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PROPOSITIONS OF PART-TIME EMPLOYMENT CONTRACTS FOR RESEARCH-SUPPORT STAFF IN THE FRAME OF THE FNP PROJECT HYCAP

Proposition nr 1 :
The proposition is for a research associate with good knowledge in materials science and electrochemistry (particularly, Li-ion batteries and hybrid capacitors) for supervising and assisting the Master Student, PhD student and the Post-Doctoral fellow in their experimental work. The recruited person will take part in the synthesis and characterization of positive and negative electrode materials, realization of electrodes, manufacturing and investigation of hybrid cells. Good skills for working under controlled atmosphere are required.

Proposition nr 2 :
The proposition is for a research associate with good knowledge on electrolytes for electrochemical energy storage systems (particularly Li-ion batteries and hybrid capacitors). Since optimized electrolytes for Na-ion capacitors are not commercially available, the research associate should propose electrolyte formulations fulfilling a number of conditions such as high conductivity, stable solid-electrolyte interphase, reduced flammability, low temperature operation. The researcher is expected to prepare a detailed bibliography report on electrolytes for hybrid capacitors (and related systems as Li-ion batteries and electrical double-layer capacitors). The thermal behavior of the formulations will be determined by DSC, in absence and in presence of the electrode materials. Then, in collaboration with the PhD student and Post-Doctoral fellow, she/he will test such formulations separately for positive and negative electrodes.

Proposition nr 3 :
The proposition is for a research associate with good knowledge in electrochemistry and electrode materials used in electrochemical capacitors. During the course of the project, she/he should contribute to the development of operando methods (Raman spectrometry, EQCM, dilatometry, …) to identify the mechanisms occurring in both negative and positive electrode of the hybrid Na-ion device. Attempts on the full device should be also considered.

The three propositions are for one year and, after eventual amendment, could be prolonged for two more years, depending on the research advancement.

Candidates wishing to apply are requested to send i) their Curriculum Vitae (including a detailed description of research experience and traineeships, a list of publications and presentations in conferences); ii) an application letter for the position; iii) copies of diplomas to Professor F. Béguin (francois.beguin@put.poznan.pl) before **October 6th, 2017.**

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