

Ag nanoparticles on mesoporous carbon support as cathode catalyst for anion exchange membrane fuel cell

Linge, Jonas Mart; Erikson, Heiki; Mooste, Marek; Piirsoo, Helle-Mai; **Kaljuvee, Tiit**; Kikas, Arvo; Aruväli, Jaan; Kisand, Vambola; Tamm, Aile; Kannan, Arunachala Mada; Tammeveski, Kaido International Journal of Hydrogen Energy 2023 / p. 11058-11070
<https://doi.org/10.1016/j.ijhydene.2022.12.138> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

ANAMMOX-denitrification biomass in microbial fuel cell to enhance the electricity generation and nitrogen removal efficiency

Zekker, Ivar; Bhowmick, Gourav Dhar; Priks, Hans; Nath, Dibyojoyty; Rikmann, Ergo; **Jaagura, Madis** Biodegradation 2020 / p. 249 - 264 <https://doi.org/10.1007/s10532-020-09907-w> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

CCM and DCM operation analysis of cascaded quasi-z-source inverter

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard; Adamowicz, Marek Proceedings of IEEE International Symposium on Industrial Electronics : ISIE'2011 : 27-30 June 2011, Gdansk, Poland 2011 / p. 159-164 : ill

CO2 turned into a nitrogen doped carbon catalyst for fuel cells and metal-air battery applications

Ratso, Sander; **Walke, Peter; Mikli, Valdek**; Locs, Janis; Šmits, Krišjānis; Vitola, Virginija; Šutka, Andris; Kruusenberg, Ivar Green chemistry 2021 / p. 4435-4445 <https://doi.org/10.1039/D1GC00659B> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Design guidelines of new step-up DC/DC converter for fuel cell powered distributed generation systems

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 33-41 : ill

Electrocatalysis of oxygen reduction on multi-walled carbon nanotube supported copper and manganese phthalocyanines in alkaline media

Kaare, Kätlin; Kruusenberg, Ivar; Merisalu, Maido; Matisen, Leonard; Sammelselg, Väino; Tammeveski, Kaido Journal of solid state electrochemistry 2016 / p. 921-929 : ill <https://doi.org/10.1007/s10008-015-2990-9>

Electrochemical behaviour of graphene-based materials towards ORR

Kibena-Pöldsepp, Elo; Lilloja, Jaana; Merisalu, Maido; **Rauwel, Protima** BEC 16 : the 6th Baltic Electrochemistry Conference : Electrochemistry of Functional Interfaces and Materials : 15th-17th June 2016, Helsinki, Finland 2016 / p. 121

Electrochemical Reduction of Oxygen on Platinum-Modified Carbon Materials = Elektrokeemiline hapniku redutseerumine plaatinaga modifitseeritud süsinikmaterjalidel

Najafli, Erkin 2025 <https://digikogu.taltech.ee/et/Item/2da3885d-1ab1-4847-8647-ab7629641de8> https://www.ester.ee/record=b5746298*est
<https://doi.org/10.23658/taltech.33/2025>

Electroreduction of oxygen on cobalt- and iron-containing nitrogen-doped carbon aerogels

Sarapuu, Ave; Samolberg, Lars; **Kreek, Kristiina; Koel, Mihkel**; Joost, Urmas; Tammeveski, Kaido BEC 16 : the 6th Baltic Electrochemistry Conference : Electrochemistry of Functional Interfaces and Materials : 15th-17th June 2016, Helsinki, Finland 2016 / p. 20

Exploring different synthesis parameters for the preparation of metal-nitrogen-carbon type oxygen reduction catalysts

Teppor, Patrick; Jäger, Rutha; Härk, Eneli; Sepp, Silver; Kook, Mati; **Volobujeva, Olga**; Paiste, Päärn; Kochovski, Zdravko; Tallo, Indre; Lust, Enn Journal of the Electrochemical Society 2020 / art. 054513 <https://doi.org/10.1149/1945-7111/ab7093> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Fuel cell city buses : grey shadows of green energy

Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l.
<https://doi.org/10.1109/BEC56180.2022.9935604>

Hydrogen post-treatment enhances the electrochemical activity of Pt-CeO2/C catalysts

Nguyen, Huy Qui Vinh; Kasuk, Heili; Härmäs, Meelis; Aruväli, Jaan; **Volobujeva, Olga**; Härk, Eneli; Kochovski, Zdravko; Lust, Enn; Nerut, Jaak 8th Baltic Electrochemistry Conference. Conference Abstract 2024 / 1 p. https://sisu.ut.ee/wp-content/uploads/sites/638/nguyen_huy_qui_vinh_.pdf

A hydrogen technology as buffer for stabilization of wind power generation

Andrianovitš, Anna; Egorov, Mikhail; Lehtla, Madis; Vinnikov, Dmitri 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 62-70 : ill https://www.ester.ee/record=b2549033*est

Impedance-source inverter-based high-power DC/DC converter for fuel cell applications

Egorov, Mikhail; Vinnikov, Dmitri; Strzelecki, Ryszard; Adamowicz, Marek 8 IEEEIC International Conference on Environment and Electrical Engineering : Karpacz, Poland, 10-13.May 2009 2009 / p. 57-60 : ill <http://eeeic.org/proc/papers/109.pdf>

Influence of A-Site Deficiency and Ca Concentration on the Electrical and Crystallographic Properties of (Nd_{0.2}Sr_{0.7-x}Cax)YTi_{0.95}Fe_{0.05}O_{3-δ}-Based Fuel Electrode for Solid Oxide Cells

Paydar, Sara; Kooser, Kuno; **Volobujeva, Olga**; Granroth, Sari; Nurk, Gunnar ACS Applied Energy Materials 2024 / p. 5745 - 5754
<https://doi.org/10.1021/acsaem.4c00824> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Influence of A-site modifications on the properties of La_{0.21}Sr_{0.74-x}CaxTi_{0.95}Fe_{0.05}O_{3-δ} based fuel electrode for solid oxide cell

Paydar, Sara; Kooser, Kuno; Möller, Priit; **Volobujeva, Olga**; Granroth, Sari; Lust, Enn; Nurk, Gunnar Journal of The Electrochemical Society 2023 / art. 054502, 10 p. : ill <https://doi.org/10.1149/1945-7111/acd084> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Influence of electrolyte scaffold microstructure and loading of miec material on the electrochemical performance of r-soc fuel electrode [Online resource]

Maide, Martin; Lillmaa, Kadi; Salvan, Laur Kristjan; **Uibu, Mai**; Lust, Enn; Nurk, Gunnar Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdtk.ut.ee/teesid-2018/>

Influence of graphite pore forming agents on the structural and electrochemical properties of porous Ni-CGO anode

Tamm, Kadi; **Triikkel, Andres** Journal of the electrochemical society 2012 / p. F849-F857 : ill
<https://iopscience.iop.org/article/10.1149/2.067212jes>

Influence of Ni concentration on electrochemical and crystallographic properties of La_{0.25}Sr_{0.25}Ca_{0.4}Ti_{1-x}Ni_xO_{3-δ} solid oxide fuel cell anode

Korjus, Ove; Möller, Priit; Kooser, Kuno; Käämbre, Tanel; **Volobujeva, Olga**; Nerut, Jaak; Kotkas, S.; Lust, Enn; Nurk, Gunnar Journal of Power Sources 2021 / Art. n.r 229739 <https://doi.org/10.1016/j.jpowsour.2021.229739> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Investigation of oxygen reduction on platinum nanoparticles deposited onto peat-derived carbon carrier

Lobjakas, Viljar; Nerut, Jaak; Kasuk, Heili; Adamson, Anu; Thomberg, Thomas; Aruväli, Jaan; Valk, Peeter; Teppor, Patrick; Koppel, Mirjam; **Mikli, Valdek**; **Volobujeva, Olga**; **Lust, Enn** ECS Meeting Abstracts 2022 / p. 49-58 : ill
<https://doi.org/10.1149/10807.0049ecst> [Journal metrics at Scopus](#) [Article at Scopus](#)

Iron and cobalt phthalocyanine embedded electrospun carbon nanofiber-based catalysts for anion exchange membrane fuel cell cathode

Muuli, Kaur; Sokka, Andri; Mooste, Marek; Lilloja, Jaana; **Gudkova, Viktoria**; Käärik, Maike; Otsus, Markus; Kikas, Arvo; Kisand, Vambola; Tamm, Aile; Leis, Jaan; **Krumme, Andres** Journal of Catalysis 2023 / p. 117-130 <https://doi.org/10.1016/j.jcat.2023.04.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Kütuseelement ergutab jätkuvalt fantaasiat : [kütuseelemendist Dmitri Vinnikov ja Madis Lehtla]

Juurak, Raivo; **Vinnikov, Dmitri**; **Lehtla, Madis** Õpetajate Leht 2010 / 5. märts, lk. 7 : fot https://artiklid.elnet.ee/record=b1962215*est

Kütuseelement võiks olla Eesti tee

Krustok, Jüri Eesti Päevaleht 1997 / 28. sept., lk. 6: ill

Mathematical models of cascaded quasi-impedance source converter

Vinnikov, Dmitri; **Roasto, Indrek**; **Zakis, Janis** Технічна електродинаміка 2010 / 1, p. 59-64 : ill
<https://ortus.rtu.lv/science/lv/publications/11212>

New converter topologies for integration of hydrogen based long-term energy storages to renewable energy systems = Uued muundurite topoloogiad vesinikul põhinevate energiasalvestite integreerimiseks taastuenergiatsüsteemidesse
Andrijanovitš, Anna 2013 http://www.ester.ee/record=b2946972*est

New fuel cell power conditioning system for supplying dedicated loads

Vinnikov, Dmitri; **Roasto, Indrek**; **Jalakas, Tanel**; **Lehtla, Tõnu**; **Laugis, Juhan** 2010 9th International Conference on Environment and Electrical Engineering : Prague, Czech Republic, 16-19 May 2010 / p. 341-344 : ill
<https://ieeexplore.ieee.org/document/5489939>

New high-gain step-up DC/DC converter for a fuel cell interfacing in hydrogen buffer

Vinnikov, Dmitri; **Husev, Oleksandr**; **Andrijanovitš, Anna**; **Roasto, Indrek** Технічна електродинаміка 2011 / p. 93-100 : ill

New high-gain step-up DC/DC converter with high-frequency isolation

Vinnikov, Dmitri; **Zakis, Janis**; **Husev, Oleksandr**; **Strzelecki, Ryszard** 2012 Twenty-Seventh Annual IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando (FL), USA, 5-9 Feb. 2012 / p. 1204-1209 : ill
<https://ieeexplore.ieee.org/document/6165972>

New step-up DC/DC converter for fuel cell powered distributed generation systems: some design guidelines

Vinnikov, Dmitri; Strzelecki, Ryszard; Zakis, Janis; **Roasto, Indrek** Przegląd elektrotechniczny 2010 / 8, p. 245-252
<https://www.semanticscholar.org/paper/New-Step-Up-DC-DC-Converter-for-Fuel-Cell-Powered-Vinnikov-Roasto/00d1f7e78e0fe0d6e2a114c0515e6eb5eb196f4e>

Numerical investigation of 3D rhombus designed PEMFC on the cell performance

Jabbary, Ali; Rostami Arnesab, Sadra; Samanipour, Hossein; **Ahmadi, Nima** International journal of green energy 2021 / 17 p. : ill
<https://doi.org/10.1080/15435075.2020.1865361> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Optimization of La_{0.2}Sr_{0.7}- xCa xTi_{0.95}Fe_{0.05}O₃-δ fuel electrode stoichiometry for solid oxide fuel-cell application

Paydar, Sara; Kooser, Kuno; Möller, Priit; **Volobujeva, Olga**; Granroth, Sari; Lust, Enn; Nurk, Gunnar ACS Applied Energy Materials 2022 / p. 10119 - 10129 <https://doi.org/10.1021/acsaem.2c01808> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Oxygen electroreduction on Fe-containing nitrogen-doped carbon nanotubes

Ratso, Sander; Kruusenberg, Ivar; Sarapuu, Ave; **Rauwel, Protima** BEC 16 : the 6th Baltic Electrochemistry Conference : Electrochemistry of Functional Interfaces and Materials : 15th-17th June 2016, Helsinki, Finland 2016 / p. 18

Oxygen reduction on silver nanoparticles supported on carbide-derived carbons

Linge, Jonas Mart; Erikson, Heiki; Merisalu, Maido; **Kaljuvee, Tiit** Journal of the electrochemical society 2018 / p. F1199–F1205
<https://doi.org/10.1149/2.0711814jes> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Parameter estimation of PEM fuel cells employing the hybrid grey wolf optimization method

Miao, Di; Chen, Wei; Zhao, Wei; **Demsas, Tekle** Energy 2020 / Art. 116616 <https://doi.org/10.1016/j.energy.2019.116616> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat as a carbon source for non-platinum group metal oxygen electrocatalysts and AEMFC cathodes

Teppor, Patrick; Jäger, Rutha; Paalo, Maarja; Adamson, Anu; Härmäs, Meelis; **Volobujeva, Olga**; Aruväli, Jaan; Palm, Rasmus; Lust, Enn International Journal of Hydrogen Energy 2022 / p. 16908 - 16920 <https://doi.org/10.1016/j.ijhydene.2022.03.199> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions

Teppor, Patrick; Jäger, Rutha; Paalo, Maarja; Palm, Rasmus; **Volobujeva, Olga**; Härk, Eneli; Kochovski, Zdravko; Romann, Tavo; Härmäs, R.; Aruväli, Jaan; Kikas, Arvo; Lust, Enn Electrochemistry Communications 2020 / art. 106700
<https://doi.org/10.1016/j.elecom.2020.106700> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions

Teppor, Patrick; Jäger, Rutha; Paalo, Madis; Palm, R.; **Volobujeva, Olga**; Härk, E.; Kochovski, Z.; Romann, Tavo; Härmäs, R.; Aruväli, J.; Kikas, A.; Lust, Enn GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 81
<http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Performance improvement method for the voltage-fed qZSI with continuous input current

Vinnikov, Dmitri; **Roasto, Indrek**; Strzelecki, Ryszard; Adamowicz, Marek MELECON 2010 : the 15th IEEE Mediterranean Electrotechnical Conference : 25th-28th April 2010, Malta : book of abstracts 2010 / p. 135 <https://ieeexplore.ieee.org/document/5476229>

Quasi-Z-source-based isolated DC/DC converters for distributed power generation

Vinnikov, Dmitri; **Roasto, Indrek** IEEE transactions on industrial electronics 2011 / p. 192-201 : ill
<https://ieeexplore.ieee.org/document/5409567>

Review of energy challenges and horizons of hydrogen city buses

Vodovozov, Valery; **Raud, Zoja**; **Petlenkov, Eduard** Energies 2022 / art. 6945 <https://doi.org/10.3390/en15196945> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Step-up DC/DC converters with cascaded quasi-Z-source network

Vinnikov, Dmitri; **Roasto, Indrek**; Strzelecki, Ryszard; Adamowicz, Marek IEEE transactions on industrial electronics 2012 / p. 3727-3736 : ill <https://ieeexplore.ieee.org/document/6096410>

Supporting critical raw material circularity – upcycling graphite from waste LIBs to Zn–air batteries

Praats, Reio; **Chernyaev, Alexander**; **Sainio, Jani**; **Lundström, Mari**; **Kruusenberg, Ivar**; **Liivand, Kerli** Green chemistry 2024 / p. 2874–2883 : ill <https://doi.org/10.1039/d3gc04315k>

Sustainable co₂-derived nanoscale carbon support to a platinum catalyst for oxygen reduction reaction

Najafli, Erkin; Ratso, Sander; Ivanov, Yuri P.; Gatalo, Matija; Pavko, Luka; **Yörük, Can Rüstü**; **Walke, Peter**; Divitini, Giorgio; Hodnik, Nejc; Kruusenberg, Ivar ACS Applied Nano Materials 2023 / p. 5772-5780 : ill <https://doi.org/10.1021/acsanm.3c00208> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sustainable co₂-derived nanoscale carbon support to a platinum catalyst for oxygen reduction reaction

Najafli, Erkin; Ratso, Sander; Ivanov, Y.P.; Gatalo, M.; Pavko, L.; **Yörük, Can Rüstü; Walke, Peter;** Divitini, G.; Hodnik, N.; Kruusenberg, Ivar GSFMT Scientific Conference 2023 : Tartu, 23-24 May, 2023 : abstracts 2023 <https://fmdk.ut.ee/programm-2023/>

Syntthesis of platinum modified nanocarbon catalysts for fuel cell application

Najafli, Erkin GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / P 39 https://fmdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf

Thermodynamic behaviour of proton exchange membrane fuel cell under different thermal treatment regimes

Kesküll, Konon; Podgurski, Vitali Proceedings of the Estonian Academy of Sciences 2024 / p. 361-365
<https://doi.org/10.3176/proc.2024.4.05>

A three-phase full soft-switching current-fed naturally clamped DC-DC converter for high-power fuel cell applications

Kosenko, Roman; Chub, Andrii; Blinov, Andrei 2016 2nd International Conference on Intelligent Energy and Power Systems (IEPS) : Kyiv, Ukraine, June 7-11, 2016 : conference proceedings 2016 / [5] p. : ill <https://doi.org/10.1109/IEPS.2016.7521882>

Transition-metal- and nitrogen-doped carbide-derived carbon/carbon nanotube composites as cathode catalysts for anion-exchange membrane fuel cells

Lilloja, Jaana; Kibena-Pöldsepp, Elo; Sarapuu, Ave; Douglin, John C.; Käärik, Maike; Kozlova, Jekaterina; **Paiste, Päärn;** Kikas, Arvo; Aruväli, Jaan; Leis, Jaan ACS catalysis 2021 / p. 1920-1931 <https://doi.org/10.1021/acscatal.0c03511> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The utilization of platinum catalysts deposited on carbon support synthesized from coffee grounds in a polymer electrolyte membrane fuel cell

Simson, Sander; Nerut, Jaak; Härmas, Meelis; Valk, Peeter; Teppor, Patrick; Palm, Rasmus; Koppel, Miriam; Aruväli, Jaan; Korjus, Ove; **Volobujeva, Olga;** Mansson, Martin; Lust, Enn ECS Meeting Abstracts 2023 / art. 2295 <https://doi.org/10.1149/MA2023-01382295mtgabs>

Uudsed alalispingemuundurid taastuenergeetikas

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek Teadusmõte Eestis (X). Tehnikateadused. 3 : [artiklikogumik] 2019 / lk. 216-226 : ill., fot https://www.ester.ee/record=b5208765*est

Vanadium and carbon composite electrocatalyst for oxygen reduction reaction

Zarmehri, Ehsan; Raudsepp, Ragle; **Danilson, Mati;** Šutka, A.; Kruusenberg, Ivar Materials chemistry and physics 2023 / art. 128162, 10 p. : ill <https://doi.org/10.1016/j.matchemphys.2023.128162> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Waste tire derived carbon support for non-platinum-group metal catalyst materials for oxygen reduction reaction in alkaline medium

Laanemäe, Joel; Jäger, Rutha; Teppor, Patrick; **Volobujeva, Olga;** Lust, Enn ECS Meeting Abstracts 2023 / p. 2283-2283
<https://doi.org/10.1149/MA2023-01382283mtgabs>

Waste tire derived carbon support for non-platinum-group metal catalyst materials for oxygen reduction reaction in alkaline medium

Laanemäe, Joel; Jäger, Rutha; Teppor, Patrick; **Volobujeva, Olga;** Lust, Enn ECS Transactions 2023 / p. 63-72
<https://doi.org/10.1149/11105.0063ecst>

Vesiniku jõul liikuvad autod ja digitaalne tulevik

Rassõlkin, Anton Elektriala 2021 / lk. 22-23 : ill https://www.ester.ee/record=b1240496*est