Brad Lehman

List of Publications by Year
in descending order

Version: 2024-02-01

90 papers	3,707 citations	393982 19 h-index	301761 39 g-index
90 all docs	90 docs citations	90 times ranked	3017 citing authors

#	Article	IF	Citations
1	Step-Up DCâ€“DC Converters: A Comprehensive Review of Voltage-Boosting Techniques, Topologies, and Applications. IEEE Transactions on Power Electronics, 2017, 32, 9143-9178.	5.4	1,348
2	An Adaptive Solar Photovoltaic Array Using Model-Based Reconfiguration Algorithm. IEEE Transactions on Industrial Electronics, 2008, 55, 2644-2654.	5.2	352
3	Lineâ€“Line Fault Analysis and Protection Challenges in Solar Photovoltaic Arrays. IEEE Transactions on Industrial Electronics, 2013, 60, 3784-3795.	5.2	215
4	Decision tree-based fault detection and classification in solar photovoltaic arrays. , 2012, , .		156
5	A Solar Time Based Analog Ensemble Method for Regional Solar Power Forecasting. IEEE Transactions on Sustainable Energy, 2019, 10, 268-279.	5.9	136
6	Outlier detection rules for fault detection in solar photovoltaic arrays. , 2013, , .		106
7	Designing to Mitigate Effects of Flicker in LED Lighting: Reducing risks to health and safety. IEEE Power Electronics Magazine, 2014, 1, 18-26.	0.6	97
8	Control of Photovoltaic Arrays: Dynamical Reconfiguration for Fighting Mismatched Conditions and Meeting Load Requests. IEEE Industrial Electronics Magazine, 2015, 9, 62-76.	2.3	78
9	Determining the optimum grid-connected photovoltaic inverter size. Solar Energy, 2013, 87, 96-116.	2.9	73
10	Coupled Input-Series and Output-Parallel Dual Interleaved Flyback Converter for High Input Voltage Application. IEEE Transactions on Power Electronics, 2008, 23, 88-95.	5.4	69
11	Proposing measures of flicker in the low frequencies for lighting applications. , 2011, , .		67
12	Solar Battery Chargers for NiMH Batteries. IEEE Transactions on Power Electronics, 2007, 22, 1600-1609.	5.4	64
13	Baseline and target values for regional and point PV power forecasts: Toward improved solar forecasting. Solar Energy, 2015, 122, 804-819.	2.9	60
14	An Intelligent-Based Fault-Tolerant System for Solar-Fed Cascaded Multilevel Inverters. IEEE Transactions on Energy Conversion, 2018, 33, 1047-1057.	3.7	56
15	Current-Fed Dual-Bridge DCâ€“DC Converter. IEEE Transactions on Power Electronics, 2007, 22, 461-469.	5.4	53
16	E-Mobility â€” Advancements and Challenges. IEEE Access, 2019, 7, 165226-165240.	2.6	45
17	Fundamental Theorems of Averaging for Functional Differential Equations. Journal of Differential Equations, 1999, 152, 160-190.	1.1	41
18	Dual Interleaved Active-Clamp Forward With Automatic Charge Balance Regulation for High Input Voltage Application. IEEE Transactions on Power Electronics, 2008, 23, 38-44.	5.4	40

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19	Three-Level Switching Cell for Low Voltage/High-Current DCâ€“DC Converters. IEEE Transactions on Power Electronics, 2007, 22, 1997-2007.	5.4	32
20	Analysis of a Switched Impedance Transformer-Type Nonsuperconducting Fault Current Limiter. IEEE Transactions on Power Electronics, 2015, 30, 1925-1936.	5.4	29
21	Challenges to overcurrent protection devices under line-line faults in solar photovoltaic arrays. , 2011, , .		28
22	A survey on voltage boosting techniques for step-up DC-DC converters. , 2016, , .		26
23	Performance improvement of dynamic PV array under partial shade conditions using M ² algorithm. IET Renewable Power Generation, 2019, 13, 1239-1249.	1.7	26
24	Degradation Effects on Energy Absorption Capability and Time to Failure of Low Voltage Metal Oxide Varistors. IEEE Transactions on Power Delivery, 2017, 32, 2272-2280.	2.9	25
25	Performance evaluation of solar photovoltaic arrays including shadow effects using neural network. , 2009, , .		21
26	A Probabilistic Approach of Designing Driving Circuits for Strings of High-Brightness Light Emitting Diodes. , 2007, , .		20
27	Degradation of low voltage metal oxide varistors in power supplies. , 2016, , .		20
28	The impact of irradiance time behaviors on inverter sizing and design. , 2010, , .		17
29	Analysis and Verification of Inductor Coupling Effect in Interleaved Multiphase DC-DC Converters. IEEE Transactions on Power Electronics, 2015, , 1-1.	5.4	17
30	A Compact Coupled Inductor for Interleaved Multiphase DC-DC Converters. IEEE Transactions on Power Electronics, 2016, , 1-1.	5.4	16
31	Self-Driven Synchronous Rectification Scheme Without Undesired Gate-Voltage Discharge for DC-DC Converters With Symmetrically Driven Transformers. IEEE Transactions on Power Electronics, 2008, 23, 506-510.	5.4	15
32	Proposing Measures of Flicker in the Low Frequencies for Lighting Applications. LEUKOS - Journal of Illuminating Engineering Society of North America, 2011, 7, 189-195.	1.5	15
33	Clearing Series AC Arc Faults and Avoiding False Alarms Using Only Voltage Waveforms. IEEE Transactions on Power Delivery, 2020, 35, 946-956.	2.9	15
34	Averaging Theory for Delay Difference Equations with Time-Varying Delays. SIAM Journal on Applied Mathematics, 1999, 59, 1487-1506.	0.8	14
35	Identification of Pre-existing/Undetected Line-to-Line Faults in PV Array Based on Preturn on/off Condition of the PV Inverter. IEEE Transactions on Power Electronics, 2020, 35, 11865-11878.	5.4	14
36	Performance Evaluation of a Dual-Input Hybrid Step-Up DCâ€“DC Converter. IEEE Transactions on Industry Applications, 2022, 58, 3769-3782.	3.3	14

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37	Optimum design of magnetic inductive energy harvester and its AC-DC converter. , 2012, , .		13
38	Optimal power flow management in a photovoltaic nanogrid with batteries. , 2015, , .		13
39	Modular differential power processing (mDPP). , 2017, , .		13
40	Series AC Arc Fault Detection Using Only Voltage Waveforms. , 2019, , .		13
41	Distributed MPPT for modular differential power processing in scalable photovoltaic system. , 2018, , .		11
42	An Overview of Converter Topologies and Their Derivations and Interrelationships. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 6417-6429.	3.7	11
43	An adaptive ramp compensation scheme to improve stability for DC-DC converters with ripple-based constant on-time control. , 2014, , .		10
44	PV Panel to PV Panel Transfer Method for Modular Differential Power Processing. IEEE Transactions on Power Electronics, 2022, 37, 4764-4778.	5.4	10
45	Modular subpanel photovoltaic converter system: Analysis and control. , 2016, , .		9
46	Economically Optimal Power Flow Management of Grid-Connected Photovoltaic Microgrid Based on Dynamic Programming Algorithm and Grid I/O Strategy for Different Weather Scenarios. , 2019, , .		9
47	Multi-level converters for three-phase photovoltaic applications. , 2010, , .		8
48	Optimum inverter sizing in consideration of irradiance pattern and PV incentives. , 2011, , .		8
49	Parallel operation of digital controlled modified sine wave inverters. , 2013, , .		8
50	Reconfigurable solar photovoltaic battery charger using a switch matrix. , 2012, , .		7
51	Energy management for solar battery charging station. , 2013, , .		7
52	Inductive magnetic harvester with resonant capacitive rectifier based on synchronized switch harvesting technique. , 2013, , .		7
53	Distributed control for modular plug-and-play subpanel photovoltaic converter system. , 2017, , .		7
54	A Highly Reliable Single-Phase AC to Three-Phase AC Converter With a Small Link Capacitor. IEEE Transactions on Power Electronics, 2021, 36, 10051-10064.	5.4	7

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55	Digital Sliding Mode Pulsed Current Averaging IC Drivers for High Brightness Light Emitting Diodes. , 2006, , .		6
56	Self-Driven Synchronous Rectification Scheme for Wide Range Application of DC/DC Converters with Symmetrically Driven Transformers. , 0, , .		6
57	A new topology of bridge-type Non-Superconducting Fault Current Limiter. , 2013, , .		6
58	Unipolar and bipolar degradation of low voltage Metal Oxide Varistors. , 2016, , .		6
59	A Long-Lifespan Single-Phase Single-Stage Multi-Module Inverter for PV Application. , 2018, , .		6
60	A Simulation-Based Multifunctional Differential Mode and Common Mode Filter Design Method for Universal Converters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 658-672.	3.7	6
61	Coupled Dual Interleaved Flyback Converter for High Input Voltage Application. , 2007, , .		5
62	Increased energy delivery for parallel battery packs with no regulated bus. , 2012, , .		5
63	Phase/RMS maximum power point tracking for inductive energy harvesting system. , 2015, , .		5
64	Performance Evaluation of A Dual Input Hybrid Step up DC-DC Converter. , 2020, , .		5
65	The Methodology of Constructing the Quadratic Converters. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 6586-6606.	3.7	5
66	Vibrational stabilization and calculation formulas for nonlinear time delay systems: Linear multiplicative vibrations. Automatica, 1994, 30, 1207-1211.	3.0	4
67	Effects of parametric uncertainty in designing a high-brightness LED light system. IEEE Applied Power Electronics Conference and Exposition, 2008, , .	0.0	4
68	A simple formula for estimating the optimum tilt angles of photovoltaic panels. , 2013, , .		4
69	Energy absorption capability of low voltage Metal Oxide Varistors in AC and impulse currents. , 2016, , .		4
70	Editorial: Reflections on 2015 and entering the active content age. IEEE Transactions on Power Electronics, 2016, 31, 3-4.	5.4	4
71	Optimal Power Management for Grid-Connected Microgrid Considering Modelling of Different Electricity Cost and Battery Degradation Cost. , 2019, , .		4
72	Editorial 2019: Entering a New Era. IEEE Transactions on Power Electronics, 2019, 34, 4-6.	5.4	4

#	Article	IF	Citations
73	Mitigation and utilization of the inductor coupling effect in interleaved multiphase DC/DC converters. , 2013, , .		3
74	Submodule integrated boost DC-DC converters with no external input capacitor or input inductor for low power photovoltaic applications. , 2016, , .		3
75	A Generalized Simulation-Based Multi-Functional Differential Mode and Common Mode LCL Filter Design Method. , 2019, , .		3
76	Estimation method of DC wire losses in photovoltaic systems. , 2012, , .		2
77	Fast switching reconfigurable photovoltaic modules integrated within DC-DC converters. , 2013, , .		2
78	Fast reconfigurable photovoltaic switching cell integrated within DC-DC converters. , 2014, , .		2
79	Editorial: IEEE Transactions on Power Electronics, February 2015. IEEE Transactions on Power Electronics, 2015, 30, 517-518.	5.4	2
80	Averaging Theory for Fractional Differential Equations. Fractional Calculus and Applied Analysis, 2021, 24, 621-640.	1.2	2
81	Steady State Electro-Thermal Modeling For DC-DC Converters. , 2006, , .		1
82	Input-Series Two-Stage DC-DC Converter with Inductor Coupling. , 2007, , .		1
83	Self-Balanced Input-Series Two-Stage DC-DC Converter and Ripple Match Design. IEEE Applied Power Electronics Conference and Exposition, 2007, , .	0.0	1
84	Direct parallel operation of cascaded H-bridge multilevel inverters. , 2014, , .		1
85	A new power stage architecture and control scheme to optimize maximum power point tracking for photovoltaic systems. , 2014, , .		1
86	A soft-switching multi-phase converter with coupled inductors and switch-time-delay control. , 2015, , .		1
87	400 V to 12 V Step-down DC-DC Power Converter Based on the Differential Concept. , 2019, , .		1
88	A Single-Phase PV Inverter with Swinging Bus Controller to Eliminate Electrolytic Capacitor and Achieve Reactive Power Generation Capability. , 2019, , .		1
89	Self-Balanced Dual Interleaved Active-Clamp Forward for High Input Voltage Application. IEEE Applied Power Electronics Conference and Exposition, 2007, , .	0.0	0
90	A Four-Mode Three-State (FMTS) Swinging Bus Controller for PV Micro-Inverters to Achieve Reactive Power Compensation and Remove Electrolytic Capacitor. , 2020, , .		0