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Organic and biological nanosensors for environment

C. Nicolini
University of Genova, Italy

Abstract

This paper describes the optimal implementation of two sensors of new conception for environment, utilizing a wide range of detection methods and of complex nanocomposites, namely the first one organic based on matrices of Calcium Oxide, the second one based on Langmuir-Blodgett multi-layers of recombinant Laccase. Special attention was paid to detecting substances significant for environment (as carbon dioxide and phenols) by means of amperometric and Quartz Crystal Microbalance technologies. The resulting two implemented nanosensors are here described along with proofs of principles and corresponding applications for environment.