

The Public Research Centre - Gabriel Lippmann, a public establishment for applied scientific research and technology transfer, has an opening for a permanent position for its "Science and Analysis of Materials" department (SAM) that focuses in the following fields: characterization of materials, development of nano-analytical instrumentation, surface treatment and thin films, nanotechnologies and nanomaterials, and smart functional materials for:

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**a Physicist specialized in charged particle optics (m/f)**  
(ref: SAM-20130325-CHRECP02)

Description of the position:

The Scientific Instrumentation Unit of the SAM department focuses on the development of scientific instruments based on charged particle beams dedicated to nano-analysis, nano-imaging and nano-machining. The research activities cover both fundamental and instrumental aspects. The team comprises specialists in nano-analytics, in charged particle optics, in ion-matter interactions, in mechanical engineering, in electronics and mechatronics giving the Scientific Instrumentation Unit the complete spectrum of know-how that is required to convert innovative ideas and concepts into prototype instruments.

Current projects include the development of correlative microscopy instruments in order to achieve high-resolution high-sensitivity chemical imaging (e.g. by in-situ combination of electron microscopy and secondary ion mass spectrometry), of compact high-performance mass spectrometers and of high brightness ion sources.

Our different research projects are performed in cooperation with leading international instrument manufacturers and with research groups specialized in the relevant fields.

The successful candidate will have to:

- Participate in R&D projects related to the development of scientific instruments based on charged particle beams,
- Initiate novel developments in the fields of nano-analytics, nano-imaging and nano-machining,
- Interact with external partners (instrument manufacturers and academic partners) in the framework of joint R&D projects, in view of valorising the developments performed within the research projects and for setting-up common R&D projects,
- Communicate on the generated scientific results (conferences, scientific publications, symposia, ...),
- Write scientific and technical reports and documents,
- Propose and write (after internal validation) patents applications

Profile:

- PhD in Physics with a special emphasis on charged particle optics
- Minimum of 5 years of experience in charged particle optics (simulations and experimental) and instrumental development acquired during PhD thesis and after in the frame of employments in R&D
- Experience with charged particle optics simulation software together with knowledge in data processing and software programming is mandatory, experience with SIMION and/or LORENTZ is an asset

- Experience in designing mass spectrometers and/or ion sources is an asset
- Strong experimental skills
- Fluency in English (scientific exchanges) is a must
- Excellent communication, organisational, flexibility and interpersonal skills with a mandatory team-spirit

Contact:

Candidates interested in the above position can apply online on our website [www.lippmann.lu](http://www.lippmann.lu)

The application file should include:

- a CV
- a motivation letter
- the names of two or three referees
- a list of publications
- a summary of past scientific researches highlighting the main achievements
- and a copy of the last diploma.

For any question regarding our job offers or the application process, please contact our recruitment team at [recrutement@lippmann.lu](mailto:recrutement@lippmann.lu)