# Postdoc position
# Electron transport at the nanoscale in Van der Waals heterostructures

A postdoc position is open in the "*molecular nanostructures & devices (NCM)*" group at the Institute for Electronics Microelectronics and Nanotechnologies (IEMN), a CNRS laboratory located at the university of Lille – France.

This position is open in the context of a collaborative project funded by the "Agence National de la Recherche" and the "Swiss National Science Foundation". It is a project between our group and the Laboratory *"Transport at Nanoscale Interfaces"* led by Prof. Michel Calame at EMPA at Dübendorf (near Zurich). This group develops fundamental understanding in the optoelectronic, thermal and ionic transport properties of low--dimensional materials & devices and transfer this knowledge to applications for biochemical sensing and bioelectronics.

We are looking for a highly motivated postdoc with a PhD degree in condensed matter physics, materials science, nanoscience or a related discipline and a strong interest for 2D materials, nanofabrication, scanning probe microscopy and interdisciplinary research.

Our main goal with this project is to provide a better fundamental understanding of the interface in hybrid, mixed-dimensional Van der Waals heterostructures with high electronic bandwidth. We will focus on the nanoscale characterization (scanning probe microscope) of the organic/graphene interfaces (barristor device).

The position requires a good autonomy and initiative to work in a multidisciplinary environment. Good communication skills (written and oral) in English are also mandatory.

The "molecular nanostructures & devices" group is mainly interested in the electronic properties of organic nanostructures and molecular-scale electronics devices. IEMN (www.iemn.fr) is a widely recognized nanotechnology research centers in France with world--class clean--room equipment, electrical characterization and simulation capabilities, near-field scanning probe platform. Our group is well equipped with a platform for "materials and organic devices". We have a large experience for molecular materials and nano-device fabrication and characterization. For more details: www.nanomol.wordpress.com

The position is funded for 1 year (renewable one year), the foreseen starting date is February 1, 2019 or later.

Applicants should send by e-mail: A detailed curriculum vitae, a letter of motivation, PhD diploma with referee's reports and contact details of two referees to : *Dominique Vuillaume*, research director at CNRS, head of the "molecular nanostructures & devices" group: dominique.vuillaume@iemn.fr

**Institut d'Electronique Microelectronique et Nanotechnologie**
**Centre national de la recherche scientifique (CNRS)**
***Cité Scientifique, Univ. Lille, CS60069, avenue Poincaré,***
***F-59652 cedex, Villeneuve d'Ascq, France***