

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

Husev, Oleksandr; Matiushkin, Oleksandr; Roncero-Clemente, Carlos; **Vinnikov, Dmitri;** Chopyk, Vasily 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](#)

Carrier based modulation with capacitor balancing for three-level neutral-point-clamped qZS inverter

Romero-Cadaval, Enrique; Roncero-Clemente, Carlos; **Husev, Oleksandr; Vinnikov, Dmitri** 2015 9th International Conference on Compatibility and Power Electronics (CPE) : proceedings : Faculty of Science and Technology (FCT), Caparica, Lisbon, Portugal, 24-26 June, 2015 2015 / p. 57-62 : ill <http://dx.doi.org/10.1109/CPE.2015.7231049>

Carrier level-shifted based control method for the PWM 3L-T-Type qZS inverter with capacitor imbalance compensation

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; Ruiz-Cortes, Mercedes; **Husev, Oleksandr** IEEE transactions on industrial electronics 2018 / p. 8297-8306 : ill <https://doi.org/10.1109/TIE.2018.2814020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CCM operation analysis of the single-phase three-level quasi-Z-source inverter

Husev, Oleksandr; Roncero-Clemente, Carlos; **Stepenko, Serhii; Vinnikov, Dmitri;** Romero-Cadaval, Enrique 15th International Power Electronics and Motion Control Conference, EPE-PEMC 2012 ECCE Europe, Novi Sad, Serbia 2012 / p. DS1b.21-1-DS1b.21-6 : ill <https://ieeexplore.ieee.org/document/6397221>

Comparison of impedance-source networks for two and multilevel buck-boost inverter applications

Husev, Oleksandr; Blaabjerg, Frede; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri;** Siwakoti, Yam P.; Strzelecki, Ryszard IEEE transactions on power electronics 2016 / p. 7564-7579 : ill <https://doi.org/10.1109/TPEL.2016.2569437> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparison of three MPPT algorithms for three-level neutral-point-clamped qZ-Source inverter [Electronic resource]

Roncero-Clemente, Carlos; **Husev, Oleksandr;** Minambres-Marcos, Victor; **Stepenko, Serhii;** Romero-Cadaval, Enrique; **Vinnikov, Dmitri** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 80-85 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6601133>

Control scheme of a Three-Phase Three-Level NPC qZ-Source inverter with LCL filter for RES applications

Roncero-Sanches, Pedro; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr; Makovenko, Elena** Proceedings of the IECON 2016 - 42nd Annual Conference of the IEEE Industrial Electronics Society : Florence, Italy, October 24-27 2016 2016 / p. 6540-6547 <https://doi.org/10.1109/IECON.2016.7793338> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Controlling a battery energy storage system to support residential photovoltaic installations

Fernao Pires, Vitor; Martins, Joao; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr** 2017 IEEE International Symposium on Industrial Electronics (ISIE) : Edinburgh International Conference Centre, Edinburgh, Scotland, United Kingdom, 19-21 June, 2017 : proceedings 2017 / p. 1769-1774 : ill <https://doi.org/10.1109/ISIE.2017.8001516>

Current control strategy of a grid connected three-level neutral-point-clamped qZS inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr; Vinnikov, Dmitri;** Stepenko, Serhii 13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 14-19, 2013 2013 / p. 97-101 : ill

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>

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;** Milanes-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 of three-phase three-level CIC T-source inverter with maximum boost control

Shults, Tatiana; Husev, Oleksandr; Roncero-Clemente, Carlos; **Blaabjerg, Frede;** Strzelecki, Ryszard IECON 2015 - Yokohama : 41st Annual Conference of the IEEE Industrial Electronics Society : November 9-12, 2015, Pacifico Yokohama, Yokohama, Japan 2015 / p. 004447-004452 : ill <http://dx.doi.org/10.1109/IECON.2015.7392792>

Digital control strategy for interleaved quasi-Z-source inverter with with active power decoupling

Stepenko, Serhii; Husev, Oleksandr; Pires Pimentel, Sergio; Vinnikov, Dmitri; Roncero-Clemente, Carlos; **Makovenko, Elena** IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 3725-3730 : ill

Dual-purpose converters for DC or AC grid as energy transition solution : perspectives and challenges

Husev, Oleksandr; Vinnikov, Dmitri; Kouro, Samir; Blaabjerg, Frede; Roncero-Clemente, Carlos IEEE industrial electronics

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](#)

Efficiency and loss distribution analysis of the 3L-Active NPC qZS inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; Fernao Pires, Vitor; **Husev, Oleksandr** 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 2018 / p. 449-454 : ill <https://doi.org/10.1109/CPE.2018.8372560>

Evaluation of losses in three-level neutral-point-clamped and T-type quasi-Z-source inverters with modified carrier based modulation method

Ruiz-Cortes, M.; Romero-Cadaval, Enrique; Roncero-Clemente, Carlos; Gonzalez-Romera, Eva; **Husev, Oleksandr** 2017 11th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2017) : Cadiz, Spain, 4-6 April 2017 / p. 638-643 : ill <https://doi.org/10.1109/CPE.2017.7915247>

Experimental comparison of two-level full-SiC and three-level Si-SiC quasi-Z-source inverters for PV applications

Stepenko, Serhii; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Roncero-Clemente, Carlos; **Pires Pimentel, Sergio**; **Santasheva, Elena** Energies 2019 / 2509 ; 17 p. : ill <https://doi.org/10.3390/en12132509> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental comparison of two-level full-SiC and three-level Si-SiC quasi-Z-source inverters for PV applications

Stepenko, Serhii; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Roncero-Clemente, Carlos; **Pimentel, Sergio Pires**; **Santasheva, Elena** Emerging converter topologies and control for grid connected photovoltaic systems 2021 / P. 121-137 : ill <https://doi.org/10.3390/books978-3-03943-910-2>

Experimental evaluation of a new carrier-based modulation method for a three-level T-type quasi-impedance-source inverter

Gutierrez-Escalona, Javier; Roncero-Clemente, Carlos; Barrero-Gonzalez, Fermin; **Husev, Oleksandr**; **Gonzalez-Romera, Eva**; **Milanes-Montero, Maria Isabel** IET power electronics 2022 / p. 337-348 <https://doi.org/10.1049/pel2.12234> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental Investigation of high frequency 3L-NPC qZS inverter for photovoltaic application

Husev, Oleksandr; **Stepenko, Serhii**; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; Strzelecki, Ryszard Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5969-5974 : ill <https://doi.org/10.1109/IECON.2013.6700114> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

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>

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

Matiushkin, Oleksandr; **Husev, Oleksandr**; **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>

Grid-connected PV system based on a single-phase three-level qZS inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Stepenko, Serhii Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5979-5984 : ill <https://doi.org/10.1109/IECON.2013.6700116> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Grid-connected single-phase 3L-T-type qZS inverter for renewable energy

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Ruiz-Cortes, Mercedes; Romero-Cadaval, Enrique; Barrero-Gonzalez, Fermin; Gonzalez-Romera, Eva IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 5003-5007 : ill <https://doi.org/10.1109/IECON.2019.8926888> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Grid-connected three-phase 3L-T-type qZS inverter for renewable energy

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Barrero-Gonzalez, Fermin; Gonzalez-Romera, Eva; Milanes-Montero, Maria Isabel;

Romero-Cadaval, Enrique 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 114-119 <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161512>

Grounding and isolation requirements in DC microgrids: overview and critical analysis

Azizi, Mohammadreza; **Husev, Oleksandr**; Veligorskyi, Oleksandr; **Rahimpour, Saeed**; **Roncero-Clemente, Carlos** Energies 2023 / art. 7747, 23 p. : ill <https://doi.org/10.3390/en16237747> [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, Oleksandr; Husev, Oleksandr; Gutiérrez-Escalona, Javier; **Roncero-Clemente, Carlos**; Romero-Cadaval, Enrique PCIM Europe 2025 2025 / 7 p

Hysteresis current control with distributed shoot-through states for impedance source inverters

Husev, Oleksandr; **Chub, Andrii**; Romero-Cadaval, Enrique; **Roncero-Clemente, Carlos**; **Vinnikov, Dmitri** International journal of circuit theory and applications 2016 / p. 783-797 : ill <https://doi.org/10.1002/cta.2106> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Matiushkin, Oleksandr; **Husev, Oleksandr**; 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>

Improvements on the carrier-based control method for a three-level T-type, quasi-impedance-source inverter

Barrero-Gonzalez, Fermin; **Roncero-Clemente, Carlos**; Milanes-Montero, Maria Isabel; **Husev, Oleksandr** Electronics 2019 / art. 677, 12 p. : ill <https://doi.org/10.3390/electronics8060677> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An indirect model predictive current control (CCS-MPC) for grid-connected single-phase three-level NPC quasi-z-source PV inverter

Pires Pimentel, Sergio; **Husev, Oleksandr**; **Vinnikov, Dmitri**; **Roncero-Clemente, Carlos**; **Stepenko, Serhii** 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.2018.8659840>

Interleaved single-phase quasi-Z-source inverter with special modulation technique

Roncero-Clemente, Carlos; **Husev, Oleksandr**; **Stepenko, Serhii**; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON) : May 29 - June 2, 2017, Kyiv, Ukraine : conference proceedings 2017 / p. 593-598 : ill <https://doi.org/10.1109/UKRCON.2017.8100310>

Maximum boost control for interleaved single-phase quasi-Z-source inverter

Roncero-Clemente, Carlos; **Stepenko, Serhii**; **Husev, Oleksandr**; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** IECON 2017 - 43rd Annual Conference of the IEEE Industrial Electronics Society : proceedings : China National Convention Center, Beijing, China, 29. October - 01. November, 2017 2017 / p. 7698-7703 : ill <https://doi.org/10.1109/IECON.2017.8217349>

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

Matiushkin, Oleksandr; **Husev, Oleksandr**; **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-free deep reinforcement learning-based current control for the dual-purpose dc-dc/ac power converter

Gutiérrez-Escalona, Javier; **Roncero-Clemente, Carlos**; **Husev, Oleksandr**; **Matiushkin, Oleksandr**; 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>

Modified DQ control approach for three-phase inverter

Makovenko, Elena; **Husev, Oleksandr**; **Roncero-Clemente, Carlos**; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [3] p. : ill <http://dx.doi.org/10.1109/RTUCON.2017.8124800>

MPPT and GMPPT Implementation for Buck-Boost Mode Control of quasi-Z-Source Inverter

Husev, Oleksandr; **Vinnikov, Dmitri**; **Roncero-Clemente, Carlos**; Blaabjerg, Frede; Strzelecki, Ryszard IEEE transactions on industrial electronics 2022 / p. 11348 - 11358 <https://doi.org/10.1109/TIE.2021.3125658> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Three-level neutral-point-clamped quasi-Z-source inverter with maximum power point tracking for photovoltaic systems

Roncero-Clemente, Carlos; **Stepenko, Serhii**; **Husev, Oleksandr**; Minambres-Marcos, Victor; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** Technological innovation for the Internet of things : 4th IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems : DoCEIS 2013 : Costa de Caparica, Portugal, April 15-17, 2013 : proceedings 2013 / p. 334-342

New hysteresis current control for grid connected single-phase three-level quasi-Z-source inverter

Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique APEC 2014 : Twenty-Ninth Annual IEEE Applied Power Electronics Conference and Exposition : March 16–20, 2014, Fort Worth Convention Center - Fort Worth, Texas 2014 / p. 1765-1770 : ill <https://doi.org/10.1109/APEC.2014.6803544> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

New interleaved single-phase quasi-Z-source inverter with active power decoupling

Stepenko, Serhii; Roncero-Clemente, Carlos; **Husev, Oleksandr; Makovenko, Elena;** Pires Pimentel, Sergio; **Vinnikov, Dmitri** 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 2018 / p. 437-442 : ill <https://doi.org/10.1109/CPE.2018.8372558>

New modulation technique for three-level quasi-Z-source inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr; Vinnikov, Dmitri** 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. 68-71 : ill

New operation strategy for a grid-connected three-phase three-level NPC qZS inverter based on power losses

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr;** Martins, Joao Elektronika ir elektrotechnika = Electronics and electrical engineering 2016 / p. 60 - 65 <https://doi.org/10.5755/j01.eie.22.3.15316> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Husev, Oleksandr; Matiushkin, Oleksandr; 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 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](#)

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

Operation strategy and shoot-through indirect control method for three-phase Z-source inverters

Roncero-Clemente, Carlos; **Husev, Oleksandr;** Romero-Cadaval, Enrique; **Vinnikov, Dmitri;** Milanés-Montero, María Isabel 2015 IEEE 5th International Conference on Power Engineering, Energy and Electrical Drives (POWERENG) : proceedings : May 11-13, 2015, Riga, Latvia 2015 / p. 576-581 : ill <http://dx.doi.org/10.1109/PowerEng.2015.7266380>

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>

Optimization and implementation of the proportional-resonant controller for grid-connected inverter with significant computation delay

Husev, Oleksandr; Roncero-Clemente, Carlos; **Makovenko, Elena; Pires Pimentel, Sergio; Vinnikov, Dmitri;** Martins, Joao IEEE transactions on industrial electronics 2020 / p. 1201 -1211 <https://doi.org/10.1109/TIE.2019.2898616> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Output filter design for grid connected single phase three-level quasi-Z-source inverter [Electronic resource]

Husev, Oleksandr; Stepenko, Serhii; Roncero-Clemente, Carlos; **Vinnikov, Dmitri;** Romero-Cadaval, Enrique CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 46-51 : ill [CD-ROM]

Output voltage control system for a three-level neutral-point clamped quasi-Z-source inverter

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Stepenko, Serhii; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** Przegląd elektrotechniczny = Electrical review 2013 / p. 76-80 : ill <http://pe.org.pl/articles/2013/5/16.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#)

P and Q control strategy for single phase Z/qZ source inverter based on d-q frame

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr**; **Vinnikov, Dmitri** Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 2014 / p. 2048-2053 : ill

Passive power decoupling approach for three-level single-phase impedance source inverter based on resonant and PID controllers

Makovenko, Elena; **Husev, Oleksandr**; **Zakis, Janis**; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 2017 11th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2017) : Cadiz, Spain, 4-6 April 2017 2017 / p. 516-521 : ill <https://doi.org/10.1109/CPE.2017.7915225>

PV-battery assisted three-level T-Type inverter for AC residential nanogrid realized with small-scale HIL units

Gutiérrez-Escalona, Javier; **Roncero-Clemente, Carlos**; Gonzalez-Romera, Eva; Milanes-Montero, Maria Isabel; Husev, Oleksandr; Romero-Cadaval, Enrique IEEE Access 2023 / p. 48007 - 48021 <https://doi.org/10.1109/ACCESS.2023.3276235> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

PWM for single phase 3L Z/qZ-Source inverter with balanced power losses

Roncero-Clemente, Carlos; **Husev, Oleksandr**; **Jalakas, Tanel**; Romero-Cadaval, Enrique; **Zakis, Janis**; Minambres-Marcos, Victor Elektronika ir elektrotehnika = Electronics and electrical engineering 2014 / p. 71-76 : ill <https://doi.org/10.5755/j01.eee.20.6.7270> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Quasi-Z source T-type power converter for PV based commercial and industrial nanogrids with active functions strategy

Barrero-Gonzalez, Fermin; Roncero-Clemente, Carlos; Milanes-Montero, Maria Isabel; Gonzalez-Romera, Eva; Romero-Cadaval, Enrique; **Husev, Oleksandr** Electronics 2020 / art. 1233, 18 p. : ill <https://doi.org/10.3390/electronics9081233> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Gutiérrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Oleksandr**; **Matiushkin, Oleksandr**; Barrero-González, Fermin; 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](#)

Resonant and Z-source multilevel inverters

Husev, Oleksandr; Roncero-Clemente, Carlos Multilevel inverters : introduction and emergent topologies 2021 / p. 217-257 <https://doi.org/10.1016/B978-0-12-821668-2.00014-3>

Review and outlook of isolated capacitive coupling based converters

Pourjafar, Saeed; **Husev, Oleksandr**; 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-POWERENG60842.2024.10604421>

Review of novel topologies for PV applications

Makovenko, Elena; **Husev, Oleksandr**; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique Technological innovation for cyber-physical systems : 7th IFIP WG 5.5/SOCOLNET Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2016, Costa de Caparica, Portugal, April 11-13, 2016 : proceedings 2016 / p. 369-377 : ill https://doi.org/10.1007/978-3-319-31165-4_35 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

A simple space vector modulation method with DC-link voltage balancing and reduced common-mode voltage strategy for a three-level T-type quasi-Z source inverter

Mayorga, Nicolas; Roncero-Clemente, Carlos; Llor, Ana M.; **Husev, Oleksandr** IEEE Access 2021 / art. 9447724, p. 82747-82760 <https://doi.org/10.1109/ACCESS.2021.3087035> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Simulation of grid connected three-level neutral-point-clamped qZS inverter using PSCAD

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Stepenko, Serhii Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2013 / p. 14-19 : ill

Simulation study of different modulation techniques for three-level quasi-Z-source inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr**; **Vinnikov, Dmitri** Riga Technical University 53rd International Scientific Conference dedicated to the 150th anniversary and The 1st Congress of World Engineers and Riga

Simulation study of different modulation techniques for three-level quasi-Z-source inverter

Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Husev, Oleksandr; Vinnikov, Dmitri** Riga Technical University 53rd International Scientific Conference dedicated to the 150th anniversary and the 1st Congress of World Engineers and Riga Polytechnical Institute/RTU Alumni : 11-12 October 2012, Riga, Latvia : [abstracts] 2012 / p. 120 : ill
<https://intapi.sciendo.com/pdf/10.2478/v10314-012-0002-3>

Simulation study of the grid-connected single-phase impedance-sourced NPC inverter with different control methods

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Romero-Cadaval, Enrique; **Zakis, Janis; Vinnikov, Dmitri**; Milanes-Montero, Maria Isabel 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 2015 / p. 2949-2954 : ill <https://doi.org/10.1109/ICIT.2015.7125533> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Single phase three-level neutral-point-clamped quasi-Z-source inverter

Husev, Oleksandr; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri**; Stepenko, Serhii IET power electronics 2015 / p. 1-10 : ill <https://doi.org/10.1049/iet-pel.2013.0904> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Single-phase 3L PR controlled qZS inverter connected to the distorted grid

Makovenko, Elena; Husev, Oleksandr; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Blaabjerg, Frede** 2016 10th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings : Opera Nova's Congress Center, Bydgoszcz, Poland, 29. June - 01. July, 2016 2016 / p. 234-239 : ill <https://doi.org/10.1109/CPE.2016.7544191>

Single-phase string solar qZS-based inverter: example of multi-objective optimization design

Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; **Chub, Andrii**; Romero-Cadaval, Enrique IEEE transactions on industry applications 2021 / p. 3120-3130 : ill <https://doi.org/10.1109/TIA.2020.3034292> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Single-phase three-level quasi-Z-source inverter with a new boost modulation technique

Husev, Oleksandr; Stepenko, Serhii; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** IECON 2012 : 38th Annual Conference of the IEEE Industrial Electronics Society : Industrial Electronics for Sustainable Development 2012 / p. 5852-5857 : ill <https://doi.org/10.1109/IECON.2012.6389127> <https://ieeexplore.ieee.org/document/6389127>

Three-level single-phase quasi-Z source inverter with active power decoupling circuit

Makovenko, Elena; Husev, Oleksandr; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 18th International Conference of Young Specialists on Micro/Nanotechnologies and Electron Devices : proceedings : Erlagol, Altai - 29 June - 3 July, 2017 2017 / p. 497-502 : ill <https://doi.org/10.1109/EDM.2017.7981804>

Three-level three-phase quasi-Z-source neutral-point-clamped inverter with novel modulation technique for photovoltaic application

Husev, Oleksandr; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri; Jalakas, Tanel** Electric power systems research 2016 / p. 10-21 : ill <https://doi.org/10.1016/j.epsr.2015.08.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Three-level T-type qZ source inverter as grid-following unit for distributed energy resources

Gutierrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Oleksandr**; Barrero-Gonzalez, Fermin; Llor, Ana M.; Fernao Pires, Vitor IEEE journal of emerging and selected topics in power electronics 2022 / p. 7772-7785
<https://doi.org/10.1109/JESTPE.2022.3193258> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

3L-T-type qZSI as grid-forming unit in AC microgrid

Gutierrez-Escalona, Javier; Roncero-Clemente, Carlos; **Husev, Oleksandr**; Pires, Victor; Milanes-Montero, Maria Isabel; Gonzalez-Romera, Eva IECON 2022 – 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / code 184962
<https://doi.org/10.1109/IECON49645.2022.9968571> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Three-phase three-level neutral-point-clamped qZ source inverter with active filtering capabilities

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Romero-Cadaval, Enrique; Martins, Joao; **Vinnikov, Dmitri**; Milanes-Montero, Maria Isabel 2015 9th International Conference on Compatibility and Power Electronics (CPE) : proceedings : Faculty of Science and Technology (FCT), Caparica, Lisbon, Portugal, 24-26 June, 2015 2015 / p. 216-220 : ill <http://dx.doi.org/10.1109/CPE.2015.7231075>

Tracking of MPP for three-level neutral-point clamped qZ-source off-grid inverter in solar applications

Roncero-Clemente, Carlos; **Husev, Oleksandr**; Minambres-Marcos, Victor; Romero-Cadaval, Enrique; Stepenko, Serhii; **Vinnikov, Dmitri** Journal of microelectronics, electronic components and materials 2013 / p. 212-221 : ill
https://www.researchgate.net/publication/259495902_Tracking_of_MPP_for_three-level_neutral-point_clamped_qZ-source_off-grid_inverter_in_solar_applications

Voltage control tuning of a single-phase grid-Connected 3L qZS-based inverter for PV application

Pires Pimentel, Sergio; **Husev, Oleksandr; Vinnikov, Dmitri**; Roncero-Clemente, Carlos; **Makovenko, Elena** 2018 IEEE 38th

Voltage distortion approach for output filter design for off-grid and grid-connected PWM inverters

Husev, Oleksandr; Chub, Andrii; Romero-Cadaval, Enrique; Roncero-Clemente, Carlos; **Vinnikov, Dmitri** Journal of power electronics 2015 / p. 278-287 : ill <https://doi.org/10.6113/JPE.2015.15.1.278> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)