

### **A hydrogen technology as buffer for stabilization of wind power generation**

**Andrijanoviš, Anna; Egorov, Mikhail; Lehtla, Madis; Vinnikov, Dmitri** 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 62-70 : ill

### **A new high-power DC/DC converter for residential fuel cell power systems [Electronic resource]**

**Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek** 11th Spanish Portuguese Conference on Electrical Engineering (11CHLIE) : 1-4 of July 2009, Zaragoza, Spain 2009 / [6] p. [CD-ROM]

### **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]

### **Aasta teadlane: alalisvool aitab parandada hoone energiatõhusust 18 protsenti**

Alvela, Ain postimees.ee 2023 [Aasta teadlane: alalisvool aitab parandada hoone energiatõhusust 18 protsenti](#)

### **About possibility of improvement of energetic characteristics of two-stage DC/DC converter with separated commutation**

Ivakhno, Volodymyr; Zamaruev, Vladimir; Lastovka, A.; **Blinov, Andrei; Vinnikov, Dmitri** Технічна електродинаміка 2011 / p. 88-92 : ill

### **Accelerated global MPPT for multimode series resonant DC-DC converter**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** 2021 IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Florence, Italy, 14-16 July 2021 2021 <https://doi.org/10.1109/CPE-POWERENG50821.2021.9501077>

### **Accuracy analysis of dual active bridge simulations under different integration methods**

Arena, Gabriele; **Vinnikov, Dmitri; Chub, Andrii**; de Carne, Giovanni 2022 AEIT International Annual Conference (AEIT) : October 3-5, 2022 2022 / p. 1-6 <https://doi.org/10.23919/AEIT56783.2022.9951711>

### **Address from General Chairman**

**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. 3

### **Address from main organizers**

**Vinnikov, Dmitri; Liivik, Elizaveta** 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. [3] [https://www.ester.ee/record=b5183874\\*est](https://www.ester.ee/record=b5183874*est)

### **Address from main organizers**

**Vinnikov, Dmitri; Liivik, Elizaveta** 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. [3] [https://www.ester.ee/record=b5291755\\*est](https://www.ester.ee/record=b5291755*est)

### **Advanced course of power electronics : laboratory works**

**Jalakas, Tanel; Vodovozov, Valery; Vinnikov, Dmitri** 2008 [https://www.ester.ee/record=b2375135\\*est](https://www.ester.ee/record=b2375135*est)

### **Alalisvoolu tagasitulek - unistus või reaalsus?**

**Roasto, Indrek; Vinnikov, Dmitri; Blinov, Andrei; Chub, Andrii; Carvalho da Silva, Edivan Laercio** Elektriala 2023 / lk. 22-25 : ill, portr [https://www.ester.ee/record=b1240496\\*est](https://www.ester.ee/record=b1240496*est)

### **An improved high-power DC/DC converter for distributed power Generation [Electronic resource]**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** EPQU'09 : 10th International Conference on Electrical Power Quality and Utilisation : 15-17 September 2009, Lodz, Poland 2009 / [6] p. [CD-ROM]

### **An improved high-voltage IGBT-based half-bridge converter for railway applications**

**Vinnikov, Dmitri; Laugis, Juhan** Fourth International Conference and Exhibition on Ecological Vehicles & Renewable Energies : March 26-29, 2009, Monaco : one-page abstract proceeding 2009 / [1] p

### **An improved high-voltage IGBT-based half-bridge DC/DC converter for railway applications**

**Vinnikov, Dmitri; Laugis, Juhan** COMPEL : The international journal for computation and mathematics in electrical and electronic engineering 2011 / p. 280-299 : ill <https://www.emerald.com/insight/content/doi/10.1108/03321641111091566/full/html>

### **An improved interface converter for a medium-power wind-hydrogen system**

**Vinnikov, Dmitri; Hõimoja, Hardi; Andrijanoviš, Anna; Roasto, Indrek; Lehtla, Tõnu**; Klytta, Marius 2nd International

**An overview of wide-voltage range isolated DC-DC converters**

**Khan, Salman; Chub, Andrii; Vinnikov, Dmitri** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413144>

**An SVM scheme for three-level quasi-switched boost T-type inverter with Enhanced voltage gain and capacitor voltage balance**

**Tran, Vinh-Thanh; Nguyen, Minh-Khai; Do, Duc-Tri; Vinnikov, Dmitri** IEEE transactions on power electronics 2021 / p. 11499-11508 <https://doi.org/10.1109/TPEL.2021.3071011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Analysis and design of 3.3 kV IGBT based three-level DC/DC converter with high-frequency isolation and current doubler rectifier**

**Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2009 / p. 97-102 : ill

**Analysis and design of ultracapacitor-boosted back-up power supply for tramcars [Electronic resource]**

**Hõimoja, Hardi; Vinnikov, Dmitri; Jalakas, Tanel** EUROCON 2009 : International IEEE Conference devoted to the 150-anniversary of Alexander S. Popov : May 18-23, 2009 Saint Petersburg, Russia 2009 / p. 598-604 [CD-ROM] <https://ieeexplore.ieee.org/document/5167691>

**Analysis and evaluation of PWM and PSM shoot-through control methods for voltage-fed qZSI based DC/DC converters**

**Roasto, Indrek; Vinnikov, Dmitri** EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010 / p. T3-100 - T3-105

**Analysis and static mode optimization of simultaneous inductive and capacitive coupled wireless power transfer system**

**Shevchenko, Viktor; Pakhaliuk, Bohdan; Husev, Oleksandr; Vinnikov, Dmitri; Strzelecki, Ryszard; Khomenko, Maksym** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 5 p <https://doi.org/10.1109/RTUCON60080.2023.10413112>

**Analysis of battery charger topologies for an electric vehicle**

**Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 223-226 : ill

**Analysis of capacitor-related mid-voltage point shift problems in high-voltage half-bridge DC/DC converters**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** Proceedings of 2008 IEEE 39th Annual Power Electronics Specialists Conference : PESC 2008 : Rhodes, Greece, 15-19 June 2008 2008 / p. 3619-3622

**Analysis of capacitor-related mid-voltage point shift problems in high-voltage half-bridge DC/DC converters**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** PESC 08 : 39th IEEE Annual Power Electronics Specialists Conference : Rhodes, Greece, 15-19 June 2008 : book of one page paper summaries 2008 / p. 573

**Analysis of cost function composition based on the horizon time prediction of an indirect MPC current control in single-phase grid-connected PV inverters**

**Pimentel, Sergio Pires; Husev, Oleksandr; Vinnikov, Dmitri; Stepenko, Serhii** 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. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982377>

**Analysis of current doubler rectifier based high frequency isolation stage for intelligent transformer [Electronic resource]**

**Beldjajev, Viktor; Roasto, Indrek; Vinnikov, Dmitri** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 336-341 [CD-ROM]

**Analysis of design requirements and optimization possibilities of partial power converter for photovoltaic string applications in DC microgrids**

**Chub, Andrii; Hassanpour, Naser; Yadav, Neelesh; Jalakas, Tanel; Blinov, Andrei; Vinnikov, Dmitri** IEEE Access 2024 / p. 14605-14619 <https://doi.org/10.1109/ACCESS.2024.3354375>

**Analysis of drawbacks and reconst[r]uction problems of the R2-type train**

**Laugis, Juhan; Vinnikov, Dmitri; Boiko, Vitali** The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 355-358 : ill

**Analysis of holdup time for DC grid-forming isolated active front-end converters**

**Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** IECON 2022 - 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / p. 1-6 <https://doi.org/10.1109/IECON49645.2022.9969075> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Analysis of implementation possibilities and benefits of three-level half-bridge NPC topology in static auxiliary converters for rolling stock [Electronic resource]**

**Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek** POWERENG 2009 : 2nd International Conference on Power Engineering, Energy and Electrical Drives : 18-20 March, 2009, Lisbon, Portugal 2009 / p. 587-592 : ill. [CD-ROM]  
<https://ieeexplore.ieee.org/document/4915180>

**Analysis of operating modes of the novel isolated interface converter for PMSG based wind turbines**

**Bisenieks, Lauris; Vinnikov, Dmitri; Zakis, Janis** POWERENG2011 : proceedings of the 2011 International Conference on Power Engineering, Energy and Electrical Drives : Torremolinos (Málaga), Spain, May 11-13, 2011 2011 / [8] p.: ill  
<https://ieeexplore.ieee.org/document/6036538>

**Analysis of operating modes of the step-up DC/DC converter with a commutating LC-filter**

**Zakis, Janis; Rankis, Ivars; Vinnikov, Dmitri** Технічна електродинаміка 2011 / p. 87-92 : ill  
<https://ortus.rtu.lv/science/en/publications/11242>

**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>

**Analysis of state of the art and development trends in soft-switched half-bridge DC/DC converters**

**Egorov, Mikhail; Vinnikov, Dmitri; Vodovozov, Valery** 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 49-54 : ill

**Analysis of state-of-the-art converter topologies for interfacing of hydrogen buffer with renewable energy systems**

**Andrijanovičs, Anna; Steiks, Ingars; Zakis, Janis; Vinnikov, Dmitri** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 87-94 : ill <https://ui.adsabs.harvard.edu/abs/2011SJRP...29...87A/abstract>

**Analysis of switching conditions of IGBTs in modified sine wave qZSIs operated with different shoot-through control methods**

**Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis; Ott, Silver; Jalakas, Tanel** Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 45-50 : ill  
[https://www.researchgate.net/publication/269779178\\_Analysis\\_of\\_Switching\\_Conditions\\_of\\_IGBTs\\_in\\_Modified\\_Sine\\_Wave\\_qZSIs\\_Operated\\_with\\_Different\\_Shoot-Through\\_Control\\_Methods](https://www.researchgate.net/publication/269779178_Analysis_of_Switching_Conditions_of_IGBTs_in_Modified_Sine_Wave_qZSIs_Operated_with_Different_Shoot-Through_Control_Methods)

**Analysis of switching properties of different high voltage IGBTs operating under hard-switching conditions**

**Blinov, Andrei; Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 323-326 : ill

**Analytical and experimental investigation of neutral point clamped quasi-impedance-source inverter**

**Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 113-118 : ill

**Analytical comparison between capacitor assisted and diode assisted cascaded quasi-Z-source inverters**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Strzelecki, Ryszard; Adamowicz, Marek** Przegląd elektrotechniczny = Electrical review 2012 / p. 212-217 : ill  
[https://www.researchgate.net/publication/290652933\\_Analytical\\_comparison\\_between\\_capacitor\\_assisted\\_and\\_diode\\_assisted\\_cascaded\\_quasi-Z-source\\_inverters](https://www.researchgate.net/publication/290652933_Analytical_comparison_between_capacitor_assisted_and_diode_assisted_cascaded_quasi-Z-source_inverters)

**Application of boundary conduction mode control in galvanically isolated buck-boost converter**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii** 3rd International Conference on Smart Grid and Renewable Energy (SGRE) 2022 / p. 1-6 <https://doi.org/10.1109/SGRE53517.2022.9774105>

**Application of cycle skipping modulation in buck-boost photovoltaic microconverters**

**Maheri, Hamed Mashinchi; Vinnikov, Dmitri; Chub, Andrii; Sidorov, Vadim; Galkin, Ilja** IEEE transactions on industry applications 2022 / p. 4804-4815 <https://doi.org/10.1109/TIA.2022.3163083> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Application of ultracapacitors in low-voltage power supply systems of light rail vehicles**

**Hõimoja, Hardi; Vinnikov, Dmitri; Strzelecki, Ryszard** The 2009 World Congress on Electronics and Electrical Engineering : WCEEENG'09 : April 6-9, 2009, Cairo, Egypt 2009 / [5] p

**Asymmetric snubberless current-fed full-bridge isolated DC-DC converters**

**Kosenko, Roman; Blinov, Andrei; Vinnikov, Dmitri; Chub, Andrii** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 5-11 : ill <https://doi.org/10.2478/ecce-2018-0001>

### **Asymmetrical PWM control of galvanically isolated impedance-source series resonant DC-DC converters**

**Vinnikov, Dmitri; Zakis, Janis; Chub, Andrii; Liivik, Elizaveta** 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. 341-346 : ill <https://doi.org/10.1109/CPE.2016.7544211>

### **Asymmetrical quasi-Z-source half-bridge DC-DC converters**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Liisa** 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. 369-372 : ill <http://dx.doi.org/10.1109/CPE.2015.7231103>

### **Automotive applications of ultracapacitors**

**Boiko, Vitali; Vinnikov, Dmitri; Liivik, Liisa** Summer Seminar on Nordic Network for Multi Disciplinary Optimised Electric Drives 2002 / ? p

### **Auxiliary power converter for a tram**

**Vinnikov, Dmitri; Lehtla, Madis** Summer Seminar on Nordic Network for Multi Disciplinary Optimised Electric Drives 2002 / ? p

### **Auxiliary power supplies for the light rail vehicles : research and development**

**Vinnikov, Dmitri** 2009 <https://www.amazon.com/AUXILIARY-POWER-SUPPLIES-LIGHT-VEHICLES/dp/3838303695>

### **Auxiliary voltage converter for Tallinn trams: stages of development**

**Vinnikov, Dmitri** Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 19-24, 2004 2004 / p. 62-65 : 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 / 13 p <https://doi.org/10.1109/MIE.2023.3252265>

### **Bidirectional DC-DC converter for modular residential battery energy storage systems**

**Chub, Andrii; Vinnikov, Dmitri; Kosenko, Roman; Liivik, Liisa; Galkin, Ilja** IEEE transactions on industrial electronics 2020 / p. 1944-1955 : ill <https://doi.org/10.1109/TIE.2019.2902828> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bidirectional isolated current source DAB converter with extended ZVS/ZCS range and reduced energy circulation for storage applications**

**Blinov, Andrei; Kosenko, Roman; Vinnikov, Dmitri; Parsa, Leila** IEEE transactions on industrial electronics 2020 / p. 10552-10563 <https://doi.org/10.1109/TIE.2019.2958291> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bidirectional isolated current-fed soft-switching secondary-modulated DC-DC converters = Isoleeritud kahesuunalised voolutoitelised pehmelülituse ja sekundaarmodulatsiooniga alalisvoolumuundurid**

**Kosenko, Roman** 2019 <https://digi.lib.ttu.ee/11237>

### **Bidirectional isolated hexamode DC-DC converter**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** IEEE transactions on power electronics 2022 / p. 12264-12278 <https://doi.org/10.1109/TPEL.2022.3170229> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bidirectional operation of the single-phase neutral-point-clamped quasi-Z-source inverter**

**Husev, Oleksandr; Zakis, Janis; Vinnikov, Dmitri; Savenko, O.** 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. 221-224 : ill

### **Bidirectional soft switching current source DC-DC converter for residential DC microgrids**

**Blinov, Andrei; Kosenko, Roman; Chub, Andrii; Vinnikov, Dmitri** IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 6059-6064 : ill <https://doi.org/10.1109/IECON.2018.8591103>

### **Bidirectional soft-switching dc-dc converter for battery energy storage systems**

**Blinov, Andrei; Kosenko, Roman; Chub, Andrii; Vinnikov, Dmitri** IET power electronics 2018 / p. 2000-2009 : ill <https://doi.org/10.1049/iet-pel.2018.5054> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bidirectional SSCB for residential DC microgrids with reduced voltage and current stress during fault interruption**

**Aditya, P.; Banavath, Satish Naik; Lidozzi, Alessandro; Chub, Andrii; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227379>

### **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](#)

#### **Black start and fault tolerant operation of isolated matrix converter for DC microgrids**

**Emiliani, Pietro; Blinov, Andrei; Chub, Andrii;** de Carne, Giovanni; **Vinnikov, Dmitri** IECON 2022 - 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / 5 p <https://doi.org/10.1109/IECON49645.2022.9968735> [Conference proceedings at Scopus](#) [Article at Scopus](#)

#### **Boost half-bridge DC-DC converter with reconfigurable rectifier for ultra-wide input voltage range applications**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta;** Blaabjerg, Frede; Siwakoti, Yam P. 2018 IEEE Applied Power Electronics Conference and Exposition (APEC 2018), San Antonio, Texas, USA, 4-8 March 2018 2018 / p. 1528-1532 : ill <https://doi.org/10.1109/APEC.2018.8341219> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Buck-boost resonant Z-source parital power converter**

**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 3rd International Conference on Smart Grid and Renewable Energy (SGRE) 2022 / p. 1-6 <https://doi.org/10.1109/SGRE53517.2022.9774095>

#### **Buck-boost unfoldr 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>

#### **Cascaded quasi-Z-source inverters for renewable energy generation systems**

Adamowicz, Marek; Strzelecki, Ryszard; **Vinnikov, Dmitri** Proceedings of 5th International Conference and Exhibition on Ecological Vehicles and Renewable Energies : March 25-28, 2010, Grimaldi Forum, Monaco 2010 / [8] p

#### **CCM and DCM analysis of Quasi-Z-Source derived push-pull DC/DC converter**

**Chub, Andrii; Husev, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri** Journal of microelectronics, electronic components and materials 2014 / p. 224-234 : ill

#### **CCM and DCM operation analysis of cascaded quasi-z-source inverter**

**Vinnikov, Dmitri; Roasto, Indrek;** Strzelecki, Ryszard; Adamowicz, Marek Proceedings of IEEE International Symposium on Industrial Electronics : ISIE'2011 : 27-30 June 2011, Gdansk, Poland 2011 / p. 159-164 : ill

#### **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

#### **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 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>

#### **Clustering-based penalty signal design for flexibility utilization**

**Rosin, Argo; Ahmadihangar, Roya; Azizi, Elnaz;** Sahoo, Subham; **Vinnikov, Dmitri;** Blaabjerg, Frede; Dragicevic, Tomislav; Bolouki, Sadegh IEEE Access 2020 / p. 208850-208860 <https://doi.org/10.1109/ACCESS.2020.3038822> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **CM voltage compensator for DC/DC converters [Electronic resource]**

Smolenski, Robert; Jarnut, Marcin; Bojarski, Jacek; **Blinov, Andrei; Vinnikov, Dmitri** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 264-268 : ill [CD-ROM]

#### **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-

**Common mode voltage reduction and neutral-point voltage balance for quasi-Z-source three-level neutral-point-clamped inverters**

Liu, Wenjie; Yang, Yongheng; Li, Weilin; Zhang, Xiaobin; **Husev, Oleksandr; Vinnikov, Dmitri** International Power Electronics Conference (IPEC-Himeji 2022- ECCE Asia) 2022 / p. 934-939 <https://doi.org/10.23919/IPEC-Himeji2022-ECCE53331.2022.9806905>

**Common-mode voltage analysis and reduction for the quasi-Z-source inverter with a split inductor**

Liu, Wenjie; Yang, Yongheng; Kerekes, Tamas; **Liivik, Elizaveta; Vinnikov, Dmitri**; Blaabjerg, Frede Applied sciences 2020 / art. 8713, 13 p. : ill <https://doi.org/10.3390/app10238713> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Compact design of a power circuit for a dual-output voltage converter**

**Vinnikov, Dmitri; Lehtla, Tõnu** BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 333-336 : ill

**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 high power density bidirectional DC-DC converters for portable energy storage applications**

Tytelmaier, Kostiantyn; Zakis, Janis; **Husev, Oleksandr; Vinnikov, Dmitri** Elektronika ir elektrotehnika = Electronics and electrical engineering 2018 / p. 33-41 : ill <https://doi.org/10.5755/j01.eie.24.6.22287> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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>

**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>

**Comparative evaluation of isolated dc-dc converters for low power applications**

**Azizi, Mohammadreza; Husev, Oleksandr; Vinnikov, Dmitri; Veligorskyi, Oleksandr** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 7-12 <https://doi.org/10.1109/PEMC51159.2022.9962944>

**Comparative review of long-term energy storage technologies for renewable energy systems**

**Andrijanovič, Anna; Hõimoja, Hardi; Vinnikov, Dmitri** Elektronika ir elektrotehnika = Electronics and electrical engineering 2012 / p. 21-26 : ill

**Comparative study of capacitor-assisted extended boost qZSIs operating in continuous conduction mode**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 297-300 : ill

**Comparative study of rectifier topologies for quasi-Z-source derived push-pull converter**

**Chub, Andrii; Husev, Oleksandr; Vinnikov, Dmitri** Elektronika ir elektrotehnika = Electronics and electrical engineering 2014 / p. 29-34 : ill

**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](#)

**A comparison between three-phase conventional two-stage ac-dc and single-stage matrix converter approaches**

**Mohseni, Parham; Emiliani, Pietro; Husev, Oleksandr; Vinnikov, Dmitri; Mackay, Laurens** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227438>

**Comparison of 2- and 3-level Half-Bridge DC/DC converters for high-voltage high-power applications**

**Vinnikov, Dmitri; Strzelecki, Ryszard** Przegląd elektrotechniczny = Electrical review 2009 / 10, p. 217-221 [https://www.researchgate.net/publication/283654804\\_Comparison\\_of\\_2-and\\_3-level\\_half-bridge\\_DCDC\\_converters\\_for\\_high-voltage\\_high-power\\_applications](https://www.researchgate.net/publication/283654804_Comparison_of_2-and_3-level_half-bridge_DCDC_converters_for_high-voltage_high-power_applications)

**A comparison of a discrete-time PI and an indirect MPC current controllers for a single-phase grid-connected inverter operating with distorted grid and significant computation feedback delay**

Pimentel, Sergio Pires; **Husev, Oleksandr; Vinnikov, Dmitri; Stepenko, Serhii; Kütt, Lauri**; Rodriguez, Jose 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC) 2019 / 6 p.: ill <https://doi.org/10.1109/COBEP/SPEC44138.2019.9065396>

**Comparison of control methods for high-voltage high-power three-level half-bridge DC/DC converters [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri**; Galkin, Ilja 6th International Conference-Workshop Compatibility and Power Electronics : May 20-22, 2009 : CPE 2009 : conference proceedings 2009 / p. 258-264 : ill. [CD-ROM] [https://www.researchgate.net/publication/241160163\\_Comparison\\_of\\_control\\_methods\\_for\\_high-voltage\\_high-power\\_three-level\\_half-bridge\\_DCDC\\_converters](https://www.researchgate.net/publication/241160163_Comparison_of_control_methods_for_high-voltage_high-power_three-level_half-bridge_DCDC_converters)

**Comparison of different microcontroller development boards for power electronics applications**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** 5th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology : Kuressaare, January 14-19, 2008 2008 / p. 103-107 : ill

**Comparison of full power and partial power buck-boost DC-DC converters for residential battery energy storage applications**

**Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 2022 IEEE 16th International Conference on Compatibility, Power Electronics, and Power Engineering (CPE-POWERENG) 2022 / 6 | <https://doi.org/10.1109/CPE-POWERENG54966.2022.9880862>

**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>

**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>

**Comparison of interface converter topologies for small- or medium-power wind-hydrogen systems**

**Andrijanovič, Anna; Vinnikov, Dmitri; Hõimoja, Hardi**; Klytta, Marius 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 122-127 : ill

**Comparison of isolated boost full bridge converters for power factor correction application**

**Zinchenko, Denys; 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 / 7 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982361>

**Comparison of (N+1) redundancy and fault tolerance approaches in single-stage series-connected isolated MVAC to LVDC converters**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Blinov, Andrei**; Bayhan, Sertac; **Vinnikov, Dmitri** 2023 International Conference on Clean Electrical Power (ICCEP) 2023 / p. 469-474 : ill <https://doi.org/10.1109/ICCEP57914.2023.10247478>

**Comparison of performance of phase-shift and asymmetrical pulse width modulation techniques for the novel galvanically isolated buck-boost dc-dc converter for photovoltaic applications**

**Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman**; Zakis, Janis; **Liivik, Elizaveta** IEEE journal of emerging and selected topics in power electronics 2017 / p. 624-637 : ill <https://doi.org/10.1109/JESTPE.2016.2631628>

**Comparison of pulse width modulation methods for a quasi impedance source inverter**

**Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri** 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II 2011 / p. 25-29 : ill

**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>

**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]

**Comparison of three-phase isolated DC/DC converters with Z- and quasi-Z-source inverters**

**Egorov, Mikhail; Vinnikov, Dmitri**; Strzelecki, Ryszard; Adamowicz, Marek 7th International Symposium "Topical Problems in the

**Comprehensive comparative analysis of impedance-source networks for DC and AC application**

**Husev, Oleksandr**; Shults, Tatiana; **Vinnikov, Dmitri**; **Chub, Andrii** Electronics 2019 / 21 p. : ill

<https://doi.org/10.3390/electronics8040405> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Control basics of a flywheel-powered uninterruptible motor drive**

**Hõimoja, Hardi**; **Vinnikov, Dmitri**; **Rosin, Argo** BEC 2008 : 2008 International Biennial Baltic Electronics Conference :

proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 289-292 : ill

**Control methodology of the rolling stock auxiliary power supply**

**Roasto, Indrek**; **Vinnikov, Dmitri** 4th International Symposium Topical Problems of Education in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 15-20, 2007 2007 / p. 122-125 : ill

**Control of quasi-Z-source dc-dc converter by the overlap of active states : new possibilities and limitations**

**Roasto, Indrek**; **Liivik, Liisa**; **Vinnikov, Dmitri** 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. 217-220 : ill

**A control strategy for a grid-connected PV system with unbalanced loads compensation**

Fernao Pires, Vitor; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Martins, Joao 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. 154-159 : ill <https://doi.org/10.1109/CPE.2015.7231065>

**Control system simulation of a 40kW half-bridge isolated DC/DC converter [Electronic resource]**

**Roasto, Indrek**; **Vinnikov, Dmitri** EPE 2007 : 12th European Conference on Power Electronics and Applications : 2-5 September 2007, Aalborg, Denmark 2007 / [10] p. [CD-ROM]

**Cooling methods for high voltage IGBTs**

**Blinov, Andrei**; **Vinnikov, Dmitri** 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 134-139 : ill

**Cooling methods for high-power electronic systems**

**Blinov, Andrei**; **Vinnikov, Dmitri**; **Lehtla, Tõnu** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 79-86 : ill

**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>

**Critical parameter analysis and design of the Quasi-Z-Source inverter**

Liu, Wenjie; Yang, Yongheng; **Liivik, Elizaveta**; **Vinnikov, Dmitri**; Blaabjerg, Frede 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 474-480 : ill <https://doi.org/10.1109/UKRCON.2019.8879831>

**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

**Current-fed dual inductor push-pull partial power converter**

**Abdelrahim Abdelghafour, Omar Mohamed**; **Vinnikov, Dmitri**; **Chub, Andrii**; **Blinov, Andrei** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 327-332 <https://doi.org/10.1109/PEMC51159.2022.9962937>

**Current-fed partial power converter for photovoltaic applications in DC microgrids**

**Jalakas, Tanel**; **Kosenko, Roman**; **Chub, Andrii**; **Vinnikov, Dmitri**; **Blinov, Andrei** IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society 2021 / p. 1-5 : ill <https://doi.org/10.1109/IECON48115.2021.9589899> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Day-ahead PV output power forecasting utilizing boosting recursive lightGBM-LSTM framework**

**Hokmabad, Hossein Nouroollahi**; **Husev, Oleksandr**; **Vinnikov, Dmitri**; **Belikov, Juri**; **Petlenkov, Eduard** IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2023) : proceedings 2023 / 5 p <https://doi.org/10.1109/ISGTEUROPE56780.2023.10408090>

### **DC droop control strategies and tuning principles**

**Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri;** Mackay, Laurens; **Jalakas, Tanel** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 <https://doi.org/10.1109/RTUCON60080.2023.10412947>

### **DC fast charging of electric vehicles : a review on architecture and power conversion technology**

Arena, Gabriele; **Emiliani, Pietro; Chub, Andrii; Vinnikov, Dmitri;** de Carne, Giovanni 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227492>

### **DC grid interface converter based on three-phase isolated matrix topology with phase-shift modulation**

**Emiliani, Pietro; Blinov, Andrei; Chub, Andrii;** de Carne, Giovanni; **Vinnikov, Dmitri** 2022 IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 l. <https://doi.org/10.1109/PEDG54999.2022.9923256>

### **DC integration of residential photovoltaic systems : a survey**

**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Vinnikov, Dmitri; Blinov, Andrei** IEEE Access 2022 / p. 66974-66991 <https://doi.org/10.1109/ACCESS.2022.3185788> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **DC nano grid control in the residential energy router with the presence of constant power loads**

**Najafzadeh, Mahdiyyeh; Vinnikov, Dmitri; Husev, Oleksandr; Roasto, Indrek** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / p. 1-6 <https://doi.org/10.1109/ENERGYCON53164.2022.9830523>

### **DC-DC перетворювач з широким діапазоном забезпечення режиму природної комутації в нулях напруги**

**Blinov, Andrei; Vinnikov, Dmitri;** Ivakhno, Volodymyr; Zamaruev, Volodymyr; Styslo, Bogdan Вісник НТУ "Харківський політехнічний інститут". Серія: Електричні машини та електромеханічне перетворення енергії = Bulletin of the NTU "Kharkiv Polytechnic Institute". Series: Electrical Machines and Electromechanical Energy Conversion 2019 / с. 14-19 : in <https://doi.org/10.20998/2409-9295.2019.20.02>

### **DC-link capacitor minimization in residential energy router through battery utilization**

**Najafzadeh, Mahdiyyeh; Vinnikov, Dmitri; Husev, Oleksandr; Jalakas, Tanel; Roasto, Indrek** 2021 IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Florence, Italy, 14-16 July 2021 2021 / p. 1-6 : ill <https://doi.org/10.1109/CPE-POWERENG50821.2021>

### **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>

### **Decentralized control of a UPS systems operating in parallel**

Strzelecki, Ryszard; **Vinnikov, Dmitri** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 297-300 : ill

### **Design and analysis of a DC solid-state circuit breaker for residential energy router application**

**Rahimpour, Saeed; Husev, Oleksandr; Vinnikov, Dmitri** Energies 2022 / art. 9434 <https://doi.org/10.3390/en15249434> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Design and development challenges of power electronics converters for the rolling stock**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** Intelligent Technologies in Logistics and Mechatronics Systems : ITELMS'2008 : proceedings of the 3rd International Workshop : May 22-23, 2008, Panevezys, Lithuania 2008 / p. 17-22 : ill

### **Design and development of 3.3 kV IGBT based three-level DC/DC converter**

**Vinnikov, Dmitri; Roasto, Indrek** Electrical engineering research report 2009 / [6] p

### **Design and development of the middle-frequency isolation transformer for the high-voltage DC/DC converter [Electronic resource]**

**Vinnikov, Dmitri; Lehtla, Tõnu;** Strzelecki, Ryszard; **Galkin, Ilja** The 4th International Scientific Conference of The Military Technical College [Korby El-Kobbah, Cairo, Egypt] : 27-29 May 2008. Proceedings of the 6th ICEENG Conference : 27-29 May, 2008 2008 / p. EE045 [CD-ROM]

### **Design and development of three-level half-bridge NPC converter with dual 3.3 kV IGBT modules**

**Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek** 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 43-48 : ill

### **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

**Design and implementation issues of integrated magnetics for quasi-Z-source inverters**

**Zakis, Janis; Vinnikov, Dmitri** ISEF 2011 - XV International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering : Funchal, Madeira, September 1-3, 2011 2011 / [8] p.: ill

**Design considerations of dual-active bridge DC grid-forming converter for DC buildings**

**Carvalho, Edivan Laercio; Sidorova, Aleksandra; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2024 / 11 p <https://doi.org/10.1109/TIE.2023.3331125>

**Design for accelerated testing of DC-link capacitors in photovoltaic inverters based on mission profiles**

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri; Wang, Huai; Blaabjerg, Frede** IEEE transactions on industry applications 2021 / p. 741–753 <https://doi.org/10.1109/TIA.2020.3030568> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Design guidelines of new step-up DC/DC converter for fuel cell powered distributed generation systems**

**Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard** 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 33-41 : ill

**Design issues of redundant protection and supervision system for the special purpose power converters [Electronic resource]**

**Vinnikov, Dmitri; Roasto, Indrek; Vodovozov, Valery** International Conference on Renewable Energies and Power Quality : ICREPQ'09 : Valencia, Spain, 15th to 17th April 2009 2009 / [6] p. [CD-ROM] <https://www.icrepq.com/ICREPQ%2709/356-vinnikov.pdf>

**Design of high frequency transformer for isolated bridge-type PFC converter**

**Zinchenko, Denys; Blinov, Andrei; Vinnikov, Dmitri; Ormison, Andres** 2020 IEEE 4th International Conference on Intelligent Energy and Power Systems (IEPS), 06.07.2020 - 10.07.2020, Istanbul, Turkey 2020 / 8 p. : ill <https://doi.org/10.1109/IEPS51250.2020.9263134>

**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>

**Design of multiphase single-switch impedance-source converters**

**Chub, Andrii; Vinnikov, Dmitri; Liivik, Liisa; Jalakas, Tanel; Blinov, Andrei** IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 3718-3724 : ill <https://doi.org/10.1109/IECON.2018.8591361>

**Design of solid state circuit breaker**

**Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri** 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / p. 1-5 <https://doi.org/10.1109/RTUCON56726.2022.9978903>

**Development and application of energy producing solar pavement in Estonia**

**Jalakas, Tanel; Chub, Andrii; Vinnikov, Dmitri; Spalatu, Nicolae; Gudkova, Viktoria; Krunks, Malle; Mere, Arvo; Lahi, Allan** 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / 5 p. : ill <https://doi.org/10.1109/RTUCON56726.2022.9978908>

**Development and verification of control and protection algorithms for the special purpose high power converters**

**Roasto, Indrek; Vinnikov, Dmitri; Vodovozov, Valery** Intelligent Technologies in Logistics and Mechatronics Systems : ITELMS'2008 : proceedings of the 3rd International Workshop : May 22-23, 2008, Panevezys, Lithuania 2008 / p. 23-27 : ill

**Development of 50-kW isolated DC/DC converter with high-voltage IGBTs**

**Vinnikov, Dmitri; Jalakas, Tanel; Laugis, Juhan** Przegląd elektrotechniczny 2007 / p. 103-107

**Development of 50-kW isolated DC/DC converter with high-voltage IGBTs [Electronic resource]**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** Proceedings of 5th International Conference 2007 : Compatibility in Power Electronics : 29 May - 1 June 2007, Gdynia, Poland 2007 / [6] p. [CD-ROM]

**Development of a power electronics controller with RISC-V based core for security-critical applications**

Swakath, S. U.; Kshirsagar, Abhijit; Kondepu, Koteswararao; Banavath, Satish Naik; **Chub, Andrii; Vinnikov, Dmitri** 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / p. 1-5 <https://doi.org/10.1109/RTUCON56726.2022.9978737>

**Development of auxiliary power supplies for the 3.0 kV DC rolling stock [Electronic resource]**

Vinnikov, Dmitri; Laugis, Juhan; Jalakas, Tanel ISIE2007 : 2007 IEEE International Symposium on Industrial Electronics : June 4-7, 2007, Vigo, Spain 2007 / p. 359-364 [CD-ROM]

**Development of auxiliary power supplies for the 3.0 kV DC rolling stock**

Vinnikov, Dmitri; Laugis, Juhan; Jalakas, Tanel ISIE2007 : 2007 IEEE International Symposium on Industrial Electronics : June 4-7, 2007, Vigo, Spain : abstract book 2007 / p. 61 <https://ieeexplore.ieee.org/document/4374624>

**Development of auxiliary power supply for tram**

Vinnikov, Dmitri; Lehtla, Madis BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 389-390 : ill

**Digital control strategy for interleaved quasi-Z-source inverter 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

**Digital current mode control algorithms for high-power half-bridge DC/DC converters**

Roasto, Indrek; Vinnikov, Dmitri; Jalakas, Tanel; Strzelecki, Ryszard Przegląd elektrotechniczny 2011 / p. 180-186 : ill

**Distorted grid and significant computation feedback delay**

Pimentel, Sergio Pires; Husev, Oleksandr; Vinnikov, Dmitri; Stepenko, Serhii; Kütt, Lauri; Rodriguez, Jose 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC 2019) Santos, Brazil, 1-4 December 2019 / p. 1481-1486 <http://toc.proceedings.com/52923webtoc.pdf>

**Distributed energy systems : design, modeling, and control**

2022 <https://www.taylorfrancis.com/books/edit/10.1201/9781003229124/distributed-energy-systems-ashutosh-giri-sabha-raj-arya-dmitri-vinnikov>

**Dmitri Vinnikov, tehnika- ja arvutiteadused [Võrguväljaanne]**

Vinnikov, Dmitri Eesti Teaduste Akadeemia : Youtube kanal 2021 / video [Dmitri Vinnikov, tehnika- ja arvutiteadused](#)

**Doctoral School of Energy and Geotechnology II : closing conference of the project : Pärnu, Estonia, January 12-17, 2015**

2015 [https://www.ester.ee/record=b4448632\\*est](https://www.ester.ee/record=b4448632*est)

**Droop control implementation in bidirectional step-up/down Partial power converter for battery energy storage applications**

Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413064>

**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](#)

**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 magazine 2023 <https://doi.org/10.1109/MIE.2022.3230219>

**Dynamic behaviour of qZS-based bi-directional DC/DC converter in supercapacitor charging mode [Electronic resource]**

Zakis, Janis; Vinnikov, Dmitri; Husev, Oleksandr; Rankis, Ivars SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the International Symposium on Power Electronics, Electrical drives, Automation and Motion 2012 / p. 764-768 : ill [CD-ROM]

**Dynamic positioning system for the multifunctional vessel EVA-316**

Subarev, Kirill; Vinnikov, Dmitri; Laugis, Juhan 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 142-145 : ill

**Dynamic reconfiguration for wide output voltage range isolated buck-boost PFC converter**

Verbytskyi, Ievgen; Nadeem, Mohammad Mahad; Blinov, Andrei; Carvalho, Edivan Laercio; Chub, Andrii; Vinnikov, Dmitri 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian Power Electronics Conference (SPEC/COBEP) 2023 / 5 p. : ill <https://doi.org/10.1109/SPEC56436.2023.10407792>

**Editorial : special issue on impedance-source converter topologies and applications**

Vinnikov, Dmitri; Li, Yuan; Abu-Rub, Haitham IEEE transactions on power electronics 2016 / p. 7417-7418 <http://dx.doi.org/10.1109/TPEL.2016.2577418>

**Eesti elektriraudtee kontaktvõrgu seisund ja väljavaated**  
**Boiko, Vitali; Vinnikov, Dmitri** Elektriala 2004 / 1, lk. 24-25 : ill

**Eesti teadlaste nutikad minuundurid hoogustavad energiapööoret**  
**Vinnikov, Dmitri; Chub, Andrii** novaator.err.ee 2024 [Eesti teadlaste nutikad minuundurid hoogustavad energiapööoret](#)

**Effect of droop control curves on the efficiency of dual-active bridge converters**  
**Carvalho, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society 2023 / 6 p <https://doi.org/10.1109/IECON51785.2023.10312056>

**Effect of mission profile resolution on photovoltaic energy yield prediction in Python and MATLAB**  
**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri; Blaabjerg, Frede** 2021 IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2021 / 5 p. : ill <https://doi.org/10.1109/CPE-POWERENG50821.2021.9501222>

**Effects of voltage transients on the DC droop control in residential nanogrids**  
**Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri; Jalakas, Tanel** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227464>

**Efficiency improvement from topology modification of the single-switch isolated quasi-Z-source DC-DC converter [Online resource]**  
**Liivik, Elizaveta; Chub, Andrii; Vinnikov, Dmitri** 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [7] p. : ill <https://doi.org/10.1109/RTUCON.2016.7763118>

**Efficiency improvement of step-up series resonant DC-DC converter in buck operating mode**  
**Sidorov, Vadim; Chub, Andrii; 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 / 6 p. : ill <https://doi.org/10.1109/RTUCON51174.2020.9316574>

**Efficiency optimization of the high-power isolated DC/DC converters through THD and losses reduction in isolation transformers [Electronic resource]**  
**Vinnikov, Dmitri; Bolgov, Viktor** International Conference on Renewable Energies and Power Quality : ICREPQ'09 : Valencia, Spain, 15th to 17th April, 2009 2009 / [7] p. : ill. [CD-ROM]  
[https://www.researchgate.net/publication/237808470\\_Efficiency\\_Optimization\\_of\\_the\\_High-Power\\_Isolated\\_DCDC\\_Converters\\_through\\_THD\\_and\\_Losses\\_Reduction\\_in\\_Isolation\\_Transformers](https://www.researchgate.net/publication/237808470_Efficiency_Optimization_of_the_High-Power_Isolated_DCDC_Converters_through_THD_and_Losses_Reduction_in_Isolation_Transformers)

**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](#)

**An efficient non-inverting buck-boost converter with improved step up/down ability**  
**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Pefitsis, Dimosthenis** Energies 2022 / art. 4550 <https://doi.org/10.3390/en15134550> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Electric power management and control in DC buildings—state-of-the-art and emerging technologies**  
**Blinov, Andrei; Roasto, Indrek; Chub, Andrii; Emiliani, Pietro; Vinnikov, Dmitri** Power Quality : Infrastructures and Control 2023 / p. 67-96 [https://doi.org/10.1007/978-981-19-7956-9\\_3](https://doi.org/10.1007/978-981-19-7956-9_3)

**Electric vehicle fast charger high voltage input multiport converter topology analysis [Electronic resource]**  
**Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 326-331 : ill [CD-ROM]

**An electrolytic capacitor-less multiple-output LED driver with a universal input voltage**  
**Awad, Khaled; Abdel-Rahim, Omar; Gaafar, Mahmoud A.; Orabi, Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / 6 l. <https://doi.org/10.1109/ENERGYCON53164.2022.9830255>

**Electronic systems of motor drive**  
**Vodovozov, Valery; Vinnikov, Dmitri** 2008 [http://www.ester.ee/record=b2384912\\*est](http://www.ester.ee/record=b2384912*est)

**Electronics and semiconductor engineering : laboratory works**  
**Jalakas, Tanel; Vodovozov, Valery; Vinnikov, Dmitri** 2008 [https://www.ester.ee/record=b2373748\\*est](https://www.ester.ee/record=b2373748*est)

### **Elektersõidukite sisetoiteallikaist**

**Vinnikov, Dmitri** Elektriala 2002 / 1, lk. 12-13 : ill

### **Elektrijamite elektroonsed süsteemid**

**Vodovozov, Valery; Vinnikov, Dmitri; Jansikene, Raik** 2008 [http://www.ester.ee/record=b2384926\\*est](http://www.ester.ee/record=b2384926*est)

### **Elektrirongide ER1 ja ER2 veoajami energiavoogude analüüs**

**Vinnikov, Dmitri; Boiko, Vitali** Elektriala 2005 / 1, lk. 28-29 : ill

### **An embedded half-bridge $\Gamma$ -Z-source inverter with reduced voltage stress on capacitors**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Nozadian, Mohsen Hasan Babayi; Shokati Asl, Elias; Babaei, Ebrahim; Chub, Andrii** Energies 2021 / art. 6433, 21 p. : ill <https://doi.org/10.3390/en14196433> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **EMC considerations on PCB design for a high-power converter control system [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri; Klytta, Marius** Proceedings of 5th International Conference 2007 : Compatibility in Power Electronics : 29 May - 1 June 2007, Gdynia, Poland 2007 / [4] p. [CD-ROM]

### **Emerging converter topologies and control for grid connected photovoltaic systems**

2021 <https://doi.org/10.3390/books978-3-03943-910-2>

### **EMI problems of the high frequency 3-phase rectifier**

**Vinnikov, Dmitri; Lehtla, Tõnu; Joller, Jüri** 3rd International Scientific Workshop "Compatibility in Power Electronics" (CPE 2003) : Gdansk-Zielona Gora, Poland, 28-30 May, 2003 2003 / p. 159-161

### **Energiasäästu võimalustest Eesti elektrilises ühistranspordis**

**Vinnikov, Dmitri** Elektriala 2000 / 1, lk. 12-13: ill [https://artiklid.elnet.ee/record=b1003229\\*est](https://artiklid.elnet.ee/record=b1003229*est)

### **Energia tootev teekatend nüüd ka Eestis**

**Jalakas, Tanel; Chub, Andrii; Vinnikov, Dmitri; Spalatu, Nicolae; Gudkova, Viktoria; Krunks, Malle; Mere, Arvo; Lahi, Allan; Lindvest, Andre** Elektriala 2023 / lk. 14-16 : portr., fot [https://www.ester.ee/record=b1240496\\*est](https://www.ester.ee/record=b1240496*est)

### **Energy storage for 1500 V photovoltaic systems : A comparative reliability analysis of DC-and AC-Coupling**

He, Jinkui; Yang, Yongheng; **Vinnikov, Dmitri** Emerging converter topologies and control for grid connected photovoltaic systems 2021 / p. 323-338 : ill <https://doi.org/10.3390/books978-3-03943-910-2>

### **Energy storage for 1500 V photovoltaic systems : A comparative reliability analysis of DC-and AC-Coupling**

He, Jinkui; Yang, Yongheng; **Vinnikov, Dmitri** Energies 2020 / art. 3355, 16 p. : ill <https://doi.org/10.3390/en13133355> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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 2019 / p. 1178-1183 : ill <http://toc.proceedings.com/52923webtoc.pdf>

### **Energy-efficient high-voltage switch based on parallel connection of IGBT and IGCT [Electronic resource]**

**Blinov, Andrei; Vinnikov, Dmitri; Ivakhno, Volodymyr** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 360-364 [CD-ROM] [https://www.researchgate.net/publication/252015928\\_Energy-efficient\\_high-voltage\\_switch\\_based\\_on\\_parallel\\_connection\\_of\\_IGBT\\_and\\_IGCT](https://www.researchgate.net/publication/252015928_Energy-efficient_high-voltage_switch_based_on_parallel_connection_of_IGBT_and_IGCT)

### **Envisioning the future renewable and resilient energy grids – a power grid revolution enabled by renewables, energy storage, and energy electronics**

Peng, Fang Zheng; Liu, Chen-Ching; Li, Yuan; Jain, Akshay Kumar; **Vinnikov, Dmitri** IEEE journal of emerging and selected topics in industrial electronics 2024 / p. 8-26 <https://doi.org/10.1109/JESTIE.2023.3343291>

### **EV battery charging converters with wide output DC voltage range**

**Nadeem, Mohammad Mahad; Blinov, Andrei; Vinnikov, Dmitri** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10412960>

### **Evaluation of different high-voltage switch solutions for high-power converters used in rolling stock [Electronic resource]**

**Vinnikov, Dmitri; Laugis, Juhan; Jalakas, Tanel** ISIE08 : 2008 IEEE International Symposium on Industrial Electronics : 30 June - 2 July 2008, Cambridge, United Kingdom 2008 / p. 214-219 : ill. [CD-ROM]

### **Evaluation of different loss calculation methods for high-voltage IGBT-s under small load conditions**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control

**Evaluation of different loss calculation methods for high-voltage IGBT-s under small load conditions [Electronic resource]**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : proceedings 2008 / p. 1286-1290 : ill. [CD-ROM]

**Evaluation of dual-active bridge converter for DC energy buildings**

**Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Sidorova, Aleksandra; Chub, Andrii; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p  
<https://doi.org/10.1109/CPE-POWERENG58103.2023.10227460>

**Evaluative analysis of 2- and 3-level DC/DC converters for high-voltage high-power applications [Electronic resource]**

**Vinnikov, Dmitri; Egorov, Mikhail;** Strzelecki, Ryszard 6th International Conference-Workshop Compatibility and Power Electronics : May 20-22, 2009 : CPE 2009 : conference proceedings 2009 / p. 432-437 [CD-ROM]

**Experimental analysis of extended boost quasi-Z-source inverters**

**Ott, Silver; Jalakas, Tanel; Roasto, Indrek; 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. 65-67 : ill

**Experimental analysis of extended boost quasi-Z-source inverters**

**Ott, Silver; Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 259-262 : ill

**Experimental analysis of the dynamic performance of Si, GaAs and SiC diodes**

**Blinov, Andrei; Vinnikov, Dmitri; Rang, Toomas** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 49-52 : ill

**Experimental analysis of wide input voltage range qZS-derived push-pull DC/DC converter for PMSG-based wind turbines**

**Blinov, Andrei; Vinnikov, Dmitri; Husev, Oleksandr; Chub, Andrii** PCIM Europe 2013 : International Exhibition and Conference for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, Nuremberg, 14.-16. May 2013 : proceedings 2013 / p. 1435-1444 : ill

**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 efficiency and thermal parameters evaluation in Full-SiC Quasi-Z-Source inverter**

**Pimentel, Sergio Pires; Husev, Oleksandr; Vinnikov, Dmitri; Pires Pimentel, Sergio;** Prystupa, Anatoliy 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. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982288>

**Experimental results of parallel active filter implementation in nonideal power grid**

**Husev, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri** Technological Innovation for Value Creation : third IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2012, Costa de Caparica, Portugal, February 27-29, 2012 : proceedings 2012 / p. 291-298 : ill

**Experimental study of high step-up quasi-Z-source DC-DC converter with synchronous rectification**

**Liivik, Liisa; Chub, Andrii; Vinnikov, Dmitri; Zakis, Janis** 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. 409-414 : ill <http://dx.doi.org/10.1109/CPE.2015.7231110>

**Experimental study of new integrated DC/DC converter for hydrogen-based energy storage**

**Vinnikov, Dmitri; Andrijanovič, Anna; Roasto, Indrek; Jalakas, Tanel** 2011 10th International Conference on Environment and Electrical Engineering (EEEIC), 8-11 May 2011, Rome, Italy : conference proceedings 2011 / [4 p.] : ill  
<https://ieeexplore.ieee.org/document/5874667>

**Experimental study of shoot-through control methods for qZSI-based DC/DC converters [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri; Jalakas, Tanel; Zakis, Janis; Ott, Silver** SPEEDAM 2010 : International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Pisa, Italy, 14th-16th June, 2010 : proceedings 2010 / p. 29-34 : [CD-ROM]

### **Experimental study of voltage-fed quasi-Z-source inverter based isolated DC/DC converter**

**Vinnikov, Dmitri; Roasto, Indrek;** Strzelecki, Ryszard Electrical engineering research report 2009 / [7] p

### **Experimental verification of DC/DC converter with full-bridge active rectifier**

**Blinov, Andrei;** Ivakhno, Volodymyr; Zamaruev, Vladimir; **Vinnikov, Dmitri; Husev, Oleksandr** IECON 2012 : 38th Annual Conference of the IEEE Industrial Electronics Society : Industrial Electronics for Sustainable Development 2012 / p. 5179-5184 : ill

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

**Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek;** Ribickis, Leonids International Conference on Renewable Energies and Power Quality (ICREPQ'11) : Las Palmas de Gran Canaria (Spain), 13th to 15th April 2011 2011 / [5] p. : ill. [CD-ROM]

### **Extended boost quasi-Z-source inverters : possibilities and challenges**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Ott, Silver** Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 51-56 : ill

### **Extended ZVS-On/ZCS-Off range for CF-DAB converter under DCM operation for residential energy storage systems**

**Carvalho da Silva, Edivan Laercio;** Cardoso, Rafael; Felipe, Carla Aparecida; Stein, Carlos Marcelo De Oliveira; Bellinaso, Lucas Vizzotto; Michels, Leandro; **Vinnikov, Dmitri** IEEE Access 2023 / p. 119231-119243 <https://doi.org/10.1109/ACCESS.2023.3327219>

### **A family of bidirectional solid-state circuit breakers with increased safety in DC microgrids**

**Rahimpour, Saeed; Husev, Oleksandr; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2023 <https://doi.org/10.1109/TIE.2023.3337493>

### **Fault detection and protection system for the power converters with high-voltage IGBTs [Electronic resource]**

**Vinnikov, Dmitri; Roasto, Indrek; Lehtla, Tõnu** ICECS 2008 : The 15th IEEE International Conference on Electronics, Circuits and Systems : August 31 - September 3, 2008, Malta 2008 / p. 922-925 : ill. [CD-ROM]

### **Fault diagnosis of output-side diode-bridge in isolated DC-DC series resonant converter**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 <https://doi.org/10.1109/ENERGYCON53164.2022.9830339>

### **Fault management techniques to enhance the reliability of power electronic converters : an overview**

**Rahimpour, Saeed; Husev, Oleksandr; Vinnikov, Dmitri;** Vosoughi Kurdkandi, Naser; Tarzamni, Hadi IEEE Access 2023 / p. 13432-13446 <https://doi.org/10.1109/ACCESS.2023.3242918>

### **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>

### **Fault-tolerant galvanically isolated DC/DC converters with zero redundancy = Null-liiasusega veatolerantsed galvaanilise isolatsiooniga alalispingemuundurid**

**Bakeer, Abualkasim Ahmed Ali** 2023 <https://doi.org/10.23658/taltech.18/2023> <https://digikogu.taltech.ee/et/Item/a9433801-e32e-4f98-af87-454e414646f4> [https://www.eester.ee/record=b5558648\\*est](https://www.eester.ee/record=b5558648*est)

### **Fault-tolerant soft-switching current-fed DC-DC converter**

**Zinchenko, Denys; Kosenko, Roman; Blinov, Andrei; Vinnikov, Dmitri** 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 437-440 : ill <https://doi.org/10.1109/UKRCON.2019.8879973>

### **Feasibility study of 200 kW half-bridge and full-bridge DC/DC converters with 6.5 kV IGBTs**

**Vinnikov, Dmitri; Lehtla, Madis** 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Speedam 2008 : Ischia (Italy), June 11th-13th, 2008 : conference proceedings 2008 / p. 1537-1541 : ill. [CD-ROM]

### **Feasibility study of flexible systems for reactive power compensation**

**Zakis, Janis; Vinnikov, Dmitri; Laugis, Juhan;** Rankis, Ivars Технічна електродинаміка 2010 / 2, p. 16-21 : ill

### **Feasibility study of half- and full-bridge isolated DC/DC converters in high-voltage high-power applications**

**Vinnikov, Dmitri; Jalakas, Tanel; Egorov, Mikhail** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : abstracts 2008 / p. 49

**Feasibility study of half- and full-bridge isolated DC/DC converters in high-voltage high-power applications [Electronic resource]**

**Vinnikov, Dmitri; Jalakas, Tanel; Egorov, Mikhail** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : proceedings 2008 / p. 1271-1277 : ill. [CD-ROM]

**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 Si and SiC MOSFETs in high-gain DC/DC converter for renewable energy applications**

**Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri; Rang, Toomas** Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5975-5978 : ill

**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>

**Feasibility study of universal power electronics interface operation in 350 V and 700 V residential DC microgrids**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 7 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227441>

**Feed drive of a lathe**

**Egorov, Mikhail; Vinnikov, Dmitri; Vodovozov, Valery** 5th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology : Kuressaare, January 14-19, 2008 2008 / p. 163-169 : ill

**Flexibility investigation of price-responsive batteries in the microgrids cluster**

**Ahmadihangar, Roya; Azizi, Elnaz;** Subham, Sahoo; **Häring, Tobias; Rosin, Argo; Vinnikov, Dmitri;** Dragicevic, Tomislav; Blaabjerg, Frede Proceedings : 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Online - Setúbal, Portugal, 08 - 10 July, 2020 2020 / p. 456-461 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161667>

**Flexible models of electric motor drives**

**Vodovozov, Valery; Vinnikov, Dmitri** Технічна електродинаміка 2008 / 3, с. 89-91

**Four level inverter's DC bus voltage balancing with 3-Terminal DAB converter**

Grabarek, Maciej; Strzelecki, Ryszard; Tomasov, Valentin S.; **Vinnikov, Dmitri** 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. 396-401 : ill <https://doi.org/10.1109/CPE.2016.7544221>

**Four novel PWM shoot-through control methods for impedance source DC-DC converters**

**Vinnikov, Dmitri; Roasto, Indrek; Liivik, Liisa; Blinov, Andrei** Journal of power electronics 2015 / p. 299-308 : ill

**14th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology. II" : Pärnu, Estonia, January 13-18, 2014**

2014 [http://www.ester.ee/record=b3050698\\*est](http://www.ester.ee/record=b3050698*est)

**FPGA control of the neutral point clamped quasi-Z-source inverter**

**Stepenko, Serhii; Husev, Oleksandr; Vinnikov, Dmitri;** Ivanets, Sergey BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 263-266 : ill

**Front-end active rectifier for grid-connected PMSG based wind turbines**

**Husev, Oleksandr; Bisenieks, Lauris; Vinnikov, Dmitri** Вісник Чернігівського державного технологічного університету. Серія "Технічні науки" = Journal of Chernigiv State Technological University 2011 / p. 132-138 : ill

**Full soft-switching high step-up DC-DC converter for photovoltaic applications**

**Blinov, Andrei; Vinnikov, Dmitri;** Ivakhno, Volodymyr 2014 16th European Conference on Power Electronics and Applications (EPE'14-ECCE Europe) : Lappeenranta, Finland, 26-28 August 2014. Vol. 4 2014 / p. 2951-2957 : ill

**Full-bridge fault-tolerant isolated DC-DC converters : overview of technologies and application challenges**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** IEEE Power Electronics Magazine 2022 / p. 45-55 <https://doi.org/10.1109/MPEL.2022.3196565> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Galvanically isolated quasi-Z-source DC-DC converter with a novel ZVS and ZCS technique**

**Husev, Oleksandr; Liivik, Liisa; Blaabjerg, Frede; Chub, Andrii; Vinnikov, Dmitri; Roasto, Indrek** IEEE transactions on

**Galvanically isolated quasi-Z-source DC-DC converters with combined energy transfer for renewable energy sources integration**

**Chub, Andrii; Vinnikov, Dmitri; Jalakas, Tanel** 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 2015 / p. 2896-2900 : ill

**Global MPPT for interleaved buck-boost DC-DC converter**

**Matiushkin, Oleksandr; Husev, Oleksandr;** 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 integration of DC buildings : standards, requirements and power converter topologies**

**Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Emiliani, Pietro;** de Carne, Giovanni; **Vinnikov, Dmitri** IEEE open journal of power electronics 2022 / p. 798-823 <https://doi.org/10.1109/OJPEL.2022.3217741> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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 buck-boost inverter based on unfolding circuit**

**Matiushkin, Oleksandr; Husev, Oleksandr; 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>

**Grid-connected photovoltaic systems : an overview of recent research and emerging PV converter technology**

Kouro, Samir; Leon, Jose I.; **Vinnikov, Dmitri;** Franquelo, Leopoldo G. IEEE industrial electronics magazine 2015 / p. 47-61 : 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 2013 / p. 5979-5984 : ill

**Grid-forming operation of energy-router based on model predictive control with improved dynamic performance**

**Najafzadeh, Mahdiyyeh;** Strzelecka, Natalia; **Husev, Oleksandr; Roasto, Indrek;** Nassereddine, Kawsar; **Vinnikov, Dmitri;** Strzelecki, Ryszard Energies 2022 / 14 p. : ill <https://doi.org/10.3390/en15114010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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](#)

**High-efficiency partial power converter for integration of second-life battery energy storage systems in DC microgrids**

**Hassanpour, Naser; Chub, Andrii; Yadav, Neelesh; Blinov, Andrei; Vinnikov, Dmitri** IEEE Open Journal of the Industrial Electronics Society 2024 / 15 p <https://doi.org/10.1109/OJIES.2024.3389466>

**High-efficiency quad-mode parallel PV power optimizer for DC microgrids**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** IEEE transactions on industry applications 2023 / p. 1002-1012 <https://doi.org/10.1109/TIA.2022.3208879>

**High-efficiency single-stage onboard charger for electrical vehicles**

**Zinchenko, Denys; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri;** Verbytskyi, Ievgen; Bayhan, Sertac IEEE Transactions on Vehicular Technology 2021 / p. 12581-12592 : ill <https://doi.org/10.1109/TVT.2021.3118392> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**High-frequency split-bobbin transformer design with adjustable leakage inductance**

**Rahman, Showrov; Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 15-17 Nov. 2021 : conference proceedings 2021 / p. 1-5 : ill <https://doi.org/10.1109/RTUCON53541.2021.9711708>

**High-performance buck-boost partial power quasi-Z-source series resonance converter**

**Abdel-Rahim, Omar; Chub, Andrii; Mashinchi Maheri, Hamed; Blinov, Andrei; Vinnikov, Dmitri** IEEE Access 2022 / p. 13017-130189 <https://doi.org/10.1109/ACCESS.2022.3225751> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**High-performance quasi-Z-source series resonant DC-DC converter for photovoltaic module-level power electronics applications**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Roasto, Indrek** IEEE transactions on power electronics 2017 / p. 3634-3650 : ill  
<http://dx.doi.org/10.1109/TPEL.2016.2591726>

**High-voltage auxiliary power supply with the simplified power circuit topology for the DC trains [Electronic resource]**

**Vinnikov, Dmitri; Laugis, Juhan** Proceedings of the 9th International Conference "Electrical Power Quality and Utilisation" : EPQU'2007 : Barcelona, Spain, October 9-11, 2007 2007 / [6] p. [CD-ROM] <https://ieeexplore.ieee.org/document/4424227>

**High-voltage half-bridge IGBT inverter [Electronic resource]**

**Vinnikov, Dmitri; Laugis, Juhan** Proceedings of 16th International Conference on Electrical Drives and Power Electronics EDPE'2007 : The High Tatras (Slovakia), 24-26 September, 2007 2007 / [6] p. [CD-ROM]

**High-voltage IGBT based converters for rolling stock : possibilities and challenges**

**Roasto, Indrek; Jalakas, Tanel; Vinnikov, Dmitri** 2011 <https://www.amazon.com/HIGH-VOLTAGE-BASED-CONVERTERS-ROLLING-STOCK/dp/3843391211>

**High-voltage switch realization possibilities for the 3.0 kV DC fed voltage converters**

**Vinnikov, Dmitri** ELECO'2007 : 5th International Conference on Electrical and Electronics Engineering : 5-9 December 2007, Bursa, Turkey 2007 / ? p

**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](https://doi.org/10.1007/978-3-030-37161-6_33) [Conference proceeding at Scopus](#) [Article at Scopus](#)

**Hybrid IGBT-IGCT switch**

**Blinov, Andrei; Vinnikov, Dmitri;** Ivakhno, Volodymyr; Zamaruev, Vladimir Przegląd elektrotechniczny = Electrical review 2012 / p. 12-15 : ill [https://www.researchgate.net/publication/290550726\\_Hybrid\\_IGBT-IGCT\\_Switch](https://www.researchgate.net/publication/290550726_Hybrid_IGBT-IGCT_Switch)

**Hybrid IGBT-IGCT switch**

**Blinov, Andrei; Vinnikov, Dmitri** 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 2011 / p. 161-164 : ill

**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 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 <http://dx.doi.org/10.1002/cta.2106>

**IEEE Industrial Electronics Society students and young professionals just after the pandemic time [students and young professionals news]**

Jasinski, Marek; Turzynski, Marek; **Vinnikov, Dmitri; Chub, Andrii** IEEE industrial electronics magazine 2022 / p. 89-100  
<https://doi.org/10.1109/MIE.2022.3212247>

**Impact of component losses on the voltage boost properties and efficiency of the QZS-converter family**

**Roasto, Indrek; Vinnikov, Dmitri** COMPEL : The international journal for computation and mathematics in electrical and electronic engineering 2012 / p. 1945-1963 : ill

**Impact of component losses on the voltage boost properties and efficiency of the qZS-converter family [Electronic resource]**

**Vinnikov, Dmitri; Roasto, Indrek** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 303-308 [CD-ROM]  
[https://www.researchgate.net/publication/241185271\\_Impact\\_of\\_component\\_losses\\_on\\_the\\_voltage\\_boost\\_properties\\_and\\_efficiency\\_of\\_the\\_QZS-converter\\_family](https://www.researchgate.net/publication/241185271_Impact_of_component_losses_on_the_voltage_boost_properties_and_efficiency_of_the_QZS-converter_family)

**Impact of transformer turns ratio on the power losses and efficiency of the wide range isolated buck-boost converter for photovoltaic applications**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii; Sidorov, Vadim; Liivik, Elizaveta** Energies 2020 / art. 5645, 21 p  
<https://doi.org/10.3390/en13215645> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Impedance-source DC solid-state circuit breakers : an overview**

**Rahimpour, Saeed; Husev, Oleksandr; Vinnikov, Dmitri** 2022 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM) 2022 / p. 186-191 <https://doi.org/10.1109/SPEEDAM53979.2022.9842138>

**Impedance-source galvanically isolated DC/DC converters : state of the art and future challenges**

**Liivik, Liisa; Chub, Andrii; Vinnikov, Dmitri** 2014 55th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings 2014 / p. 67-74 : ill

**Impedance-source inverter-based high-power DC/DC converter for fuel cell applications**

**Egorov, Mikhail; Vinnikov, Dmitri;** Strzelecki, Ryszard; Adamowicz, Marek 8 IEEE International Conference on Environment and Electrical Engineering : Karpacz, Poland, 10-13.May 2009 2009 / p. 57-60 : ill <http://eeeic.org/proc/papers/109.pdf>

**Implementation of burst control based on sigma-delta modulation in low-cost microcontroller**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** IEEE Workshop on Computers in Power Electronics 2022 / 6 I <https://doi.org/10.1109/COMPEL53829.2022.9830023>

**Implementation of global maximum power point tracking in photovoltaic microconverters: A survey of challenges and opportunities**

**Vinnikov, Dmitri; Chub, Andrii;** Kosenko, Roman; **Sidorov, Vadim;** Lindvest, Andre IEEE journal of emerging and selected topics in power electronics 2023 / p. 2259-2280: ill <https://doi.org/10.1109/JESTPE.2021.3137521>

**Implementation of high-voltage IGBTs in power electronic converters for the rolling stock**

**Vinnikov, Dmitri; Laugis, Juhan;** Frolov, S.; Matvejev, J. Технічна електродинаміка 2007 / 4, p. 109-114 : ill

**Implementation possibilities of hybrid IGBT-IGCT switches in three-level NPC inverters**

**Blinov, Andrei; Vinnikov, Dmitri;** Ivakhno, Volodymyr; Zamaruev, Vladimir COMPEL : the international journal for computation and mathematics in electrical and electronic engineering 2012 / p. 1917-1930 : ill

**Implementation possibilities of SMD capacitors for high power applications**

**Zakis, Janis; Vinnikov, Dmitri** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2012 / p. 18-23 : ill

**Implementation possibilities of SMD capacitors for high power applications**

**Zakis, Janis; 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 31 of Subsection of Power Electronic Converters and Applications 2012 / 6 p. : ill

**Implementation possibilities of SMD capacitors for high power applications**

**Zakis, Janis; 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. 128 : ill

**Improved maximum power point tracking algorithm for step-up/down partial power converters operating around zero partiality**

**Yadav, Neelesh; Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** IEEE journal of emerging and selected topics in power electronics 2024 / p. 1984-1994 <https://doi.org/10.1109/JESTPE.2024.3354843>

**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](#)

**Improved switched-inductor quasi-switched-boost inverter with low input current ripple**

**Chub, Andrii; Liivik, Liisa; Zakis, Janis; Vinnikov, Dmitri** 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 221-226 : ill

**Indirect model predictive control for inverter connected to distorted grid with significant computation delay**

**Husev, Oleksandr;** Pimentel, Sergio Pires; **Vinnikov, Dmitri; Kütt, Lauri;** Rodriguez, Jose IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 6483-6488 : ill <https://doi.org/10.1109/IECON.2019.8927279>

**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>

**Inductor Current Ripple Analysis and Reduction for Quasi-Z-Source Inverters with An Improved ZSVM6 Strategy**

Liu, Wenjie; Yang, Yongheng; Kerekes, Tamas; **Vinnikov, Dmitri**; Blaabjerg, Frede IEEE transactions on power electronics 2021 / p. 7693-7704 <https://doi.org/10.1109/TPEL.2020.3043102> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Industrial and technological applications of power electronics systems**

2021 <https://doi.org/10.3390/books978-3-0365-0823-8>

#### **Influence of slot wedge material on permanent magnet losses in a traction motor with tooth coil windings**

Lindh, Pia; **Vaimann, Toomas**; **Kallaste, Ants**; Pyrhönen, Juha; **Vinnikov, Dmitri**; Naumanen, Ville International journal of applied electromagnetics and mechanics 2013 / p. 227-236 : ill

#### **Influence of specific requirements on the design of auxiliary power supply for a light rail vehicle**

**Vinnikov, Dmitri**; **Lehtla, Tõnu** 2nd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 17-22, 2005 2005 / p. 93-97 : ill

#### **Influence of wedge material on losses of a traction motor with tooth-coil windings**

Lindh, Pia; Pyrhönen, Juha; Ponomarev, P.; **Vinnikov, Dmitri** Proceedings IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 2941-2946 : ill

#### **Input source identification algorithm For isolated buck-boost DC-DC converter**

**Sidorov, Vadim**; **Chub, Andrii**; **Vinnikov, Dmitri** IEEE Workshop on Computers in Power Electronics 2022 / 6 p <https://doi.org/10.1109/COMPEL53829.2022.9829973>

#### **Input voltage range extension methods in the series-resonant DC-DC converters**

**Chub, Andrii**; **Vinnikov, Dmitri**; Lai, Jih-Sheng 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC 2019) Santos, Brazil, 1-4 December 2019 2019 / p. 1493-1499 <http://toc.proceedings.com/52923webtoc.pdf>

#### **Input-parallel output-series cascading possibilities of single-switch galvanically isolated quasi-Z-source DC-DC converters**

**Liivik, Elizaveta**; **Chub, Andrii**; **Vinnikov, Dmitri** 2016 2nd International Conference on Intelligent Energy and Power Systems (IEPS) : Kyiv, Ukraine, June 7-11, 2016 : conference proceedings 2016 / [6] p. : ill <https://doi.org/10.1109/IEPS.2016.7521873>

#### **Input-parallel output-series connection of isolated quasi-Z-source DC-DC converters**

**Chub, Andrii**; **Husev, Oleksandr**; **Vinnikov, Dmitri** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 277-284 : ill

#### **Interinstitutional activity in professional training in power electronics**

**Vodovozov, Valery**; **Vinnikov, Dmitri**; **Laugis, Juhan**; **Lehtla, Tõnu** Технічна електродинаміка 2008 / 7, с. 58-61 : ил

#### **Interinstitutional activity in professional training in power electronics [Electronic resource]**

**Vodovozov, Valery**; **Vinnikov, Dmitri**; **Laugis, Juhan**; **Lehtla, Tõnu** 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Speedam 2008 : Ischia (Italy), June 11th-13th, 2008 : conference proceedings 2008 / p. 492-495 : ill. [CD-ROM]

#### **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>

#### **Interlock delay time and its influence on the operability and efficiency of high-power DC/DC converters**

**Vinnikov, Dmitri**; **Bolgov, Viktor** Przegląd elektrotechniczny = Electrical review 2009 / 10, p. 222-227 : ill [https://www.researchgate.net/publication/291967052\\_Interlock\\_Delay\\_Time\\_and\\_its\\_Influence\\_on\\_the\\_Operability\\_and\\_Efficiency\\_of\\_High-Power\\_DCDC\\_Converters](https://www.researchgate.net/publication/291967052_Interlock_Delay_Time_and_its_Influence_on_the_Operability_and_Efficiency_of_High-Power_DCDC_Converters)

#### **Interlock delay time minimization and its impact on the high-voltage half-bridge DC/DC converter**

**Jalakas, Tanel**; **Vinnikov, Dmitri**; **Lehtla, Tõnu**; **Bolgov, Viktor** 6th International Conference-Workshop Compatibility and Power Electronics : May 20-22, 2009 : CPE 2009 : conference proceedings 2009 / p. 438-443 [CD-ROM]

#### **Interlock delay time minimization and its impact on the high-voltage half-bridge DC/DC converter [Electronic resource]**

**Jalakas, Tanel**; **Vinnikov, Dmitri**; **Lehtla, Tõnu**; **Bolgov, Viktor** 2009 Compatibility and Power Electronics CPE 2009 : 6th International Conference-Workshop 2009 / p. 438-443 : ill. [CD-ROM]

#### **Isolated DC/DC converter topology with a three-phase intermediate AC-link**

**Vinnikov, Dmitri** BEC 2006 : 2006 International Baltic Electronics Conference : Tallinn University of Technology, October 2-4, 2006, Tallinn, Estonia : proceedings of the 10th Biennial Baltic Electronics Conference 2006 / p. 241-244 : ill

### **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 selected topics in industrial electronics 2022 / p. 788-796 <https://doi.org/10.1109/JESTIE.2021.3126226>

### **Isolated matrix converters = Isoleeritud maatriksmuundurid**

**Korkh, Oleksandr** 2021 [https://www.ester.ee/record=b5395693\\*est](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>

### **Jõuelektroonika on võtmetehnoloogia energia- ja rohepöörde ülesannetes**

Arvamus, kultuur : [ajalehe Postimees lisa] 2022 / lk. 10 [https://dea.digar.ee/article/ak/2022/04/02/7.1. "Jõuelektroonika on võtmetehnoloogia energia- ja rohepöörde ülesannetes"](https://dea.digar.ee/article/ak/2022/04/02/7.1.%20J%26ouelektroonika%20on%20v%26oumetehnoloogia%20energia-%20ja%20rohep%26ouorde%20u%26oulesannetes%20)

### **Kergröõbassoidukite ajamid ja juhtimine**

**Laugis, Juhan; Lehtla, Tõnu; Joller, Jüri; Rosin, Argo; Vinnikov, Dmitri; Lehtla, Madis** 2008 [http://www.ester.ee/record=b2394445\\*est](http://www.ester.ee/record=b2394445*est)

### **Kütuseelement ergutab jätkuvalt fantaasiat : [kütuseelemendist Dmitri Vinnikov ja Madis Lehtla]**

Juurak, Raivo; **Vinnikov, Dmitri; Lehtla, Madis** Õpetajate Leht 2010 / 5. märts, lk. 7 : fot

### **Laboratory setup for studying ultracapacitors in industrial applications**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : abstracts 2008 / p. 77-78

### **Laboratory setup for studying ultracapacitors in industrial applications [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : proceedings 2008 / p. 2034-2037 : ill. [CD-ROM]

### **Laboratory setup for teaching an advanced course of power electronics**

**Jalakas, Tanel; Vinnikov, Dmitri; Vodovozov, Valery** 5th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology : Kuressaare, January 14-19, 2008 2008 / p. 149-154 : ill

### **Light load operation of 6,5 kV 200 A IGBTs in half-bridge configuration [Electronic resource]**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Speedam 2008 : Ischia (Italy), June 11th-13th, 2008 : conference proceedings 2008 / p. 1373-1378 : ill. [CD-ROM]

### **Light-load efficiency improvement of galvanically isolated quasi-Z-source DC-DC converter for photovoltaic applications**

**Mashinchi Maheri, Hamed; Chub, Andrii; Vinnikov, Dmitri** 2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, November 9-12, 2020 2020 / 6 p <https://doi.org/10.1109/COMPEL49091.2020.9265800>

### **Load leveling and loss minimization in tram systems - possibilities and challenges**

**Vinnikov, Dmitri; Hõimoja, Hardi; Rosin, Argo; Egorov, Mikhail** Технічна електродинаміка 2009 / Тематический выпуск: Силовая електроніка та енергоефективність. 1, с. 83-88 : ill

### **Loss calculation methods of half-bridge square-wave inverters**

**Blinov, Andrei; Vinnikov, Dmitri; Jalakas, Tanel** Elektronika ir elektrotechnika = Electronics and electrical engineering 2011 / p. 9-14 : ill <https://eejournal.ktu.lt/index.php/elt/article/view/604>

### **Lossless dynamic models of the quasi-Z-source converter family**

**Vinnikov, Dmitri; Husev, Oleksandr; Roasto, Indrek** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 73-78 <https://ui.adsabs.harvard.edu/abs/2011SJRP...29...73V/abstract>

### **Low-cost photovoltaic microinverter with ultra-wide MPPT voltage range**

**Liivik, Elizaveta; Chub, Andrii; Kosenko, Roman; Vinnikov, Dmitri** 2017 6th International Conference on Clean Electrical Power : Renewable Energy Resources Impact : Santa Margherita Ligure, 27-29 June 2017 2017 / p. 46-52 : ill <https://doi.org/10.1109/ICCEP.2017.8004790>

### **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. 5989-5994 : ill

**Madis Lehtla - uus tehnikateaduste doktor**  
**Vinnikov, Dmitri** Elektriala 2006 / lk. 17

**Magnetically integrated high step-up resonant DC-DC converter for distributed photovoltaic systems**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta;** Blaabjerg, Frede 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. 7691-7697 : ill <https://doi.org/10.1109/IECON.2017.8217348>

**Mathematical models of cascaded quasi-impedance source converter**

**Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis** Технічна електродинаміка 2010 / 1, p. 59-64 : ill

**Maximizing energy harvest of the impedance source PV Microconverter under partial shading conditions**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta;** Blaabjerg, Frede; Kouro, Samir CPE-POWERENG 2018 : Conference program : 12th IEEE International Conference on Compatibility, Power Electronics and Power Engineering, 10-12 April, 2018, Doha, Qatar 2018 / 7 p.: ill <https://indd.adobe.com/view/bdbda104-4e24-4d7b-88b1-f84ccfd20748> <https://doi.org/10.1109/CPE.2018.8372556>

**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>

**Maximum power point tracking algorithm for step-up/down partial power converters with improved performance around zero partiality**

**Yadav, Neelesh; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227506>

**Method for improvement of electromagnetic rail brake performance for light rail vehicles**

**Hõimoja, Hardi; Laugis, Juhan; Vinnikov, Dmitri** Intelligent Technologies in Logistics and Mechatronics Systems : ITELMS'2009 : proceedings of the 4th International Conference : June 04-05, 2009, Panevėžys, Lithuania 2009 / p. 7-12 : ill

**Middle-frequency isolation transformer design issues for the high-voltage DC/DC converter**

**Vinnikov, Dmitri; Laugis, Juhan; Galkin, Ilja** Proceedings of 2008 IEEE 39th Annual Power Electronics Specialists Conference : PESC 2008 : Rhodes, Greece, 15-19 June 2008 2008 / p. 1930-1936

**Middle-frequency isolation transformer design issues for the high-voltage DC/DC converter**

**Vinnikov, Dmitri; Laugis, Juhan; Galkin, Ilja** PESC 08 : 39th IEEE Annual Power Electronics Specialists Conference : Rhodes, Greece, 15-19 June 2008 : book of one page paper summaries 2008 / p. 304 : ill

**Mission profile-based accelerated testing of DC-link capacitors in photovoltaic inverters**

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri;** Wang, Huai; Blaabjerg, Frede Thirty-Fourth Annual IEEE Applied Power Electronics Conference and Exposition, March 17 – 21, 2019, Anaheim, California 2019 / p. 2833-2840 : ill <https://doi.org/10.1109/APEC.2019.8721794> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**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-based diagnosis of power converters**

**Vodovozov, Valery; Raud, Zoja; Vinnikov, Dmitri** Технічна електродинаміка 2009 / Тематический выпуск: Силова електроніка та енергоефективність. 2, с. 38-43

**Modernisation of trams in Estonia**

**Laugis, Juhan; Lehtla, Tõnu; Pettai, Elmo; Joller, Jüri; Rosin, Argo; Lehtla, Madis; Vinnikov, Dmitri** The 6-th International Conference on Unconventional Electromechanical and Electrical Systems : UEES'04. Vol. 2 of 3 2004 / p. 561-564

**Modernization of electrical transport systems in Estonia**

**Laugis, Juhan; Lehtla, Tõnu; Joller, Jüri; Boiko, Vitali; Vinnikov, Dmitri; Lehtla, Madis** 10th International Power Electronics and Motion Control Conference : EPE-PEMC 2002, Cavtat & Dubrovnik : 9-11 September 2002, Cavtat & Dubrovnik, Croatia 2002

**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 (RTUON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [3] p. : ill <http://dx.doi.org/10.1109/RTUON.2017.8124800>

### **Modified high voltage gain soft-switched quasi-switched boost inverter**

Abbasi Aghdam Meinagh, Farhad; Babaei, Ebrahim; **Vinnikov, Dmitri; Chub, Andrii** 2019 IEEE International Conference on Industrial Technology, ICIT 2019 : Melbourne, Australia, 13-15 February 2019 : proceedings 2019 / p. 1087-1092 : ill <https://doi.org/10.1109/ICIT.2019.8755041>

### **Modified Q-Z-Source DC Circuit Breaker for Next-Generation Electric Aircrafts**

Aditya, P.; Venkata Raghavendra, I.; Banavath, Satish Naik; **Chub, Andrii**; Song, Xiaoping; **Vinnikov, Dmitri**; Wang, Fred 2023 IEEE Applied Power Electronics Conference and Exposition (APEC) 2023 / p. 1049–1056

### **Modular battery charger for light electric vehicles**

**Blinov, Andrei**; Verbytskyi, Ievgen; **Zinchenko, Denys**; **Vinnikov, Dmitri**; Galkin, Ilya 2020 / art. 774, 21 p. : ill <https://doi.org/10.3390/en13040774> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Modular MV naturally balanced converter with high-frequency isolation and no DC-Link capacitor for EV fast charging**

**Blinov, Andrei; Chub, Andrii**; Guler, Naki; Bayhan, Sertac; Parsa, Leila; **Vinnikov, Dmitri** IEEE Transactions on Transportation Electrification 2024 <https://doi.org/>

### **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](#)

### **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](#)

### **Multicell-type current regulator based on Cuk converter for resistance welding**

Verbytskyi, Ievgen; Bondarenko, Oleksandr; **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 / [6] p. : ill <https://doi.org/10.1109/RTUCON.2017.8124844>

### **Multi-mode quasi-Z-source series resonant DC/DC converter for wide input voltage range applications**

**Vinnikov, Dmitri; Chub, Andrii; Roasto, Indrek; Liivik, Liisa** Applied Power Electronics Conference and Exposition : APEC 2016 : Long Beach Convention & Entertainment Center, March 20-24, 2016 2016 / p. 2533-2539 : ill <https://doi.org/10.1109/APEC.2016.7468221>

### **Multiphase galvanically isolated impedance-source DC-DC converter for residential renewable energy applications**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta** 2017 IEEE International Symposium on Industrial Electronics (ISIE) : Edinburgh International Conference Centre, Edinburgh, Scotland, United Kingdom, 19-21 June, 2017 : proceedings 2017 / p. 1775-1780 : ill <https://doi.org/10.1109/ISIE.2017.8001517>

### **Multiphase quasi-z-source DC-DC converters for residential distributed generation systems**

**Chub, Andrii; Vinnikov, Dmitri; Liivik, Elizaveta; Jalakas, Tanel** IEEE transactions on industrial electronics 2018 / p. 8361-8371 : ill <https://doi.org/10.1109/TIE.2018.2801860> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Multiport converter with integrated energy storage for hydrogen buffer interfacing with renewable energy systems [Electronic resource]**

**Andrijanovitš, Anna; Blinov, Andrei; Husev, Oleksandr; Vinnikov, Dmitri** 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 235-240 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6209943>

### **Multiport DC/DC converters for interfacing of hydrogen buffer with wind turbine**

**Andrijanovitš, Anna; Vinnikov, Dmitri** 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 95-99 : ill

### **Multi-port i-AFE converter for grid-interactive buildings: design requirements and efficiency evaluation**

**Carvalho, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Galkin, Ilya; Vinnikov, Dmitri** 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian Power Electronics Conference (SPEC/COBEP) 2023 / 5 p <https://doi.org/10.1109/SPEC56436.2023.10408230>

### **Neuro-fuzzy control system for active filter with load adaptation [Electronic resource]**

**Husev, Oleksandr; Ivanets, Sergey; Vinnikov, Dmitri** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 28-33 [CD-ROM] <https://ieeexplore.ieee.org/document/5942202>

### **Neutral point clamped quasi-impedance-source inverter [Electronic resource]**

**Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 348-353 [CD-ROM]

<https://www.semanticscholar.org/paper/Neutral-point-clamped-quasi-impedance-source-Ott-Roasto/547db91f89adecec7c854cc3e4b811934890b7a6>

**Neutral-point-clamped quasi-Z-source inverter with field-programmable gate array based control**

**Stepenko, Serhii; 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. 76-77 : ill

**New active clamp circuit for current-fed galvanically isolated DC/DC converters [Electronic resource]**

**Zakis, Janis; Vinnikov, Dmitri; Kolosov, Valery; Vasechko, Evgen** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 353-358 : ill [CD-ROM]

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

**Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis** EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010 / p. T11-38 - T11-43 : ill

**New bidirectional multiport DC/DC converter for interfacing of hydrogen buffer with wind turbines**

**Andrijanovič, Anna; Vinnikov, Dmitri** 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 2011 / p. 85-90 : ill

**New converter for interfacing PMSG based small-scale wind turbine with residential power network [Electronic resource]**

**Bisenieks, Lauris; Vinnikov, Dmitri; Galkin, Ilja** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 354-359 [CD-ROM]  
<https://ieeexplore.ieee.org/abstract/document/5942260>

**New converter topologies for integration of hydrogen based long-term energy storages to renewable energy systems = Uued muundurite topoloogiad vesinikul põhinevate energiasalvestite integreerimiseks taastuenergiatsüsteemidesse**

**Andrijanovič, Anna** 2013 [http://www.ester.ee/record=b2946972\\*est](http://www.ester.ee/record=b2946972*est)

**A new coupled-inductor-based buck/boost DC/DC converter with soft switching for DC microgrid applications**

**Maheri, Hamed Mashinchi; Heris, Pedram Chavoshpour; Saadatizadeh, Zahra; Babaei, Ebrahim; Vinnikov, Dmitri** IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2021 / p. 1-6  
<https://doi.org/10.1109/CPE-POWERENG50821.2021.9501195>

**A new flying capacitor-based buck-boost converter for dual-purpose applications**

**Hemmati Shahsavari, Tala; Vosoughi Kurdkandi, Naser; Husev, Oleksandr; Babaei, Ebrahim; Sabahi, Mehran; Khoshkbar-Sadigh, Arash; Vinnikov, Dmitri** IEEE journal of emerging and selected topics in industrial electronics 2023  
<https://doi.org/10.1109/JESTIE.2023.3238322>

**New fuel cell power conditioning system for supplying dedicated loads**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Lehtla, Tõnu; Laugis, Juhan** 2010 9th International Conference on Environment and Electrical Engineering : Prague, Czech Republic, 16-19 May 2010 2010 / p. 341-344 : ill

**A new high step-up NPC-based switched-capacitor seven-level grid-tied inverter for PV applications**

**Marangalu, M.; Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Jalakas, Tanel** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCon), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCon60080.2023.10413150>

**New high-gain non-inverting buck-boost converter**

**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society 2021 / p. 1-6 : ill <https://doi.org/10.1109/IECON48115.2021.9590003> [Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**New high-gain step-up DC/DC converter for a fuel cell interfacing in hydrogen buffer**

**Vinnikov, Dmitri; Husev, Oleksandr; Andrijanovič, Anna; Roasto, Indrek** Технічна електродинаміка 2011 / p. 93-100 : ill

**New high-gain step-up DC/DC converter with high-frequency isolation**

**Vinnikov, Dmitri; Zakis, Janis; Husev, Oleksandr; Strzelecki, Ryszard** 2012 Twenty-Seventh Annual IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando (FL), USA, 5-9 Feb. 2012 2012 / p. 1204-1209 : ill  
<https://ieeexplore.ieee.org/document/6165972>

**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

**New integrated converter for hydrogen buffer interfacing in distributed energy systems [Electronic resource]**

**Vinnikov, Dmitri; Andrijanoviš, Anna; Roasto, Indrek; Lehtla, Tõnu** International Conference on Renewable Energies and Power Quality (ICREQP'11) : Las Palmas de Gran Canaria (Spain), 13th to 15th April 2011 / [6] p. : ill. [CD-ROM]

**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 / p. 437-442 : ill <https://doi.org/10.1109/CPE.2018.8372558>

**New isolated converter for interfacing PMSG based wind turbine with distribution network**

**Bisenieks, Lauris; Vinnikov, Dmitri;** Galkin, Ilja 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 / p. 100-107 : ill

**New isolated interface converter for grid-connected PMSG based wind turbines**

**Bisenieks, Lauris; Vinnikov, Dmitri;** Galkin, Ilja 2011 10th International Conference on Environment and Electrical Engineering (EEEIC), 8-11 May 2011, Rome, Italy : conference proceedings 2011 / p. 869-872 : ill <https://www.semanticscholar.org/paper/New-isolated-interface-converter-for-grid-connected-Bisenieks-Vinnikov/cac34f4cd26e3b2bb3306ab7c542bf6fc75dd48b>

**New isolated interface converter for PMSG based variable speed wind turbines**

**Vinnikov, Dmitri;** Bisenieks, Lauris; Galkin, Ilja Przegląd elektrotechniczny = Electrical review 2012 / p. 75-80 : ill [https://alephfiles.rtu.lv/TUA01/000042552\\_e.pdf](https://alephfiles.rtu.lv/TUA01/000042552_e.pdf)

**A new master-slave based centralized control method for an AC microgrid with multiple distributed energy resources**

**Habibnia, Saba; Mahdavi, Mohammad Saeed; Gharehpetian, Gevork B.; Ahmadihangar, Roya; Rosin, Argo; Vinnikov, Dmitri** IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 p. <https://doi.org/10.1109/PEDG54999.2022.9923216>

**New Method for Stabilization of Wind Power Generation Using Energy Storage Technology**

**Andrijanoviš, Anna; Egorov, Mikhail; Lehtla, Tõnu; Vinnikov, Dmitri** Agronomy research 2010 / S1, p. 12-24 : ill

**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 / p. 68-71 : ill

**New shoot-through control methods for qZSI-based DC/DC converters**

**Roasto, Indrek; Vinnikov, Dmitri; Zakis, Janis; Husev, Oleksandr** IEEE transactions on industrial informatics 2013 / p. 640-647 : ill

**A New Single Source Five-Level Common Ground Switched Capacitor based Inverter**

**Hemmati Shahsavar, Tala; Husev, Oleksandr;** Babaei, Ebrahim; Sabahi, Mehran; **Vinnikov, Dmitri;** Khoshkbar-Sadigh, Arash 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 <https://doi.org/10.1109/ENERGYCON53164.2022.9830422>

**A new single-phase flying inductor-based common grounded converter for dual-purpose application**

**Husev, Oleksandr; Vosoughi Kurdkandi, Naser; Marangalu, Milad Ghavipankeh; Vinnikov, Dmitri;** Hosseini, Seyed Hossein IEEE transactions on industrial electronics 2023 / p. 7913-7923 <https://doi.org/10.1109/TIE.2022.3215832>

**New step-up DC/DC converter for fuel cell powered distributed generation systems: some design guidelines**

**Vinnikov, Dmitri;** Strzelecki, Ryszard; Zakis, Janis; **Roasto, Indrek** Przegląd elektrotechniczny 2010 / 8, p. 245-252

**New step-up DC/DC converter with high-frequency isolation**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society. ICELE 2009 : 3rd IEEE International Conference on E-learning in Industrial Electronics : Porto, Portugal, 3-5 November 2009 : abstracts 2009 / p. 280 <https://ieeexplore.ieee.org/document/5415000>

**New step-up DC/DC converter with high-frequency isolation**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society : Porto, Portugal, 3-5 November 2009 : preprint proceedings 2009 / p. 667-672 : ill <https://ieeexplore.ieee.org/document/5415000>

**New voltage mode control method for the quasi-Z-source-based isolated DC/DC converters [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri** 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 655-660 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6210011>

**Non-shoot-through mode behavior of DC/DC converters with a quasi Z source inverter**

**Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri** 15th International Power Electronics and Motion Control Conference, EPE-PEMC 2012 ECCE Europe, Novi Sad, Serbia 2012 / 4 p. : ill <https://ieeexplore.ieee.org/document/6397204>

**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** 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 / p. 2243-2252 : ill <https://ieeexplore.ieee.org/document/8515623>

**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](#)

**A novel extendable high gain step up DC-DC converter**

**Mashinchi Maheri, Hamed; Salehi Vala, Sama; Basit Mirza, Abdul; Babaei, Ebrahim; Vinnikov, Dmitri** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2021 / p. 1-6 <https://doi.org/10.1109/RTUCON53541.2021.9711745>

**Novel family of flying inductor-based single-stage buck-boost inverters**

**Vosoughi Kurdkandi, Naser; Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri** IEEE journal of emerging and selected topics in power electronics 2022 / p. 6020-6032 <https://doi.org/10.1109/JESTPE.2022.3161113> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Novel family of modified qZS buck-boost multilevel inverters with reduced switch count**

**Husev, Oleksandr; Strzelecki, Ryszard; Blaabjerg, Frede; Chopyk, Vasily; 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. 98-105 : ill <http://dx.doi.org/10.1109/CPE.2015.7231056>

**Novel family of quasi-Z-source DC/DC converters derived from current-fed push-pull converters**

**Chub, Andrii; Husev, Oleksandr; Vinnikov, Dmitri; Blaabjerg, Frede** 2014 16th European Conference on Power Electronics and Applications (EPE'14-ECCE Europe) : Lappeenranta, Finland, 26-28 August 2014. Vol. 4 2014 / p. 3175-3184 : ill

**Novel family of single-phase modified impedance-source buck-boost multilevel inverters with reduced switch count**

**Husev, Oleksandr; Strzelecki, Ryszard; Blaabjerg, Frede; Chopyk, Vasily; Vinnikov, Dmitri** IEEE transactions on power electronics 2016 / p. 7580-7591 : ill <https://doi.org/10.1109/TPEL.2016.2569535>

**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](#)

**A novel high-voltage half-bridge converter with phase-shifted active rectifier [Electronic resource]**

**Blinov, Andrei; Ivakhno, Volodymyr; Zamaruev, Vladimir; Vinnikov, Dmitri; Husev, Oleksandr** 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 967-970 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6210062>

**A novel hysteresis power point optimizer for distributed solar power generation**

**Veligorskyi, Oleksandr; Husev, Oleksandr; Kosenko, Roman; Vinnikov, Dmitri** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 12-22 : ill <https://doi.org/10.2478/ecce-2018-0002>

**A novel isolated Buck-Boost DC-DC converter with wide range of voltage regulations**

**Afshari, Hossein; Husev, Oleksandr; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227443>

**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 (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413102>

**Novel isolated power conditioning unit for micro wind turbine applications**

**Chub, Andrii; Husev, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2017 / p. 5984-5993 : ill <https://doi.org/10.1109/TIE.2016.2645890>

**Novel quasi-Z-source derived inverter with unfolding circuit and battery storage**

**Makovenko, Elena; Husev, Oleksandr; 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. 431-436 : ill <https://doi.org/10.1109/CPE.2018.8372557>

**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](#)

**Novel universal power electronic interface for integration of pv modules and battery energy storages in residential dc microgrids**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri**; Lindvest, Andre IEEE Access 2023 / p. 30845-30858  
<https://doi.org/10.1109/ACCESS.2023.3260640>

**Operation and design of series-resonant current-source full-bridge dc-dc converter**

Verbytskyi, Ievgen; **Blinov, Andrei; Vinnikov, Dmitri**; Pefitsis, Dimosthenis IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society 2021 / 6 p <https://doi.org/10.1109/IECON48115.2021.9589548> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Operation of the step-up/down bidirectional partial power converter near zero series voltage**

**Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227425>

**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, Maria 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>

**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; Ahmadihangar, 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>

**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>

**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](#)

**Optimized energy scheduling of residential DC building: Case of Nordic climate**

**Sidorova, Aleksandra; Blinov, Andrei; Ahmadihangar, Roya; Vinnikov, Dmitri; Vösa, Karl-Villem; Kurnitski, Jarek** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 7 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227437>

**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 filter for the high-voltage DC/DC converter**

**Müür, Margus; Vinnikov, Dmitri** 4th International Symposium Topical Problems of Education in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 15-20, 2007 2007 / p. 118-121 : ill

**Output rectifier for the high-voltage high-frequency isolated DC/DC converter**

**Jalakas, Tanel; Vinnikov, Dmitri; Laugis, Juhan** Scientific proceedings of Riga Technical University. Serija 4, Power and electrical engineering 2007 / p. 84-95 : ill

### **Output rectifier for the high-voltage high-frequency isolated DC/DC converter**

**Roasto, Indrek; Vinnikov, Dmitri;** Klytta, Marius Scientific proceedings of Riga Technical University. Serija 4, Power and electrical engineering 2007 / p. 75-83 : ill

### **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 2013 / p. 76-80 : ill

### **Overcoming EMI problems in the high-power high-frequency DC/DC converters - a case study**

**Vinnikov, Dmitri; Laugis, Juhan** Технічна електродинаміка 2006 / 5, p. 33-37 : ill

### **An overview and comprehensive comparative evaluation of constant-frequency voltage buck control methods for series resonant DC–DC converters**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri; Bakeer, Abualkasim Ahmed Ali** IEEE Open Journal of the Industrial Electronics Society 2021 / p. 65 - 79 <https://doi.org/10.1109/OJIES.2020.3048003> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **An overview of lifetime management of power electronic converters**

Rahimpour, Saeed; Tarzamni, Hadi; **Vosoughi Kurdkandi, Naser; Husev, Oleksandr; Vinnikov, Dmitri;** Tahami, Farzad IEEE Access 2022 / p. 109688-109711 <https://doi.org/10.1109/ACCESS.2022.3214320> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Overview of single-stage isolated AC-DC topologies for interfacing DC and AC grids**

**Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 p. <https://doi.org/10.1109/PEDG54999.2022.9923249>

### **Overvoltages in an inverter-fed AC motor system with long cable**

**Vinnikov, Dmitri; Lehtla, Tõnu** 4th International Workshop CPE 2005 : Compatibility in Power Electronics : Fifth International Research and Educational Colloquium on Electronics : 1-3 June 2005, Gdynia, Poland 2005 / p. 69-71 : ill

### **Overvoltages in an inverter-fed AC motor system with long cable [Electronic resource]**

**Vinnikov, Dmitri; Lehtla, Tõnu** Proceedings of 4th International Workshop CPE 2005 : Compatibility in Power Electronics : Fifth International Research and Educational Colloquium on Electronics : 1-3 June 2005, Gdynia, Poland 2005 / [5] p. : ill. [CD-ROM]

### **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

### **Partial buck-boost resonant power converter for residential PV applications**

**Abdel-Rahim, Omar; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / 5 l. <https://doi.org/10.1109/ENERGYCON53164.2022.9830394>

### **Passive modular structure of a SEPIC based DC/DC converter**

**Chub, Andrii; Husev, Oleksandr; Vinnikov, Dmitri** 2014 IEEE International Conference on Intelligent Energy and Power Systems (IEPS) : conference proceedings : June 2-6, 2014, Kyiv, Ukraine 2014 / p. 81-85 : 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>

### **PCB design impact on GaN-Based converter operation**

**Husev, Oleksandr; Jalakas, Tanel; Vinnikov, Dmitri; Vosoughi Kurdkandi, Naser;** Persson, Eric 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), 19-23 March 2023 : proceedings 2023 / p. 640-650 <https://doi.org/10.1109/APEC43580.2023.10131547>

### **Performance analysis of protection methods in residential DC microgrids**

**Jalakas, Tanel;** Banavath, Satish Naik; **Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227388>

### **Performance benchmarking of Si and GaN MOSFETs in isolated buck-boost DC-DC converter**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Rahman, Showrov** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 15-17 Nov. 2021 : conference proceedings 2021 / p. 1-6 : ill

**Performance evaluation of step-up/down current-source partial power converters for PV applications**

**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / 5 p <https://doi.org/10.1109/RTUCON56726.2022.9978890>

**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](#)

**Performance improvement method for the voltage-fed qZSI with continuous input current**

**Vinnikov, Dmitri; Roasto, Indrek;** Strzelecki, Ryszard; Adamowicz, Marek MELECON 2010 : the 15th IEEE Mediterranean Electrotechnical Conference : 25th-28th April 2010, Malta : book of abstracts 2010 / p. 135

**Performance improvement of PWM control methods for voltage step-down in series resonant DC–DC converters**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** Energies 2020 / art. en13174569 ; 18 p <https://doi.org/10.3390/en13174569> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Photovoltaic energy yield improvement in two-stage solar microinverters**

**Chub, Andrii; Vinnikov, Dmitri; Stepenko, Serhii; Liivik, Elizaveta;** Blaabjerg, Frede Emerging converter topologies and control for grid connected photovoltaic systems 2021 / p. 197-213 : ill <https://doi.org/10.3390/books978-3-03943-910-2>

**Photovoltaic energy yield improvement in two-stage solar microinverters**

**Chub, Andrii; Vinnikov, Dmitri; Stepenko, Serhii; Liivik, Elizaveta;** Blaabjerg, Frede Energies 2019 / art. 3774, 17 p. : ill <https://doi.org/10.3390/en12193774> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Photovoltaic microconverter with integrated sub-modular power optimizer**

**Maheri, Hamed Mashinchi; Chub, Andrii; Vinnikov, Dmitri; Blinov, Andrei** IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2021 / p. 1-6 <https://doi.org/10.1109/CPE-POWERENG50821.2021.9501179>

**Photovoltaic module and submodule level power electronics and control**

Spagnuolo, Giovanni; Kouro, Samir; **Vinnikov, Dmitri** IEEE Transactions on Industrial Electronics 2019 / p. 3856 - 3859 <https://doi.org/10.1109/TIE.2018.2883187> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [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](https://www.ester.ee/record=b5502078*est)

**PMSG based residential wind turbines : possibilities and challenges**

Bisenieks, Lauris; **Vinnikov, Dmitri;** Galkin, Ilja Agronomy research 2013 / p. 295-306 : ill

**Possibilities and limitations of liquid cooling systems for high power converters**

**Blinov, Andrei; Vinnikov, Dmitri** 7th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Narva-Jõesuu, Estonia, 16.06-19.06.2009] 2009 / p. 20-25 : ill

**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

**Power Electronic Systems for Efficient and Sustainable Energy Supply**

2019 [https://www.mdpi.com/journal/energies/special\\_issues/power\\_electronic\\_systems\\_for\\_eses](https://www.mdpi.com/journal/energies/special_issues/power_electronic_systems_for_eses)

**Power electronics : laboratory works**

**Jalakas, Tanel; Vodovozov, Valery; Vinnikov, Dmitri** 2008 [http://www.ester.ee/record=b2373811\\*est](http://www.ester.ee/record=b2373811*est)

**Power loss model and efficiency analysis of the quasi-Z-Source isolated buck-boost converter with wide input voltage and load range**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii; Sidorov, Vadim** 2020 IEEE 61st International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, Nov. 5-7, 2020 : conference proceedings 2021 / 8 p. : ill <https://doi.org/10.1109/RTUCON51174.2020.9316587>

**Practical design guidelines of qZSI based step-up DC/DC converter**

**Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2010 / p. 107-114 : ill

#### **Prediction of semiconductor losses in a high-power high-voltage DC/DC converter**

**Jalakas, Tanel; Vinnikov, Dmitri** 4th International Symposium Topical Problems of Education in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 15-20, 2007 2007 / p. 114-117 : ill

#### **Predictive control based on ranking multi-objective optimization approaches for a quasi-Z source inverter**

**Bakeer, Abualkasim Ahmed Ali; Magdy, Gaber; Chub, Andrii; Vinnikov, Dmitri** CSEE journal of power and energy systems 2021 / p. 1152-1160 : ill <https://doi.org/10.17775/CSEEJPES.2020.01310> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Predictive control for isolated matrix rectifier without current distortion at sector boundary**

**Emiliani, Pietro; Blinov, Andrei; de Carne, Giovanni; Arena, Gabriele; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227405>

#### **Preface**

Shkarlet, Serhiy; Morozov, Anatoliy; Palagin, Alexander; **Vinnikov, Dmitri**; Stoianov, Nikolai; Zhelezniak, Mark; Kazymyr, Volodymyr Mathematical Modeling and Simulation of Systems : Selected Papers of 16th International Scientific-practical Conference, MODS, 2021 June 28–July 01, Chernihiv, Ukraine 2022 / p. ix-x <https://doi.org/10.1051/mmmp/2018041> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

#### **Preface to "Industrial and Technological Applications of Power Electronics Systems"**

Strzelecki, Ryszard; **Demidova, Galina; Vinnikov, Dmitri** Industrial and Technological Applications of Power Electronics Systems 2021 / p. ix <https://doi.org/10.3390/books978-3-0365-0823-8>

#### **Proportional resonant controller tuning in three-phase four-leg VSI based on particle swarm optimization**

Akhtar, Zeeshan; Zhu, Jiebei; **Husev, Oleksandr; Vinnikov, Dmitri**; Yu, Lujie 2021 IEEE 19th International Power Electronics and Motion Control Conference, The Silesian University of Technology Gliwice, Poland, 25 - 29 April, 2021 (PEMC) : proceedings 2021 / p. 851-856 : ill <https://doi.org/10.1109/PEMC48073.2021.9432607>

#### **qZS-based soft-switching DC/DC converter with a series resonant LC circuit**

**Vinnikov, Dmitri; Zakis, Janis; Liivik, Liisa; Rankis, Ivars** Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / p. 42-50 : ill

#### **QZS-based soft-switching DC/DC converter with a series resonant LC circuit [Electronic resource]**

**Vinnikov, Dmitri; Zakis, Janis; Liivik, Liisa; Rankis, Ivars** Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [3] p. : ill [CD-ROM]

#### **QZSI DC/DC converters in input-series output-parallel connection for distributed generation [Electronic resource]**

Martinez, C.; **Jalakas, Tanel; Vinnikov, Dmitri**; Lazaro, A.; Barrado, A. SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the International Symposium on Power Electronics, Electrical drives, Automation and Motion 2012 / p. 952-957 : ill [CD-ROM]

#### **Quadratic boost A-source impedance network**

Siwakoti, Yam P.; **Blaabjerg, Frede; Chub, Andrii; Vinnikov, Dmitri** ECCE 2016 : IEEE Energy Conversion Congress & Expo : September 18-22, Milwaukee, WI : proceedings 2016 / [6] p. : ill <https://doi.org/10.1109/ECCE.2016.7855374>

#### **Quasi single-stage three-phase filterless converter for EV charging applications**

**Blinov, Andrei; Zinchenko, Denys; Rabkowski, Jacek; Wrona, Grzegorz; Vinnikov, Dmitri** IEEE Open Journal of Power Electronics 2022 / p. 51-60 : ill <https://doi.org/10.1109/OJPEL.2021.3134460> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Quasi-Z-source half-bridge DC-DC converter for photovoltaic applications**

**Vinnikov, Dmitri; Chub, Andrii; Husev, Oleksandr; Zakis, Janis** 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 2015 / p. 2935-2940 : ill

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

**Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek**; Ribickis, Leonids CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 394-399 [CD-ROM] [https://www.researchgate.net/publication/224245116\\_Quasi-Z-source\\_inverter\\_based\\_bi-directional\\_DCDC\\_converter\\_Analysis\\_of\\_experimental\\_results](https://www.researchgate.net/publication/224245116_Quasi-Z-source_inverter_based_bi-directional_DCDC_converter_Analysis_of_experimental_results)

#### **Quasi-Z-source-based isolated DC/DC converters for distributed power generation**

**Vinnikov, Dmitri; Roasto, Indrek** IEEE transactions on industrial electronics 2011 / p. 192-201 : ill

### **Reactive power control for bidirectional isolated high-frequency link converter**

**Emiliani, Pietro**; Blinov, Andrei; Peftitsis, Dimosthenis; Giannakis, Andreas; **Vinnikov, Dmitri** 2022 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM) 2022 / p. 372-376  
<https://doi.org/10.1109/SPEEDAM53979.2022.9842131>

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

Roncero-Clemente, Carlos; **Husev, Oleksandr**; **Matiuskin, 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](#)

### **Regenerative passive snubber circuit for high-frequency link converters**

**Blinov, Andrei**; Verbytskyi, Ievgen; Peftitsis, Dimosthenis; **Vinnikov, Dmitri** IEEE journal of emerging and selected topics in industrial electronics 2022 / p. 252 - 257 <https://doi.org/10.1109/JESTIE.2021.3066897>

### **Reliability assessment of photovoltaic Buck-Boost microconverter for Estonian climate conditions**

**Bakeer, Abualkasim Ahmed Ali**; **Chub, Andrii**; **Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227505>

### **Reliability evaluation of an impedance-source PV microconverter**

Shen, Yanfeng; **Liivik, Elizaveta**; Blaabjerg, Frede; **Vinnikov, Dmitri**; Wang, Huai; **Chub, Andrii** 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. 108-110 : ill [http://ise.elnet.ee/record=b2950026~S2\\*est](http://ise.elnet.ee/record=b2950026~S2*est)

### **Reliability evaluation of an impedance-source PV microconverter**

Shen, Yanfeng; **Liivik, Elizaveta**; Blaabjerg, Frede; **Vinnikov, Dmitri**; Wang, Huai; **Chub, Andrii** 2018 IEEE Applied Power Electronics Conference and Exposition (APEC 2018), San Antonio, Texas, USA, 4-8 March 2018 2018 / p. 1104-1108 : ill <https://doi.org/10.1109/APEC.2018.8341154> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Reliability of DC-link capacitors in two-stage micro-inverters under different PV module sizes**

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii**; **Liivik, Elizaveta**; **Vinnikov, Dmitri**; Wang, Huai; Blaabjerg, Frede ICPE 2019 - ECCE Asia : 10th International Conference on Power Electronics - ECCE Asia : "Green World with Power Electronics" : May 27-30, 2019 BEXCO, Busan, Korea 2019 / p. 1867-1872 : ill <https://ieeexplore.ieee.org/xpl/conhome/8786807/proceeding>

### **Reliability study of input side capacitors in impedance-source PV microconverters**

**Liivik, Elizaveta**; **Vinnikov, Dmitri**; **Chub, Andrii**; Shen, Yanfeng IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 5026-5032 : ill <https://doi.org/10.1109/IECON.2019.8927173> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Research and development of digital control systems and algorithms for high power, high voltage isolated DC/DC converters = Võimsate kõrgepingeliste alalisvoolumuundurite arvjuhtimissüsteemide ja -algoritmide uurimine ning väljatöötamine**

**Roasto, Indrek** 2009 [https://www.ester.ee/record=b2557768\\*est](https://www.ester.ee/record=b2557768*est)

### **Research and development of high-power high-voltage DC/DC converters = Võimsate kõrgepingeliste alalispingemuundurite uurimine ja välmimine**

**Jalakas, Tanel** 2010 [https://www.ester.ee/record=b2607120\\*est](https://www.ester.ee/record=b2607120*est)

### **Research and development of voltage converter for trams**

**Vinnikov, Dmitri**; **Lehtla, Madis**; **Joller, Jüri**; **Laugis, Juhan** Power and Electrical Engineering International Scientific Conference 2002 / ? p

### **Research and development of voltage converters based on 6,5 kV IGBTs**

**Jalakas, Tanel**; **Roasto, Indrek**; **Müür, Margus**; **Vinnikov, Dmitri**; **Laugis, Juhan** International Youth Conference on Energetics IYCE-2007 : 31 May - 02 June, 2007, Budapest, Hungary : program & abstracts 2007 / p. 153-154 : ill

### **Research of switching properties and performance improvement methods of high-voltage IGBT based DC/DC converters = Kõrgepingelistel IGBT transistoridel põhinevate alalispingemuundurite lülitusomaduste ja jõudluse suuredamise meetodite uurimine**

**Blinov, Andrei** 2012 [http://www.ester.ee/record=b2856034\\*est](http://www.ester.ee/record=b2856034*est)

### **Research, design and implementation of auxiliary power supplies for the light rail vehicles**

**Vinnikov, Dmitri**; **Lehtla, Tõnu** 2005 [https://www.ester.ee/record=b2097496\\*est](https://www.ester.ee/record=b2097496*est)

### **Research, design and implementation of galvanically isolated impedance-source DC-DC converters = Galvaaniliselt isoleeritud impedantsallikaga alalispingemuundurite uurimine, süntees ja rakendamine**

**Chub, Andrii** 2016 <http://digi.lib.ttu.ee/i/?6209> [https://www.ester.ee/record=b4601191\\*est](https://www.ester.ee/record=b4601191*est)

### **Reverse power flow control possibilities of galvanically isolated impedance-source DC-DC converters**

**Chub, Andrii; Vinnikov, Dmitri; Liivik, Elizaveta** 2017 11th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2017) : Cadiz, Spain, 4-6 April 2017 2017 / p. 522-527 : ill  
<https://doi.org/10.1109/CPE.2017.7915226>

### **A review of galvanically isolated impedance-source DC-DC converters**

**Chub, Andrii; Vinnikov, Dmitri; Blaabjerg, Frede; Peng, Fang Zheng** IEEE transactions on power electronics 2016 / p. 2808-2828 : ill <https://doi.org/10.1109/TPEL.2015.2453128>

### **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](#)

### **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](#)

### **Review of possible DC-DC converter-topologies for tram's auxiliary power supply**

**Vinnikov, Dmitri; Lehtla, Tõnu** EPE-PEMC 2004 : 11th International Power Electronics and Motion Control Conference : 2-4 September 2004, Riga, Latvia : proceedings. Vol. 6 of 7, Mechatronics, industrial drive systems, power electronics and drives in transport, EMC and design of PE systems 2004 / p. 6-176 - 6-179 : ill

### **Selection of the duty cycle variation range and its influence on the efficiency and operability of high-power converters operating at wide input voltage swing**

**Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel** 7th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Narva-Jõesuu, Estonia, 16.06-19.06.2009] 2009 / p. 26-31 : ill

### **Self-healing photovoltaic microconverter with zero redundancy and accurate low-cost fault detection**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2024 / p. 646-656  
<https://doi.org/10.1109/TIE.2023.3250836>

### **Semiconductor power loss reduction and efficiency improvement techniques for the galvanically isolated quasi-Z-source DC-DC converters = Galvaaniliselt isoleeritud kvaasiimpedantsallikaga alalispingemuunduri pooljuhtide võimsuskao vähendamine ja kasuteguri suurendamine**

**Liivik, Liisa** 2015 [https://www.ester.ee/record=b4484169\\*est](https://www.ester.ee/record=b4484169*est)

### **Series buck-boost partial power converter based on the push-pull converter**

**Abdel-Rahim, Omar; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** IECON 2022 : 48th Annual Conference of the IEEE Industrial Electronics Society : 17-20 Oct. 2022 2022 / code. 184962 <https://doi.org/10.1109/IECON49645.2022.9968574> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

### **A series partial power converter based on dual active bridge converter for residential battery energy storage system**

**Hassanpour, Naser; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri; Abdelrahim Abdelghafour, Omar Mohamed** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 15-17 Nov. 2021 : conference proceedings 2021 / p. 1-6 : ill <https://doi.org/10.1109/RTUCON53541.2021.9711725>

### **Series resonant DC-DC converter with an AC-switch-based full-bridge boost rectifier**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** Annual IEEE Conference on Applied Power Electronics Conference and Exposition (APEC) 2021 / p. 1985-1990 <https://doi.org/10.1109/APEC42165.2021.9487113> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Series resonant DC-DC converter with single-switch full-bridge boost rectifier operating at fixed switching frequency**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 270-275  
<https://doi.org/10.1109/PEDG48541.2020.9244438>

### **Series-resonant DC-DC interface converter for battery integration into DC microgrids**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 307-310 <https://doi.org/10.1109/PEMC51159.2022.9962929>

### **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**

**Vinnikov, Dmitri; Liivik, Elizaveta** 2018 [http://www.ester.ee/record=b4763182\\*est](http://www.ester.ee/record=b4763182*est)

**Shade-tolerant photovoltaic microinverter with time adaptive seamless P-V curve sweep MPPT [Electronic resource]**  
**Vinnikov, Dmitri; Kosenko, Roman; Chub, Andrii; Liivik, Elizaveta** 19th European Conference on Power Electronics and Application : EPE'17 ECCE Europe : September 11-14, 2017, Warsaw, Poland 2017 / p. P1-P7 : ill. [USB]  
<https://doi.org/10.23919/EPE17ECCEurope.2017.8099366>

**Sheppard-Taylor isolated high boost DC-DC converter [Electronic resource]**  
**Chub, Andrii; Siwakoti, Yam P.; Vinnikov, Dmitri; Blaabjerg, Frede** Thirty Second Annual IEEE Applied Power Electronics Conference and Exposition (APEC 2017) : March 26-30, 2017, Tampa, Florida 2017 / p. 1695-1699 : ill. [CD-ROM]  
<https://doi.org/10.1109/APEC.2017.7930927>

**Short-circuit fault detection and remedial in full-bridge rectifier of series resonant DC-DC converter based on inductor voltage signature**  
**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; 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 / 6 p. : ill  
<https://doi.org/10.1109/RTUCON51174.2020.9316482>

**SiC и GaAs диоды в устройствах силовой электроники**  
**Blinov, Andrei; Vinnikov, Dmitri; Rang, Toomas** Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / с. 42-46 : ил

**Simplified digital average current mode control algorithm for half- or full-bridge isolated DC/DC converters**  
**Roasto, Indrek; Vinnikov, Dmitri** IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society : Porto, Portugal, 3-5 November 2009 : preprint proceedings 2009 / p. 1744-1749 : ill <https://ieeexplore.ieee.org/document/5414820/similar#similar>

**Simplified digital average current mode control algorithm for half- or full-bridge isolated DC/DC converters**  
**Roasto, Indrek; Vinnikov, Dmitri** IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society. ICELIE 2009 : 3rd IEEE International Conference on E-learning in Industrial Electronics : Porto, Portugal, 3-5 November 2009 : abstracts 2009 / p. 166

**A simplified peak current mode control algorithm for special purpose high voltage IGBT converters**  
**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu; Auväärt, Aivar** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 305-308 : ill

**Simulation and evaluation of control methods for the rolling stock static auxiliary converter based on three-level NPC inverter topology [Electronic resource]**  
**Roasto, Indrek; Vinnikov, Dmitri; Vodovozov, Valery** POWERENG 2009 : 2nd International Conference on Power Engineering, Energy and Electrical Drives : 18-20 March, 2009, Lisbon, Portugal 2009 / p. 593-598 : ill. [CD-ROM]  
<https://ieeexplore.ieee.org/document/4915176/similar#similar>

**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, Latvia : [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 high step-up quasi-Z-source DC-DC converter with synchronous rectification**  
**Liivik, Liisa; Vinnikov, Dmitri; Zakis, Janis** 2014 55th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings 2014 / p. 34-37 : ill

**Simulation study of nonlinear PI-controller with quasi-Z-source derived push-pull converter**  
**Chub, Andrii; Husev, Oleksandr; Vinnikov, Dmitri** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2013 / p. 26-31 : 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

### **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

### **Single-phase qZS-based PV inverter with integrated battery storage for distributed energy generation**

**Husev, Oleksandr**; **Makovenko, Elena**; **Vinnikov, Dmitri**; **Jalakas, Tanel** 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 / p. 508-513 : ill <https://doi.org/10.1109/CPE.2018.8372570>

### **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>

### **Single-stage buck–boost inverters: a state-of-the-art survey**

Azizi, Mohammadreza; **Husev, Oleksandr**; **Vinnikov, Dmitri** Energies 2022 / art. 1622 <https://doi.org/10.3390/en15051622> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Single-stage series-connected isolated converters for MVAC to DC applications**

**Blinov, Andrei**; **Chub, Andrii**; **Vinnikov, Dmitri**; Bayhan, Sertac Workshop on Smart Grid and Renewable Energy (SGRE) 2022 / 4 p <https://doi.org/10.1109/SGRE53517.2022.9774185>

### **Single-switch galvanically isolated quasi-Z-source DC-DC converter**

**Chub, Andrii**; **Vinnikov, Dmitri** 2015 IEEE 5th International Conference on Power Engineering, Energy and Electrical Drives (POWERENG) : proceedings : May 11-13, 2015, Riga, Latvia 2015 / p. 582-586 : ill <http://dx.doi.org/10.1109/PowerEng.2015.7266381>

### **Single-switch galvanically isolated step-op DC-DC converter for residential photovoltaic applications [Online resource]**

**Vinnikov, Dmitri**; **Chub, Andrii**; **Liivik, Elizaveta** Proceedings of the IECON2016 - 42nd Annual Conference of the Industrial Electronics Society : Florence (Italy), October 24-27, 2016 2016 / p. 6578-6582 : ill <https://doi.org/10.1109/IECON.2016.7793776>

### **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 (RTU CON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTU CON.2018.8659851>

### **6.5 kV IGBT switch realization possibilities and their feasibility study for high-power applications**

**Vinnikov, Dmitri**; **Laugis, Juhan**; Strzelecki, Ryszard; **Egorov, Mikhail** The 4th International Scientific Conference of The Military Technical College [Korby El-Kobbah, Cairo, Egypt] : 27-29 May 2008. Proceedings of the 6th ICEENG Conference : 27-29 May, 2008 2008 / p. EE051 [CD-ROM]

### **16th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology III" : Pärnu, Estonia, January 16-21, 2017**

2017 [http://www.ester.ee/record=b4650094\\*est](http://www.ester.ee/record=b4650094*est)

### **Sliding mode control based on super twisting algorithm for single-stage on-board charger**

Guler, Naki; Komurcugil, Hasan; Bayhan, Sertac; **Vinnikov, Dmitri**; **Blinov, Andrei** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227481>

### **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 (RTU CON), 7-9 October 2019 : conference proceedings 2019 / 6 p <https://doi.org/10.1109/RTU CON48111.2019.8982329>

### **Small signal modeling of interleaved quasi-z-source inverter with active power decoupling circuit**

**Stepenko, Serhii; Husev, Oleksandr; Pires Pimentel, Sergio; Makovenko, Elena; 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.2018.8659903>

**Small signal modeling of interleaved quasi-z-source inverter with active power decoupling circuit**

**Stepenko, Serhii; Husev, Oleksandr; Pires Pimentel, Sergio; Makovenko, Elena; 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.2018.8659903>

**Snubberless boost full-bridge converters: analysis of soft switching performance and limitations**

**Blinov, Andrei; Kosenko, Roman; Chub, Andrii; Vinnikov, Dmitri** International journal of circuit theory and applications 2019 / p. 1–25 : ill <https://doi.org/10.1002/cta.2626> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Soft start algorithm for a droop controlled dc nanogrid**

**Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l. <https://doi.org/10.1109/BEC56180.2022.9935608>

**Soft start and protection of bidirectional buck-boost partial power converter**

**Hassanpour, Naser; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** 3rd International Conference on Smart Grid and Renewable Energy (SGRE) 2022 / p. 1-6 <https://doi.org/10.1109/SGRE53517.2022.9774133>

**Soft switching bidirectional step-up/down partial power converter with reduced components stress**

**Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri** IEEE transactions on power electronics 2023 / p. 14166-14177 <https://doi.org/10.1109/TPEL.2023.3289061>

**Soft-switching capability analysis of a qZSI-based DC/DC converter**

**Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 301-304 : ill

**Soft-switching current-FED flyback converter with natural clamping for low voltage battery energy storage applications**

**Kosenko, Roman; Vinnikov, Dmitri** 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. 429–436 [http://dx.doi.org/10.1007/978-3-319-56077-9\\_42](http://dx.doi.org/10.1007/978-3-319-56077-9_42)

**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](#)

**Solving EMI problems of a high-frequency DC-DC converter**

**Vinnikov, Dmitri** The 4th Research Symposium of Young Scientists : Actual Problems of Electrical Drives and Industry Automation : Tallinn, Estonia, May 17-21, 2003 2003 / p. 69-72 : ill

**Some design consideration for the 6.5 Kv IGBT-based half-bridge DC/DC converter**

**Vinnikov, Dmitri** The Brazilian journal of power electronics = Revista electronica de potencia 2008 / 2, p. 55-60

**Some design considerations for coupled inductors for integrated buck-boost converters**

**Zakis, Janis; Vinnikov, Dmitri; Bisenieks, Lauris** POWERENG2011 : proceedings of the 2011 International Conference on Power Engineering, Energy and Electrical Drives : Torremolinos (Málaga), Spain, May 11-13, 2011 2011 / [6] p. : ill <https://ieeexplore.ieee.org/abstract/document/6036465>

**Some design considerations for high-power high-voltage DC/DC converter with improved power density and efficiency**

**Vinnikov, Dmitri** The Brazilian journal of power electronics = Revista electronica de potencia 2009 / 4, p. 297-304 <https://sobraep.org.br/site/uploads/2018/06/rvol14no4p15.pdf>

**Some design considerations for the 6.5 kV IGBT-based half-bridge DC/DC converter**

**Vinnikov, Dmitri** 9th Brazilian Power Electronics Conference : COBEP2007 : Blumenau, Brasil : book of abstracts 2007 / p. 966-971

**Stability analysis of the quasi-Z-source DC/DC converter based on small signal model [Electronic resource]**

**Husev, Oleksandr; Vinnikov, Dmitri; Roasto, Indrek** SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the

**Starting of a diesel engine by help of ultracapacitors**

**Boiko, Vitali; Vinnikov, Dmitri; Joller, Jüri** BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 405-406 : ill

**State of the art and development trends of smart control systems for high voltage DC/DC converters**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 36-42 : ill

**State-of-the-art activity recognition and prediction techniques applicable to the home energy management system**

Hokmabad, Hossein Nouroollahi; **Belikov, Juri; Husev, Oleksandr; Vinnikov, Dmitri** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / art. 181231 : ill <https://doi.org/10.1109/ENERGYCON53164.2022.9830154>

**Steady state analysis of the galvanically isolated DC/DC converter with a commutating LC filter [Electronic resource]**

**Zakis, Janis; Vinnikov, Dmitri;** Rankis, Ivars 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 838-843 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6210041>

**Steady-state analysis of qZS-derived push-pull DC/DC converter with wide input voltage regulation range [Electronic resource]**

**Husev, Oleksandr; Blinov, Andrei; Vinnikov, Dmitri; Chub, Andrii** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 320-325 : ill [CD-ROM]

**Step-up current-source partial power converter for PV systems**

**Abdel-Rahim, Omar; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Hassanpour, Naser** IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 I. <https://doi.org/10.1109/PEDG54999.2022.9923250>

**Step-up DC/DC converters with cascaded quasi-Z-source network**

**Vinnikov, Dmitri; Roasto, Indrek;** Strzelecki, Ryszard; Adamowicz, Marek IEEE transactions on industrial electronics 2012 / p. 3727-3736 : ill <https://ieeexplore.ieee.org/document/6096410>

**Step-Up series resonant DC-DC converter with bidirectional-switch-based boost rectifier for wide input voltage range photovoltaic applications**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** Energies 2020 / Art. 3747 <https://doi.org/10.3390/en13143747>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Step-Up series-resonant DC-DC converter with switched mode rectifier operating at fixed switching frequency**

**Chub, Andrii; Bakeer, Abualkasim Ahmed Ali; Vinnikov, Dmitri** 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 597-601  
<https://doi.org/10.1109/PEDG48541.2020.9244312>

**Step-up/down partial power converter with enhanced MPPT efficiency around zero partiality**

**Yadav, Neelesh; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Vinnikov, Dmitri** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10412980>

**Students & young professionals of the IEEE Industrial Electronics Society (IES) at the 24th IEEE International Conference on Industrial Technology 2023: It is also a strategic priority of IES for the next decade! [Students and Young Professionals News]**

**Vinnikov, Dmitri** IEEE industrial electronics magazine 2023 / p. 103-104 <https://doi.org/10.1109/MIE.2023.3297351>

**Study of MOSFET post-fault operation in fault-tolerant DC-DC converters**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / Code 181231, 5 p <https://doi.org/10.1109/ENERGYCON53164.2022.9830216>

**Study of operating conditions of 3,3 kV dual IGBT modules in three-level neutral point clamped inverters**

**Blinov, Andrei; Jalakas, Tanel; Vinnikov, Dmitri** Технічна електродинаміка 2010 / 1, p. 135-140 : ill

**Study of performance improvement methods for 6.5kV IGBT based two-level half-bridge converters**

**Blinov, Andrei; Vinnikov, Dmitri;** Ivakhno, Volodymyr Технічна електродинаміка 2011 / p. 56-62 : ill

**Study of simple MPPT converter topologies for grid integration of photovoltaic systems**

**Zakis, Janis; Vinnikov, Dmitri** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 67-72 : ill

### **Study on power losses of the full soft-switching current-fed DC/DC converter with Si and GaN devices**

**Chub, Andrii; Rabkowski, Jacek; Blinov, Andrei; Vinnikov, Dmitri** IECON 2015 - Yokohama : 41st Annual Conference of the IEEE Industrial Electronics Society : November 9-12, 2015, Pacifico Yokohama, Yokohama, Japan 2015 / p. 13-18

### **Super-twisting sliding mode control strategy for input series output parallel converters**

Guler, Naki; Bayhan, Sertac; Fesli, Ugur; **Blinov, Andrei; Vinnikov, Dmitri** IEEE Access 2023 / 10 p

<https://doi.org/10.1109/ACCESS.2023.3320178>

### **Supply for the auxiliary systems in the rail vehicle**

**Lehtla, Madis; Vinnikov, Dmitri** Actual Problems of Electrical Drives and Industry Automation : the 3rd Research Symposium of Young Scientists : Tallinn, Estonia, May 19-26, 2001 2001 / p. 68-70 : ill

### **Survey of loss minimization methods in tram systems [Electronic resource]**

**Hõimoja, Hardi; Vinnikov, Dmitri; Lehtla, Madis; Rosin, Argo; Zakis, Janis** SPEEDAM 2010 : International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Pisa, Italy, 14th-16th June, 2010 : proceedings 2010 / p. 1356-1361 : [CD-ROM]

### **Survey of topology morphing control techniques for performance enhancement of galvanically isolated DC-DC converters**

**Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri; Peng, Fang Zheng** IEEE Open Journal of the Industrial Electronics Society 2022 / p. 751-777 : ill <https://doi.org/10.1109/OJIES.2022.3225265> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Switched inductor quasi-Z-source based back-to-back converter for variable speed wind turbines with PMSG**

**Bisenieks, Lauris; Vinnikov, Dmitri; Ott, Silver** Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 61-66 : ill

### **Switch-off behaviour of 6.5 kV IGBT modules in two-level voltage source inverter**

**Blinov, Andrei; Jalakas, Tanel; Vinnikov, Dmitri; Janson, Kuno** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2010 / p. 121-126 : ill

### **Synchronous rectification in quasi-Z-source converters : possibilities and challenges**

**Liivik, Liisa; Vinnikov, Dmitri; Jalakas, Tanel** 2014 IEEE International Conference on Intelligent Energy and Power Systems (IEPS) : conference proceedings : June 2-6, 2014, Kyiv, Ukraine 2014 / p. 32-35 : ill

### **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](#)

### **Zero-redundancy fault-tolerant resonant dual active bridge converter for more electric aircrafts**

**Chub, Andrii; Buticchi, Giampaolo; Sidorov, Vadim; Vinnikov, Dmitri** 2022 IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 l. <https://doi.org/10.1109/PEDG54999.2022.9923154>

### **Tallinn University of Technology : [department of electrical drives and power electronics, faculty of power engineering]**

**Vinnikov, Dmitri** The ECPE network : member companies and competence centres 2012 / p. 138 : ill

### **TalTechi aasta teadlane Dmitri Vinnikov tegutseb selle nimel, et rohepöörde saaks teha praktiliselt ja mõistlike kuludega**

**Vinnikov, Dmitri** digi.geenius.ee 2023 [TalTechi aasta teadlane Dmitri Vinnikov tegutseb selle nimel, et rohepöörde saaks teha praktiliselt ja mõistlike kuludega](#)

### **TalTechi aasta teadlane Dmitri Vinnikov: „Seda eriala õppides avanevad noore inimese ees uskumatud töövõimalused!“**

Alvela, Ain toostusuudised.ee 2023 [TalTechi aasta teadlane Dmitri Vinnikov: „Seda eriala õppides avanevad noore inimese ees uskumatud töövõimalused!“](#)

### **Teaduspreemia tehnikateaduste alal uurimuste tsükli "Uudsed alalispingemuundurid taastuenergeetikas" eest : Dimitri Vinnikov, Tanel Jalakas, Indrek Roasto**

**Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek** Eesti Vabariigi teaduspreemiad 2014 2014 / lk. 64-74 : fot., ill

### **13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : in memoriam of professor Juhan Laugis : Pärnu, Estonia, January 14-19, 2013**

2013 [http://www.ester.ee/record=b2925939\\*est](http://www.ester.ee/record=b2925939*est)

### **Three-level half-bridge ZVS DC/DC converter for electrolyzer integration with renewable energy systems**

**Andrijanovitš, Anna; Vinnikov, Dmitri; Roasto, Indrek; Blinov, Andrei** 2011 10th International Conference on Environment and Electrical Engineering (EEEIC), 8-11 May 2011, Rome, Italy : conference proceedings 2011 / [4 p.] : ill

### **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

### **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 <http://dx.doi.org/10.1016/j.epsr.2015.08.018>

### **Three-mode reconfigurable rectifier for DC-DC converters with wide input voltage range**

**Chub, Andrii**; **Vinnikov, Dmitri**; Kouro, Samir; Malinowski, Mariusz IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 4429-4435 <https://doi.org/10.1109/IECON.2019.8926994> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Three-phase bidirectional isolated AC-DC matrix-converter with full soft-switching range**

**Carvalho, Edivan Laercio**; **Blinov, Andrei**; **Emiliani, Pietro**; **Chub, Andrii**; **Vinnikov, Dmitri** IEEE Access 2023 / p. 119270-119283 <https://doi.org/10.1109/ACCESS.2023.3327224>

### **Three-phase four wire high-frequency link converter for residential DC grids**

**Emiliani, Pietro**; **Blinov, Andrei**; de Carne, Giovanni; Arena, Gabriele; **Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227416>

### **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>

### **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 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413182>

### **Three-port flyback converter for photovoltaic module integration in bipolar DC microgrids**

**Chub, Andrii**; **Zinchenko, Denys**; **Vinnikov, Dmitri**; **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. 909-914 <https://doi.org/10.1109/ICIT45562.2020.9067237> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Title: Models of the qZ-Converters**

**Vinnikov, Dmitri**; Strzelecki, Ryszard Przegląd elektrotechniczny 2010 / 6, p. 80-84

### **Topological review of quasi-switched boost inverters**

Barath, Jayakumar Geetha Nataraj; Soundarajan, Ayyasamy; Stepenko, Serhii; **Husev, Oleksandr**; **Vinnikov, Dmitri**; Nguyen, Minh-Khai Electronics 2021 / art. 1485 <https://doi.org/10.3390/electronics10121485> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Topology morphing control of low-cost PV microconverters**

**Mashinchi Maheri, Hamed**; **Vinnikov, Dmitri**; **Chub, Andrii**; **Sidorov, Vadim** 2021 IEEE 19th International Power Electronics and Motion Control Conference (PEMC), 25-29 April 2021, Gliwice, Poland : proceedings 2021 <https://doi.org/10.1109/PEMC48073.2021.9432496>

### **Topology morphing control with soft transients for multimode series resonant DC-DC converter**

**Sidorov, Vadim**; **Chub, Andrii**; **Vinnikov, Dmitri** 2021 IEEE 22nd International Conference of Young Professionals in Electron Devices and Materials (EDM) 2021 / p. 331-336 <https://doi.org/10.1109/EDM52169.2021.9507621>

### **Topology-morphing photovoltaic microconverter with wide MPPT voltage window and post-fault operation capability**

**Vinnikov, Dmitri**; **Chub, Andrii**; **Zinchenko, Denys**; **Sidorov, Vadim** IEEE Access 2020 / art. 9171332, p. 153941-153955 : ill <https://doi.org/10.1109/ACCESS.2020.3017805> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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

### **Traction and control of light rail vehicles**

**Laugis, Juhan; Lehtla, Tõnu; Joller, Jüri; Rosin, Argo; Vinnikov, Dmitri; Lehtla, Madis** 2008

[http://www.ester.ee/record=b2394449\\*est](http://www.ester.ee/record=b2394449*est)

### **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](#)

### **Transient analysis of high-voltage half-bridge inverter during freewheeling states**

**Blinov, Andrei; Jalakas, Tanel; Vinnikov, Dmitri; Janson, Kuno** 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 8-11 : ill

### **Transient response analyse of different voltage-fed qZS-family inverters**

**Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri; Teemets, Raivo** 11th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 16-21, 2012 2012 / p. 195-199 : ill

### **Trans-Z-source-like inverter with built-in DC current blocking capacitors [Electronic resource]**

Adamowicz, Marek; Guzinski, Jaroslaw; Strzelecka, Natalia; **Vinnikov, Dmitri** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 137-149 : ill. [CD-ROM] <https://ieeexplore.ieee.org/document/5942221>

### **Triple-Loop Control Configuration for Grid-Connected LCL-Filtered Inverters Based on Time-Domain Design**

**Elkayam, Moria Sassonker; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p. : ill <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227426>

### **TTÜ elektriakomitee ja jõuelektronika instituut moderniseeris BLRT kraana**

**Vinnikov, Dmitri; Boiko, Vitali** Mente et Manu 2005 / 5. mai, lk. 3 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **Two-stage quasi-Z-source network based step-up DC/DC converter**

**Vinnikov, Dmitri; Roasto, Indrek**; Strzelecki, Ryszard; Adamowicz, Marek ISIE 2010 : IEEE International Symposium on Industrial Electronics : Bari, Italy, 4-7 July 2010 2010 / p. 1143-1148 : ill

### **Ultracapacitors as an innovative teaching topic in Tallinn University of Technology [Electronic resource]**

**Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu** 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Speedam 2008 : Ischia (Italy), June 11th-13th, 2008 : conference proceedings 2008 / p. 475-480 : ill. [CD-ROM]

### **Ultra-High gain modified SCLN based DC-DC converter with reduced device current stress**

Sahoo, Gyana Manjari; Banavath, Satish Naik; **Chub, Andrii; Vinnikov, Dmitri** 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 <https://doi.org/10.1109/RTUCON56726.2022.9978808>

### **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](#)

### **Universal galvanically isolated DC-DC converters with topology morphing control = Universaalsed topoloogiat muutva juhtimisega galvaaniliselt isoleeritud alalispingemuundurid**

**Sidorov, Vadim** 2023 <https://doi.org/10.23658/taltech.17/2023> <https://digikogu.taltech.ee/et/Item/96dbe736-5976-431c-ae55-7fc2d4ead55e> [https://www.ester.ee/record=b5558654\\*est](https://www.ester.ee/record=b5558654*est)

### **Use of ultracapacitors modules in ICE starting system**

**Boiko, Vitali; Vinnikov, Dmitri; Joller, Jüri** Power and Electrical Engineering International Scientific Conference 2002 / ? p

### **Utility-scale energy storage systems : a comprehensive review of their applications, challenges, and future directions**

Luo, Wensheng; Stynski, Sebastian; **Chub, Andrii**; Franquelo, Leopoldo G.; Malinowski, Mariusz; **Vinnikov, Dmitri** IEEE industrial electronics magazine 2021 / p. 17-27 <https://doi.org/10.1109/MIE.2020.3026169> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Utility-scale energy storage systems : converters and control**

Stynski, Sebastian; Luo, Wensheng; **Chub, Andrii; Vinnikov, Dmitri** IEEE industrial electronics magazine 2020 / p. 32-52  
<https://doi.org/10.1109/MIE.2020.3011655> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Uudsed alalispingemuundurid taastuenergeetikas**

**Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek** Teadusmõte Eestis (X). Tehnikateadused. 3 : [artiklikogumik] 2019 / lk. 216-226 : ill., fot [https://www.ester.ee/record=b5208765\\*est](https://www.ester.ee/record=b5208765*est)

#### **Wear-out failure analysis of an impedance-source PV microinverter based on system-level electrothermal modeling**

Shen, Yanfeng; **Chub, Andrii; Wang, Huai; Vinnikov, Dmitri; Liivik, Elizaveta**; Blaabjerg, Frede IEEE transactions on industrial electronics 2019 / p. 3914-3927 <https://doi.org/10.1109/TIE.2018.2831643> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Wear-out failure analysis of solar optiverter operating with 60- and 72-cell Si crystalline PV modules**

**Liivik, Liisa; Chub, Andrii**; Sangwongwanich, Ariya; Shen, Yanfeng; **Vinnikov, Dmitri**; Blaabjerg, Frede IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 6134-6140 : ill <https://doi.org/10.1109/IECON.2018.8592925>

#### **Versatile laboratory tools for advanced course of power electronics**

**Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek; Raud, Zoja; Egorov, Mikhail** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 277-280 : ill

#### **Versatile power electronic building block for residential DC microgrids**

**Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; Liivik, Elizaveta** 2018 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM 2018) : Amalfi, Italy, 20-22 June 2018 2018 / p. 735-741 : ill <https://doi.org/10.1109/SPEEDAM.2018.8445317>

#### **Wide input voltage range high step-up DC-DC vonverter 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 input voltage range operation of the series resonant DC-DC converter with bridgeless boost rectifier**

**Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri; Rosin, Argo** Energies 2020 / p. 4220-4237 <https://doi.org/10.3390/en13164220> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Wide input voltage range photovoltaic microconverter with reconfigurable buck-boost switching stage**

**Chub, Andrii; Vinnikov, Dmitri; Kosenko, Roman; Liivik, Elizaveta** IEEE transactions on industrial electronics 2017 / p. 5974-5983 : ill <https://doi.org/10.1109/TIE.2016.2645891>

#### **Wide output voltage range isolated buck-boost PFC converter with reconfigurable rectifier**

**Verbytskyi, Ievgen; Nadeem, Mohammad Mahad; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 7 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227389>

#### **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](#)

#### **Wind energy systems [Online resource]**

Malinowski, Mariusz; Milczarek, Adam; **Vinnikov, Dmitri; Chub, Andrii** Power electronic converters and systems : frontiers and applications 2016 / p. 351-394 : ill [http://dx.doi.org/10.1049/PBPO074E\\_ch12](http://dx.doi.org/10.1049/PBPO074E_ch12) [http://www.ester.ee/record=b4556286\\*est](http://www.ester.ee/record=b4556286*est)

#### **Wireless charging station design for electric scooters : case study analysis**

**Shevchenko, Viktor**; Pakhaliuk, Bohdan; **Husev, Oleksandr; Vinnikov, Dmitri**; Strzelecki, Ryszard Energies 2024 / art. 2472 <https://doi.org/10.3390/en17112472>

#### **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 International Conference on Electronics and Nanotechnology (ELNANO 2018) : Kyiv, Ukraine, 24-26 April 2018 2018 / p. 692-698 : ill <https://doi.org/10.1109/ELNANO.2018.8477438>

#### **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

#### **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](#)

#### **Ülikondensaatorid**

**Vinnikov, Dmitri** Elektriala 2002 / 4, lk. 18-19

#### **Анализ возможности замены автомобильной аккумуляторной батареи на ультраконденсаторы**

**Vinnikov, Dmitri; Boiko, Vitali; Laugis, Juhan** Международная научно-техническая конференция "Состояние и перспективы развития электротехнологий" (XI Бенардосовские чтения) : Иваново, 2003 2003 / [7] с

#### **Двухтактный квази-импедансный повышающий DC/DC преобразователь**

**Vinnikov, Dmitri; Husev, Oleksandr; Blinov, Andrei** Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / с. 36-42 : ил

#### **Использование разделенной коммутации в двухзвенных преобразователях постоянного напряжения для снижения динамических потерь силовых полупроводниковых ключей**

**Sokol, Jevgeni; Blinov, Andrei; Vinnikov, Dmitri** Энергосбережение. Энергетика. Энергоаудит 2014 / 55-69 : ил

#### **Исследование возможностей применения ультраконденсаторов в электросистеме автомобиля**

**Vinnikov, Dmitri; Boiko, Vitali; Laugis, Juhan** Силовая электроника и энергоэффективность : СЭЭ'2003 : Алушта, Украина, 2003 2003 / [4] с

#### **Классификация изолированных DC/DC квази-импедансных преобразователей**

**Chub, Andrii; Husev, Oleksandr; Vinnikov, Dmitri** Вісник Національного Технічного Університету "ХПИ" 2013 / с. 15-21 : ил

#### **Модернизация установки "Universalprüfmaschine Zwick 1435" на Пярнуской лыжной фабрике**

**Boiko, Vitali; Vinnikov, Dmitri; Laugis, Juhan; Ignatov, S.** Automation and Control Technologies-2002 2002 / ? p

#### **О нововведениях в учебном процессе в Институте электропривода и силовой электроники Таллиннского технического университета**

**Lehtla, Tõnu; Laugis, Juhan; Vinnikov, Dmitri** Технічна електродинаміка 2005 / 2, с. 100-103

#### **О результатах многолетнего сотрудничества института электропривода и силовой электроники Таллиннского технического университета с Таллинским трамвайно-троллейбусным объединением**

**Vinnikov, Dmitri; Laugis, Juhan; Lehtla, Tõnu; Egorov, Mikhail** Материалы Международной конференции : Международное сотрудничество в образовании и науке : Санкт-Петербург, 2-6 июня 2008 года = Proceedings of the International Conference : International Education and Science Cooperation : Saint-Petersburg, June 2-6, 2008 : IESC-2008 2008 / с. 271-279 : ил

#### **Об институте электропривода и силовой электроники**

**Laugis, Juhan; Vinnikov, Dmitri; Lahtnests, Rain** Международная конференция "80 лет отечественной школы электропривода" 2002 / ? p

#### **Об опыте Института электропривода и силовой электроники ТТУ в области модернизации электроподвижного состава Таллиннского трамвайного парка**

**Vinnikov, Dmitri; Boiko, Vitali; Lehtla, Madis; Rosin, Argo; Laugis, Juhan** Технічна електродинаміка 2004 / 3, с. 52-55 : ил

#### **Об опыте проведения курсов повышения квалификации в институте электропривода и силовой электроники Таллиннского технического университета**

**Boiko, Vitali; Vinnikov, Dmitri** International Conference Automation and Control Technologies - 2005 2005 / p. 15-17

#### **Об экспериментальных испытаниях двухтактного квази-импедансного преобразователя постоянного напряжения с полупроводниковыми элементами на основе карбида кремния**

**Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri; Husev, Oleksandr** Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / с.51-58 : ил

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

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

#### **Обратимый двухзвенный преобразователь постоянного напряжения с разделенной коммутацией и с неизменным знаком входного и выходного напряжения**

**Ивахно, В.; Замаруев, В.; Стысло, Б.; Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman** Вісник Національного Технічного

**Порівняння імпедансних ланок для перетворювачів з джерелом напруги**

**Husev, Oleksandr; Chub, Andrii; Vinnikov, Dmitri** Технічна електродинаміка 2015 / с. 25-32 : іл

**Разработка и исследование статического преобразователя напряжения для трамвая**

**Vinnikov, Dmitri** Силовая электроника и энергоэффективность : международная научно-техническая конференция (МНТК СЭЭ'2002) 2002 / ? р

**Решение задачи измерения скорости в макете привода с векторным управлением**

**Boiko, Vitali; Vinnikov, Dmitri; Laugis, Juhan** Automatika ir valdymo technologijos - 2004 = Automation and Control Technologies - 2004 : proceedings of the International Conference 2004 / p. 43-45

**Состояние и тенденции развития электротранспорта в Эстонии**

**Laugis, Juhan; Lehtla, Tõnu; Vinnikov, Dmitri; Boiko, Vitali** Труды III международной (XIV всероссийской) конференции по автоматизированному электроприводу : Нижний Новгород, 12-14 сентября 2001 2001 / с. 243-245

**Сравнительный анализ повышающих преобразователей для интеграции фотоэлектрических панелей в сеть**

**Husev, Oleksandr; Vinnikov, Dmitri; Veligorsky, O.** Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / с. 28-34 : ил

**Сравнительный анализ повышающих преобразователей для интеграции фотоэлектрических панелей в сеть [Компьют. файл]**

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

**Трёхуровневый квази-импедансный инвертор с новым методом модуляции**

**Husev, Oleksandr; Stepenko, Serhii; Clemente, C.; Kadaval, E.; Vinnikov, Dmitri** Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / с. 47-52 : ил

**Электролиз как способ аккумуляирования избыточной энергии ветроэнергетических установок**

**Egorov, Mikhail; Vinnikov, Dmitri; Vodovozov, Valery** Технічна електродинаміка 2008 / 1, с. 42-47 : ил