



<b><i>Project Title:</i></b>	<i>Evaluation of Nano/Micro-Porous materials for biotoxin capture</i>
<b><i>Project Short description</i></b>	<p>The presence of biotoxins in food and water is a general threat to human health that causes many diseases and even mortalities worldwide every year. A lot of money is spent every year in the monitoring programs for seafood toxins, above all in countries with a well-developed industry in seafood production and commercialization. Furthermore, toxic outbreaks imply great losses to the seafood industry as the mollusks cannot be commercialized for, frequently, long periods of time.</p> <p>Taking this into account, more efficient strategies and materials should be developed for biotoxins in situ monitoring, separation and seafood and water detoxification in order to prevent and remediate the negative impact of toxic outbreaks.</p> <p>The main aim of this project is to evaluate the use of porous nano/micro-materials (e.g. Metal/Covalent Organic Frameworks) for the encapsulation of marine and freshwater biotoxins in order to be used as new tools for; in situ toxin concentration for environmental monitoring, shellfish decontamination and/or toxin separation for analysis.</p>
<b><i>Expected Start/end date</i></b>	To be agreed with the University Supervisor (6 months foreseen)
<b><i>Required degree and Background knowledge of students, minimum grade point average, etc...</i></b>	<p>We are seeking for a motivated student with a degree in one of the following disciplines: Biology, Biochemistry, Food Technology, and/or Chemistry. Background in fluorescence techniques, enzymatic reactions, toxicology and/or cellular biology will be desirable.</p>

**Supervisor at INL**

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