Grenoble INP - UGA is a member of international engineering and management education and research networks. It is widely recognized in national and international rankings.

8 schools + 39 laboratories
8300 students
1 300 teaching, research, administrative and technical staff

Grenoble INP - UGA is a renowned public institution of higher education and research, and a major player in the Grenoble ecosystem. It is the engineering and management institute of Grenoble Alpes University, and plays a leading role in the scientific and industrial community.

Researcher in organic chemistry

<table>
<thead>
<tr>
<th>Job ad reference</th>
<th>2023-RESEARCHORGCHEM-LEPMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research field</td>
<td>Synthesis of redox-active ligands and related earth-abundant metal complexes as promising electrode material for metal-ion battery</td>
</tr>
<tr>
<td>Host laboratory</td>
<td>LEPMI (UMR 5279) / Website : <a href="https://lepmi.grenoble-inp.fr/">https://lepmi.grenoble-inp.fr/</a></td>
</tr>
<tr>
<td>Researcher profile</td>
<td>First stage researcher (R1)</td>
</tr>
<tr>
<td>Location</td>
<td>Saint Martin d’Hères (Grenoble), France</td>
</tr>
<tr>
<td>Date of recruitment / contract term</td>
<td>15/01/2024 (7 months)</td>
</tr>
<tr>
<td>Contacts</td>
<td><a href="mailto:Laureline.lecarme@grenoble-inp.fr">Laureline.lecarme@grenoble-inp.fr</a></td>
</tr>
</tbody>
</table>

Grenoble INP - UGA is a leading public institution accredited with the French label “Initiative d’excellence”. It offers innovative engineering and management programs, with an increasing internationalization of its course offers. The courses are grounded in sound scientific knowledge and linked to digital, industrial, organizational, environmental and energy transitions. The Engineering and Management Institute of Grenoble Alpes brings together more than 1300 staff members (teacher-researchers, lecturers, administrative and technical staff) and 8300 students, located on 8 sites (Grenoble INP - Ense3, Grenoble INP - Ensimag, Grenoble INP - Esisar, Grenoble INP - Génie industriel GI, Grenoble INP - Pagora, Grenoble INP - Phelma, Polytech Grenoble, Grenoble IAE and the INP Prepa). Grenoble INP is also a highly-ranked institution of higher education and research, leading the way in the fields of engineering and management on an international scale. It is a member of a large number of international academic and research networks. It is part of the European University UNITE!.

As part of Grenoble Alpes University, Grenoble INP has associated guardianship of 39 national and international research laboratories and of technological platforms. The research conducted there benefits both its socio-economic partners and its students. Grenoble INP is at the heart of the following scientific fields: physics, energy, mechanics and materials; digital; micronanoelectronics, embedded systems; industry of the future, production systems, environment; management and business sciences.

Grenoble INP - UGA is an equal opportunity employer committed to sustainability. Grenoble INP-UGA celebrates diversity and equity and is committed to creating an inclusive environment for all employees. All qualified applications will be considered without discrimination of any kind.
Research

The Laboratory of Electrochemistry and Physical-Chemistry of Materials and Interfaces brings together expertise in most areas of electrochemistry, particularly in electrochemical energy production and storage and photovoltaics, by combining materials science and electrochemical engineering.

From the fundamental study of electrolytes, electrodes and their interface to the modelling of a generator in operation, integrating the durability of materials and systems and their life cycle, its teams aim to improve our knowledge in all areas where the movement of charged species is involved.

Job description:

Coordination complexes made of redox-active ligands and earth-abundant metals are known for their reversible multi-electron transfers. Nature uses these species as powerful catalysts to perform highly selective chemical reactions. Catalysis is not the only field where such species could be exploited. Indeed, the ability to exchange several electrons is particularly seducing when thinking of energy and especially metal-ion batteries. We are convinced that the combination of non-innocent ligands and earth-abundant metals will lead to highly active electrode materials for batteries, while reducing eco-compatible issues. Considering specifications inherent to such a field, we plan to design earth-abundant metal complexes from original redox-active ligands. As such, tetradeutate ligands will be targeted with a special focus on o-phenylenediamine derivatives. Once the electrochemical properties are evaluated (collaboration), the newly synthesized complexes will be immobilized or polymerized as electrode materials.

Specific requirements or conditions

Candidate profile. The researcher is a synthetic chemist (PhD in organic chemistry) with a strong expertise in multi-step organic synthesis, synthetic methodology and organometallic chemistry. An additional experience in coordination chemistry and/or polymer chemistry will be appreciated (not mandatory). Rigorous, meticulous, curious and independent, the candidate is able to adapt to a multi-disciplinary environment and has good communication skills (writing and speaking) to interact with scientists from different fields (organic and physical chemistry, electrochemistry, theoretical chemistry).

Position assigned to a restricted area: YES

(Device for the protection of the scientific and technical potential of the nation, conditioning the appointment of the researcher to the authorization of the Defense Security Officer).

How to apply

Applications must be sent to: Laureline.lecarme@grenoble-inp.fr
Application deadline: 08/01/2024