

SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

CNR - Sustainable materials for sodium-based battery

Funded By	C.N.R. - CONSIGLIO NAZIONALE DELLE RICERCHE [P.iva/CF:02118311006]
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Context of the research activity	<p>The research activity will be mainly focused towards sustainable materials development for Na-ion/air battery based on hybrid (organic/inorganic) and organic electrocatalyst synthesized from materials coming from biomasses conversion and organic polymer.</p> <p>Theme bound scholarship funded by Consiglio Nazionale delle Ricerche – Istituto Tecnologie Avanzate per l’Energia “Nicola Giordano” (CNR ITAE)</p> <p>Scientific Responsible: Alessandra Di Blasi - diblasi@itaecnr.it</p> <p>Main seat to carry out the research activity: CNR-ITAE, Messina</p>
Objectives	<p>Sodium-based energy storage technology represents the most promising candidate among the post-lithium ion battery thanks to the sodium's natural abundance, the low cost and safety. The aim of the activity is to contribute for accelerating the research towards innovative and sustainable materials for electrochemical storage technology looking to the medium-long term. The most promising materials will be assembled as electrodes in a cell configuration and tested in order to evaluate the electrochemical performance in terms of charge/discharge cycles at different C-rate and retention capacity.</p>
Skills and competencies for the development of the activity	<p>Chemistry degree and knowledge of several physico-chemical (XRD, SEM, TEM ecc.) and electrochemical characterization devices (charge/discharge cycles at different C-rate, retention capacity, electrochemical parameters, electrical impedance spectroscopy (EIS), electron conductivity etc..).</p>