

HYNANOSTORE – HYbrid NANOstructured systems for sustainable energy STORagE (ERC)

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Energy storage devices play a key role in the clean energy transition, enabling the use of energy from renewable sources and electric mobility. Currently, lithium-ion batteries dominate the market, but are based on critical raw materials (such as Cobalt), whose low natural abundance, high cost, and toxicity urges the search for alternative materials. The goal of the project HYNANOSTORE – HYbrid NANOstructured systems for sustainable energy STORagE – recently funded by an ERC Consolidator grant, is to develop a rechargeable battery based on organic materials. We propose an innovative device in which natural redox molecules are combined with conductive nanostructures to obtain cheap, green and versatile energy storage devices. SWOT analysis will be a useful tool to successfully carry out the project and exploit this opportunity for innovation toward green energy storage technology.