The FONTANAPULIA Project

Francesco Matteucci e Roberto Giannantonio DHITECH S.c.a.r.l.

The presentation will describe the project FONTANAPULIA - FOtocatalizzatori NanosTrutturAti per uNA Acqua Più puLItA - which was financed by the Puglia Region through POR Puglia FESR-FSE 2014-2020 -Innonetwork Action. The project aims at engaging the Nanotechnologies (KET 2) to break down the organic pollutants present in the waters, favoring the development of Sustainable Cities and Territories. Currently, water purification systems are inadequate and unsuitable to reduce the polluting load of large volumes of wastewater and industrial water produced by large agglomerates, as they mainly perform the bactericidal action. In order to combine the bactericidal effect with the abatement of organic pollutants present in the waters, the FONTANAPULIA project aims at developing water purification technology by applying the photocatalysis process. During the project will be developed nano-structured metal oxides having photocatalytic properties in ultraviolet (UV) and a photocatalytic reactor prototype that will be integrated into the UV lamps purification systems. Besides, new diagnostic methods will be developed to study the toxicity of nanostructured photocatalytic semi-finished products. At the end of the FONTANAPULIA project, the photocatalytic reactor prototype will be tested in two Apulian sites polluted by different types of contaminants.