

SEMINAR

GRAPHENE SENSORS FOR BIOELECTRONIC APPLICATIONS

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The development of a new generation of electronic devices that can effectively detect and stimulate the electrical activity of nerve cells is of utmost importance for fundamental research on neuron communication as well as for medical applications in neuroprostheses. Due its maturity, most of the work with field effect transistors (FETs) has been done based on Si technology. However, the high electronic noise and relatively poor stability in aqueous environments associated to Si technology have motivated the search for more suitable materials. In this respect, the outstanding electronic and electrochemical performance of graphene, together with its ability to be integrated with flexible substrates holds great promise for bioelectronic applications.

In this presentation, I will discuss our work towards the development of a graphene-based platform for applications in bioelectronics. After discussing the fabrication and in-electrolyte operation of graphene solution-gated field effect transistors (G-SGFETs), I will report on the use of arrays of G-SGFETs for the detection of the electrical and chemical activity of living cells.

REMINDER

Dr José A. Grrido
Graphene sensors for bioelectronic applications
18 October, 2013 – 12:00 p.m.
Place: ICN2 Seminar Room, ICN2 Building, UAB
Invited by: Prof Stephan Roche