



## Offre de stage de M2

**Title: Microplastic degradation and organic additive release under laboratory conditions**

*Start date:* 01/02/2021

*End date:* 30/06/2021

*Host institution:* Mediterranean Institute of Oceanography (MIO), Marseille, France

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*Co-supervisor:* Richard Sempéré

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*Associated project:* ANR Andromeda

*Budget:* AMU

*PI:* Richard Sempéré

The JPI Oceans ANDROMEDA project is an international collaboration of 15 research institutions. The aim of this partnership is to develop and improve analysis techniques for the cost-effective detection of micro- and nanoplastics and to study their degradation in the marine environment. The Mediterranean Institute of Oceanography (MIO) focuses hereby on the study of the release of plastic additives under environmentally relevant laboratory conditions. Plastic additives are chemicals which are added to the polymer during fabrication and include organic compounds such as phthalates, bisphenols and organophosphate esters. Discarded plastic waste can release these compounds into the environment where they pose a threat due to their suspected or proven endocrine disrupting activity, among others.

The recruited master student will be implicated in the experimental work of the research group, including the planning, organization and conducting of experiments aimed at investigating the release of additives from different plastic materials under (i) hyperbaric conditions and (ii) accelerated UV degradation conditions. Furthermore, the successful candidate will participate in the development of a method to extract organic contaminants from sediment pore water. The student will hereby learn how to work in an ISO-6 clean-room, how to extract organic contaminants from environmental matrixes using Solid Phase Extraction (SPE) and how to precisely identify chemical compounds and measure their concentration using GC/MS. The successful candidate is expected to be highly motivated, eager to engage in laboratory work and apt at working in a precise and rigorous way. Good English skills are required. Previous experience in organic contaminant extraction or GC/MS analysis is a plus, but not vital.