



M2ex – Exploiting metal-microbe applications to expand the circular economy

Marie Skłodowska-Curie Action H2020-MSCA-ITN-EJD-2019

ESR1-UNILIM: Characterization of the labile metal fraction in complex matrices containing microbes

Job description

We are looking for a motivated Early Stage Researcher (ESR) in the field of metal bioavailability assessment in complex biological matrices. The research fellow will be hosted at the Université de Limoges (UNILIM, France). This group has long expertise in characterization of biological sludges and passive sampling for metal(loid)s (*i.e.* DGT), leading several projects in this area. He/she will be recruited by UNILIM for a period of 36 months with the aim of obtaining a joint PhD degree between UNILIM and Universidad Pablo de Olavide (UPO, Seville, Spain).

The M2ex European Joint Doctorate offers to the ESR1 an innovative series of Network-wide training events to ensure a high-quality, engaging and inspirational training environment including secondments in CSIC (Spain), Blue Sky Bio Limited (United Kingdom) and ODESSOL (France).

Objectives

DGT (Diffusive Gradients in Thin-films) passive sampling is promising for the determination of bioavailable metals in microbial matrices. However, their complex composition might interfere with DGT sampling. Due to the lack of information in the literature, this project will aim at evaluating the possibilities offered by DGT samplers in microbial matrices and at establishing relevant deployment procedures for such matrices.

Expected Results

Evaluation of the robustness of DGT samplers in microbial matrices. Identification of microbial matrix fractions (extracellular polymers, minerals...) involved in the formation of bioavailable complexes or inert "entities".

Candidate's profile

We are looking for a candidate with Analytical/Water Chemistry, Chemical Engineering or Environmental Science Degree.

Our Offer

You will receive an employment contract for 3 years according to the EU contribution for ITN recruitments and general conditions at the host institution. It includes full social security coverage and will start in September/October 2020.

Enrolment in Doctoral degree(s): UNILIM / UPO