



POSTDOCTORAL RESEARCHER IN TRANSMITTED ION/ELECTRON MICROSCOPY (M/F)

Fixed term contract | 3 Years | Fulltime/40h | Belvaux | Luxembourg

Context

The **Advanced Instrumentation for Ion Nano-Analytics** (AINA) group of the MRT department at the **Luxembourg Institute of Science and Technology** (LIST) focuses on the development of correlative microscopy for high-resolution high-sensitivity nano-analytics. The research activities cover fundamentals, instrument development and applications.

Description

We are looking for a well-motivated post-doctoral researcher to develop innovative imaging and analytical modalities using sub-50 keV transmitted He ions. In comparison to Transmission Electron Microscopy, the physics of Transmitted Ion Microscopy, specifically quantum-related phenomena, are nearly fully unexplored.

This position offers a tremendous potential to do fundamental ground-breaking work in developing the methodological framework for high-resolution imaging and analysis using transmitted ions. The post-doctoral researcher will benefit from the guidance and support of our team of highly skilled scientists and engineers.

She/He will also benefit from direct interactions with our well-established international collaborative network with leading researchers.

Profile

Education

- PhD in Physics, Materials Science or a closely-related discipline

Competencies

- Strong experimental skills related to transmitted ion/electron microscopy
- Ability to work with prototype instruments, design experiments and work independently with high level of scientific rigor
- Sound knowledge of charged particle-matter interactions (Quantum mechanical understanding of electron-matter interactions desirable)
- Ability to work in a team with team-spirit mandatory

Language

- Be fluent in English (both oral and written)

Job reference: MRT-2017-023

Application file:

- A CV
- A motivation letter

Apply online: [MRT-Job offer](#)

Your working environment

The research department

The Materials Research and Technology department (MRT) focuses on two key enabling technologies: nanotechnologies and advanced materials, and investigates research questions related to transducing materials and actuators, photocatalysis and energy harvesters, transparent electronics and smart nanocomposites, point-of-care and drug delivery, modeling and design of structures and multifunctional composites, bio-based polymers and composites, adhesion and compatibilization of fibres/matrix, process engineering and advanced manufacturing.

> [LIST.lu/MRT](#)