

Active power electronic transformer as a power conditioner for nonlinear loads [Electronic resource]

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao; **Jalakas, Tanel** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 63-68 : ill [CD-ROM]

Active power electronic transformer based on modular building blocks

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5922-5927 : ill <https://doi.org/10.1109/IECON.2013.6700106> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

A battery cell balancing method with linear mode bypass current control

Gallardo-Lozano, Javier; Romero-Cadaval, Enrique; **Jalakas, Tanel**; **Hõimoja, Hardi** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 245-248 : ill

Battery technologies in electric vehicles : improvements in electric battery packs

Mohseni, Parham; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Strzelecki, Ryszard; Romero-Cadaval, Enrique; Tokarski, Igor IEEE industrial electronics magazine 2023 / p. 55-65 <https://doi.org/10.1109/MIE.2023.3252265> [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>

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>

Code development of a DSP-FPGA based control platform for power electronics applications

Minambres-Marcos, Victor; **Roasto, Indrek**; Szczepankowski, P.; Romero-Cadaval, Enrique; **Vinnikov, Dmitri**; Barrero-Gonzalez, Fermin 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 2015 / p. 2890-2895 : ill <https://doi.org/10.1109/ICIT.2015.7125524> [Conference proceedings at Scopus](#) [Article at Scopus](#) [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>

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>

Comparison of voltage balancers for DAB converters in bipolar residential DC microgrids

Carvalho, Edivan Laercio; Mandrioli, Riccardo; Mastromauro, Rosa Anna; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 2025 IECON – 51st Annual Conference of the IEEE Industrial Electronics Society 2025 / 6 p <http://doi.org/10.1109/IECON58223.2025.11221951>

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**

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

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 evaluation of a base module of active power electronic transformer

Roasto, Indrek; Minambres-Marcos, Victor; Romero-Cadaval, Enrique; Strzelecki, Ryszard 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. 384-389 : ill <http://dx.doi.org/10.1109/CPE.2015.7231106>

Design of a simple modular active power electronic transformer

Strzelecki, Ryszard; **Roasto, Indrek**; Romero-Cadaval, Enrique Proceedings : IECON 2014 - 40th Annual Conference of the IEEE Industrial Electronics Society : Sheraton Hotel Dallas, Dallas, TX, USA, 30. October-01. November, 2014 2014 / p. 1410-1415 : ill <https://doi.org/10.1109/IECON.2014.7048686> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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](#)

An economical optimization for the participation of a residential microgrid in flexibility markets providing ancillary services

Alvi, Anas Abdullah; Gonzalez-Romera, Eva; Romero-Cadaval, Enrique; **Vinnikov, Dmitri**; Milanés-Montero, Maria Isabel; Barrero-Gonzalez, Fermin 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604394>

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>

Efficiency map comparison of induction and synchronous reluctance motors

Rassölkin, Anton; Heidari, Hamidreza; **Kallaste, Ants**; **Vaimann, Toomas**; Acedo, Jaime Pando; Romero-Cadaval, Enrique 2019 26th International Workshop on Electric Drives : Improvement in Efficiency of Electric Drives (IWED) : Moscow Power Engineering Institute, Moscow, Russia, 30th of January – 2nd of February 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/IWED.2019.8664334>

Efficiency study of the single-phase solar qZS-based inverter

Husev, Oleksandr; Stepenko, Serhii; **Vinnikov, Dmitri**; Roncero, Carlos; Santasheva, Elena; Romero-Cadaval, Enrique IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 4399-4404 <https://doi.org/10.1109/IECON.2019.8926655> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Electric vehicle multiport fast charger based on the concept of active power electronic transformer

Jalakas, Tanel; **Roasto, Indrek**; Gallardo-Lozano, Javier; Romero-Cadaval, Enrique 2014 16th European Conference on Power Electronics and Applications (EPE'14-ECCE Europe) : Lappeenranta, Finland, 26-28 August 2014. Vol. 3 2014 / p. 2168-2176 : ill

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 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 / p. 5969-5974 : ill <https://doi.org/10.1109/IECON.2013.6700114> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

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 reactive power compensation by using electric vehicles

Gallardo-Lozano, Javier; Romero-Cadaval, Enrique; Minambres-Marcos, Victor; **Vinnikov, Dmitri; Jalakas, Tanel; Hõimoja, Hardi** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 19-24 : ill

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 / 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; Milanés-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>

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 / p. 2025 / 7 p

Hybrid FEA-Simulink modelling of permanent magnet assisted synchronous reluctance motor with unbalanced magnet flux

Pando-Acedo, Jaime; **Rassõlkin, Anton;** Lehtikainen, Antti; **Vaimann, Toomas; Kallaste, Ants;** Romero-Cadaval, Enrique; **Belahcen, Anouar** 2019 IEEE 12th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDMPED), 27-30 Aug. 2019, Toulouse, France : proceedings 2019 / p. : 174-180 : ill <https://doi.org/10.1109/DEMPED.2019.8864925>

Hybrid low-power Wind Generation and PV grid-connected system with HPC, PC and MPPT control

Rosa, Carlos; **Vinnikov, Dmitri;** Romero-Cadaval, Enrique; Pires, Vitor; Martins, Joao Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 / p. 2024-2029 : ill

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>

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>

Isolated high-frequency link PFC rectifier with high step-down factor and reduced energy circulation

Blinov, Andrei; Vinnikov, Dmitri; Romero-Cadaval, Enrique; Martins, João F.; Pefitsis, Dimosthenis IEEE journal of emerging and

Low-power home PV systems with MPPT and PC control modes [Electronic resource]

Rosa, Carlos; **Vinnikov, Dmitri**; Romero-Cadaval, Enrique; Pires, Vitor; Martins, Joao CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 58-62 : ill [CD-ROM]

Low-power Wind Generation grid-connected system with MPPT and PC control

Rosa, Carlos; **Vinnikov, Dmitri**; Romero-Cadaval, Enrique; Pires, Vitor; Martins, Joao Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5991-5996 : ill <https://doi.org/10.1109/IECON.2013.6700118> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

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>

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>

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 https://doi.org/10.1007/978-3-642-37291-9_36 https://link.springer.com/chapter/10.1007/978-3-642-37291-9_36 [Article collection metrics at Scopus](#) [Article at Scopus](#)

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 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 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 space vector pulse width modulation strategies for single-phase three-level NPC impedance-source inverters

Shults, Tatiana; **Husev, Oleksandr**; Blaabjerg, Frede; Roncero, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** IEEE transactions on power electronics 2019 / p. 4820-4830: ill <https://doi.org/10.1109/TPEL.2018.2859194> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 <https://doi.org/10.1109/IECON58223.2025.11221287>

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>

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](#)

Overview of advanced functionalities for residential photovoltaic inverter connected to the grid

Makovenko, Elena; Husev, Oleksandr; Romero-Cadaval, Enrique 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. 99-102 : ill http://ise.elnet.ee/record=b2950024~S2*est

An overview of the functions of smart grids associated with virtual power plants including cybersecurity measures

Alvi, Anas Abdullah; Romero-Cadaval, Enrique; González-Romera, Eva; Hassan, Jamil; **Vinnikov, Dmitri** Technological innovation for connected cyber physical spaces : 14th IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2023, Caparica, Portugal, July 5-7, 2023 : proceedings 2023 / p. 95 - 107 https://doi.org/10.1007/978-3-031-36007-7_7 [Conference Proceedings 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>

Performance evaluation of a three-phase PV power plant under unbalanced conditions with islanding detection reliability test

Alvi, Anas Abdullah; Romero-Cadaval, Enrique; Gonzalez-Romera, Eva; Vinnikov, Dmitri; Hassan, Jamil 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227391>

Power converter interfaces for electrochemical energy storage systems - a review

Fernao Pires, Vitor; Romero-Cadaval, Enrique; **Vinnikov, Dmitri; Roasto, Indrek;** Martins, Joao Energy conversion and management 2014 / p. 453-475 : ill <https://doi.org/10.1016/j.enconman.2014.05.003> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Power Electronic Systems for Efficient and Sustainable Energy Supply

2019 https://www.mdpi.com/journal/energies/special_issues/power_electronic_systems_for_eses

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

Gutierrez-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 elektrotechnika = 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](#)

Quasi-Z-source based string inverter for residential photovoltaic application = Kvaasi-impedants tüüpi allikaga muundur kodumajapidamistes kasutatavatele päikesepaneelidele

Santasheva, Elena 2019 <https://digi.lib.ttu.ee/ii/?12312>

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](#)

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 Polytechnical Institute/RTU Alumni : 11-12 October 2012, Riga, Latvija : [abstracts] 2012 / p. 120 : ill <https://intapi.sciendo.com/pdf/10.2478/v10314-012-0002-3>

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, Paper 14 of Subsection of Power Electronic Converters and Applications 2012 / 7 p. : ill

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 power electronics transformer with active functions for smart grid

Minambres-Marcos, Victor; **Roasto, Indrek**; Romero-Cadaval, Enrique; Strzelecki, Ryszard; Barrero-Gonzalez, Fermin 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. 528-533 : ill <http://dx.doi.org/10.1109/CPE.2015.7231131>

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 qZ-source inverter connected to the grid with battery storage and active power decoupling function

Makovenko, Elena; Husev, Oleksandr; Romero-Cadaval, Enrique; **Vinnikov, Dmitri; Stepenko, Serhii** 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTU CON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTU CON.2018.8659843>

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>

A standard-based software infrastructure to support weather forecasting in distributed energy systems [Electronic resource]

Oliviera-Lima, Jose A.; Delgado-Gomes, Vasco; Martins, Joao; Lima, Celso; 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. 36-39 : ill [CD-ROM]

State of the art of active power electronic transformers for smart grids

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao; Smolenski, Robert IECON 2012 : 38th Annual Conference of the IEEE Industrial Electronics Society : Industrial Electronics for Sustainable Development 2012 / p. 5241-5246 : ill <https://ieeexplore.ieee.org/document/6389543>

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

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-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

Transactive energy : power electronics challenges

Martins, João F.; Romero-Cadaval, Enrique; **Vinnikov, Dmitri**; Malinowski, Mariusz IEEE Power Electronics Magazine 2022 / p. 20-32 <https://doi.org/10.1109/MPEL.2022.3140981> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)