

### **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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Analysis of series partial power converter in transient and steady-state operation modes**

**Hassanpour, Naser** 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 51-52 [https://www.ester.ee/record=b5504019\\*est](https://www.ester.ee/record=b5504019*est)

### **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>

### **Design and Control of Bidirectional Step-Up/Down Partial Power Converters for DC Microgrid Applications = Alalisvoolu mikrovõrkudele osavõimsuse töötusega kahe suunalise tõste-langetusmuunduri projekteerimine ja juhtimine**

**Hassanpour, Naser** 2025 [https://www.ester.ee/record=b5746961\\*est](https://www.ester.ee/record=b5746961*est) <https://digikogu.taltech.ee/et/Item/daec7687-5e83-467e-8e6a-45b1e4a15a64> <https://doi.org/10.23658/taltech.30/2025>

### **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>

### **Enhanced switched impedance inverter with tapped inductor**

Nozadian, Mohsen Hasan Babayi; **Hassanpour, Naser; Khan, Salman** 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604411>

### **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 / p. 847-860 <https://doi.org/10.1109/OJIES.2024.3389466> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A hybrid modulation approach for step-up/ down partial power converter with improved MPPT efficiency around zero partiality**

**Yadav, Neelesh; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Vinnikov, Dmitri; Galkin, Ilya** IEEE transactions on industry applications 2025 <https://doi.org/10.1109/TIA.2025.3525607>

### **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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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>

### **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>

### **P3R : partial power postregulated gridforming converter for prosumer DC buildings**

**Carvalho da Silva, Edivan Laercio; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Rathore, Akshay Kumar; Vinnikov, Dmitri** IEEE transactions on industrial electronics 2025 / p. 1628-1637 <https://doi.org/10.1109/TIE.2024.3423358>

### **Partial Power Processing and its Emerging Applications : Chapter 7**

**Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Kouro, Samir** Power electronics for next-generation drives and energy systems, Vol. 1: converters and control for drives 2022 / p. 211-242 [https://digital-library.theiet.org/content/books/10.1049/pbpo207f\\_ch7](https://digital-library.theiet.org/content/books/10.1049/pbpo207f_ch7)

### **Performance evaluation of step-up /down partial power converters based on current-fed DC-DC topologies**

**Yadav, Neelesh; Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Galkin, Ilja; Abdelrahim Abdelghafour, Omar Mohamed** IEEE transactions on industry applications 2024 / p. 7111-7124 <https://doi.org/10.1109/TIA.2024.3413050>.

### **Performance evaluation of step-up/down partial power converters based on current-fed DC-DC topologies**

**Yadav, Neelesh; Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Galkin, Ilya; Abdelrahim Abdelghafour, Omar Mohamed** IEEE transactions on industry applications 2024 / p. 7111-7124 : ill <https://doi.org/10.1109/TIA.2024.3413050> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Protection and control implementation for bidirectional step-up/down partial power converter for droop-controlled DC microgrids**

**Yadav, Neelesh; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Vinnikov, Dmitri** IEEE transactions on industry applications 2025 / 11 p <https://doi.org/10.1109/TIA.2025.3561767>

### **Protection of bidirectional Step-Up/Down partial power converter against short circuit and open circuit faults and mode transition issues**

**Hassanpour, Naser; Chub, Andrii; Blinov, Andrei; Yadav, Neelesh; Hasan, Sayeed; Vinnikov, Dmitri** 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604315>

### **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>

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### **Shade-tolerant PV microconverters**

**Sidorov, Vadim; Bakeer, Abualkasim Ahmed Ali; Maheri, Hamed Mashinchi; Hassanpour, Naser; Rahman, Showrov; Chub, Andrii** Distributed Energy Systems 2023 / p. 1-22 <https://doi.org/10.1201/9781003229124-17>

### **A single-phase high-frequency isolated quasi-Z-source AC-AC converter without commutation problem and step-change frequency operation**

**Zargariafshar, D.; Mousavi, S. M. J.; Babaei, Ebrahim; Mashinchi Maheri, Hamed; Hassanpour, 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/RTUCON60080.2023.10413096>

### **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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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**Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Hassanpour, Naser** IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 l. <https://doi.org/10.1109/PEDG54999.2022.9923250>

### **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>