**Postdoctoral Scientist Position at IMDEA Energy to work on**
**"Membrane-free Redox Flow Batteries using immiscible liquid-liquid electrolytes"**

The Institute IMDEA Energy is a Research Centre created by the Regional Government of "Comunidad de Madrid" to develop world-class R&D on clean and renewable energy. The ultimate goal of the Institute IMDEA Energy is to achieve outstanding scientific and technological contributions in the creation of a sustainable energy system. The aim of the Institute is to make a significant impact in all energy-related research topics by bringing together high quality researchers, providing them with excellent infrastructures and resources and promoting their close collaboration with the industrial sector.
The Electrochemical Processes Unit of IMDEA Energía is performing research and development of high-efficiency electrochemical energy storage devices, mainly for coupling them with renewable energy sources and for sustainable transport.
The Electrochemical Processes Unit of IMDEA Energía is opening a **Postdoctoral Scientist Position** associated to the ERC Consolidator Grant awarded to Dr. Rebeca Marcilla. This project, entitled *Membrane-Free redox Flow Batteries (MFreeB),* proposes to remove the problematic ion-exchange membrane of redox flow batteries by developing a disruptive, versatile and scalable battery concept that relies on the immiscibility of two redox electrolytes. Moreover, cheap, abundant and environmental-friendly organic molecules will replace the harmful vanadium active species. This open Postdoctoral Position will be dedicated to investigate the Organic Redox Electrolytes for Redox Flow Batteries.

**Your Tasks:**

- R&D on Electrochemistry and Electrochemical Energy Storage.
- Electrochemical Characterization of Organic Redox Electrolytes.
- R&D on Redox Flow Batteries: Design and Characterization.
- R&D on Liquid-Liquid Biphasic Systems: equilibrium and partition coefficients.
- Participation in national and international research projects in Electrochemical Energy Storage.
- Dissemination and publication of research results in scientific journals.
- Supervision of PhD, Master and undergraduate students.

**Your Qualification, Experience and Skills:**

Compulsory requirements:

- Ph.D. degree in Electrochemistry, Materials, Chemistry, Physics, Chemical Engineering or similar.
- Hands-on experience on Electrochemical Characterization Methods: cyclic voltammetry, RDE, RRDE, Galvanostatic charge-discharge, Impedance Spectroscopy.
- Strong background in Electrochemical Energy Storage.
- Good knowledge in Redox Flow Batteries.
- Fluent oral and written communication skills in English.

Moreover, the following aspects will be positively evaluated:

- Experience on Electrochemistry of organic redox molecules.
- Experience on Electrochemistry at liquid-liquid interfaces.
- Experience on Physicochemical aspects of Electrolytes; solubility, viscosity, density, etc.
- Experience on Thermodynamics of Liquid-Liquid Biphasic Systems.
- At least 2 year of experience as postdoctoral researcher.

**Location:** Móstoles, Madrid, Spain.

**Remuneration:** Between 33,000-37,000 Euro per year, depending upon qualification and expertise.

**Duration:** The position is available immediately and is a one-year appointment with annual renewals depending on performance.

**Reference: 18.31.EQ9 POD**

**We are looking forward to your application.**
For further information contact Dr. Rebeca Marcilla, E-Mail: rebeca.marcilla@imdea.org

Applicants should send their Curriculum Vitae (publications list included) and covering letters to the following address:

**email**: rebeca.marcilla@imdea.org

**Subject**: Reference **18.31.EQ9 POD**