

Convocatoria de ayudas para la realización de proyectos colaborativos en el marco de IBEROS. Anualidad 2018

Proyecto concedido

DATOS GENERALES:

Título proyecto:	Enzymatic autonomous biosensing device for neurological biomarkers detection
Entidades participantes (mínimo 2 entidades):	Instituto Superior de Engenharia do Porto Universidade de Vigo
Grupos de investigación:	BioMark – Sensor Research Novos Materiais
Investigadores principales:	Felismina Moreira; Goreti Sales Stefano Chiussi
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OBJETIVOS DEL PROYECTO (máximo 100 palabras):

To develop new *Enzymatic Biofuel Cell* (EBFC) device based on screen printed or equivalent platform (SPPs) for the production of low cost and renewable devices that can be used in commercial context in diagnosis of age-related diseases.

PLAN DE TRABAJO:

The EBFC supports were fabricated with different substrates as PEN or Kapton strips (for flexible devices), to cast a conductive material (gold or other metals) on a specific design. Substrates may be laser treated to enhance adherence or used to transfer the electrodes to adhesive tapes. The conductive working electrodes will be coated with different nanomaterials (biographene and a composite material graphene oxide with prussian blue nanocubes) for posterior assembling of the enzymes and biorecognition elements. The EBFC will be adapted to operate with a (bio)sensing material in the cathode or anode, leading to reproducible/efficient electrical output within time. The electrical features of the obtained patterned conductive materials will be evaluated electrochemically in order to optimize the design and to evaluate the best material/pattern approach.