



Grenoble, October 1, 2023

UMR5819-SyMMES (CEA/CNRS/UGA)
Molecular SystemS and nanoMaterials for Energy and health
CEA-Grenoble/IRIG/SyMMES
17, Rue des Martyrs
38054 Grenoble Cedex 9

Re: Multiscale design of hybrid soft-matter materials for next-generation lithium-metal batteries

Funding: Position funded under the [PEPR Batteries](#) program, [HEAL B&B](#) project

To whom it may concern

Disciplines: Materials Science, Electrochemistry, Physics

Laboratory: UMR5819-SyMMES (CEA/CNRS/Univ. Grenoble Alpes), [Systèmes Moléculaires et nanoMatériaux pour l'Energie et la Santé](#)

Host institution:

COMUE-UGA: Communauté Université Grenoble Alpes

CNRS: Centre National de la Recherche Scientifique/French National Centre for Scientific Research (Employer)

Funding Offer

Funding type: [CNRS](#) Salary (funded by the French National Research Agency)

Funding amount: €2,900-4,000 gross per month depending on experience and qualifications. The salary may increase over time based on responsibilities and performance. France has a comprehensive social security system.

Dates

Application deadline: December 31, 2025, 6:00 PM (CET)

Duration: The postdoctoral Researcher position is for 12 months, with the possibility of 1-year extension.

Start date: As soon as possible

Missions

The postdoctoral researcher will work in the field of ionic and electronic conductors, electrolytes, and hybrid soft-matter separators for lithium-metal batteries.

The candidate will contribute to a national project under the PEPR Batteries program (HEAL B&B project), focused on the development and investigation of innovative functional materials. The work will aim to understand their electrochemical, structural, and spectroscopic properties, with the goal of integrating them into next-generation lithium-metal batteries.

Activities

The postdoctoral researcher will work in the field of ionic and electronic conductors, electrolytes, and hybrid soft-matter separators for lithium-metal batteries. The main scientific questions involve the relationships between the local scale (nanostructure), the mesoscale (tortuosity), and intermediate scales (carrier residence times) with transport mechanisms, aiming to improve the performance of functional materials for lithium-metal battery applications.

The candidate will contribute to a national project under the PEPR Batteries program (HEAL B&B project), focused on the development and investigation of innovative functional materials. The work will aim to understand their electrochemical, structural, and spectroscopic properties, for integration into next-generation lithium-metal batteries.



Grenoble, October 1, 2023

UMR5819-SyMMES (CEA/CNRS/UGA)
Molecular SystemS and nanoMaterials for Energy and health
CEA-Grenoble/IRIG/SyMMES
17, Rue des Martyrs
38054 Grenoble Cedex 9

Required Profile

The candidate must hold a PhD in (electro-)chemistry, materials science, physics, or another relevant discipline related to functional soft matter. Previous experience in structural studies using synchrotron or neutron radiation and in the electrochemistry of functional materials is highly valued.

As the project is primarily experimental, the candidate should be familiar with the use of various techniques, such as electrochemical and spectroscopic methods, and diffraction and scattering techniques, such as SAXS/WAXS, nanoXRD, or ptychography.

A demonstrated ability to work independently, to operate beyond the traditional boundaries of chemistry and functional soft-matter physics, as well as excellent communication and scientific writing skills (in English), are as important as academic qualifications. The selected candidate should have a genuine interest in laboratory work and the use of large-scale facilities (EBS-ESRF), be motivated, autonomous, able to tackle new challenges, and demonstrate personal maturity.

Work Environment

The UMR 5819 – SYMMES laboratory, a joint research unit (UMR) supported by CNRS, Grenoble-INP, CEA, and UGA (Université Grenoble Alpes), brings internationally recognized interdisciplinary expertise in (electro)chemistry, physics, and multiscale structure/property correlations through ex situ, in situ, and operando characterizations. These skills support both fundamental research and the development of key technologies on societally relevant topics, particularly zero-carbon energy (generation, conversion, and storage, in line with UN SDG 7: fuel cells, batteries, and (micro)supercapacitors). The SyMMES environment is collaborative and welcoming, offering a wide range of theoretical and experimental expertise and gathering numerous engaged early-career researchers.

Selection process

Candidates are encouraged to apply as soon as possible. The search for suitable candidates will continue until the position is filled.

Applicants should submit an electronic application file including:

- a curriculum vitae (CV),
- a cover letter (1–3 pages) introducing themselves, presenting their qualifications, previous research areas and main results, future goals and research focus, and any specific projects or research questions of primary interest,
- a summary of their research experience,
- a list of publications.

The complete application should be submitted on the [dedicated CNRS website](#).

For any questions, please contact: Dr Manuel Maréchal: manuel.marechal@univ-grenoble-alpes.fr