

Séminaire de Chimie Autour des Nanosciences

THOMAS DONEUX

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Donnera une conférence sur le thème :

UNDERSTANDING AND CONTROLLING THE INTERFACIAL (ELECTRO)CHEMISTRY OF THIOL-ON-GOLD SELF ASSEMBLED MONOLAYERS TO BUILD IMPROVED BIOSENSING PLATFORMS

The analytical performances (selectivity, sensitivity, limit-of-detection) of biosensors are ultimately connected to the interfacial architecture of the sensing surface, which needs to be optimised. The formation of "self-assembled monolayers" (SAMs) of thiolated (bio)molecules on gold substrates is nowadays a widespread method to build biosensors. A proper understanding of the interfacial chemistry is essential for an appropriate control and clever design of sensors with the desired properties.

Some key aspects of SAMs will be presented in this lecture, with a particular emphasis on electrochemical applications. The Au-S chemistry, the formation of SAMs, their electrochemical stability and their properties towards electron transfer will be discussed and illustrated with some specific examples related to DNA biosensors.



LE VENDREDI 20 Novembre À 11H00
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