Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Milica Vujković**
Address(es)	Studentski trg 12-16, 11158 Belgrade, Serbia
Telephone(s)	(381-11) 3336-630
E-mail	milica.vujkovic@ffh.bg.ac.rs
Date of birth	28.01.1983.

Field of interest

Development of various materials for energy device applications: i) intercalation materials for metal-ion rechargeable batteries; ii) carbon materials for developments of batteries and supercapacitors

Work experience

Dates	01.2009.-present
Occupation or position held	Research Associate
Main activities and responsibilities	Development of different, high-capacity intercalation materials suitable as anode and cathode for both lithium and sodium rechargeable batteries, with the emphasis on aqueous-type battery systems. The main task includes the development of the various synthesis procedures with regard to their optimization for electrochemical properties in lithium/sodium electrolytes, as well as the characterization of synthesized materials, from the structural and surface aspect, by various physicochemical methods. The examination of carbon electrochemistry, aimed at developing the carbon-based supercapacitors.
Name and address of employer	Faculty of Physical Chemistry, University of Belgrade, Studentski trg 12-16, Belgrade, Serbia

Education and training

Dates	28.01.2013.
Title of qualification awarded	PhD thesis: "Influence of synthetic condition of both $Li_4Ti_5O_{12}$/C and $LiFePO_4$/C composites on the kinetics of intercalation of lithium ions in organic and aqueous electrolytic solutions"
Principal subjects/occupational skills covered	Physical Chemistry of Materials and Electrochemistry, the field of Li^+-ion batteries
Name and type of organisation providing education and training	Faculty of Physical Chemistry, University of Belgrade
Dates	2001-2006
Title of qualification awarded	Graduate studies
Principal subjects/occupational skills covered	Physical Chemistry
Name and type of organisation providing education and training	Faculty of Physical Chemistry, University of Belgrade
Dates	1997-2001
Title of qualification awarded	High school

Name and type of organisation providing education and training	Gymnasium "Stojan Cerović", Nikšić, Republic of Montenegro
Technical skills and competences	Electrochemical methods: cyclic voltammetry, chronopotenciometry, chronoamperometry, galvanostatic intermittent titration technique, potentiostatic intermittent titration technique, impedance measurements, galvanostatic charging/discharging method... Scanning Electron Microscope (Phenom ProX) High Performance Liquid Chromatography systems (SPD-DAD, SPD-UV, RF and RI detectors) UV/VIS spectrophotometer with Diode array detector and Stopped-flow apparatus (used for investigation of the kinetics of ultra- fast chemical reactions).
Research activities (November 17, 2018)	28 papers in the international scientific journals (3 papers in the national scientific journals, and 40 conference papers). 1 book chapter, 2 nationally approved patents and 1 national patent application. 531 citates according to the Google Scholar's (January 11, 2019), h-index 12. Reviewer for Electrochimica Acta, J. Power Sources, Scientific Reports, Waste Management, RSC Advances, Materials Today Energy, Journal of Cleaner Production,... Advisor of one PhD thesis in the field of recycling technology of lithium-ion batteries Co-advisor of several master and diploma thesis
Projects	***Scientific projects*** 2019-2020- Bilateral Project "Development of ecological Li-ion batteries '', between Serbia and Montenegro, manager of the Serbian team. 2018-2020 Bilateral Project " Developments of novel materials for alkaline-ion batteries'', between Serbia and Slovenia, manager of the Serbian team. 2015-2018: Project "DURAPEM-Novel Materials for Durable Proton Exchange Membrane Fuel Cells", NATO-Science for Peace and Security (SPS) Programme, G4925, Slovenia and Serbia, participant. 2013-2015: Bilateral Project: Transition metal oxides as electrode materials for lithium ion batteries, between Serbia and Portugal, participant. ***Non-scientific projects*** Project "Science in Motion for Friday Night Commotion 2014-2015" (SCIMFONICOM 2014-2015. HORIZON 2020- MSCA-NIGHT-633376), participant. Project "Science in Motion for Friday Night Commotion 2013" (SCIMFONICOM 2013, FP7-PEOPLE-2013-NIGHT), participant.
Lectures	"Alkaline-ion batteries: Research and Development , 5th Conference on Transport and Research in the Danube Region, 13-14 November, 2018, Ljubljana, Slovenia (invited lecture and panel discussion). "Comparison of sodium and lithium intercalation materials", Electrochemical Section of the Serbian Chemical Society at the Faculty of Technology and Metallurgy, University in Belgrade, 10th November, 2014, Belgrade, Serbia (invited lecture). "Contemporary trends in the development of Li-ion batteries", Foundation of Ilija M. Kolarac, Belgrade, Serbia within the cycle - Energy of Future, 10th October, 2014, "Development of nanostructured materials for Li-ion batteries", ICEMS, Instituto Superior Te´cnico, TU Lisbon, Av. Rovisco Pais, 1049e001 Lisboa, Portugal, 21st November, 2013.
Awards and recognitions	2015- The Award of the Commerce Chamber of Belgrade for the best patent in 2013/2014 which is in the interest to the economy of Belgrade 2014- The Award of the Commerce Chamber of Belgrade for the best PhD thesis in 2012/2103 which is in the interest to the economy of Belgrade. 2013- The Award for the best thesis at the Yucomat 2013 conference held in Montenegro, Republic Montenegro. 2007- Special recognition of Serbian Chemical Society for outstanding achievement during the undergraduate studies 2011-2006.
Driving licence	B

Additional information

Patents

Milica Vujković, Slavko Mentus, Procedure for increasing the capacitance of supercapacitor with nanodispersed carbon electrodes in alkaline electrocatalytic solution, Patent Application, P-2018/0314.
N. Gavrilov, M. Vujković, I. Pašti, G. Ćirić-Marjanović, S. Mentus, Supercapacitor based on carbon nanostructure with aqueous electrolytic solution, 2011/0565, Accepted patent 7,07,2014. No. 53366.
M. Vujković, I Stojković, N. Cvjetićanin, S. Mentus, $LiFe_{0.95}V_{0.05}PO_4/C$ composite as electrode material for secondary lithium-ion batteries with aqueous electrolytic solution, 2012/0243, Accepted patent 18,12,2015. No 54346.

The most relevant publications

M. Vujković, D. Bajuk-Bogdanović, Lj. Matović, M. Stojmenović, S. Mentus, Carbon, 138 (2018) 369-378, doi: 10.1016/j.carbon.2018.07.053. (IF2018=7.082).
J. Senćanski, D. Bajuk-Bogdanović, D. Majstorović, E.Tchernychova, J. Papan, **M. Vujković**, The synthesis of $Li(Co-Mn-Ni)O_2$ cathode material from spent-Li ion batteries and the proof of its functionality in aqeuous lithium and sodium electrolytic solutions, J. Power Sources 342 (2017) 690-703, doi: 10.1016/j.jpowsour.2016.12.115. (IF2017=6.945).
M. Vujković, S. Mentus, Potentiodynamic and galvanostatic testing of $NaFe_{0,95}V_{0,05}PO_4/C$ composite in aqueous NaNO3 solution , and the properties of aqeuous $Na_{1,2}V_3O_8/NaNO_3$/ $NaFe_{0,95}V_{0,05}PO_4/C$ battery, J. Power Sources, 325 (2016) 185-193, doi: 10.1016/j.jpowsour.2016.06.031. (IF2016=6.395)
M. Vujković, I. Pašti, I. Stojković Simatović, B. Šljukić, M. Milenković, S. Mentus, The influence of intercalated ions on the cyclic stability of V_2O_5/graphite composite in aqueous electrolytic solutions: Experimental and Theoretical Approach, Electrochimica Acta 176 (2015) 130–140, doi:10.1016/j.electacta.2015.07.004. (IF2015=4.803).
M. Vujković, S. Mentus, High-rate intercalation capability of $NaTi_2(PO_4)_3/C$ composite in aqueous lithium and sodium nitrate solutions, J. Power Sources, 288 (2015) 176-186. doi:10.1016/j.jpowsour.2015.04.132. (IF2016=6.333).
M. Vujković, Ivana Stojković, Biljana Sljukić, M. Mitrić, C.A.C. Sequeira, S. Mentus, Versatile insertion capability of Na1.2V3O8 nanobelts in aqueous electrolyte solutions, Electrochimica Acta, 147 (2014) 167-175. doi:10.1016/j.electacta.2014.08.137. (IF2014=4.504)
M. Vujković, S. Mentus, Fast sodiation/desodiation reactions of electrochemically delithiated olivine $LiFePO_4$ in aerated aqueous $NaNO_3$ solution, J. Power Sources, 247 (2014) 184-188. doi:10.1016/j.jpowsour.2013.08.062. (IF2014=6.217).
M. Vujković, D. Jugović, M.Mitrić, Ivana Stojković, N. Cvjetićanin, S. Mentus, The $LiFe_{(1-x)}V_xPO_4/C$ composite synthesized by gel-combustion method, with improved rate capability and cycle life in aerated aqueous solutions, Electrochimica Acta, 109 (2013) 835-842. doi:10.1016/j.electacta.2013.07.219. (IF2013=4.056).
M. Vujković, N. Gavrilov, I. Pašti, J. Krstić, G.Ćirić-Marjanović, S.Mentus, Superior capacitive and electrocatalytic properties of carbonized nanostructured polyaniline upon a low temperature hydrothermal treatment, Carbon, 64 (2013) 472-486. doi:10.1016/j.carbon.2013.07.100. (IF2013=6.160).
M. Vujković, I. Stojković, N. Cvjetićanin, S. Mentus, Gel-combustion synthesis of LiFePO4/C composite with improved capacity retention in aerated aqueous electrolyte solution, Electrochimica Acta, 92 (2013) 248-256. (IF2013=4.056).