

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 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](#)

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](#)

Concept of wireless low-voltage DC socket for the residential house application

Shevchenko, Viktor; Husev, Oleksandr; Pakhaliuk, Bohdan; Vinnikov, Dmitri; Strzelecki, Ryszard IEEE Access 2024 / p. 143226-143236 <https://doi.org/10.1109/ACCESS.2024.3471691>

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](#)

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>

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

Carvalho da Silva, Edivan Laercio; Sidorova, Aleksandra; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri IEEE transactions on industrial electronics 2024 / p. 10601-10611 <https://doi.org/10.1109/TIE.2023.3331125>

Design issues of SSCBs for residential DC microgrid

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2024 / 6 p <https://doi.org/10.1109/RTUCON62997.2024.10830826>

Effect of droop control curves on the efficiency of dual-active bridge converters

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society IECON Proceedings (Industrial Electronics Conference) 2023 / 6 p <https://doi.org/10.1109/IECON51785.2023.10312056> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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>

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>

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

Azizi, Mohammadreza; Husev, Oleksandr; Veligorskyi, Oleksandr; Rahimpour, Saeed; Roncero-Clemente, Carlos Energies 2023 / art. 7747, 23 p. : ill <https://doi.org/10.3390/en16237747> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-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>

Hybrid residual current device and solid state circuit breaker for residential DC microgrids

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 5 p <https://doi.org/10.1109/BEC61458.2024.10737970>

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

Carvalho da Silva, 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>

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](#)

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>

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 2024 / 10 p <https://doi.org/10.1109/TIE.2024.3423358>

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](#)

Real-time optimal power management for a hybrid energy storage system with battery thermal consideration and DC microgrid current estimation capability

Farrokhi, Ehsan; Ghoreishy, Hoda; Ahmadiyahangar, Roya Electrical Engineering 2024 <https://doi.org/10.1007/s00202-024-02243-9>