doc experience with high skills in S/TEM and related spectroscopies (EELS, EDX, etc.). Knowledge on electron tomography as well as on light spectroscopies as cathodoluminescence will be a plus.

## Research contact

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## Funding conditions

P-SPHERE fellows will receive a three-year working contract. The position will be based in Bellaterra, Barcelona (Spain).

- The salary for Post Doc is: 36.100€ gross per year
- Single relocation payment of 3000€

## Timeline

Application submission deadline: February 2nd (2016)- 5pm CET

Candidates will receive an automated confirmation when submitting the application via the P-SPHERE website.

If you are interested for more information on eligibility criteria; evaluation and selection; guidelines for evaluators; timeline; documents and templates; and how to apply etc please visit:

[www.uab.cat/web/research/p-sphere/introduction-134568866835.html](http://www.uab.cat/web/research/p-sphere/introduction-134568866835.html)