

Post-doctoral position

Synthesis and characterization of new ion-imprinted polymers

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 centered on three themes: 1) elaboration of polymers with controlled architectures and morphologies; 2) biofouling and marine natural molecules and 3) dynamics, organization and durability of interfacial systems. 24 permanent staff (19 teachers-researchers and 6 technical staff), about 17 PhD students and 3 post-doc fellows are working in these research activities.

The Post-Doctoral position is part of the ANR Lab-on-Ship project in partnership with the Laboratory of Environmental Chemistry (Aix-Marseille University) and Laboratory of Metal Contaminants Biogeochemistry (IFREMER Nantes).

The Lab-on-Ship project aims at the preservation of natural aquatic resources by developing a field-deployable instrument to easily, cheaply and accurately determine environmental levels of toxic metal contaminants (Cd, Pb and Hg) in various aqueous matrices. This analytical system will be based on miniaturized modules and will include all pre-treatment steps of sample. To achieve the selectivity and sensitivity necessary for such analytical systems, the developed flow analytical system will be based on a selective Solid Phase Extraction (SPE) step of Cd, Pb and Hg, followed by detection of each metal by absorptiometry or fluorescence after derivatization with a specifically formulated reagent for each one. The SPE step will be carried out by Ion-Imprinted Polymers (IIPs).

To develop original and performing IIPs for Cd, Pb and Hg, the MAPIEM Laboratory is looking for a candidate with a profile of chemist/physical chemist who will synthesize and characterize these new polymers both for their physicochemical properties and for their analytical performances.

The candidate must hold a PhD in polymer science and should have a good experience in the synthesis and characterization of polymers, preferably molecularly or ion imprinted polymers.

An experimenter with scientific curiosity is needed to address the different aspects of this multidisciplinary subject (organic and polymer synthesis, physicochemical studies, characterization of the retention and selectivity performances of the imprinted polymers). 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: January-February 2015

Duration: 18 months

Net salary: 2400-2500 €/month