

MIKHAIL SERGEEVICH KONDRATENKO
CURRICULUM VITAE

PERSONAL DETAILS:

Date and Place of Birth: July 3, 1987; Sergiev-Posad, USSR

CONTACT INFORMATION:

Research associate, Faculty of Physics, Lomonosov Moscow State University, Leninskie gory 1-2,
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PROFESSIONAL EXPERIENCE:

2016 – present, CEO, SC-TEK LLC

2013 – present, research associate, Lomonosov Moscow State University, Faculty of Physics

2007 – 2009, engineer, Roksa-Service, designing structured cabling systems

EDUCATION:

2010 Graduated with honors from [Lomonosov Moscow State University, Faculty of Physics, Chair of Polymer and Crystal Physics](#), Diploma work in analysis of performance of high temperature polymer electrolyte fuel cells by means of electrochemical impedance spectroscopy

2013 Ph. D. in polymer physics and electrochemistry, [Lomonosov Moscow State University, Faculty of Physics](#). Thesis title: "Effect of polybenzimidazoles on triple phase boundary, proton conductivity and platinum degradation in active layers of phosphoric acid fuel cells".

AWARDS and HONORS:

2012 Ph. D. student award of the [Zamaraev Foundation](#)

RESEARCH INTERESTS:

Polymer physics, structure and properties of thin organic/polymer films, polymers in supercritical media, new polymer materials for electrochemical energy storage, electrochemical impedance spectroscopy.

PUBLICATIONS

- [1] T.E. Grigor'ev, E.E. Said-Galiev, A.Y. Nikolaev, M.S. Kondratenko, I. V. Elmanovich, M.O. Gallyamov, A.R. Khokhlov, Electrocatalysts for fuel cells synthesized in supercritical carbon dioxide, *Nanotechnologies Russ.* 6 (2011) 311–322. doi:10.1134/S1995078011030062.
- [2] M.S. Kondratenko, M.O. Gallyamov, A.R. Khokhlov, Performance of high temperature fuel cells with different types of PBI membranes as analysed by impedance spectroscopy, *Int. J. Hydrogen Energy.* 37 (2012) 2596–2602. doi:10.1016/j.ijhydene.2011.10.087.
- [3] M.S. Kondratenko, I.I. Ponomarev, M.O. Gallyamov, D.Y. Razorenov, Y.A. Volkova, E.P.

- Kharitonova, A.R. Khokhlov, Novel composite Zr/PBI-O-PhT membranes for HT-PEFC applications., *Beilstein J. Nanotechnol.* 4 (2013) 481–92. doi:10.3762/bjnano.4.57.
- [4] I. V. Elmanovich, M.S. Kondratenko, D.O. Kolomytkin, M.O. Gallyamov, A.R. Khokhlov, Active layer materials coated with Teflon AF nano-films deposited from solutions in supercritical CO₂ for fuel cell applications, *Int. J. Hydrogen Energy.* 38 (2013) 10592–10601. doi:10.1016/j.ijhydene.2013.06.018.
- [5] O. Shamardina, M.S. Kondratenko, A.V. Chertovich, A.A. Kulikovskiy, A simple transient model for a high temperature PEM fuel cell impedance, *Int. J. Hydrogen Energy.* 39 (2014) 2224–2235. doi:10.1016/j.ijhydene.2013.11.058.
- [6] M.S. Kondratenko, M.O. Gallyamov, O.A. Tyutyunnik, I. V. Kubrakova, A. V. Chertovich, E.K. Malinkina, G.A. Tsirlina, Degradation of High Temperature Polymer Electrolyte Fuel Cell Cathode Material as Affected by Polybenzimidazole, *J. Electrochem. Soc.* 162 (2015) F587–F595. doi:10.1149/2.0741506jes.
- [7] I.I. Ponomarev, K.M. Skupov, D.Y. Razorenov, V.G. Zhigalina, O.M. Zhigalina, I.I. Ponomarev, Y.A. Volkova, M.S. Kondratenko, S.S. Bukalov, E.S. Davydova, Electrospun nanofiber pyropolymer electrodes for fuel cells on polybenzimidazole membranes, *Russ. J. Electrochem.* 52 (2016) 735–739. doi:10.1134/S1023193516080097.
- [8] M.S. Kondratenko, E.A. Karpushkin, N.A. Gvozdik, M.O. Gallyamov, K.J. Stevenson, V.G. Sergeyev, Influence of aminosilane precursor concentration on physicochemical properties of composite Nafion membranes for vanadium redox flow battery applications, *J. Power Sources.* 340 (2017) 32–39. doi:10.1016/j.jpowsour.2016.11.045.
- [9] Kondratenko M.S., Elmanovich I. V., Gallyamov M.O. Polymer materials for electrochemical applications: Processing in supercritical fluids // *J. Supercrit. Fluids.* 2017. Vol. 127. P. 229–246. doi:10.1016/j.supflu.2017.03.011.