



PERSONA CIÈNCIA EMPRESA
UNIVERSITAT RAMON LLULL

RESEARCH PROJECT

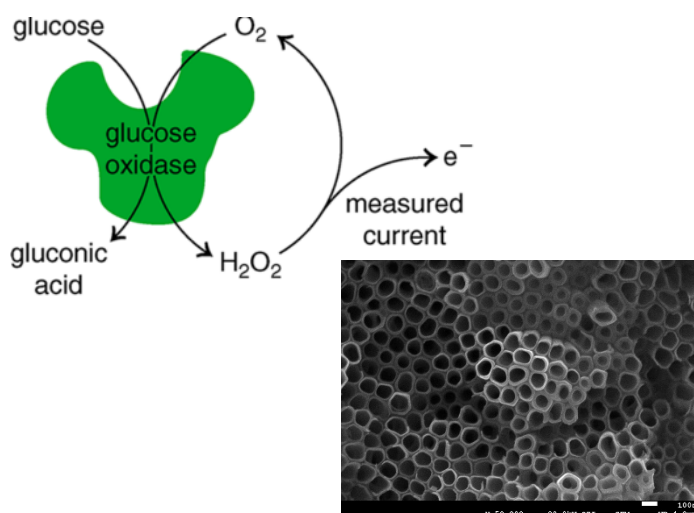
Development of electrochemical biosensors

One of the chief attractions of biosensors is the remarkable specificity that their biological component confers on them. Enzymes are the most commonly used reagents, but many other biologicals and bio-mimics have also been featured. These include antibodies, whole cells (including microbial, plant, and animal cells), subcellular organelles, tissue slices, lectins, and numerous synthetic molecules with affinity or catalytic properties.

Electrochemical biosensors based on enzyme immobilization are able to combine the analytical power of the analytical techniques with the specificity of biological recognition processes. These sensors are considered as a low cost, low power, simple and rapid alternative to traditional analytical procedures.

Since Clark and Lyons reported the first concept of glucose amperometric biosensor in 1962, numerous changes have been proposed in order to improve sensors performance. Great efforts have been focused on increasing sensitivity and stability of the sensor, as well as using bio-compatible materials for implantable devices

It is also worth mentioning that the proper functioning of the biosensor also depends on the properties electrochemical interface where the enzyme is immobilized



We are looking for a student of Analytical Chemistry, Biotechnology or Material Science Engineering, highly motivated, for laboratory work in the evaluation of electrochemical interfaces, nanosurfaces and enzyme immobilization strategies for the development of electrochemical biosensors.

Position offered (2017-2018): 1 Master research project (6-9 month)

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