

Adaptive frequency-based power management for off-grid hybrid photovoltaic converters

Gonschorowsk, Ezequiel; Cardoso, Rafael; **Carvalho da Silva, Edivan Laercio**; **Stein, Carlos Marcelo De Oliveira**; Carati, Emerson Giovanni; Denardin, Gustavo Weber; da Costa, Jean Patric Eletronica de potencia 2024 / art. e202440 <https://doi.org/10.18618/REP.e202440>

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 Giovanni; 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>

Assessment of mixed energy storage system considering high spatial resolution data from a real PV installation

Rogowski, Szymon; **Hasan, Sayeed**; **Chub, Andrii**; **Sibinski, Maciej** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 6 p <https://doi.org/10.1109/BEC61458.2024.10737964> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Comparison of carbon aerogel and carbide-derived carbon as electrode materials for non-aqueous supercapacitors with high performance

Laheäär, Ann; **Peikolainen, Anna-Liisa**; **Koel, Mihkel**; Jänes, Alar; Lust, Enn Journal of solid state electrochemistry 2012 / p. 2717-2722 : ill <https://link.springer.com/article/10.1007/s10008-012-1660-4>

Comparison of carbon aerogel and carbide-derived carbon as electrode materials for non-aqueous supercapacitors with high performance

Laheäär, Ann; **Peikolainen, Anna-Liisa**; **Koel, Mihkel**; Jänes, Alar; Lust, Enn The 63rd Annual Meeting of International Society of Electrochemistry : 19.-24.08.2012, Praha 2012 / Abstract #s04-068 <https://link.springer.com/article/10.1007/s10008-012-1660-4>

Control strategies of ultracapacitors

Roasto, Indrek; **Lehtla, Tõnu**; **Rosin, Argo** 3rd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 16-21, 2006 2006 / p. 85-88

Cost-effective synthesis of electrodeposited NiCo2O4 nanosheets with induced oxygen vacancies : a highly efficient electrode material for hybrid supercapacitors

Pappu, Samhita; Nanaji, Katchala; **Mandati, Sreekanth**; Rao, Tata Naransinga; **Martha, Surendra K.**; **Bulusu, Sarada V.** Batteries and supercaps 2020 / p. 1209-1219 <https://doi.org/10.1002/batt.202000121>

Development of electrospon nanostructured electrochemical double-layer capacitor electrodes = Elektrilise kaksikkihi kondensaatori elektrokedratud nanostruktuursete elektroodide arendus

Malmberg, Siret 2021 <https://digikogu.taltech.ee/et/Item/ab0b679b-f1a4-4f69-af49-949f7698e2fc> https://www.ester.ee/record=b5451440*est <https://doi.org/10.23658/taltech.39/2021>

Directly electrospon electrodes for electrical double-layer capacitors from carbide-derived carbon

Malmberg, Siret; Arulepp, Mati; **Savest, Natalja**; **Tarasova, Elvira**; **Vassiljeva, Viktoria**; **Krasnou, Illia**; **Käärik, Maike**; **Mikli, Valdek**; **Krumme, Andres** Journal of electrostatics 2020 / art. 103396, 7 p. : ill <https://doi.org/10.1016/j.elstat.2019.103396> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Economic feasibility analysis for a residential building in Tallinn with high electricity consumption. A case study with suitable energy storage for the Estonian climate

Rikkas, Elina Rebecka 2020 17th International Conference on the European Energy Market (EEM) 2020 / 5 p <https://doi.org/10.1109/EEM49802.2020.9221961>

Eestlased võitsid Euroopa aasta leiutaja auhinna

Postimees 2022 / Lk. 9 <https://dea.digar.ee/article/postimees/2022/06/27/11.6>

Electrochemical evaluation of directly electrospon carbide-derived carbon-based electrodes in different nonaqueous electrolytes for energy storage applications

Malmberg, Siret; Arulepp, Mati; **Tarasova, Elvira**; **Vassiljeva, Viktoria**; **Krasnou, Illia**; **Krumme, Andres** C – journal of carbon research 2020 / art. 59, 16 p. : ill <https://doi.org/10.3390/c6040059>

Electroconductive fibrous mat prepared by electrosponning of polyacrylamide-g-polyaniline copolymers as electrode material for supercapacitors

Smirnov, Michael; **Tarasova, Elvira**; **Mikli, Valdek**; **Vassiljeva, Viktoria**; **Krumme, Andres** Journal of materials science 2018 / p. 4859–4873 : ill <https://doi.org/10.1007/s10853-018-03186-w> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Elektrokedratud kiud

Krumme, Andres Horisont 2021 / lk. 14-15 : fot https://www.ester.ee/record=b1072243*est

Energiasalvestid ja -salvestustehnoloogiad

Rosin, Argo; Link, Siim; Hõimoja, Hardi; Drovtar, Imre 2015 http://www.ester.ee/record=b4484414*est

Enhancement of residential PV energy storage system by supercapacitor battery – high spatial resolution data analysis
Rogowski, Szymon; Hasan, Sayeed; Chub, Andrii; Sibinski, Maciej Proceedings of the Estonian Academy of Sciences 2025 / p. 269-280 <https://doi.org/10.3176/proc.2025.2S.01>

Experimental verification of novel bi-directional qZSI based DC/DC converter for short term energy storage systems [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Ribickis, Leonids International Conference on Renewable Energies and Power Quality (ICREPQ'11) : Las Palmas de Gran Canaria (Spain), 13th to 15th April 2011 2011 / [5] p. : ill. [CD-ROM]
<https://www.icrepq.com/icrepq%2711/550-zakis.pdf>

Ilmus eestikeelne raamat energiasalvestistest

Ehitaja 2015 / lk. 34 : ill

Investigation of supercapacitor bidirectional power flow system

Rankis, Ivars; **Zakis, Janis** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering = Rīgas Tehniskās universitātes zinātniskie raksti. Serija 4. Energētika un elektrotehnika 2012 / p. 35-40 : ill
<https://ortus.rtu.lv/science/en/publications/13864>

Key aspects of industrial fabrication of carbon based ionic capacitive laminates

Kaasik, Friedrich; Jürgens, M.; Lust, Enn; Aabloo, Alvo; Baranova, Inna; Basant, Martin Z.; Hantel, Moritz M.; Johanson, Urmas; Kiefer, Rudolf; **Koel, Mihkel;** Peikola, Anna-Liisa Future Frontiers : PhD Conference on Emerging Technologies : Book of Abstracts 2025 / p. 33 ; oral 22 https://tuit.ut.ee/sites/default/files/2025-05/PhD%20Conference%202025%20Book%20of%20Abstracts_pub3.pdf

Lade- und Entladevorgänge von Ultrakondensatoren

Roasto, Indrek Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 19-24, 2004 2004 / p. 69-72 : ill

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](#)

New bi-directional DC/DC converter for supercapacitor interfacing in high-power applications

Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010 / p. T11-38 - T11-43 : ill
https://www.researchgate.net/publication/224184374_New_bi-directional_DCDC_converter_for_supercapacitor_interfacing_in_high-power_applications

Outlook of usage of supercapacitors in uninterruptible power supplies

Galkin, Ilja; Stepanov, A.; **Laugis, Juhan** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 237-240 : ill

The performance of fibrous CDC electrodes in aqueous and non-aqueous electrolytes

Malmberg, Siret; Arulepp, Mati; **Laanemets, Krista;** Käär, Maike; Laheäär, Ann; **Tarasova, Elvira; Vassiljeva, Viktoria;** Krasnou, Illia; **Krumme, Andres** C : Journal of Carbon Research 2021 / art. 46 <https://doi.org/10.3390/c7020046>

Quasi-Z-source inverter based bi-directional DC/DC converter : analysis of experimental results [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Ribickis, Leonids CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 394-399 [CD-ROM]
https://www.researchgate.net/publication/224245116_Quasi-Z-source_inverter_based_bi-directional_DCDC_converter_Analysis_of_experimental_results

A test bench to study propulsion drives of electric vehicles with a supercapacitor storage system [Electronic resource]

Rassõlkin, Anton; Vodovozov, Valery Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [3] p. : ill [CD-ROM]

TTÜ teadlased arendavad kosmosetehnika jaoks vajalikke supekondensaatoreid [Võrguväljaanne]

Vähi, Kersti novaator.err.ee 2020 / fot [TTÜ teadlased arendavad kosmosetehnika jaoks vajalikke supekondensaatoreid](#)

Ultrakondensatoren - Energiespeicher für Schienenfahrzeuge

Roasto, Indrek 2nd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 17-22, 2005 2005 / p. 119-122 : ill

Ülikondensaatoreid

Об экспериментальных испытаниях двухтактного квази-импедансного преобразователя постоянного напряжения с полупроводниковыми элементами на основе карбида кремния [Компьют. файл]

Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri; Husev, Oleksandr Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [2] с. : ил [CD-ROM]