

Analysis of the use of supercapacitors and batteries as energy storage elements for off-grid hybrid photovoltaic inverters
Gonschorowski, E.; Cardoso, Rafael; **Carvalho da Silva, Edivan Laercio**; de Oliveira Stein, Carlos Marcelo; Carati, Emerson
Giovani; Denardin, Gustavo Weber; da Costa, Jean Patric 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian
Power Electronics Conference (SPEC/COBEP) 2023 / 7 p <https://doi.org/10.1109/SPEC56436.2023.10407182>

Characterising local environments in high energy density Li-ion battery cathodes: A combined NMR and first principles study of LiFe_{0.9}Co_{0.1}PO₄

Strobridge, Fiona C.; Middlemiss, Derek S.; Pell, Andrew J.; Leskes, Michal; Clément, Raphaële J.; Pourpoint, Frédérique; Lu, Zhouguang; Hanna, John V.; Pintacuda, Guido; **Samoson, Ago** Journal of materials chemistry A 2014 / p. 11948-11957 : ill <https://doi.org/10.1039/c4ta00934g> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Correlations between lithium local structure and electrochemistry of layered LiCo_{1-2x}Ni_xMn_xO₂ oxides: 7Li MAS NMR and EPR studies

Stoyanova, Radostina; Ivanova, Svetlana; Zhecheva, Ekaterina; **Samoson, Ago**; Simova, Svetlana; Tzvetkova, Pavleta; Barra, Anne-Laure Physical chemistry chemical physics 2014 / p. 2499-2507 : ill <https://doi.org/10.1039/c3cp54438a> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

DC-link capacitor minimization in residential energy router through battery utilization

Najafzadeh, Mahdiyyeh; Vinnikov, Dmitri; Husev, Oleksandr; Jalakas, Tanel; Roasto, Indrek 2021 IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Florence, Italy, 14-16 July 2021 2021 / p. 1-6 : ill <https://doi.org/10.1109/CPE-POWERENG50821.2021>

Determination of the impedance of lithium-ion batteries using methods of digital signal processing

Rahmoun, Ahmad; Loske, Moritz; **Rosin, Argo** Energy procedia 2014 / p. 204-213 : ill <https://doi.org/10.1016/j.egypro.2014.01.174> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Development of in situ high resolution NMR: Proof-of-principle for a new (spinning) cylindrical mini-pellet approach applied to a Lithium ion battery

Mohammad, Irshad; Cambaz, Musa Ali; **Samoson, Ago**; Fichtner, Maximilian; Witter, Raiker Solid state nuclear magnetic resonance 2024 / art. 101914 <https://doi.org/10.1016/j.ssnmr.2023.101914> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Eesti talv ja tootja promo: millised on tegelikud väljakutsed elektriautode akude arendamisel? Teemat avab TalTechi professor

Rassõlkin, Anton digi.geenius.ee 2024 [Eesti talv ja tootja promo: millised on tegelikud väljakutsed elektriautode akude arendamisel? Teemat avab TalTechi professor](#)

Eesti teadlaste avastus võimaldab akusid suuremal määral ümbertöödelda

Saar, Sandra novaator.err.ee 2024 [Eesti teadlaste avastus võimaldab akusid suuremal määral ümbertöödelda](#)

Elektriline paadi päramootor liitiumaku toitega

Gavrilov, Aleksei Kalastaja 2016 / lk. 76-79 : ill. ; 82, lk. 76 http://www.ester.ee/record=b1072320*est https://artiklid.elnet.ee/record=b2807237*est

High-efficiency partial power converter for integration of second-life battery energy storage systems in DC microgrids

Hassanpour, Naser; Chub, Andrii; Yadav, Neelesh; Blinov, Andrei; Vinnikov, Dmitri IEEE Open Journal of the Industrial Electronics Society 2024 / p. 847-860 <https://doi.org/10.1109/OJIES.2024.3389466> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Jõuelektroonik: akupõlenguid õhutab rutiinist toituv turvatunne

Blinov, Andrei novaator.err.ee 2024 [Jõuelektroonik: akupõlenguid õhutab rutiinist toituv turvatunne](#)

Lahendus liitiumikriisile, tulevasele liitiumikriisile

Strandberg, Marek Inseneeria 2016 / lk. 8 : fot https://artiklid.elnet.ee/record=b2755207*est

Li⁺ intercalation in isostructural Li₂VO₃ and Li₂VO₂F with O²⁻ and mixed O²⁻/F⁻ anions

Chen, Ruiyong; Ren, Shuhua; Yavuz, Murat; Guda, Alexander A.; Shapovalov, Viktor; **Witter, Raiker**; Fichtner, Maximilian; Hahn, Forst Physical chemistry chemical physics 2015 / p. 17288-17295 : ill <https://doi.org/10.1039/c5cp02505b> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Li-Ion battery equivalent circuit modelling

Hokmabad, Hossein Nourollahi 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 97-98 : ill https://www.ester.ee/record=b5504019*est

Mathematical modeling and analysis of a battery energy storage system for microgrids = Mikrovõrkude

energiasalvestussüsteemi matemaatilise modelleerimine ja analüüs

Rahmoun, Ahmad 2017 <https://digi.lib.ttu.ee/i/?9116> https://www.ester.ee/record=b4745144*est

Mathematical modeling and dynamic behavior of a lithium-ion battery system for microgrid application

Rahmoun, Ahmad; Armstorfer, Andreas; Helguero Cruz, Jorge Luis; Biechl, Helmuth; Rosin, Argo 2016 IEEE International Energy Conference (ENERGYCON) : [Leuven, Belgium, 4-8 April 2016] 2016 / [6] p. : ill
<https://doi.org/10.1109/ENERGYCON.2016.7513977>

Modular battery charger for light electric vehicles

Blinov, Andrei; Verbytskyi, Ievgen; Zinchenko, Denys; Vinnikov, Dmitri; Galkin, Ilja Energies 2020 / art. 774, 21 p. : ill
<https://doi.org/10.3390/en13040774> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

MPC based power management for off-grid photovoltaic hybrid inverters using Li-ion batteries and supercapacitors

Gonschorowski, E.; Cardoso, Rafael; Carvalho, Edivan Laercio; de Oliveira Stein, Carlos Marcelo; Carati, Emerson Giovanni; Denardin, Gustavo Weber; da Costa, Jean Patric 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 6 p
<https://doi.org/10.1109/ICDCM63994.2025.11144663> [Conference at Scopus](#)

A Pathway to Circular Economy-Converting Li-Ion Battery Recycling Waste into Graphite/rGO Composite Electrocatalysts for Zinc–Air Batteries

Praats, Reio; Sainio, Jani; Vikberg, Milla; Klemettinen, Lassi; Wilson, Benjamin P.; Lundström, Mari; Kruusenberg, Ivar; Liivand, Kerli Batteries 2025 / art. 165, 18 p. : ill <https://doi.org/10.3390/batteries11040165>

A Review on graphene-based electrospun conductive nanofibers, supercapacitors, Anodes, and cathodes for lithium-ion batteries

Javed, Kashif; Oolo, Marco; Savest, Natalja; Krumme, Andres Critical Reviews in Solid State and Materials Sciences 2019 / p. 427-443 : ill <https://doi.org/10.1080/10408436.2018.1492367> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A self-rechargeable and flexible polymer solar battery

Dennler, G.; Bereznev, Sergei; Meissner, Dieter; Mellikov, Enn; Öpik, Andres Solar energy 2007 / 8, p. 947-957
<https://www.sciencedirect.com/science/article/pii/S0038092X07000424>

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>

Synthesis of ternary GNP-CNT-ZrO₂ nanocomposite as a high-performance anode for lithium-ion batteries

Imanian Ghazanlou, Siavash; Imanian Ghazanlou, Siamak; Imanian Ghazanlou, Sroush; Mohammadpour, Naghme; Hussainova, Irina Journal of industrial and engineering chemistry 2023 / p. 209-221 : ill <https://doi.org/10.1016/j.jiec.2023.07.050> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Upcycling Li-Ion Battery Waste into Sustainable Electrocatalysts for Zinc-Air Battery Application = Liitumioonakude jäätmete väärandamine ressursitõhusateks katalüsaatomaterjalideks tsink-õhk akude tarvis

Praats, Reio 2025 https://www.ester.ee/record=b5759684*est <https://digikogu.taltech.ee/et/Item/d902a21f-04e5-4ea7-b4cd-fe03752a55dc>
<https://doi.org/10.23658/taltech.66/2025>

Utilizing waste lithium-ion batteries for the production of graphite-carbon nanotube composites as oxygen electrocatalysts in zinc–air batteries

Praats, Reio; Sainio, Jani; Vikberg, Milla; Klemettinen, Lassi; Wilson, Benjamin P.; Lundström, Mari; Kruusenberg, Ivar; Liivand, Kerli RSC Sustainability 2025 / p. 546–556 : ill <http://dx.doi.org/10.1039/d4su00526k>

Открытие эстонских ученых позволит перерабатывать аккумуляторы в большем объеме

Saar, Sandra rus.err.ee 2024 [Открытие эстонских ученых позволит перерабатывать аккумуляторы в большем объеме](#)

Советы ученого: как снизить риск возгорания аккумулятора

Blinov, Andrei nauka.err.ee 2024 [Советы ученого: как снизить риск возгорания аккумулятора](#)