

Analysis and comparison of high-frequency link converter topologies

Korkh, Oleksandr 17th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018 / p. 156-161 : ill http://ise.elnet.ee/record=b2950098~S2*est

Analysis of oscillation suppression methods in the AC-AC stage of high frequency link converters

Korkh, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 5 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982259>

Characterisation of 1200 V RB-IGBTs with different irradiation levels under hard and soft switching conditions

Blinov, Andrei; Korkh, Oleksandr; Vinnikov, Dmitri; Waind, Peter 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 / p. 1382-1391 : ill <https://ieeexplore.ieee.org/document/8515535>

Characterisation of 1200 V reverse-blocking IGBTs for naturally commutated HF-link inverter

Zinchenko, Denys; Korkh, Oleksandr; Blinov, Andrei; Waind, Peter; Vinnikov, Dmitri 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 382-387 : ill <https://doi.org/10.1109/UKRCON.2019.8879900>

Comparison of soft switching methods of DC-AC full bridge high-frequency link converter

Korkh, Oleksandr; Blinov, Andrei; Kosenko, Roman; Vinnikov, Dmitri 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659898>

Dual-Mode magnetically integrated photovoltaic microconverter with adaptive mode change and global maximum power point tracking

Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Rosin, Argo; Babaei, Ebrahim IET renewable power generation 2021 / p. 86-98 <https://doi.org/10.1049/rpg2.12007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dynamic characteristic evaluation of a 600V reverse blocking IGBT device

Korkh, Oleksandr; Blinov, Andrei Advances in Information, Electronic and Electrical Engineering (AIEEE) : proceedings of the 5th IEEE Workshop, november 24-25, 2017, Riga, Latvia 2018 / p. 1-5 : ill <https://doi.org/10.1109/AIEEE.2017.8270527>

Energy yield assessment methodology for photovoltaic microinverters

Chub, Andrii; Kosenko, Roman; Korkh, Oleksandr; Vinnikov, Dmitri; Kouro, Samir 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC 2019) Santos, Brazil, 1-4 December 2019 / p. 1178-1183 : ill <http://toc.proceedings.com/52923webtoc.pdf>

Experimental verification of two-stage power converter with current-fed soft-switching front-end for battery storage applications

Kosenko, Roman; Blinov, Andrei; Korkh, Oleksandr 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 / p. 1599-1608 : ill <https://ieeexplore.ieee.org/document/8515580>

Fault-tolerant approach for photovoltaic module-level power electronic applications

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Malinowski, Mariusz 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 438-444 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161599>

Fault-tolerant bidirectional series resonant DC-DC converter with minimum number of components

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Malinowski, Mariusz 2019 IEEE Energy Conversion Congress and Exposition, ECCE, 2019-09-29 - 2019-10-03, Baltimore, MD, USA 2019 / p. 1359-1363 <https://doi.org/10.1109/ECCE.2019.8912292>

High gain DC-AC high-frequency link inverter with improved quasi-resonant modulation

Blinov, Andrei; Korkh, Oleksandr; Chub, Andrii; Vinnikov, Dmitri; Pefitsis, Dimosthenis; Norrga, Staffan; Galkin, Ilja IEEE transactions on industrial electronics 2022 / p. 1465-1476 : ill <https://doi.org/10.1109/TIE.2021.3060657> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid DC-DC converters with topology morphing control and post-fault operation capability

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Blinov, Andrei; Liivik, Elizaveta Electrimacs 2019 : Selected Papers, Vol. 1 2020 / p. 433-445 https://doi.org/10.1007/978-3-030-37161-6_33 [Conference proceeding at Scopus](#) [Article at Scopus](#)

Improved modulation method for full-bridge AC-DC HF-link converter

Blinov, Andrei; Korkh, Oleksandr; Chub, Andrii; Vinnikov, Dmitri 2020 IEEE International Conference on Industrial Technology, Buenos Aires Institute of Technology (ITBA) Buenos Aires, Argentina, 26-28 February, 2020 : proceedings 2020 / p. 1173-1177 : ill <https://doi.org/10.1109/ICIT45562.2020.9067128> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Isolated matrix converters = Isoleeritud maatriksmuundurid

Korkh, Oleksandr 2021 https://www.ester.ee/record=b5395693*est <https://digikogu.taltech.ee/et/Item/34baf9fc-42aa-45ce-b071-3b8886c7903e> <https://doi.org/10.23658/taltech.4/2021>

MPPT performance enhancement of low-cost PV microconverters

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Liivik, Elizaveta; Blaabjerg, Frede; Kouro, Samir Solar energy 2019 / p. 156-166 : ill <https://doi.org/10.1016/j.solener.2019.05.024> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel approach immune to partial shading for photovoltaic energy harvesting from building integrated PV (BIPV) solar roofs

Chub, Andrii; Korkh, Oleksandr; Kosenko, Roman; Vinnikov, Dmitri 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 2243-2252 : ill <https://ieeexplore.ieee.org/document/8515623>

1200 V RB-IGBTs under different switching conditions

Korkh, Oleksandr 18th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology III : Toila, Estonia, January 14-19, 2019 : [proceedings] 2019 / p. 149-150 : ill

Optimization and Design of Planar Transformer for the High Frequency Link Converter

Korkh, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri; Shevchenko, Viktor 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 615-620 <https://doi.org/10.1109/PEDG48541.2020.9244465>

Review of isolated matrix inverters : topologies, modulation methods and applications

Korkh, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri; Chub, Andrii Energies 2020 / art. 2394, 30 p. : ill <https://doi.org/10.3390/en13092394> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Single-switch impedance-source galvanically isolated DC-DC converter with combined energy transfer

Chub, Andrii; Vinnikov, Dmitri; Babaei, Ebrahim; Liivik, Elizaveta; Korkh, Oleksandr; Kouro, Samir 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659851>

Soft-switching modulation method for full-bridge DC-AC HF-link inverter

Korkh, Oleksandr 19th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tartu, Estonia, January 14-17, 2020 2020 / p. 133-134 : ill https://www.ester.ee/record=b5291755*est

Soft-switching modulation method for full-bridge DC-AC HF-link inverter

Blinov, Andrei; Korkh, Oleksandr; Vinnikov, Dmitri; Galkin, Ilja; Norrga, Staffan IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 4417-4422 : ill <https://doi.org/10.1109/IECON.2019.8927186> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Solar optiverter - a novel hybrid approach to the photovoltaic module level power electronics

Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; Korkh, Oleksandr IEEE transactions on industrial electronics 2019 / p. 3869-3880 <https://doi.org/10.1109/TIE.2018.2850036> [Tehnikaülikooli seade muudab päikesepaneelid märgatavalt tootlikumaks](#) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Zero-current switching impedance-source DC-DC converter

Korkh, Oleksandr; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 5051-5056 <https://doi.org/10.1109/IECON.2019.8927614> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Ultrawide voltage gain range microconverter for integration of silicon and thin-film photovoltaic modules in DC microgrids

Chub, Andrii; Vinnikov, Dmitri; Korkh, Oleksandr; Malinowski, Mariusz; Kouro, Samir IEEE transactions on power electronics 2021 / p. 13763-13778 <https://doi.org/10.1109/TPEL.2021.3084918> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Wide input voltage range high step-up DC-DC converter with fault-tolerant operation capability

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Kouro, Samir 2019 IEEE International Conference on Industrial Technology, ICIT 2019 : Melbourne, Australia, 13-15 February 2019 : proceedings 2019 / p. 1099-1104 : ill <https://doi.org/10.1109/ICIT.2019.8755040> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Wide-range operation of high step-up DC-DC converters with multimode rectifiers

Chub, Andrii; Vinnikov, Dmitri; Korkh, Oleksandr; Jalakas, Tanel; Demidova, Galina Electronics 2021 / art. 914, 20 p. : ill <https://doi.org/10.3390/electronics10080914> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Voltage gain extension techniques for high step-up galvanically isolated DC-DC converters

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Liivik, Elizaveta; Blinov, Andrei 2020 IEEE International Conference on Industrial Technology, Buenos Aires Institute of Technology (ITBA) Buenos Aires, Argentina, 26-28 February, 2020 : proceedings 2020 / p. 1021-1027 : ill <https://doi.org/10.1109/ICIT45562.2020.9067115> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)