

Artificial Intelligence in the hierarchical control of ac, dc and hybrid ac/dc microgrids : A review

Gutiérrez-Escalona, J.; Roncero-Clemente, C.; Husev, Oleksandr; Matiushkin, Oleksandr; Blaabjerg, Frede IEEE Access 2024 / p. 157227-157246 <https://doi.org/10.1109/ACCESS.2024.3486382> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bidirectional twisted single-stage single-phase buck-boost DC-AC converter

Husev, Oleksandr; Matiushkin, Oleksandr; Roncero-Clemente, Carlos; Vinnikov, Dmitri; Chopyk, Vasiliy Energies 2019 / art. 3505, 14 p. : ill <https://doi.org/10.3390/en12183505> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Buck-boost unfold inverter as a novel solution for single-phase PV systems

Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri; Roncero, Carlos; Romero-Cadaval, Enrique; Kütt, Lauri IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 6116-6121 : ill <https://doi.org/10.1109/IECON.2018.8592899>

Capacitive vs Inductive Coupling Based DC-DC Converter Operating in MHz Switching Frequency Range

Pourjafar, Saeed; Mohseni, Parham; Husev, Oleksandr; Strezelecki, Ryszard; Matiushkin, Oleksandr 2025 IEEE Applied Power Electronics Conference and Exposition (APEC) 2025 / p. 2173-2178 <https://doi.org/10.1109/APEC48143.2025.10977156>

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; Lytvyn, 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](#)

Comparative analysis of buck-boost inverters based on unfolding circuit versus H5, H6, HERIC topologies

Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri; Vosoughi Kurdkandi, Naser 2022 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM) 2022 / p. 547-552 <https://doi.org/10.1109/SPEEDAM53979.2022.9842282>

Comparative analysis of qZS-based bidirectional DC-DC converter for storage energy application

Matiushkin, Oleksandr; Husev, Oleksandr; Tytelmaier, Kostiantyn; Kroics, Kaspars; Veligorskyi, Oleksandr; Zakis, Janis Technological Innovation for Smart Systems : 8th IFIP WG 5.5/SOCOLNET Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2017, Costa de Caparica, Portugal, May 3–5, 2017 : proceedings 2017 / p. 409-418 http://dx.doi.org/10.1007/978-3-319-56077-9_40

Comparative evaluation of common-ground converters for dual-purpose application

Hemmati Shahsavari, Tala; Rahimpour, Saeed; Vosoughi Kurdkandi, Naser; Fesenko, Artem; Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri Energies 2023 / art. 2977 <https://doi.org/10.3390/en16072977> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative evaluation of dual-purpose converters suitable for application in dc and ac grids

Husev, Oleksandr; Matiushkin, Oleksandr; Jalakas, Tanel; Vinnikov, Dmitri; Vosoughi Kurdkandi, Naser IEEE journal of emerging and selected topics in power electronics 2024 / p. 1337-1347 <https://doi.org/10.1109/JESTPE.2023.3243857> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative evaluation of the air core magnetic design for MHz+ switching frequency

Matiushkin, Oleksandr; Pakhaliuk, Bohdan; Gutierrez-Escalona, Javier; Romero-Cadaval, Enrique; Husev, Oleksandr; Zakis, Janis Applied sciences 2025 / art. 8820 <https://doi.org/10.3390/app15168820>

Comparative study of the phase-integrated converter as universal power converter

Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri; Vosoughi Kurdkandi, Naser; Kouro, Samir Annual IEEE Conference on Applied Power Electronics Conference and Exposition (APEC) 2022 / p. 58-63 <https://doi.org/10.1109/APEC43599.2022.9773553> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Comparison of grid-connected flyback-based microinverter with primary and secondary side decoupling approach

Afshari, Hossein; Husev, Oleksandr; Vinnikov, Dmitri; Matiushkin, Oleksandr; Vosoughi Kurdkandi, Naser 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / p. 1-6 <https://doi.org/10.1109/RTUCON56726.2022.9978855>

Comprehensive comparison of grid-connected flyback-based microinverter with primary and secondary side decoupling approach

Afshari, Hossein; Husev, Oleksandr; Matiushkin, Oleksandr; Pourjafar, Saeed; Kurdkandi, Naser Vosoughi; Vinnikov, Dmitri IEEE transactions on industry applications 2024 / p. 9080-9089 <https://doi.org/10.1109/TIA.2024.3452069> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comprehensive comparison of isolated high step-up dc-dc converters for low power application

Pourjafar, Saeed; Afshari, Hossein; Mohseni, Parham; Husev, Oleksandr; Matiushkin, Oleksandr; Shabbir, Noman IEEE

open journal of power electronics 2024 / p. 1149–1161 <https://doi.org/10.1109/OJPEL.2024.3433554> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost-effective piggyback forward dc-dc converter

Matiushkin, Oleksandr; Husev, Oleksandr; Afshari, Hossein; Vinnikov, Dmitri; Strzelecki, Ryszard 2024 IEEE Applied Power Electronics Conference and Exposition (APEC) 2024 / p. 2106-2111 <https://doi.org/10.1109/APEC48139.2024.10509355> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

DC-ready flyback-based micro-converter

Afshari, Hossein; Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604344>

DC-ready photovoltaic solar converter

Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri; Kurnitski, Jarek PCIM Europe 2023 : Conference proceedings 2023 / 7 p <https://doi.org/10.30420/566091094> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Dead-beat-based model predictive current control for the dual-purpose dc-dc/ac PWM modular power converter

Roncero-Clemente, Carlos; Escalona, Javier-Gutierrez; Pires, V. Fernao; **Matiushkin, Oleksandr**; Milanés-Montero, Maria Isabel; Romero-Cadaval, Enrique 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604328>

Design and experimental validation of a single-stage PV string inverter with optimal number of interleaved buck-boost cells

Fesenko, Artem; **Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri**; Strzelecki, Ryszard; Kołodziejek, Piotr Energies 2021 / art. 2448, p., 17 p. : ill <https://doi.org/10.3390/en14092448> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design of LCL-filter for grid-connected buck-boost inverter based on unfolding circuit

Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri; Kütt, Lauri 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818248>

Dual-purpose dc-dc/ac PWM modular power converter as dual-output hybrid converter

Roncero-Clemente, Carlos; Gutierrez-Escalona, Javier; **Matiushkin, Oleksandr**; Husev, Oleksandr; Romero-Cadaval, Enrique; Fernao Pires, V. Renewable energy and power quality journal 2025 / p. 183-187 <https://doi.org/10.52152/4563>

Dual-purpose dc-dc/ac PWM modular power converter as grid-forming unit in a droop-controlled ac nanogrid

Roncero-Clemente, Carlos; Escalona, Javier-Gutiérrez; **Matiushkin, Oleksandr**; Pires, V. Fernão; Milanés-Montero, María Isabel; **Romero-Cadaval, Enrique** IECON Proceedings (Industrial Electronics Conference) IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society 2024 / 6 p <https://doi.org/10.1109/IECON55916.2024.10906022> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Feasibility study of high-power density of modified isolated CLLC DC-DC interface with wide range of voltage/current regulation

Husev, Oleksandr; Matiushkin, Oleksandr; Mohseni, Parham; Canales, Francisco PCIM Europe 2024 2024 / 10 p <https://doi.org/10.30420/566262111> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Feasibility study of interleaving approach for buck-boost inverter with unfolding circuit

Fesenko, Artem; **Matiushkin, Oleksandr; Husev, Oleksandr**; Khandakji, Kamal; Velihorskyi, Oleksandr 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 415–419 : ill <https://doi.org/10.1109/UKRCON.2019.8879966>

Feasibility study of interleaving approach for Quasi-Z-Source inverter

Stepenko, Serhii; Husev, Oleksandr; Vinnikov, Dmitri; Fesenko, Artem; **Matiushkin, Oleksandr** Electronics 2020 / art. 277, 11 p. : ill <https://doi.org/10.3390/electronics9020277> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feasibility study of model predictive control for grid-connected twisted buck-boost inverter

Matiushkin, Oleksandr; Husev, Oleksandr; Rodríguez, Jose; Young, Hector; **Roasto, Indrek** IEEE transactions on industrial electronics 2022 / p. 2488-2499 <https://doi.org/10.1109/TIE.2021.3068663> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feasibility study of three-phase modular converter for dual-purpose application in DC and AC microgrids

Roncero-Clemente, Carlos; **Husev, Oleksandr; Matiushkin, Oleksandr**; Gutierrez-Escalona, Javier; Barrero-Gonzalez, Fermin; **Vinnikov, Dmitri**; Strzelecki, Ryszard IEEE journal of emerging and selected topics in power electronics 2024 / p. 1348-1358 <https://doi.org/10.1109/JESTPE.2023.3247960> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Forward-based DC-DC converter with eliminated leakage inductance problem

Matiushkin, Aleksandr; Husev, Aleksandr; Afshari, Hossein; Romero-Cadaval, Enrique; Roncero-Clemente, Carlos IEEE transactions on industrial electronics 2025 / p. 1638-1648 <https://doi.org/10.1109/TIE.2024.3429626>

Full SiC three-level T-type quasi-Z source inverter as grid-forming unit in islanded nanogrid

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Matiushkin, Aleksandr;** González-Romera, Eva; Pires, V. Fernão; Romero-Cadaval, Enrique IET renewable power generation 2025 / art. e70051 <https://doi.org/10.1049/rpg2.70051>

Global MPPT for interleaved buck-boost DC-DC converter

Matiushkin, Aleksandr; Husev, Aleksandr; Fesenko, Artem; **Vinnikov, Dmitri** 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 / 7 p. : ill <https://doi.org/10.1109/RTUCON51174.2020.9316589>

Grid-connected buck-boost inverter based on unfolding circuit

Matiushkin, Aleksandr; Husev, Aleksandr; Vinnikov, Dmitri; Gordienko, Vyacheslav 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.2018.8659824>

A high step-up non-isolated dc-dc converter with low voltage stress across transistor

Pourjafar, Saeed; Hemmati Shahsavari, Tala; Hashemzadeh, Seyed Majid; **Husev, Aleksandr; Matiushkin, Aleksandr; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2024 / p. 15755-15767 <https://doi.org/10.1109/TIE.2024.3383025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-Frequency Step-Up DC-DC Converter with Integrated Ferrite-less Inductances

Matiushkin, Aleksandr; Husev, Aleksandr; Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique PCIM Europe 2025 2025 / 7 p

Implementation of MPPT hill climbing technique for forward based DC-DC converter

Matiushkin, Aleksandr; Husev, Aleksandr; Romero-Cadaval, Enrique; Roncero-Clemente, Carlos 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604422>

Isolated high step-up current-fed DC-DC converter with low input current ripple and wide full-soft-switching capability

Mohseni, Parham; Pourjafar, Saeed; Matiushkin, Aleksandr; Husev, Aleksandr; Vinnikov, Dmitri IEEE transactions on industry applications 2025 / 11 p <https://doi.org/10.1109/TIA.2025.3544985>

LCL-filter design and application

Husev, Aleksandr; Matiushkin, Aleksandr Distributed energy systems : design, modeling, and control 2023 / p. 283-294 <https://doi.org/10.1201/9781003229124-18>

Model predictive control for buck-boost inverter based on unfolding circuit

Matiushkin, Aleksandr; Husev, Aleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 431-436 : ill <https://doi.org/10.1109/UKRCON.2019.8879870>

Model predictive control of a single-stage flying inductor based buck-boost grid-connected common-ground inverter

Rahimpour, Saeed; Matiushkin, Aleksandr; Kurdkandi, Naser Vosoughi; Najafzadeh, Mahdiyyeh; Husev, Aleksandr; Vinnikov, Dmitri 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2021 / p. 1-6 <https://doi.org/10.1109/RTUCON53541.2021.9711711>

Model predictive control of novel buck-boost inverter with unfolding circuit

Matiushkin, Aleksandr 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. 155-156 : ill https://www.ester.ee/record=b5183874*est

Model-free deep reinforcement learning-based current control for the dual-purpose dc-dc/ac power converter

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Aleksandr; Matiushkin, Aleksandr;** Barrero-Gonzalez, Fermin; Gonzalez-Romera, Eva 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604305>

Novel concept of solar converter with universal applicability for DC and AC microgrids

Husev, Aleksandr; Matiushkin, Aleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; Kouro, Samir IEEE transactions on industrial electronics 2022 / p. 4329-4341 : ill <https://doi.org/10.1109/TIE.2021.3086436> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel dual-purpose cost-effective forward-based micro-converter

Afshar, Hossein; Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 5 p <https://doi.org/10.1109/ICDCM63994.2025.11144743>

Novel family of single-stage buck-boost inverters based on unfolding circuit

Husev, Oleksandr; Matiushkin, Oleksandr; Roncero-Clemente, Carlos; Blaabjerg, Frede; **Vinnikov, Dmitri** IEEE transactions on power electronics 2019 / p. 7662-7676 : ill <https://doi.org/10.1109/TPEL.2018.2879776> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel family of single-stage buck-boost inverters based on unfolding circuit : [conference paper]

Matiushkin, Oleksandr; Husev, 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 2018 / p. 128-129 : ill http://ise.elnet.ee/record=b2950043~S2*est

A novel flying inductor based grid-connected inverter with buck-boost ability

Vosoughi Kurdkandi, Naser; Husev, Oleksandr; Rahimpour, Saeed; Roncero-Clemente, Carlos; **Matiushkin, Oleksandr; Vinnikov, Dmitri** IECON 2022 - 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / 6 p <https://doi.org/10.1109/IECON49645.2022.9968954> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Novel Interlinking Converter Approach for Islanded Hybrid Microgrids based on the Modular Dual-Purpose Power Converter

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Oleksandr; Matiushkin, Oleksandr;** Milanés-Montero, María Isabel; Romero-Cadaval, Enrique 2025 International Aegean Conference on Electrical Machines and Power Electronics & International Conference on Optimization of Electrical and Electronic Equipment 2025

Novel isolated high step-up DC-DC converter with wide input voltage regulation range

Pourjafar, Saeed; Mohseni, Parham; Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTU CON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTU CON60080.2023.10413102>

A novel single-phase common-grounded converter based on switched-capacitor

Kurdkandi, Naser Vosoughi; **Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri;** Gao, Wei; Chunting, Chris Mi IEEE transactions on power electronics 2024 / p. 16201-16216 <https://doi.org/10.1109/TPEL.2024.3444769> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel single-stage buck-boost inverter with unfolding circuit

Matiushkin, Oleksandr; Husev, Oleksandr; Strzelecki, Ryszard; Ivanets, Sergey; Fesenko, Artem 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON) : May 29 - June 2, 2017, Kyiv, Ukraine : conference proceedings 2017 / p. 538-543 : ill <https://doi.org/10.1109/UKRCON.2017.8100298>

Online learning-based coordination control of the interlinking converter in hybrid ac/dc microgrid

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Matiushkin, Oleksandr;** Romero-Cadaval, Enrique; Gonzalez-Romera, Eva; Martins, Joao 2025 IECON – 51st Annual Conference of the IEEE Industrial Electronics Society 2025 / 6 p <http://doi.org/10.1109/IECON58223.2025.11221287>

Optimal LCL-filter study for buck-boost inverter based on unfolding circuit

Matiushkin, Oleksandr; Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos Proceedings : 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Online - Setúbal, Portugal, 08 - 10 July, 2020 2020 / p. 467-472 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161683>

Optimal tuning of resonant and repetitive based controller for single-phase buck-boost inverter with unfolding circuit

Husev, Oleksandr; Belikov, Juri; Matiushkin, Oleksandr; Vinnikov, Dmitri; Ahmadiyahangar, Roya; Vosoughi Kurdkandi, Naser IEEE journal of emerging and selected topics in industrial electronics 2022 / p. 954-965 <https://doi.org/10.1109/JESTIE.2021.3121190>

Performance evaluation of the universal photovoltaic string converter during the operation in DC microgrid environment

Matiushkin, Oleksandr; Vinnikov, Dmitri; Husev, Oleksandr IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society, 2021 2021 / p. 1-6 : ill <https://doi.org/10.1109/IECON48115.2021.9589473> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Photovoltaic string converter with universal compatibility with AC and DC microgrids = Alalis- ja vahelduvvoolu mikrovõrkudega ühilduv universaalne muundur päikese-elektrijaamadele

Matiushkin, Oleksandr 2022 <https://doi.org/10.23658/taltech.27/2022> <https://digikogu.taltech.ee/et/Item/b818b684-924e-4fda-b414-fe8b7adba165> https://www.ester.ee/record=b5502078*est

Reactive power injection capability of buck-boost inverter with unfolding circuit

Roncero-Clemente, Carlos; **Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri;** Blaabjerg, Frede IEEE transactions on power electronics 2022 / p. 11876-11886 <https://doi.org/10.1109/TPEL.2022.3179784> [Journal metrics at Scopus](#) [Article at Scopus](#)

Reinforcement Learning-based Energy Management Strategy for Flexible Hybrid ac/dc Microgrid

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Oleksandr; Matiushkin, Oleksandr**; Barrero-González, Fermín; González-Romera, Eva IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society 2025 / 6 p
<https://doi.org/10.1109/IECON55916.2024.10905501> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Research development of bidirectional DC-DC/AC converter

Matiushkin, 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. 128-130 : ill
https://www.ester.ee/record=b5291755*est

A review of hybrid converter topologies

Afshari, Hossein; Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri Energies 2022 / art. 9341
<https://doi.org/10.3390/en15249341> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Small signal model of the buck-boost bidirectional DC-AC converter based on unfolding circuit

Matiushkin, Oleksandr; Husev, Oleksandr; 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 / 6 p
<https://doi.org/10.1109/RTUCON48111.2019.8982329>

A three-phase unfolding-based PFC topology with two inductors for electric vehicles battery charging

Mohseni, Parham; Husev, Oleksandr; Vinnikov, Dmitri; Matiushkin, Oleksandr; Vosoughi Kurdkandi, Naser 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-11, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413182>

Traction powered multiport DC-DC converter for bidirectional EV charging application – HIL simulation results

Lukianov, Mykola; Romero Cadaval, Enrique; **Matiushkin, Oleksandr**; Strzelecki, Ryszard 19th International Conference on Compatibility, Power Electronics and Power Engineering 2025