

# Université Claude Bernard Lyon 1- Hosting offer for a MSCA Post-doctoral fellowship candidate in nanoscale energy-conversion devices

<b>Host Organisation</b>	<b>Université Claude Bernard Lyon 1</b>
<b>Department</b>	
<b>Laboratory</b>	<b>CETHIL</b>
<b>Website (lab / research team)</b>	
<b>Supervisor Contact name</b>	<b>P-Olivier CHAPUIS</b>
<b>Supervisor Contact email</b>	<b>olivier.chapuis@insa-lyon.fr</b>

## Host Organisation

The Université Claude Bernard Lyon 1 welcomes Marie Sklodowska Curie Postdoctoral Fellowships applications!

With 62 laboratories/centres and more than 7000 publications per year, and as the leading French university in terms of the number of patents filed in collaboration with industry, Lyon 1 contributes to scientific and innovation progress in numerous fields: health, mathematics, IT, physics, chemistry, earth and space sciences, life sciences, etc. Creator of emerging knowledge and new technologies, the University is consolidating its research excellence on a global and international level by developing inter- and multidisciplinary approaches targeting the major challenges facing today society.

## Host research lab/team

**The Laboratoire CETHIL (Centre for Energy and Thermal Sciences, Lyon) is a leading research lab in Europe in thermal management and energy applications.** Research at CETHIL covers many topics linked to heat transfer and energy-related systems and devices. CETHIL is one of the key centers at the European and international levels where a so-large range of spatial and temperature scales are investigated: from the nanostructure to the building and urban area scales, from liquid helium or slurry ice up to combustion temperatures.

- Physics of heat transport phenomena
- Heat transfer in complex systems and devices, and their energy efficiency
- Processes driven by heat transfer

The **Micro and Nanoscale Heat Transfer (MiNT)** research team – one of the 5 teams of CETHIL - is devoted to research in **nanoscale heat transfer and energy conversion**.

Among the topics, one can find:

- **Thermal management** in materials and operating nanoelectronic devices. From atoms (**molecular dynamics**) to mesoscopic (**Boltzmann equation** for phonons and electrons, acoustics) and macro-scale heat conduction (FEM). **Near-field and sub-wavelength thermal radiation**.
- **Thermal-to-electricity conversion**, waste-heat harvesting and refrigeration: thermoelectrics, thermophotovoltaics, thermal rectennae, etc. Materials (2D, nano-objects, ...) and devices.
- **Thermal nanometrology** and instrumentation: AFM (world-leading scanning thermal microscopy platform involving in-house developed instruments), piezo-based actuators, resistive thermometry, infrared spectroscopy of nanoscale materials.

### Hosting Offer

The **CETHIL lab** offers to host a MSCA Postdoctoral Fellowship candidate (typically a post-doc of less than 8 years research experience since PhD defence), submitting an application to the next MSCA-2026-PF call for proposals (deadline 09<sup>th</sup> of September 2026), interested to work on one of the following research topics:

- Nanoscale energy-conversion devices: thermophotovoltaics, thermoradiative systems, thermophotonics, thermal rectennae, thermoelectrics
- Scanning thermal microscopy of single nano-objects
- Impact of nanoscale heat dissipation on local mechanical properties
- Thermal emission of nanostructured objects: photonics, infrared spectroscopy. Deviation to the fourth exponent in the Stefan-Boltzmann law.
- Hybridation between thermal techniques and scanning transmission electron microscopy

The fellowship could last for 12 to 36 months, depending on the type of Postdoctoral Fellowship.

### Supervision

The successful Marie-Curie Post-doctoral fellow will be supervised by Dr P.-Olivier CHAPUIS, CNRS research director and responsible for the MiNT team. His/her research interests include all the abovementioned topics. Depending on the topic, other members of the team may be involved in the supervision, for instance Dr Olivier Merchiers, Ass. Prof. at INSA, or Séverine Gomes, CNRS research director at CETHIL.

### **Application process**

Interested candidates are invited to contact us exclusively by email at [mint.cethyl@insa-lyon.fr](mailto:mint.cethyl@insa-lyon.fr).

Make sure that you include the reference to this offer in the title of your email. Please attach a CV, a motivation letter, names of three references, **as well as a 1-page research proposal**.

### **Professional grant application support:**

Candidates will receive the support of the supervisors, as well as online training from a professional grant application company, and advices from successful applicants, to prepare and submit their application with the CETHIL as a host laboratory, to the next MSCA-PF call for proposals.