Curriculum vitae Europass

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Personal Information

Name(s) / Surname(s)	**Dominko Robert**
Position	Research Professor and Associate Professor
Professional address	Department of Materials Chemistry, National institute of Chemistry Hajdrihova 19, 1000 Ljubljana, Slovenia
Electronic email	robert.dominko@ki.si
Birthday, Nationality	August 30th, 1971, Slovenian

Diplomas, University Degrees

2012	Habilitation in materials science at University of Ljubljana, Slovenia
2002	PhD in Chemistry, University of Ljubljana, Slovenia

Positions held

1998 – now	National Institute of Chemistry, Ljubljana, Slovenia
1997 – 1998	TKI Hrastnik – product engineer in the industry

Admin. Responsibilities

June 2015 – now	Coordinator of EU project with acronym HELIS project (grant no. 666221)
Jan. 2014 – Dec. 2017	Vice-president and president of scientific council at NIC
Oct. 2012 – Sept. 2016	Coordinator of EU project with acronym EUROLIS project (grant no. 314515)
Jan. 2014 – now	Group leader of working group on Li-S batteries in Alistore ERI
Apr. 2009 – Dec. 2013	Group leader of nanopositive WP in Alistore ERI

Promotions & Awards

Mar. 2004	Jozef Stefan Golden Emblem Prize Award for outstanding contributions made to science in Doctoral theses.
Jun. 2012	Pregl award for outstanding contribution to chemistry and related science in last 5 years.
Dec. 2012	Prometheus Sciences for excellence in communication in Slovenia
Feb. 2013	HONDA initiation grant Europe

Indicators for Research

114	Publications in International Journals (h = 41)
40	Invited and Keynote oral presentations in International Conferences
> 200	Oral communications and posters in international conferences
13	Thesis advisor of 13 PhD students (6 financed by national grant)
2	Book chapters
4	International Patents published

Keywords & of Expertise

Different fields of battery research and development; solid-state electrochemistry of battery composites, research and development of new active materials, development of new characterization techniques and development of new concepts in the energy storage field.

10 most cited publications

354, 27 p.y. **Impact of the carbon coating thickness on the electrochemical performance of LiFePO4/C composites,** A.K. Dominko, R; Bele, M; Gaberscek, M; Remskar, M; Hanzel, D; Pejovnik, S; Jamnik, J, *J. Electrochem. Soc.*, ***52***, A607-A610 *(2005).*

330, 28 p.y. **Structure and electrochemical performance of Li_2MnSiO_4 and Li_2FeSiO_4 as potential Li-battery cathode materials,** Dominko, R; Bele, M; Gaberscek, M; Meden, A; Remskar, M; Jamnik, J, *Electrochem Commun.* 8, 217-220 (2007)

327, 30 p.y. **Improved electrode performance of porous $LiFePO_4$ using RuO_2 as an oxidic nanoscale interconnect,** Hu, Y.-S.; Guo Y.-G.; Dominko R.; Gaberscek M. Jamnik J.; Maier J., *Adv. Mater.,* **19** (15) 1963 (2007)

301, 27 p.y. **Is small particle size more important than carbon coating? An example study on $LiFePO_4$ cathodes**. M. Gaberscek, R. Dominko, J. Jamnik, *Electrochem Commun.* 9, 2778-2783 (2007)

252, 25 p.y. **Li_2MSiO_4 (M = Fe and/or Mn) cathode materials,** R.Dominko, *J. Power Sources*, **184**, 462-468 (2008)

238, 20 p.y. **Porous olivine composites synthesized by sol-gel technique,** Dominko, R; Bele, M; Gaberscek, M; Remskar, M; Hanzel, D; Goupil, JM; Pejovnik, S; Jamnik, J, *J. Power Sources*, **153**, 274-280 (2006)

227, 32 p.y. **Cathode Composites for Li-S Batteries via the Use of Oxygenated Porous Architectures** Demir-Cakan R., Morcrette M., Nouar F., Davoisne C., Devic T., Gonbeau D., Dominko R., Serre C., Ferey G., Tarascon J.-M., *J. Am. Chem.Soc.,****133****, 16154-16160 (2011)*

203, 29 p.y. **Silicate cathodes for lithium batteries: alternatives to phosphates?,** Islam M.S., Dominko R., Masquelier C., Sirisopanaporn C., Armstrong A. R., Bruce P.G., *J. Mater.Chem.,****21****,* 9811-9818 (2011)

187, 17 p.y. **Beyond one-electron reaction in Li cathode materials: Designing $Li_2Mn_xFe_{1-x}SiO_4$,** Kokalj A., Dominko R., Mali G., Meden A., Gaberscek M., Jamnik J., *Chem. Mater.,****19***: 3633-3640 (2007)

180, 12 p.y. **The role of carbon black distribution in cathodes for Li ion batteries.** Dominko R., Gaberscek M., Drofenik J., Bele M., Pejovnik S., Jamnik J. *J. Power Sources,****119,*** 770-773 (2003).

10 recent publications

Mechanistic Study of Magnesium–Sulfur Batteries. A. Robba, A. Vizintin, J. Bitenc, G. Mali, I. Arcon, M. Kavici, M. Zitnik, K. Bucar, G. Aquilanti, C. Martineau-Corcos, A. Randon-Vitanova, R. Dominko, *Chem. Mater. DOI: 10.1021/acs.chemmater.7b03956* (2017)

The physicochemical properties of a [DEME][TFSI] ionic liquid-based electrolyte and their influence on the performance of lithium-sulfur batteries, S. Drvaric Talian, M. Bester-Rogac, R. Dominko, *Electrochem. Acta*, ***252***, 147-153 (2017)

Pulse combustion reactor as a fast and scalable synthetic method for preparation of Li-ion cathode materials, G. Križan, J. Križan, R. Dominko, M. Gaberscek, *J. Power Sources*, ***363***), 218-226 (2017)

Reactivity and Diffusivity of Li Polysulfides: A Fundamental Study Using Impedance Spectroscopy, T S. Drvaric Talian, J. Moskon, R. Dominko, M. Gaberscek. *ACS Appl. Mater. Interfaces*, **9**, 29760-29770 (2017)

The mechanism of Li_2S activation in lithium-sulfur batteries: Can we avoid the polysulfide formation?, A. Vizintin, L. Chabanne, E. Tchernychova,I. Arcon, L. Stievano, G. Aquilanti, M. Antonietti, T.P. Fellinger, R. Dominko, *J. Power Sources*, **344**, 208-217, (2017)

Effect of Cl^- and $TFSI^-$ anions on dual electrolyte systems in a hybrid Mg/$Li_4Ti_5O_{12}$ battery, J. Bitenc, M. Firm, A. Randon-Vitanova, R. Dominko, *Electrochem. Commun.*, ***76***, 29-33 (2017)

Operando characterization of batteries using x-ray absorption spectroscopy: advances at the beamline XAFS at synchrotron Elettra, G. Aquilanti, M. Giorgetti, R. Dominko, L. Stievano, I. Arcon, N. Novello, L. Olivi, *J. Phys. D: Appl. Phys.,* **50**, 074001 (2017)

Synthesis, Structure, and Electrochemical Properties of $Na_3MB_5O_{10}$ (M = Fe, Co) Containing M^{2+} in Tetrahedral Coordination, F. Strauss, G. Rousse, M.T. Sougrati, D.A. Dalla Corte, M. Courty, R. Dominko, J.M. Tarascon, *Inorg. Chem.* A, **55**, 12775-12782 (2016)

Operando Resonant Inelastic X-ray Scattering: An Appropriate Tool to Characterize Sulfur in Li-S Batteries, M. Kavcic, K. Bucar, M. Petric, M. Zitnik, I. Arcon, R. Dominko, A. Vizintin, *J. Phys.Chem.C.,* **120***,* 24568-24576 (2016)

Poly(hydroquinoyl-benzoquinonyl sulfide) as an active material in Mg and Li organic batteries, J. Bitenc, K. Pirnat, G. Mali, B. Novosel, A. Randon-Vitanova, R. Dominko, *Electrochem. Commun.*, **69**, 1-5 (2016)