



## Research engineer (M/F) offer at IMAP MOFs scale-up and shaping for CO<sub>2</sub> capture (M/F)

**Mission:** In the framework of the EU project « MOF4Air » ([www.mof4air.eu](http://www.mof4air.eu)), the Paris Institute of Porous Materials is seeking to hire a highly motivated Research engineer for MOF scale-up and shaping (duration: 1 year with a possible extension of 6 months to 1 year).

To apply, please follow the instructions given in the following link:

<https://emploi.cnrs.fr/Offres/CDD/UMR8004-GEOMOU-002/Default.aspx?lang=EN>

**Activities:** The research engineer will be first in charge of the synthesis of pre-selected MOFs at large scale (10-200 g). Developing new protocols for green syntheses will be also part of his/her tasks. Then, he/she will have to develop suitable procedures for the shaping of the obtained MOFs (i.e. wet granulation, extrusions, etc.) without hampering the properties of the MOFs. He/she will be also in charge of characterizing both MOF powders and shaped particles by different techniques (X-ray diffraction, porosimetry, spectroscopy, mechanical stability, etc.). Other tasks, related to the project, are envisioned depending on the work progress. Besides, the research engineer will participate to the writing of reports, deliverables and prepare regular presentations related to the EU project. The participation to consortium meetings in France or in Europe will be mandatory.

**Skills:** The candidate is expected to be highly experienced in the synthesis and characterization of hybrid porous materials. Experience in scaling-up and shaping of porous materials is required while knowledge on X-Ray diffraction and gas sorption characterization techniques is a must. High English level (oral, written) as well as strong communication skills are compulsory.

**Work context:** The IMAP (Institut des Matériaux Poreux de Paris) is a joint ENS ESPCI and CNRS research unit within the PSL university in Paris. It possesses a worldwide renown expertise in the synthesis and characterization of porous hybrid solids (MOFs) for applications in health, energy and environment. IMAP gathers 8 permanent staff (researchers, engineers and assistant professors) and more than 20 post-doctoral fellows, PhD candidates and interns.

The research engineer will be working at IMAP in close collaboration with several French and European partners from the European project.

### **General information**

« MOF4Air » is EU H2020 project gathering 14 partners (academics, SMEs and end-users) from 8 countries in the perspective to develop and demonstrate the performances of MOF-based CO<sub>2</sub> capture technologies in power plants and energy intensive industries.

*Reference: UMR8004-GEOMOU-002*

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*Workplace : IMAP, ESPCI, 10 rue Vauquelin, 75005 Paris*

*Date of publication : 14 November 2019*

*Contract Period : 12 months (possible extension of 6 months to 1 year).*

*Expected date of employment : 03 February 2020*

*Proportion of work : Full time*

*Remuneration : Gross salary between 2700 and 3000 Euros, upon experience*

*Desired level of education : Higher than 5-year university degree (PhD)*

*Experience required : 1 to 4 years*