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Personal Profile

The presence of xenobiotic compounds in the urban sewages constitutes today a new field of research. The project includes the investigation of the fate of nine pharmaceutical active substances in the wastewaters of three UWTPs. The research is being developed through the development and application of innovative analytic methods of chromatography. In addition a battery of toxicity tests will be developed in order assess the potential effects of these wastewaters and of these substances on various organisms from various taxonomic groups. The work moreover aims in the design and development of innovative methods of advanced chemical oxidation of (i.e. photocatalysis, sonolysis and hybrid methods) for the degradation/mineralization of the active pharmaceutical substances.

Research Profile

Our laboratory specializes in identifying and decomposing "xenobiotics", chemicals which are alien to any life-form, such as medicines, plant chemicals, organic compounds from paints and colours, plastics, even children's toys and so forth. Identification of these chemicals is done at first with chromatography which is what you see here, and then with advanced chemical oxidization methods. These use ultra violet light and some catalysts which are a combination of oxygen and hydrogen to produce chemical roots which can attack organic chemicals and break them into simpler molecules which in turn can be "eaten" and destroyed by microorganisms during biological treatment.

Relevant Links or info

For further information about Dr Fatta and the department of Environmental and Civil Engineering, please follow http://www.ucy.ac.cy/goto/civilenv/en-US/Home.aspx