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Vacancy

Postdoctoral Researcher – Theory and Molecular Simulation of Fluids in Nanoporous Materials

The Institut Laue-Langevin (ILL), situated in Grenoble, France, is Europe's leading research facility for scientific research using neutrons. Every year, we host over 2000 visits by scientists, who come to the Institute to carry out world-class research.The ILL Theory Group is opening a postdoctoral position on the electrical stimulation of fluid adsorption and transport in nanoporous materials. This project, which starts on 1 January 2026, aims to deepen our understanding of how oscillating electrostatic fields modify the thermodynamics and dynamics of nanoconfined fluids, with applications in adsorption, catalysis, electrochemistry, and electromechanics.

Yours Tasks

- Develop theoretical and computational approaches based on statistical mechanics to study fluids confined in nanoporous materials
- Implement and perform molecular simulations to investigate the impact of electrical stimulation (oscillating electrostatic fields) on adsorption and transport phenomena
- Collaborate with experimental partners (e.g. Lydéric Bocquet's group in Paris, Grenoble-based groups) to compare and validate theoretical predictions
- Contribute to joint research initiatives with ILL scientists and external users

Qualifications / Experience:

- You hold a PhD in physics, physical chemistry, or materials science (or equivalent)
- Strong background in statistical mechanics and molecular simulation methods
- Knowledge of fluid thermodynamics and dynamics at interfaces or in confinement
- Experience in collaborating within interdisciplinary research teams (theory/experiment)
- Good communication skills in written and spoken English

This project is funded by the European Union

We offer:

- ✓ **Quality of life** A hub for research and technology, the city of Grenoble is ideally located in the heart of the French Alps (just 3 hours from Paris/Provence by train, 1 hour from Lyon international airport and 1 ½ hours from Geneva). It is important for us that our staff achieve a healthy work-life balance. We therefore offer home working (under certain conditions), generous annual paid leave entitlement and a host of other benefits that you will discover when you arrive!

- ✓ **Prospects** We guarantee you a **2-year fixed-term contract (renewable for 2 years)**

- ✓ **Benefits** - We offer generous social benefits (expatriation allowance, excellent health cover), moving and relocation assistance (under certain conditions) and an annual productivity bonus. We also offer language courses for you and your partner and subsidies for the use of public transport and the staff canteen, as well as for holidays and a variety of cultural and sports activities. For more information, please visit **https://www.ill.eu/careers/working-at-the-ill/employment-conditions**

How to apply:

https://www.ill-recruits.eu/module.php?module=applicant_register_cv_analyzer/applicant_register_cv_upload&sid=2077

Then why not take your next career step with us by applying online - preferably in English - via our career portal by **12.10.2025**, quoting reference number **25/55** with a list of publications and the names of 3 referees, including one from your present work place. After prescreening, the selected candidates will be interviewed by a scientific panel in person or on-line. The chosen candidate will then be interviewed by HR. Please note that all applicants are subject to administrative screening and medical fitness is required. The expected start date is 5 January 2026.

Con copia de la candidatura a: eures.franciasuizabenelux@sepe.es
Indicando la referencia ILL 25/55

Ayudas a la movilidad EURES

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