UNIVERSITÉ DE TOULON

Post-doctoral position

LABORATOIRE MAPIEM

Synthesis and characterization of new molecularly imprinted polymers for organic micropollutants monitoring

Université de Toulon (France) - Laboratoire Matériaux Polymères Interfaces Environnement Marin (MAPIEM EA- 4323) http://mapiem.univ-tln.fr/

The MAPIEM Laboratory (MAtériaux Polymères Interfaces Environnement Marin) is a team from the French Ministry for Higher Education and Research (EA 4323). Research activities of the laboratory are interdisciplinary and include Durability and Functional Materials with a special expertise on Ion and Molecularly Imprinted Polymers for extraction and sensing applications (http://mapiem.univ-tln.fr/Ion-and-Moleculary-Imprinted-Polymers-IMIP.html). 26 permanent staff (20 teachers-researchers and 6 technical staff), about 14 PhD students and 4 post-doc fellows are working in the laboratory.

The Post-Doctoral position is part of a European ERA-NET MarTERA project called NEMO that will start in May 2020, in partnership with DCU Water Institute (Dublin City University, Ireland) and KLEARIA (SME, France).
The NEMO project aims at the preservation of natural aquatic resources by developing a new generation Lab-on-Chip (LoC) miniaturized sensor platform in order to easily and accurately determine environmental levels of Persistent Organic Pollutants (POPs) in sea water matrices. POPs including polycyclic aromatic hydrocarbons (PAHs) and perfluorocarbon compounds (PFCs) are targeted as well as emerging contaminants such as UV organic filters. The project relies on a recognition phase based on electrochemical molecularly imprinted polymers (MIPs). Combining highly selective MIP technology with electrochemical detection is an exciting prospect as a highly innovative and new sensor technology. MIP based sensors will be incorporated into glass-based LoC devices and their reliability will be demonstrated in the marine environment.

To develop original and performing electrochemical MIPs for POPs, the MAPIEM Laboratory is looking for a candidate with a profile of chemist who will synthesize and characterize these new polymers (both for their physicochemical properties and for their analytical performances) and further graft them on electrode surface.

The candidate must hold a PhD in polymer chemistry with a good experience in the synthesis and characterization of monomers and polymers. An experience in surface modification by polymer grafting will be appreciated.
An experimenter with scientific curiosity is needed to address the different aspects of this multidisciplinary subject (organic and polymer synthesis and characterization, surface modification). A good command of the English language will be necessary for the communication (written and oral) of results.

Please send a detailed CV, a motivation letter and 2 recommendation letters as soon as possible by email to Dr Catherine Branger to the following address: branger@univ-tln.fr .

Beginning: May 2020
Duration: 24 months (1 year renewable)
Net salary: 2100-2200 €/month