

Sensors of Triclosan on complex solutions

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Currently, water supplies, water courses and aquifers are known to be contaminated by pesticides, industrial products and emergent pharmaceuticals and personal care products (PPCPs), with strong impact and inauspicious effects in human and biota. In order to have control over water quality with simple and cheaper methods, it will be necessary to develop sensors that allow the detection of pollutants traces in a fast way. In this talk the achieved results on the detection of Triclosan, a bacteriostatic molecule used in PPCPs such as toothpaste or soaps, on complex matrixes as effluent water, will be presented. Electronic tongue concept based in electrochemical or impedance measurements are the most common methods to classify the presence of molecules on complex solutions, and the experimental results demonstrate that it is

possible with these techniques detect Triclosan in aqueous complex solutions with concentrations in the range of 10^{-15} to 10^{-6} M. However, optical techniques as optical fibers, surface plasmon resonance and light absorption can also be used to detect Triclosan. A comparison of the results obtained by the different methods will be also presented and discussed.

Speaker Biography

Maria Raposo has completed her PhD in 1999 from Sao Paulo University, Brazil. She is professor of University of Lisbon, Portugal. Since 2008, she is head of the Functional Molecular Systems group which research interests include electric and optical properties of ultra-thin films of polymers and biomolecules, interfaces and nanotechnology, colloids, molecular architectures for electronics, photonics and magnetism, biomimetic membranes and radiation effect in biological systems. She has over 100 publications that have been cited over 1000 times, and her publication H-index is 18 and has been serving as an editorial board member of some Journals.

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