

Research Fellow – Investigating precursor and anode materials for Li-ion batteries

Job Reference: RRP.12.39.01.1/2

Employer: International Iberian Nanotechnology Laboratory (INL)

Location: Braga, Portugal

Group/Unit: Atomic Structure-Composition of Materials

Number of Vacancies: 1

Employment Type: Full time

Contract Duration: 18 months

Open Date for Applications: April 2nd, 2024

Closing Date for Applications: April 21st, 2024, 23h00m (Lisbon Time)

Overview

The Atomic Structure-Composition of Materials Research Group is dedicated to investigating the atomic structure, atomic composition, and defect behaviour of nanomaterials, through transmission electron microscopy.

We are looking for a qualified Research Fellow to join our team in the projects "*Li Regeneration Cycle*", "*Solid State Thin Film Batteries*", and "*Lithium-based compounds for battery components*", under the PRR framework, under the New Generation Storage Agenda.

Job Duties

The job duties will be the following:

- Conducting and producing high quality original research, following the objectives of the aforementioned project;
- Performing morphological, structural-composition characterisation of LiOH produced from the valorisation of HCl, and anodes produced from the refined precursor materials, by various electron microscopy techniques;
- Compounding research activities and results, and disseminating such results in research papers and reports;
- Engaging in collaborative research with researchers from other clusters and Institutions;
- Engaging in RTDI activities together with industrial and other entities ensuring timely and accurate deployment of compounded knowledge to such entities;
- Participating in national and international conferences.

Mandatory Qualifications

Education

- PhD in Science or Engineering.

Experience

- SEM;
- TEM and STEM imaging techniques;
- Electron diffraction techniques;
- Energy Dispersive Spectroscopy (EDS);
- Image processing and standard software for electron microscopy;
- Sample preparation of materials for TEM/STEM observations.

Preferred Qualifications

Experience

- Battery materials and/or oxide-based materials;
- SEM/FIB;
- In-Situ Gas and/or Liquid TEM/STEM microscopy;
- Electron Energy Loss Spectroscopy (EELS).

Personal Skills

- Hands-on" approach together with a high commitment in respecting working deadlines;
- Problem Solving ability;
- Customer orientation;
- Ability to work independently and as team player;
- Good communication skills.

Our Benefits

- Competitive salary;
- Tax benefits and other Diplomatic privileges;
- Private health insurance;
- Family allowances (according to family situation);
- Free nursery service at INL premises (subject to availability);
- Support for education fees of dependent children;
- Relocation support;
- 30 working days of annual leave.

How to Apply

The application **must be in English** and include the following **mandatory documents**:

- a) Cover letter;
- b) *Curriculum Vitae*;
- c) Academic and/or Professional diplomas;
- d) Recognition of academic degrees (only academic degrees awarded by non-Portuguese higher education institutions) *

*The selected candidate(s) with an academic degree granted by a non-Portuguese higher education institution must present, for hiring purposes, the certificate of recognition of that degree(s), issued by the Portuguese Directorate General for Higher Education or by a Portuguese Public Higher Education Institution. Please consult the website of the Portuguese Directorate General for Higher Education: <https://www.dges.gov.pt/en>.

Online application instructions:

1. The application is made online by clicking the "Apply" button below;
2. The candidate must complete all required sections of the online application form;
3. The candidate must submit the mandatory documents mentioned above in pdf format by including them in the "Additional files" section using the "Add portfolio" button.

Important note:

Incomplete applications including the failure to provide mandatory documents or providing inaccurate information will result in the application not being considered.

How the Selection Process works

A. Applications eligibility check

This stage will be carried out on the basis of the mandatory requirements, education, experience and technical skills defined for the job, as well as the validation of the mandatory documents. Only candidates who meet the eligibility criteria will move forward to the next stage.

B. CV Assessment

The Selection Committee will evaluate the eligible applications based on their CV and other submitted documents and the suitability for the position. The best ranked candidates will be shortlisted for the interview stage(s).

C. Interview(s)

The interview(s) may be done in different formats: video recording, online or onsite.

The question based interview will evaluate the match between the candidate's profile and the requirements for the position, including the technical and personal skills. To better support this stage, the candidate may be requested to prepare a short presentation.

D. Nomination

The selected candidate will be nominated and formally offered the position, including the disclosure of the contractual conditions.

Additional Information

Application feedback

We highly value your interest in becoming part of the INL experience and it is important for us to maintain good communications with all candidates. No matter the outcome of your application, we will always provide you with feedback.

Equal Opportunity and Non-Discrimination Principle

INL follows a non-discrimination and equal access principle, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of and duties based on any possible discriminatory issues.

The advertisement deadline may be extended at any time without previous notice in order to improve the suitability and effectiveness of the recruitment process.

About INL

The International Iberian Nanotechnology Laboratory – INL (<http://www.inl.int>), is the first and only Intergovernmental Organisation in the world entirely focused on Nanoscience and Nanotechnology.

It was founded under an international legal framework to perform interdisciplinary research, deploy and communicate nanotechnology for the benefit of society. INL aims to be a recognised leading global nanotechnology innovation hub.