

CNRS research engineer (M/F)
«material science / characterization»

laboratory: Développement de Méthodologies Expérimentales (UMS 3360 DMEX)
Pau, France

GENERAL INFORMATION

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| Work place: | Pau, France |
| Type of contract: | fixed term contract |
| Duration of the contract: | 12 months |
| Expected start date: | January 1, 2019 |
| Unit of work: | full time |
| Salary: | 2399.48 à 2586.30€ gross per month depending on experience |
| Level of studies: | PhD |
| Desired experience: | Indifferent |

MISSIONS

The research engineer (M/F) will be responsible for the design and implementation of a material characterization protocol combining X-ray tomography (morphological characterization) and mass spectrometry (SIMS, chemical characterization).

ACTIVITIES

As a research engineer (M/F) your main activities will involve the design, implementation, validation and the application of a new protocol for material characterization. This includes:

- combining two experimental techniques (x-ray tomography and Secondary Ion Mass Spectrometry) in order to characterize the nature and the properties of the studied material
- performing and/or supervising experiments, processing experimental data, and interpreting the results in relation to the objectives of research
- working in close collaboration with other laboratories or with companies
- disseminating and valorising results in the form of technical reports, publications or communications

Other secondary activities are required such as:

- Transmitting skills by providing training to others
- Creating awareness about the risks associated with the use of certain experimental techniques and products and enforce application of the safety rules

SKILLS

Excellent background in material science and/or experimental physics.

Operational knowledge

- X-ray tomography
- Image processing (software such as Fiji, Aviso, Dragonfly or equivalent)
- Data analysis (based on matlab, python or equivalent)
- Knowledge of SIMS and sample preparation for SIMS is an asset.
- Material characterization techniques
- Notions on the organisation of the higher education and public research sector

Other knowledge

- Writing and communication skills
- Fluency in English is required. Knowledge of French is an asset.
- Ability to work in a team,
- Ability to work autonomously,
- Taste for project management,
- Ability to develop and advance preparation and acquisition protocols.

WORK CONTEXT

The research engineer (M/F) will be integrated in UMS 3360 DMEX, a laboratory in the field of X-ray imaging (<https://imagingcenter.univ-pau.fr/>). DMEX is a service unit attached to the IPRA research federation, a member of the Carnot Institute ISIFoR, and a privileged partner of the Chair of Excellence on x-ray imaging. The main goal of DMEX is to meet the needs of industry and academia in terms of high-resolution 3D imaging. In November 2017, DMEX received the ISO9001:2015 certification for its activities in the field of imaging x-ray. To date, we are the only joint UPPA-CNRS laboratory that was awarded this certificate. In 2018, DMEX and its partners took the initiative to join forces and to launch the IXIA characterization platform. The Région Nouvelle Aquitaine, the UPPA and a number of socio-economic partners, will jointly invest 1.2M€ to realize IXIA. IXIA's main goal will be to combine the most advanced characterization techniques, in order to achieve a comprehensive physico-chemical analysis at all scales and for all types of materials. The research engineer (M/F) will play a central role in the realization of the IXIA project.

More info:

<https://imagingcenter.univ-pau.fr/>

<http://www.carnot-isifor.eu/>

<https://e2s-uppa.eu/en/research/instrumentation/dmex-x-ray-tomography.html>

<https://e2s-uppa.eu/en/research/chairs-of-excellence/chair-for-x-ray-imaging.html>

CONSTRAINTS AND RISKS

The lab is 100% compliant with the regulations in force and considers the health and safety of its personnel as a top priority.

CONTACT

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