PhD Topic at LRCS, Amiens, FRANCE
https://www.lrcs.u-picardie.fr/

Topic Title	*Development of an innovative process for manufacturing hard carbons for Na-ion battery anode application*
Principal Advisor	JANOT Raphaël, LRCS, Amiens, France
Co-advisor	MEUNIER Philippe, Mersen, France
Collaborations	
Funding Source, Name of project	French CIFRE fellowship, Mersen
Web Site of Advisor (if applicable)	https://www.mersen.com/en.html
Date of publication of the offer	April 30th, 2017
Deadline for application	June 1st, 2017
Date of start of the Project	October 1st, 2017
Description of the Topic	Objective of the thesis is to develop an innovative manufacturing process for hard carbons in order to improve performances of Na-ion battery. These carbons are non-graphitizable carbons coming from pyrolysis of organic precursor. After initial screening of various precursors in the laboratory and selection of the most appropriate precursor and pyrolysis cycle, a phase of development of an industrial pilot process should be undertaken to prepare industrialization of the process. These trials will be performed in a Mersen plant on an industrial pilot furnace.
Techniques to be used	✓ Pyrolysis ✓ BET surface area ✓ Electron microscopy ✓ Electrochemistry vs. Na
Skills of the Applicant	**Master 2** or engineering school (background physics and chemistry, electrochemistry). Strong knowledge in materials, interfaces and electrochemistry.
Contact (s)	Annie NUNES (HR manager) at annie.nunes@mersen.com
List of documents to provide	CV + motivation letter + list of references