

Designação do projeto | High performance supercapacitors based on deep-eutectic solvent electrolytes

Código do projeto | PTDC/EQU-EQU/4893/2021

Objetivo principal | Cork based activated carbon for developing novel composite electrodes for supercapacitor applications..

Região de intervenção | Norte | Lisboa

Entidade Promotora | COLAB VASCO DA GAMA

Entidades Co-promotoras | C2CNewCap| IST-ID, ASSOCIAÇÃO DO INSTITUTO SUPERIOR TÉCNICO PARA A INVESTIGAÇÃO E O DESENVOLVIMENTO

Investigador Responsável (IST – ID) | Prof. Fátima Montemor

Data de aprovação |

Data de início | 17/01/2022

Data de conclusão | 16/01/2025

Custo total elegível (IST-ID) | 93.748.50 EUR

Objetivos, descrição do projeto, atividades e resultados esperados:

The innovative pathway of the HYDES project is to design a range of new sustainable DESs-based electrolytes and combine them with optimized electrodes (of capacitive and/or redox nature). Low toxicity/low cost solid compounds will be used to prepare DESs, liquid at room temperature, by simple routes allowing an easy composition tuning. These innovative DESs will empower different charge storage mechanisms and, in combination with optimized capacitive and redox electrode materials, create synergetic systems with high energy density and low economic and environmental costs. These new systems will allow developments beyond the state-of-the-art, contributing to the fundamental understanding of the characteristics of charge storage mechanisms involved and to technological progress addressing new cell configurations.