

# MASTER STUDENTS

**IF YOU WANT TO JOIN A YOUNG DYNAMIC TEAM, TO LEARN FROM THE WORLD LEVEL SCIENTISTS AND USE THE LATEST EQUIPMENTS AND TECHNOLOGY THIS IS YOUR OPPORTUNITY!**

**Applications are open to students registered for a Master Programme at University in related subjects: *materials science, physics, chemistry, engineering...* who wish to develop a career in research.**

## TOPIC

Single lithium ion conductor polymer electrolytes for lithium metal batteries (Cells & electrochemical testing - EES area)

Graphene-based electrodes for Lithium-Ion capacitors (LICs) (Cells & electrochemical testing - EES area)

RT solid polymer for high energy density batteries (Cells & electrochemical testing - EES area)

Surface modification of Na-based electrode for Na-ion batteries (Advanced Interfacial Analysis – EES area)

Deposition of thin film coating materials and membrane modification for Li-S batteries (Advanced Interfacial Analysis – EES area)

High Voltage Lithium Ion Capacitor (Fabrication & Processing, proof of concept, prototyping (EES area)

Study of the cathode fabrication parameters (Fabrication & Processing, proof of concept, prototyping (EES area)

Hard and soft carbons as high efficiency anodes for NA-ion batteries (XRD Platform)

## TOPIC

Electron microscopy techniques on Na-O<sub>2</sub> batteries for reaction products sensitive to the air (EM Platform)

Further evaluation of a new bio-based ecological electrolyte (NMR Platform)

Synthesis and characterization of new insertion electrode materials for Li-ion and Na-ion batteries, selected from Bond Valence Energy screening (Solid State Electroactive Materials – EES area)

Preparation of novel 3D porous graphene-derived materials for high-efficient Na-O<sub>2</sub> batteries (Solid State Electroactive Materials – EES area)

Nano-enhanced phase change materials for thermal energy storage: effect of nano-additives on the heat of fusion and crystallization (Phase transitions and critical behaviors - TES area)

High-Tech hybrid coating for Phase Change Materials (Phase transitions and critical behaviors - TES area)

Electric-fields induced crystallization of polyols (Advanced heat and mass transfer – TES area)

Ion exchange of sites A and B in spinel structures A<sub>x</sub>B<sub>2-x</sub>O<sub>4</sub> as materials in thermochemical cycles for hydrogen production in water splitting reactions (Solid State Chemical Reactions – TES area)

## HOW TO APPLY?

To manage your application

(academic record + CV + **topics you are interested in**)

send an email to: [people@cicenergigune.com](mailto:people@cicenergigune.com)

**YOUR FUTURE STARTS AT CIC energigUNE**

