



Post-doctoral position in the design of biocompatible and flexible conductive materials, Grenoble, France

Location : Grenoble, France

Centre de recherches sur les Macromolécules Végétales (CERMAV)-CNRS, Structure and Modification of Polysaccharides team

Starting Date : November 2020

Duration : 11 months

CERMAV/CNRS is a fundamental research center devoted to glycosciences, with strong and multidisciplinary expertise that spans from chemistry, physical-chemistry, biology to material sciences. It covers all the areas related to oligosaccharides, polysaccharides, glycoproteins and glycomaterials: their *in vivo* and *in vitro* synthesis, their characterization, functions and applications to answer to major societal challenges in the fields of human health, emerging energies and materials for new technologies.

Project description: The development of biocompatible, flexible and stretchable electronic devices for recording and/or electrical stimulation of tissue is a great challenge in the growing field of implanted medical devices. The postdoctoral researcher will work on the design and study of new flexible and bioresorbable conductive materials which originality lies in the combination of two crosslinked polysaccharide systems incorporating a conducting polymer. The post-doc project includes the chemical modification of natural polysaccharides, the development of flexible and stretchable polysaccharide substrates to produce simple prototypes of electrical tissue stimulation devices as well as their physico-chemical characterization (mechanical properties, swelling and stability under physiological conditions). The post-doctoral fellow will also take part in the *in vitro* evaluation of the biocompatibility of these new devices by standard tests.

Context: The postdoctoral researcher will be part of the STRETCH project supported by the Agence Nationale de la Recherche (ANR). The research work will be performed in CERMAV-CNRS in the team "Structure and Modification of Polysaccharides" as well as in CEA-LETI and Clinattec (Grenoble).

Requirements : The ideal candidate will have:

- a PhD in Polymer Science or in Biomaterials Science;
- strong experience in the design and characterization of polymeric materials;
- ability to work independently and collaboratively in a highly interdisciplinary group;
- ability to properly report, organize and publish research data.

Application : Please send your personalized motivation letter (max. 1 page), CV (max. 2 pages), list of publications, full transcripts, and the names and contact details of at least two references to Prof. Rachel Auzély as soon as possible per email (rachel.auzely@cermav.cnrs.fr).

For more information, please contact directly Prof R . Auzély.