Shaping Energy for a Sustainable Future

Resolution date February 6th 2020

PROPOSAL FOR THE ASSIGNMENT OF R1 FIRST STAGE RESEARCHER PROJECT ENGINEER (NºRef.2/2020)

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Ph.D. Student Position Oxygen Electrocatalyts for Metal Air Batteries and Fuel Cells

The Functional Nanomaterials Group is seeking a PhD student to work on a project devoted to the development of oxygen electrocatalyts for metal air batteiers and fuel cells.

Description: The oxygen reduction reaction (ORR) is an essential process in particularly appealing energy conversion and storage technologies, such as fuel cells and metal air batteries. These technologies rely on an oxygen cathode where ambient oxygen is reduced. The complete ORR requires the participation of 4 electrons, making it very sluggish and limiting the overall performance of these devices. To accelerate this reaction, Pt or Pt-based alloys are generally required, what strongly increases the device cost and constitutes one of the major barriers toward commercialization. Hence, considerable efforts are involved in the design and production of ORR catalysts that are free of Pt and Pt-group metals.

We are interested: in a Ph.D. student highly motivated to develop nanostructured electrocatalyts for oxygen reduction and oxygen evolution reactions. She/he will get experience in hands on preparation and characterization of electrocatalytic nanomaterials using colloidal synthesis methods and other strategies.
Requirements: Ph.D. student who is highly motivated to learn, work in a team, high flexibility and initiative and ability to innovate.
Bachelor and master of Physics / Materials Science / Chemistry or similar is required. Experience in nanoparticle synthesis and electrochemical characterization will be positively evaluated.
Fluent English is mandatory.

We offer: One year contract. Joining a team of highly qualified and motivated researchers working in the frontiers of knowledge in science and technology.

A salary commensurate with the characteristics of the candidate

Incorporation: The candidates should be available by February 2020.

Workplace: Barcelona (IREC facilities)

Applicants should send a detailed CV, a motivation letter and bachelor/master transcript to Andreu Cabot, acabot@irec.cat.