



Université Claude Bernard



Postdoc position offer Institute of Light and Matter (iLM), Lyon, France

ILM is offering a junior post-doctoral position to perform experiments under the supervision of Fabien Violla (FemtoNanoOptics group) and Anne-Laure Bianco (Liquid and Interface group) in the frame of the ANR project entitled *Soft Nanoflu*.

The project aims at understanding how transport properties in a nanofluidic channel are influenced by the ultraconfinement at the nanoscale and the electronic properties of the interfaces. To achieve this goal, we will study wetting films, originating from the condensation of water humidity on selected substrates. We will characterize the role of the film thickness (controlled at the nanoscale by varying the atmosphere humidity) and the electronic properties of the substrate (using several types of 2D van der Waals materials such as graphene, boron-nitride, dichalcogenides..., and tuning them optically, electrostatically...).

The successful candidate will be involved in the designing, nanofabrication and characterization of such nanopatterned hybrid substrates, and in the electrical conductivity measurements of the ultrathin wetting films induced inside an original environmental cell developed in the group.

He/she will be affiliated to the Institut Lumière Matière (ILM) in Lyon, France. He/she will participate in a collaborative research program in the framework of ANR SOFTNANOFLU project, involving teams in ILM and ICGM (Montpellier) laboratories. He/she will work in close collaboration with a PhD student, and with the help of several permanent researchers and research engineers involved in the project.

Required qualifications & hiring details

The candidate should have a PhD in Physics (from optical spectroscopy to soft matter Physics), in Material Science or Electrochemistry. A background in nanofabrication (with knowledge in manipulation of 2D van der Waals materials and/or nanofluidics systems) and/or in low current measurements will be appreciated. Fluent English or French, and good communication skills are required.

A junior profile is sought, with a PhD defended in the last 2 years. The duration of contract will be 18 months with possibilities for extension. The gross monthly salary is from 2648 € to 3054€, depending on experience.

Application procedure

Formal application has to be done in the job offer webpage:

<https://emploi.cnrs.fr/Offres/CDD/UMR5306-FABVIA-001/Default.aspx?lang=EN>