Institute of Engineering and Management of Grenoble Alpes University

HR EXCELLENCE IN RESEARCH

Grenoble INP - UGA is a member of **international** engineering and management education and research **networks.** It is widely recognized in national and international rankings.

8 schools + **39** laboratories

8300 students

1 300 teaching, research, administrative and technical staff

Grenoble INP - UGA is a renowned public institution of higher education and research, and a major player in the Grenoble ecosystem. It is the engineering and management institute of Grenoble Alpes University, and plays a leading role in the scientific and industrial community.

PhD student in materials science for the development of desalination membranes

Job reference number	
Research field	Materials science (wet chemistry)
Host laboratory	Laboratoire des Matériaux et du Génie Physique (LMGP, UMR 5628 Grenoble-INP, UGA et CNRS) https://lmgp.grenoble-inp.fr/
Researcher profile	Master
Location	Grenoble, France
Date of recruitment / contract length	From October 2024 to October 2027
Contacts	David Riassetto david.riassetto@grenoble-inp.fr

Grenoble INP - UGA is a leading public institution accredited with the French label “Initiative d’excellence”. It offers innovative engineering and management programs, with an increasing internationalization of its course offers. The courses are grounded in sound scientific knowledge and linked to digital, industrial, organizational, environmental and energy transitions. The Engineering and Management Institute of Grenoble Alpes brings together more than 1300 staff members (teacher-researchers, lecturers, administrative and technical staff) and 8300 students, located on 8 sites (Grenoble INP - Ense3, Grenoble INP - Ensimag, Grenoble INP - Esisar, Grenoble INP - Génie industriel GI, Grenoble INP - Pagora, Grenoble INP - Phelma, Polytech Grenoble, Grenoble IAE and the INP Prepa). Grenoble INP is also a highly-ranked institution of higher education and research, leading the way in the fields of engineering and management on an international scale. It is a member of a large number of international academic and research networks. It is part of the European University UNITE!.
As part of Grenoble Alpes University, Grenoble INP has associated guardianship of 39 national and international research laboratories and of technological platforms. The research conducted there benefits both its socio-economic partners and its students. Grenoble INP is at the heart of the following scientific fields: physics, energy, mechanics and materials; digital; micronanoelectronics, embedded systems; industry of the future, production systems, environment; management and business sciences.

Grenoble INP - UGA is an equal opportunity employer committed to sustainability. Grenoble INP-UGA celebrates diversity and equity and is committed to creating an inclusive environment for all employees. All qualified applications will be considered without discrimination of any kind.

Research

Offer description:

Missions :

This interdisciplinary project aims to develop a new type of membrane and process for seawater desalination. It will be divided into 4 axes: the production of ZnO nanowire membranes, their surface functionalization, the study of their resistance to biofouling, and studies of membrane life cycle and process performance.

Building on our preliminary results, the candidate will carry out the program described above in collaboration between the LMGP, G-Scop and Liphy laboratories.

Scientific and technical activities :

-Production of self-supporting membranes made of inorganic nanowires

-Surface functionalization of these membranes to control their wettability

-Characterization of membranes

-Study of biofilm formation on membrane surfaces during use

-Study of biofilm degradation efficiency by photocatalysis

-Comparative life-cycle analysis of membranes produced and marketed reverse osmosis membranes, and assessment of seawater desalination process yields.

Related activities :

-Supervision of students (Master ...)

-Dissemination and presentation of results (publication of articles and presentations at international conferences)

Skills

The candidate must have an experimental profile in materials science. Experience in life cycle analysis is desirable but not essential.

-Knowledge of materials science, particularly sol-gel and liquid solution chemistry.

-Proficiency in experimental materials characterization techniques (SEM, XRD, AFM, etc.)

-Experience in measuring surface wettability properties and photocatalysis

-Rigor, autonomy and interdisciplinarity

-Fluency in English and excellent presentation and writing skills

Specific requirements or conditions

The ability to work in English is imperative, French is welcome. International experience would be an added advantage.

Specifics of the position

Research can be carried out at several sites in Grenoble and St Martin-d'Hères. In view of existing partnerships, international travel is envisaged.

Position assigned to a restricted area: NO

(Device for the protection of the scientific and technical potential of the nation, conditioning the appointment of the researcher to the authorization of the Defense Security Officer).

How to apply

Applications must be sent to : David.riassetto@grenoble-inp.fr

Application deadline : 30/06/2024