Call reference number	(2023-15)
Call name	Researcher – Biodegradable battery fabrication and characterization
Application Deadline	2023/03/20

Introduction and main description

The upcoming wave of power hungry Internet-of-Things (IoT) sensing nodes will strongly increase the primary battery demand in the near future thus aggravating the environmental impact associated to its production and the generation of waste electrical and electronic equipment (WEEE) after its operation lifetime.
This project proposes to develop a new battery concept based on the principles of ecodesign and circular economy. Thus, batteries will be designed and fabricated to ensure an optimal use of resources while reducing their potential environmental impact throughout their whole life cycle. In this way, the project aims to change the current paradigm of primary batteries from a 'one-size-fits-all' to a new 'tailor-made' model where batteries are ecodesigned to fit the life cycle of the device to be powered.
We offer a part-time job until the end of the project in September 2024

Skills and Requirements

Required:
- BSc in Chemical Engineering, Electrochemistry, Chemistry or Physics.
- Experience in battery components fabrication and characterization.
- Knowledge of rapid prototyping and additive manufacturing techniques, e.g. laser-induced graphene.

Desired:
- Experience in electrochemical characterization techniques such as CV, LSV, CA, EIS.
- Knowledge and experience in biobased hydrogel preparation and redox polymers.
- Fluent in English.

Work Program / Duties / Responsibilities

Design and fabrication of several battery components and prototypes.
Electrochemical characterization of redox species.
Evaluation of ionic conductivity of biobased polymer electrolyte membranes.
Battery performance characterization.

Application Procedure

Apply by submitting a motivation letter and a CV (in English) using the "Contact" button at the corresponding offer, at the "Join Us" area on BCMaterials' portal (https://www.bcmaterials.net/join-us).
Your name and email address will be required for furher contact too.

Other Relevant Information
Write as much as needed, relating evaluation process, dates of interest.