



leti

Direction de la Recherche Technologique

Laboratoire d'Electronique et de Technologie de l'Information

R&D Engineer Position Biomaterials for medical applications

CEA/LETI/Healthcare department is a 150+ people department devoted to the development and industry transfer of micro- and nano- technologies in the biology and healthcare fields (Leti HEALTH, <http://www-leti.cea.fr/en>). Closely with hospital universities and institutions of higher education, the Healthcare Department develops new technologies to improve medical diagnosis and treatment of patients and works in a multidisciplinary environment at the chemistry/biology interface, in an applied research laboratory linking fundamental research and industrial transfer of technologies

Position description

To meet industrial requirements in early detection, we developed device functionalized with early infection sensors that enables surgeons and medical staff to diagnose early postoperative infections. The direct detection of an infection will be identified by the presence of bacteria through exhaled, specific VOC (Volatile Organic Compound)

The proposed work will consist in elaborating new porous materials (obtained by sol-gel process) in order to reach the best performance in terms of detection limit.

Secondly, since 2013 and supported by external collaborations, we started research activity devoted to the development of biomaterials for medical or environment applications. Several techniques of engineering of polymers are presently developed (electrospinning, microfluidic) to design bio-based materials. Thanks to his (her) expertise, the engineer should characterize these matrices and propose an implementation of Lab network to perform these physico-chemical and physical characterizations of biomaterials.

Location: CEA Grenoble, France

Duration: 18 months

Starting date: February 1st, 2015

Required Skills:

Applicants should hold a Master of Sciences in Polymer Science or polymer engineering with strong background in characterization: rheology of interfaces and physicochemical characterizations of polymers (GPC, NMR, DLS, etc.). A background in biodegradable/renewable polymers should be appreciated.

Ability to work in a cross-disciplinary environment (collaborative, EU and industrial projects) in connection with biologists, chemists, industrial and clinicians is absolutely required. Good skills in English.

Contact:

Interested applicants should send a Cover letter, a CV with contact information of two references. Please send your application only by email to: anne-claude.couffin@cea.fr or severine.vignoud@cea.fr

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