



POZNAŃ UNIVERSITY OF TECHNOLOGY

FACULTY OF CHEMICAL TECHNOLOGY
INSTITUTE OF CHEMISTRY AND TECHNICAL ELECTROCHEMISTRY

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PROPOSITION OF PHD STUDENT STIPEND IN POZNAŃ UNIVERSITY OF TECHNOLOGY

Objective of research: *A new generation of high energy hybrid capacitors - HYCAP*

We propose a PhD student stipend in the Faculty of Chemical Technology, Poznan University of Technology for a collaborative work in the frame of the HYCAP project supported by the TEAM TECH Programme implemented by the Foundation for Polish Science.

The objective of the HYCAP project is to developing a new concept of high energy, environment friendly and low cost electrochemical capacitor (also called supercapacitor) based on the hybridization of electrodes undergoing different charging mechanisms. Supercapacitors are energy storage devices used for applications in electric and hybrid vehicles, tramways, starting of diesel engines, renewable energy harvesting, etc.

Within the frame of HYCAP, the student will design optimised composites for negative electrodes of metal-ion capacitors using nanocarbons (nanoporous carbons, graphenes, carbon nanotubes, ...) as conductive and resilient matrix. Advanced physico-chemical methods and electrochemical techniques will be coupled to determine the insertion mechanisms and to further optimise the materials. Hybrid capacitor cells will be then realized by combining these electrodes with electrical double-layer ones.

This ambitious work programme, in collaboration with two renowned industrial partners in Poland, is recommended for a chemist interested by fundamental and applied science, and aiming at developing a future carrier connected with research and industrial developments. The fellow should possess some background in materials science and electrochemistry. She/he should be good team player and have ability and willing to taking initiative. Good English speaking and writing is also required.

Amount of stipend per month: 4,500 PLN (tax free) for 36 months.

Starting date: October 1st, 2017

Candidates wishing to apply are requested to send their Curriculum Vitae, a recommendation letter from their current scientific supervisor, a motivation letter, attested copies of education certificates including grade reports and other documents to Professor F. Béguin (francois.beguin@put.poznan.pl) before **August 11th, 2017**.

More information on: <http://powersourcesgroup.put.poznan.pl/>



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