

## Research Engineer Position

### *Nanofabrication of photonic nanostructures by focused ion beam and nanoimprint lithography*



The Institut Fresnel is a research state laboratory based in Marseille / France, devoted to research and higher education. Institut Fresnel is seeking to recruit talented, enthusiastic young scientists who are highly motivated to boost their research career in nanophotonics and related nanoscience technologies.

#### **Motivation**

The successful candidate will be part of the ERC Proof of Concept project “PrintNano4Fluo” carried out at the Institut Fresnel under the supervision of Jérôme Wenger. Our group has acquired a wide expertise in the nanoscale control of light fields in plasmonic nanostructures and its application to enhance fluorescence spectroscopy applications focusing on single molecules.

Our next project aims at bridging the technological gap between nanophotonics and single molecule fluorescence techniques. Our vision is to develop a cost-effective and scalable nanofabrication technique to produce nanophotonics devices with high optical performance. These nanophotonic devices will be further used by our group and our scientific collaborator worldwide to further advance biophysics studies focusing on single molecules.

Our solution offers a distinctive unique set of advantages: it is low-cost, fast, scalable and safe while still providing a high optical performance of the final. Bringing nanophotonics tools to the end users single molecule microscopists is a major element of novelty to break into the physical limits set by diffraction where no other alternative exists today.

#### **Job description**

To strengthen our multidisciplinary team, we are seeking for a specialist of nanofabrication of nanostructures using focused ion beam milling and related methods.

The selected candidate will be performing the nanofabrication using our in-house dual-beam focused ion beam FIB system (FEI db235 Strata). He/she will also be involved in sol-gel nanoimprint lithography and in the sample characterization using scanning electron microscopy and optical spectroscopy.

The selected applicant will be in charge of developing the different steps of the technology, testing the fabricated samples and providing feedback to the other project members. He/she will work under the supervision of Jerome Wenger and benefit from direct mentorship to further develop his/her career.

#### **Required qualifications – Eligibility**

To apply for the postdoctoral contract, candidates must hold an internationally-recognized PhD or Master degree in Physics or Engineering. Experience in a scientific project involving involving nanofabrication (FIB, EBL, NIL) will be highly appreciated. No restrictions of citizenship apply.

#### **Terms of employment – Research engineer**

The position is intended as full-time (38 hrs / week, 12 months / year) appointment under CNRS contract. The initial contract is offered for one year, with possible extensions to be discussed depending on performance. Depending on past experience and skills, the gross monthly salary should be in the range from 2500 to 3300 €.

## Application procedure

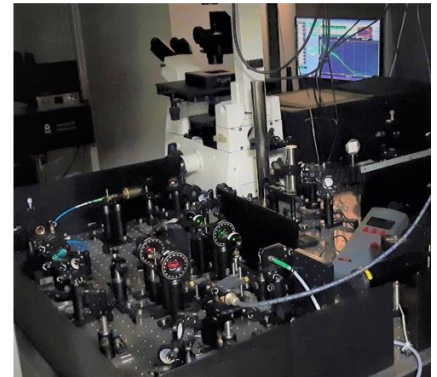
Suitable candidates are requested to submit:

- a Curriculum Vitae, including a fully referenced list of publications
- a presentation letter with declaration of interests and a description of your past achievements (max. 2 pages)
- contact email of three potential references

Applications should be submitted by email to [jerome.wenger@fresnel.fr](mailto:jerome.wenger@fresnel.fr).

Selection is based on merit and potential, measured in terms of the academic record and personal achievements. Proactivity, participation in community activities, and capacity for team-work are also taken into account.

The call will remain open until the position is filled.



## Web Links

[www.jeromewenger.com](http://www.jeromewenger.com)

[www.fresnel.fr/mosaic](http://www.fresnel.fr/mosaic)