

ECOLE DOCTORALE DES SCIENCES CHIMIQUES - ED 040

Proposition de sujets de thèse pour la rentrée 2024 / 2025

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| <u>Titre de la thèse</u> | New Prussian Blue type positive electrode materials for Na-ion batteries |
| Descriptif du sujet | <p>This PhD proposal deals with the investigation of new positive electrode materials for Na-ion batteries, and especially their chemical and thermal stability depending on their composition and structure. The research work will include syntheses using coprecipitation and hydrothermal reactions, evaluation of the electrochemical performances in Na-ion batteries, characterization of the structural, redox and aging processes occurring upon cycling combining diffraction and spectroscopic techniques ... The goal is to develop new materials for high power density Na-ion batteries.</p> <p>This research will be performed at ICMCB, in collaboration with Pr Christian Masquelier at LRCS (University Picardie Jules Verne), in the frame of the PEPR Batteries program driven by CNRS and CEA and launched to support innovations and development of new generations of batteries to be transferred rapidly towards French and European gigafactories.</p> |
| Compétences souhaitées (nom du DEA, ou MASTER, etc...) | A degree from a relevant Master course (Solid state chemistry and physics, Inorganic materials for Energy Storage and Conversion, Electrochemistry of materials ...). Good English level. Good communication skills. Team spirit. |
| Financement (connu) | ANR PEPR Batteries - HIPOHYBAT project |
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