

**Active front-end DC grid-forming converter design with power balancing capability**

**Verbytskyi, Ievgen; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri** 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 6 p <https://doi.org/10.1109/ICDCM63994.2025.11144688>

**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](#)  
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**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>

**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>

**P3R – Partial power post regulator for DC buildings application**

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**Resonant DC transformer for grid-interactive energy efficient buildings**

**Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Rathore, Akshay Kumar; 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-POWERENG60842.2024.10604353>