



POST-DOCTORAL POSITION IN THE FABRICATION OF SOLUTION-BASED NANOCOATINGS FOR WOUND HEALING (M/F)

Fixed term contract | 24 months | Fulltime/40h | Belvaux

Your work environment

The Luxembourg Institute of Science and Technology (LIST) is a Research and Technology Organization (RTO) active in the fields of materials, environment and IT. By transforming scientific knowledge into technologies, smart data and tools, LIST empowers citizens in their choices, public authorities in their decisions and businesses in their strategies.

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You will be part of the LIST Materials Research and Technology department

Through its research into advanced materials and processes, the department, with over 190 researchers and engineers, contributes to the emergence of enabling technologies that underpin the innovation processes of local and international industry. The department's activities hinge on three thematic pillars: nanomaterials and nanotechnology, sustainable composite materials and manufacturing, and process technologies (including scientific instrumentation).

The Nanomaterials and Nanotechnologies team of engineers, researchers and technologists combine their expertise to translate the enabling capabilities of nanotechnology/nanomaterials into application-driven solutions. Based on the thorough understanding of the functional properties of novel functional materials, the NEMC group conducts research, development and innovation in the areas of nano-enabled advanced technologies for the medical and cosmetics industries including diagnostics, prosthetic devices and drug delivery systems.

An increasing number of persons show difficulties for wound healing and the resistance of an increased number of pathogens to antibiotics or other drugs also makes the skin wound healing process more complicated. The LIGNP4WOUND addresses these problems by adding natural biocides (lignin and chitosan) and bioactive molecules to the biodegradable nanofibrous mats made by electrospinning. The proposed wound dressings are composite materials and their performance will strongly depend on the adhesion and cohesion of the various composite parts. Thus, one of the project objectives is to use environmentally friendly plasma chemical technologies to achieve the desired stability of the final composite material.

What you will be doing

Responsibilities

- Support LIGNP4WOUND project activities, and be responsible for developing processes, and protocols to prepare innovative solution-based coatings embedding bio-sourced organic nanoparticles for wound healing using cutting-edge processes.
- Prepare professional quality reports for project internal/external communications including technical reports and patents.
- Write papers to be submitted in peer-reviewed international journals.
- Support duties pertaining to the smooth technical operation of related laboratories.

Job reference: MRT-2020-038

Application file:

- A CV
- A motivation letter
- References names of two or three referees

Apply online:

https://www.list.lu/en/jobs/researchers/job-offer/mrt-2020-038/?no_cache=1&cHash=fc355ff5a6d895c79b4b39b9732188aa

Your working environment

The research department

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Which profile we are looking for

Educational background

- A relevant PhD degree at the interface between chemical formulation, nanomaterial science, and surface science

Required seniority

- 1 to 4 years of experience after PhD completion related to bio-sourced organic nanoparticle engineering, formulation, and solution-based coatings

Technical skills

- Strong knowledge in chemical, morphological, and performance characterisation of biocompatible organic nanomaterials/coatings
- Proven experience in biocompatible organic nanoparticle engineering, formulation, and solution-based synthesis of coatings
- Excellent writing and reporting/presentation skills (scientific level)
- Willingness to work collegially in a multidisciplinary and multicultural environment

Language skills

- Flawless knowledge of English (both spoken and written) is required
- Knowledge of French is considered as an asset

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The Luxembourg Institute of Science and Technology (LIST) is a mission-driven Research and Technology Organisation (RTO) that develops advanced technologies and delivers innovative products and services to industry and society. Located at the heart of Luxembourg's vibrant Research and Innovation Campus in Esch-Belval, LIST can ideally connect its over 500 specialists in materials, the environment and IT with virtually all of Luxembourg's other main research players such as the University of Luxembourg, LIH, LISER, Technoport, Luxinnovation and the National Research Fund. **LIST.lu**

The LIST is committed with equality of opportunities and gender balance