

Multifunctional porous materials for advanced water treatment

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About the Project

Providing fresh water universally in a sustainable and affordable manner is a challenging task. Among the different strategies adopted to face up this problem, the recovery of freshwater from various polluted sources is of crucial importance. For this reason, the current research is focused on the development of novel multifunctional materials for advanced water technologies such as multicomponent water remediation and freshwater recovery.

This PhD activity will point to the development and characterization of multifunctional porous materials of natural origin for advanced water technologies. In particular, will be developed hydrogel based composite systems with special surface properties that permit to recover water from unconventional sources. The thesis will focus on natural based components, and various materials engineering approaches will be adopted in order to develop hydrogel based systems with the desired structural and physicochemical properties that permit the highly efficient interaction with water and the entrapment of targeted water pollutants.

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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