



POLITECHNIKA POZNAŃSKA



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Proposition of PhD student stipends in the Power Sources Group

We propose two PhD student stipends in the Faculty of Chemical Technology, Poznan University of Technology (Poland) for a collaborative work during 30 months in the frame of OPUS project funded by the National Science Centre (Narodowe Centrum Nauki - NCN).

The main objective of the project is to develop new knowledge for better understanding the charging/discharging mechanisms of electrochemical energy storage systems (i.e., supercapacitors) made of porous electrodes and electrolytes. The key target is to reach a high frequency response of electrochemical capacitors operating within a wide voltage range. The main component of electrode materials will be transition metal compounds, e.g. dichalcogenides and their carbon composites. Within the frame of the project, the PhD students will i) develop new composite materials with high conductivity and controlled porous structure; ii) study the physicochemical properties of composites; iii) determine their capacitance values and charge propagation; iv) investigate the charging/discharging process in supersaturated electrolytes; v) study the various redox couples in electrode materials and electrolytes; vi) develop high ionic conductivity membrane between the two electrodes.

This work program is recommended for chemists interested by fundamental and applied science, and aiming at developing a future carrier connected with research and industrial developments. The fellows should possess a good background in materials science and electrochemistry. They should be good team players and have the ability and willing for taking initiative. Good English speaking and writing is also expected.

Amount of stipend per month: 3,000 PLN net

Starting date: not later than November 15th,

2019 Duration: 30 months

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 E. Frąckowiak before **October 11th, 2019.**

For more information, they can as well contact Professor E. Frąckowiak, Institute of Chemistry and Technical Electrochemistry, Berdychowo 4, Poznan, Centrum Wykładowe WTCh, room 014A, phone 61 665 3632.