

Materials for water technologies

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About the Project

In the last years, the development of novel water technologies able to deal with the water decontamination and the universal freshwater supply is a challenging task. For such actions are required novel processes and materials able to deal with the great variability of the common water pollutants and with the continuously renewable list of the emerging water pollutants, substances not commonly studied and monitored (e.g. nanoplastics, perfluorinated compounds, pharmaceuticals etc.), that may cause adverse ecological and human health effects.

This PhD activity will point to the development of novel processes and materials for the study of emerging pollutants and their interactions with other common pollutants, as well as with multi-functional porous materials fabricated ad hoc. The thesis will focus on natural based components, and will be adopted various materials engineering approaches in order to develop systems with desired structural and physicochemical properties that permit the desired interactions and entrapment of the targeted components. <https://www.iit.it/research/lines/smart-materials>

Requirements: the ideal candidate must have a Bachelor's Degree in one of the following areas: Materials Science, Chemical Engineering, Chemistry, Physics or Bioengineering.

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