

Advances in room temperature fluoride-ion batteries

Molaiyan, Palanivel; Mohammad, Irshad; Witter, Raiker 20th International Conference on Advanced Energy Materials and Research, August 13-14, 2018, Dublin, Ireland : posters 2018 / p. 94 : ill <https://doi.org/10.4172/2576-1463-C1-003>

Analysis and design of ultracapacitor-boosted back-up power supply for tramcars [Electronic resource]

Hõimoja, Hardi; Vinnikov, Dmitri; Jalakas, Tanel EUROCON 2009 : International IEEE Conference devoted to the 150-anniversary of Alexander S. Popov : May 18-23, 2009 Saint Petersburg, Russia 2009 / p. 598-604 [CD-ROM]
<https://ieeexplore.ieee.org/document/5167691>

Battery impedance and its relation to battery characteristics

Tenno, Ander; Tenno, Robert; Suntio, Teuvo Proc. 24th INTELEC Conf., Montreal, Canada, 2002 2002 / p. 176-183
https://www.researchgate.net/publication/3976210_Battery_impedance_and_its_relationship_to_battery_characteristics

Battery impedance characterization through inspection of discharge curve and testing with short pulses

Tenno, Ander; Tenno, Robert; Suntio, S. Journal of power sources 2006 / 2, p. 1029-1033 : ill
<https://www.sciencedirect.com/science/article/pii/S0378775305015879>

Battery storage technologies for electrical applications : impact in stand-alone photovoltaic systems

Akinyele, Daniel; **Belikov, Juri;** Levron, Yoash Energies 2017 / art. 1760, 39 p. : ill <https://doi.org/10.3390/en10111760> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bifunctional multi-metallic nitrogen-doped nanocarbon catalysts derived from 5-methylresorcinol

Kisand, Kaarel; Sarapuu, Ave; Kikas, Arvo; Kisand, Vambola; Rähn, Mihkel; Treshchalov, Alexey; Käärik, Maike; Piirsoo, Helle-Mai; Aruväli, Jaan; **Paiste, Päärn** Electrochemistry communications 2021 / art. 106932 <https://doi.org/10.1016/j.elecom.2021.106932> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Closed-loop control system design for wireless charging of low-voltage EV batteries with time-delay constraints

Shevchenko, Viktor; Pakhaliuk, Bohdan; Zakis, Janis; Veligorskyi, Oleksandr; Luszcz, Jaroslaw; **Husev, Oleksandr;** Lytvin, Oksana; **Matiushkin, Oleksandr** Energies 2021 / art. 3934, 21 p. : ill <https://doi.org/10.3390/en14133934> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Clustering and outlier analysis for key performance indicators in battery energy storage systems applications

Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227417>

A comparison between three-phase conventional two-stage ac-dc and single-stage matrix converter approaches

Mohseni, Parham; Emiliani, Pietro; Husev, Oleksandr; Vinnikov, Dmitri; Mackay, Laurens 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227438>

Concept of hardware-in-the-loop test platform for microgrid with multi-agent approach

Kuzin, Aleksei; Lukichev, Dmitry; **Demidova, Galina;** Anuchin, Alecksey 2020 IEEE 61st International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, Nov. 5-7, 2020 : conference proceedings 2020 <https://doi.org/10.1109/RTUCON51174.2020.9316626>

Concept of universal AC/DC-DC EV onboard battery charger with minimal redundancy and high-power density

Mohseni, Parham 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. 73-74 : ill https://www.ester.ee/record=b5504019*est

Congestion control strategies for increased renewable penetration of photovoltaic in LV distribution networks

Shabbir, Noman; Kütt, Lauri; Astapov, Victor; Husev, Oleksandr; Ahmadihangar, Roya; Wen, Fushuan; Kull, Karl Energy reports 2022 / p. 217-223 <https://doi.org/10.1016/j.egyr.2022.10.184> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Control of ultracapacitors energy exchange [Electronic resource]

Roasto, Indrek; Lehtla, Tõnu; Möller, Taavi; Rosin, Argo EPE-PEMC 2006 : 12th International Power Electronics and Motion Control Conference : Portorož, Slovenia, August 30 - September 1, 2006 : proceedings 2006 / p. 1401-1406 : ill. [CD-ROM]
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Crystal phase and surface defect driven synthesis of Pb1-xSnxF2 solid solution electrolyte for fluoride ion batteries

Molaiyan, Palanivel; Witter, Raiker Journal of electroanalytical chemistry 2019 / p. 154-159
<https://doi.org/10.1016/j.jelechem.2019.04.063> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Data science-based techniques for modelling and diagnostics of battery cells based on end-of-life criteria

Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants 2023 International Conference on Electrical Drives and Power Electronics (EDPE) 2023 / 6 p <https://doi.org/10.1109/EDPE58625.2023.10274007>

Design and implementation of a digital control and monitoring system for an AC/DC UPS [Electronic resource]

Palamar, Andriy; Karpinsky, Mykola; Vodovozov, Valery CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 173-177 [CD-ROM]
<https://ieeexplore.ieee.org/document/5942227>

Development of a battery sizing tool for nearly zero energy buildings

Ahmadiahangar, Roya; Husev, Oleksandr; Blinov, Andrei; Karami, Hossein; Rosin, Argo IECON 2020 The 46th Annual Conference of the IEEE Industrial Electronics Society 2020 / p. 5149-5154 : ill <https://doi.org/10.1109/IECON43393.2020.9254557>
[Conference proceeding](#) [Article at Scopus](#) [Article at WOS](#)

Fast model for monitoring of backup batteries in telecommunications networks

Tenno, Ander; Tenno, Robert; Suntio, Teuvo Proceedings of the IASTED International Conference Power and Energy Systems : May 13-15, 2002, Marina del Rey, California, USA 2002 / p. 458-463

First charging cycle model of a lithium-ion battery and its experimental verification

Peterson, Kristjan 14th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. II" : Pärnu, Estonia, January 13-18, 2014 2014 / p. 118-122 : ill

Full-bridge fault-tolerant isolated DC-DC converters : overview of technologies and application challenges

Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri IEEE Power Electronics Magazine 2022 / p. 45-55
<https://doi.org/10.1109/MPEL.2022.3196565> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid inverter and control strategy for enabling the PV generation dispatch using extra-low-voltage batteries

Meneghetti, Luiz Henrique; **Carvalho da Silva, Edivan Laercio**; Carati, Emerson Giovani; Denardin, Gustavo Weber; da Costa, Jean Patric; de Oliveira Stein, Carlos Marcelo; Cardoso, Rafael Energies 2022 / art. 7539 <https://doi.org/10.3390/en15207539> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impedance characterization of VRLA batteries

Suntio, Teuvo; **Tenno, Ander; Tenno, Robert** Proc. 9th Power Quality Conference : Nürnberg, Germany, 2003 2003 / p. 325-330

Implementation of burst control based on sigma-delta modulation in low-cost microcontroller

Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri IEEE Workshop on Computers in Power Electronics 2022 / 6 I
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Intelligent energy management of unmanned ground vehicle

Hiimaa, Maido; Tamre, Mart Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 542-547 : ill

Interface converters for residential battery energy storage systems : practices, difficulties and prospects

Galkin, Ilja; **Blinov, Andrei**; Vorobyov, Maxim; Bubovich, Alexander; Saltanovs, Rodions; Pefitsis, Dimosthenis Energies 2021 / art. 3365 <https://doi.org/10.3390/en14123365> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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Hannolainen, Aivar; Ojanurm, Kai-Ly Tehnikaülikool 1998 / 19. jaan., lk. 4-5 https://www.ester.ee/record=b5309277*est

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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

Mechanochemical synthesis of solid-state electrolyte Sm_{1-x}CaxF_{3-x} for batteries and other electrochemical devices

Molaiyan, Palanivel; Witter, Raiker Materials letters 2019 / p. 22-26 <https://doi.org/10.1016/j.matlet.2019.02.034> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A method for battery impedance analysis

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<https://iopscience.iop.org/article/10.1149/1.1697413>

Modeling battery energy storage systems based on remaining useful lifetime through regression algorithms and binary classifiers

Zequera, Rolando Antonio Gilbert; Rjabtsikov, Viktor; Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants Applied sciences 2023 / art. 7597 <https://doi.org/10.3390/app13137597> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modelling of consumption shares for small wind energy prosumers

Annuk, Andres; Yaici, Wahiba; **Blinov, Andrei**; Märss, Maido; Trashchenkov, Sergei; Miidla, Peep Symmetry 2021 / art. 647
<https://doi.org/10.3390/sym13040647> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modular self-balancing battery charger concept for cost-effective power-assist wheelchairs

Galkin, Ilja; **Blinov, Andrei**; Verbytskyi, Ievgen; **Zinchenko, Denys** Energies Special Issue Power Electronic Systems for Efficient and Sustainable Energy Supply 2019 / art. en12081526, 21 p. : ill <https://doi.org/10.3390/en12081526> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multiport converter with integrated energy storage for hydrogen buffer interfacing with renewable energy systems [Electronic resource]

Andrijanovič, Anna; Blinov, Andrei; Husev, Oleksandr; Vinnikov, Dmitri 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 235-240 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6209943>

New carbon-based catalyst synthesis from spent li-ion batteries for electrochemical oxygen reduction

Kazemi, Maryam; Liivand, Kerli; Kruusenberg, Ivar; **Walke, Peter; Mikli, Valdek; Uibu, Mai**; Macdonald, Digby D. GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / P 42 https://fmdtk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf

Optimized energy scheduling of residential DC building: Case of Nordic climate

Sidorova, Aleksandra; Blinov, Andrei; Ahmadihangar, Roya; Vinnikov, Dmitri; Vösa, Karl-Villem; Kurnitski, Jarek 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 7 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227437>

Overview of battery energy storage systems readiness for digital twin of electric vehicles

Zequera, Rolando Antonio Gilbert 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. 103-104 https://www.ester.ee/record=b5504019*est

Overview of battery energy storage systems readiness for digital twin of electric vehicles

Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants IET Smart Grid 2023 / p. 5-16 <https://doi.org/10.1049/stg2.12101> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An Overview of bidirectional AC-DC grid connected converter topologies for low voltage battery integration

Kroics, Kaspars; **Husev, Oleksandr**; Tytelmaier, Kostiantyn; **Zakis, Janis**; Veligorskyi, Oleksandr International Journal of Power Electronics and Drive System (IJPEDS) 2018 / p. 1223-1239 : ill <https://doi.org/10.11591/ijpeds.v9.i3.pp1223-1239>

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>

Profitability of energy storages for household load scheduling

Lebedev, Denis; Rosin, Argo; Auväär, Aivar 11th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 16-21, 2012 2012 / p. 70-75 : ill

Rahvusvaheline elektrotehnika sõnastik. Osa 482, Primaar- ja sekundaareleemendid ja -patareid [Võrguteavik] = International Electrotechnical Vocabulary. Part 482: Primary and secondary cells and batteries (IEC 60050-482:2004 + IEC 60050-482:2004/Amd 1:2016 - IEC 60050-482:2004/Amd 2:2020, identical) 2020 <https://www.evcs.ee/StandardDownload/DownloadPreview?productId=134267&language=43>

Reconfigurable battery pack for unmanned ground vehicle

Hiiemaa, Maido; Tamre, Mart 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 200-203 : ill

Reliability analysis of battery energy storage system for various stationary applications

Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Shen, Yanfeng; Sangwongwanich, Ariya Journal of energy storage 2022 / art. 104217 <https://doi.org/10.1016/j.est.2022.104217> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Robert Krautmann, "Päikesepatareid annavad vunki värvõrguseadmetele". Teadus 3 minutiga 2022.11.02

Krautmann, Robert Eesti Teaduste Akadeemia : Youtube kanal 2022 / video [Robert Krautmann. "Päikesepatareid annavad vunki värvõrguseadmetele". Teadus 3 minutiga 2022.11.02 „Teadus 3 minutiga“ finaalgala 2022. 11.02.2022](#)

Sekundaareleemendid ja -patareid, mis sisaldavad leeliselisi või teisi mittehappelisi elektrolüüte. Liitumpatereid ja sekundaareleemendid kaasaskantavatele rakendustele = Secondary cells and batteries containing alkaline or other non-acid electrolytes. Secondary lithium cells and batteries for portable applications (IEC 61960:2011)

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SOC estimation for Li-Ion batteries based on equivalent circuit diagrams and the application of a Kalman filter

Rahmoun, Ahmad; Biechl, Helmuth; **Rosin, Argo** PQ2012 : 8th International Conference : 2012 Electric Power Quality and Supply Reliability : June 11-13, 2012, Tartu, Estonia : conference proceedings 2012 / p. 273-276 : ill
https://www.researchgate.net/publication/261507418_SOC_estimation_for_Li-ion_batteries_based_on_equivalent_circuit_diagrams_and_the_application_of_a_Kalman_filter

Soft-sensor approach in characterization of VRLA batteries

Tenno, Ander; Tenno, Robert; Suntio, Teuvo Proc. INTELEC 2001 2001 / p. 554-562
<https://ieeexplore.ieee.org/document/988617/similar#similar>

State of charge estimation for Li-ion batteries based on equivalent circuit diagrams and the application of a Kalman filter

Rahmoun, Ahmad; Biechl, Helmuth; **Rosin, Argo** 12th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Kuressaare, Estonia, June 11-16, 2012 2012 / p. 125-128 : ill

A structurally flexible halide solid electrolyte with high ionic conductivity and air processability

Karkera, Guruprakash; Soans, Mervyn; Akbaş, Ayça; **Witter, Raiker**; Euchner, Holger; Diemant, Thomas; Cambaz, Musa Ali; Meng, Zhen; Dasari, Bosubabu; Chandrappa, Shivaraju Guddehalli; Menezes, Prashanth W.; Fichtner, Maximilian Advanced energy materials 2023 / art. 2300982 <https://doi.org/10.1002/aenm.202300982> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Surface defect-enhanced conductivity of calcium fluoride for electrochemical applications

Molaiyan, Palanivel; **Witter, Raiker** Material design & processing communications 2019 / art. e44, 10 p. : ill
<https://doi.org/10.1002/mdp2.44>

The effects of intermittent charging on VRLA battery life expectancy in telecom applications

Suntio, Teuvo; Waltari, P.; **Tenno, Ander**; Tenno, Robert Proc. 24th INTELEC Conf., Montreal, Canada, 2002 2002 / p. 121-127
<https://ieeexplore.ieee.org/document/1048644>

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>

Valesti äravisatud patareid ohustavad kõiki. Need võivad süttida, plahvatada ja mürgitada

Kontro, Kristin Eesti Päevaleht 2023 / Lk. 18-19 https://dea.digar.ee/article/eestipaevaleht/2023/01/04/19.3_Valesti_äravisatud_patareid_ohustavad_kõiki_Need_võivad_süttida_plahvatada_ja_mürgitada

Värkvõrgule võivad tulevikus vunki anda päikesepatareid [võrguväljaanne]

Krautmann, Robert novaator.err.ee 2022 "[Värkvõrgule võivad tulevikus vunki anda päikesepatareid](#)"

О возможности оптимального регулирования конденсаторных батарей в распределительных сетях по местным параметрам

Seier, Gustav; **Tiigimägi, Eeli** Материалы XXII Литовской республиканской научно-технической конференции (31 января - 5 февраля 1972 г.) 1972 / с. 227-228