Staffan Norrga

List of Publications by Year
in descending order

112	4,214	361413	214800
papers	citations	20 h-index	47 g-index

125	125	125	2263
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High Gain DCâ€“AC High-Frequency Link Inverter With Improved Quasi-Resonant Modulation. IEEE Transactions on Industrial Electronics, 2022, 69, 1465-1476.	7.9	24
2	Evaluation of Ultrahigh-Voltage 4H-SiC Gate Turn-OFF Thyristors and Insulated-Gate Bipolar Transistors for High-Power Applications. IEEE Transactions on Power Electronics, 2022, 37, 4133-4147.	7.9	5
3	Auxiliary Power Supplies for High-Power Converter Submodules: State of the Art and Future Prospects. IEEE Transactions on Power Electronics, 2022, 37, 6807-6820.	7.9	15
4	Wireless Control of Modular Multilevel Converter Submodules With Communication Errors. IEEE Transactions on Industrial Electronics, 2022, 69, 11644-11653.	7.9	2
5	An Architecture for a Multi-Vendor VSC-HVDC Station With Partially Open Control and Protection. IEEE Access, 2022, 10, 13555-13569.	4.2	6
6	Wireless Communication in Modular Multilevel Converters and Electromagnetic Interference Characterization. IEEE Access, 2022, 10, 38189-38201.	4.2	1
7	Model-Based Design and System on Chip Implementation of DTC and PWM Techniques. , 2022, , .		0
8	Moving Beyond Open-Source Modelling: Why Open Control and Protection Software in Real Converters Will Be Useful. , 2022, , .		1
9	DC-Side Impedance Estimation of a Modular Multilevel Converter Through System Identification of a Partially Black-Boxed Control System. IEEE Transactions on Energy Conversion, 2022, 37, 2708-2721.	5.2	6
10	Static and Dynamic Performance Prediction of Ultrahigh-Voltage Silicon Carbide Insulated-Gate Bipolar Transistors. IEEE Transactions on Power Electronics, 2021, 36, 5874-5891.	7.9	19
11	Modeling and Shaping of the DC-Side Admittance of a Modular Multilevel Converter Under Closed-Loop Voltage Control. IEEE Transactions on Power Electronics, 2021, 36, 7294-7306.	7.9	20
12	A holistic method for optimal design of HVDC grid protection. Electric Power Systems Research, 2021, 196, 107234.	3.6	3
13	Wireless Control of Modular Multilevel Converter Submodules. IEEE Transactions on Power Electronics, 2021, 36, 8439-8453.	7.9	19
14	Comparative Evaluation of Voltage Source Converters With Silicon Carbide Semiconductor Devices for High-Voltage Direct Current Transmission. IEEE Transactions on Power Electronics, 2021, 36, 8887-8906.	7.9	22
15	DC-Side Impedance Interaction Analysis in an MMC-Based Back-to-Back VSC-HVDC System. , 2021, , .		0
16	Testing of an HVDC IED Prototype Using Field Recordings. , 2021, , .		0
17	Wireless control of modular multilevel converter autonomous submodules. , 2021, , .		0
18	Wireless control of modular multilevel converter submodules under ac-side faults. , 2021, , .		0

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19	Control and Admittance Modeling of an AC/AC Modular Multilevel Converter for Railway Supplies. IEEE Transactions on Power Electronics, 2020, 35, 2411-2423.	7.9	16
20	Sensitivity of Cable Model Parameters for Traveling Wave Differential Protections in MTDC Systems. IEEE Transactions on Power Delivery, 2020, 35, 2212-2221.	4.3	7
21	An Open-Source Protection IED for Research and Education in Multiterminal HVDC Grids. IEEE Transactions on Power Systems, 2020, 35, 2949-2958.	6.5	12
22	Single-Fiber Combined Optical Power and Data Transmission for High-Voltage Applications. , 2020, , .		8
23	Hybrid Alternate-Common Arm Converter With High Power Capability: Potential and Limitations. IEEE Transactions on Power Electronics, 2020, 35, 12909-12928.	7.9	6
24	A Method for the Calculation of the AC-Side Admittance of a Modular Multilevel Converter. IEEE Transactions on Power Electronics, 2019, 34, 4161-4172.	7.9	21
25	Experimental results from a Thomsonâ€coil actuator for a vacuum interrupter in an HVDC breaker. Journal of Engineering, 2019, 2019, 3527-3531.	1.1	8
26	A Proposal for Open-Source HVDC Control. , 2019, , .		4
27	Design Considerations and Comparison of Hybrid Line-Commutated and Cascaded Full-Bridge Converters With Reactive-Power Compensation and Active Filtering Capabilities. , 2019, , .		2
28	Soft-Switching Modulation Method for Full-Bridge DC-AC HF-Link Inverter. , 2019, , .		9
29	Simple Distributed Control for Modular Multilevel Converters. , 2019, , .		5
30	Low Loss Submodule Cluster for Modular Multilevel Converters Suitable for Implementation with SiC MOSFETs. , 2019, , .		3
31	Effects of Control on the AC-Side Admittance of a Modular Multilevel Converter. IEEE Transactions on Power Electronics, 2019, 34, 7206-7220.	7.9	32
32	Implications of Capacitor Voltage Imbalance on the Operation of the Semi-Full-Bridge Submodule. IEEE Transactions on Power Electronics, 2019, 34, 9520-9535.	7.9	15
33	Contribution of travelling wave propagation time to the speed of optical link protections in multiâ€terminal highâ€voltage DC systems. IET Generation, Transmission and Distribution, 2019, 13, 3078-3085.	2.5	2
34	Communication-Based Distributed Control of the Stacked Polyphase Bridges Converter. IEEE Transactions on Industrial Electronics, 2018, 65, 1011-1020.	7.9	7
35	Dissipation Loop for Shoot-Through Faults in HVDC Converter Cells. , 2018, , .		2
36	Estimation of travelling wave arrival time in longitudinal differential protections for multiâ€terminal HVDC systems. Journal of Engineering, 2018, 2018, 1007-1011.	1.1	8

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37	Impact of measurement and communication aspects on protection of multiâ€terminal DC grids. Journal of Engineering, 2018, 2018, 1146-1149.	1.1	4
38	Modulation and Power Losses of a Stacked Polyphase Bridge Converter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 409-418.	5.4	6
39	A Review of Hybrid Topologies Combining Line-Commutated and Cascaded Full-Bridge Converters. IEEE Transactions on Power Electronics, 2017, 32, 7435-7448.	7.9	39
40	MMC converter cells employing ultrahigh-voltage SiC bipolar power semiconductors. , 2017, , .		9
41	Implications of capacitor voltage imbalance on the operation of the semi-full-bridge submodule. , 2017, , .		5
42	Transient behaviour of VSC-HVDC links with DC breakers under faults. , 2017, , .		13
43	Potential of ultra-high voltage silicon carbide semiconductor devices. , 2016, , .		24
44	Control of modular multilevel matrix converters based on capacitor voltage estimation. , 2016, , .		3
45	Analysis of power losses in power MOSFET based stacked polyphase bridges converters. , 2016, , .		2
46	MMC-HVDC Standards and Commissioning Procedures. , 2016, , 305-317.		2
47	Control of direct AC/AC modular multilevel converters using capacitor voltage estimation. , 2016, , .		4
48	Investigation of the surge current capability of the body diode of SiC MOSFETs for HVDC applications. , 2016, , .		15
49	On energy storage requirements in alternate arm converters and modular multilevel converters. , 2016, , .		18
50	Tolerance Band Adaptation Method for Dynamic Operation of Grid-Connected Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2016, 31, 8172-8181.	7.9	5
51	Optimization-Based Cell Selection Method for Grid-Connected Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2016, 31, 2780-2790.	7.9	32
52	Elimination of vector changes due to sector changes with DTC. EPE Journal (European Power) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142	0.7	0
53	Performance of the modular multilevel converter with redundant submodules. , 2015, , .		25
54	Evaluation of a multiphase drive system in EV and HEV applications. , 2015, , .		13

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55	Longitudinal differential protection based on the Universal Line Model. , 2015, , .		19
56	Operation of single-chip mosfet and igbt devices after failure due to repetitive avalanche. , 2015, , .		4
57	A Submodule Implementation for Parallel Connection of Capacitors in Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2015, 30, 3518-3527.	7.9	70
58	Efficient Modeling of an MMC-Based Multiterminal DC System Employing Hybrid HVDC Breakers. IEEE Transactions on Power Delivery, 2015, 30, 1792-1801.	4.3	98
59	Loss evaluation for modular multilevel converters with different switching strategies. , 2015, , .		23
60	High-Voltage Tapped-Inductor Buck Converter Utilizing an Autonomous High-Side Switch. IEEE Transactions on Industrial Electronics, 2015, 62, 2868-2878.	7.9	38
61	Analysis of the dc-link stability for the stacked polyphase bridges converter. , 2015, , .		2
62	Tolerance Band Modulation Methods for Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2015, 30, 311-326.	7.9	97
63	Analysis and Operation of Modular Multilevel Converters With Phase-Shifted Carrier PWM. IEEE Transactions on Power Electronics, 2015, 30, 268-283.	7.9	171
64	Predictive Sorting Algorithm for Modular Multilevel Converters Minimizing the Spread in the Submodule Capacitor Voltages. IEEE Transactions on Power Electronics, 2015, 30, 440-449.	7.9	121
65	Modeling and control of a tapped-inductor buck converter with pulse frequency modulation. , 2014, , .		4
66	Implementation and testing of high-power IGCT-based cascaded-converter cells. , 2014, , .		7
67	Efficient modeling of modular multilevel converters in HVDC-grids under fault conditions. , 2014, , .		8
68	Switching pulse pattern optimisation for modular multilevel converters. , 2014, , .		3
69	Machine design considerations for an MHF/SPB-converter based electric drive. , 2014, , .		15
70	Soft-switching cells for high-power converters. , 2014, , .		6
71	Comparison of cascaded multilevel converter topologies for AC/AC conversion. , 2014, , .		71
72	Control and modulation of the stacked polyphase bridges inverter. , 2014, , .		7

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73	Elimination of vector changes due to sector changes with DTC. , 2014, , .		0
74	Converter topologies for HVDC grids. , 2014, , .		18
75	Modular Multilevel Converter AC Motor Drives With Constant Torque From Zero to Nominal Speed. IEEE Transactions on Industry Applications, 2014, 50, 1982-1993.	4.9	244
76	A Computationally Efficient Continuous Model for the Modular Multilevel Converter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 1139-1148.	5.4	82
77	On Energy Storage Requirements in Modular Multilevel Converters. IEEE Transactions on Power Electronics, 2014, 29, 77-88.	7.9	285
78	On energy variations in modular multilevel converters with full-bridge submodules for Ac-Dc and Ac-Ac applications. , 2013, , .		50
79	A submodule implementation for parallel connection of capacitors in modular multilevel converters. , 2013, , .		15
80	Analysis and operation of modular multilevel converters with phase-shifted carrier PWM. , 2013, , .		19
81	The polyphase cascaded-cell DC/DC converter. , 2013, , .		71
82	Dynamic Analysis of Modular Multilevel Converters. IEEE Transactions on Industrial Electronics, 2013, 60, 2526-2537.	7.9	516
83	Predictive sorting algorithm for modular multilevel converters minimizing the spread in the submodule capacitor voltages. , 2013, , .		20
84	INTERGRID - Enabling a sustainable energy system by large-scale intercontinental power transmission. , 2013, , .		3
85	Resonant test circuit for high-power cascaded converter submodules. , 2013, , .		11
86	Arm-current-based control of modular multilevel converters. , 2013, , .		3
87	Tolerance-band modulation methods for modular multilevel converters. , 2013, , .		56
88	A novel inverter topology for compact EV and HEV drive systems. , 2013, , .		22
89	Fault Tolerant Operation of Power Converter with Cascaded Cells. EPE Journal (European Power) Tj ETQq1 1 0.784314 rgBT /Overlock	0.7	14
90	Loss Comparison of Different Sub-Module Implementations for Modular Multilevel Converters in HVDC Applications. EPE Journal (European Power Electronics and Drives Journal), 2012, 22, 32-38.	0.7	34

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91	Analysis of arm current harmonics in modular multilevel converters with main-circuit filters. , 2012, , .		28
92	Modular multilevel converter ac motor drives with constant torque form zero to nominal speed. , 2012, , .		54
93	Evaluation of different carrier-based PWM methods for modular multilevel converters for HVDC application. , 2012, , .		96
94	High-voltage tapped-inductor buck converter auxiliary power supply for cascaded converter submodules. , 2012, , .		19
95	Frequency-domain modeling of modular multilevel converters. , 2012, , .		23
96	A New Modulation Method for the Modular Multilevel Converter Allowing Fundamental Switching Frequency. IEEE Transactions on Power Electronics, 2012, 27, 3482-3494.	7.9	245
97	Circulating current control in modular multilevel converters with fundamental switching frequency. , 2012, , .		47
98	HVDC SuperGrids with modular multilevel converters — The power transmission backbone of the future. , 2012, , .		61
99	Grid integration aspects of large solar PV installations: LVRT capability and reactive power/voltage support requirements. , 2011, , .		121
100	Solar PV array-inverter matching considering impact of environmental conditions. , 2011, , .		5
101	Capacitor voltage ripple shaping in modular multilevel converters allowing for operating region extension. , 2011, , .		90
102	Three-level converters with selective Harmonic Elimination PWM for HVDC application. , 2010, , .		5
103	A Three-Phase Soft-Switched Isolated AC/DC Converter Without Auxiliary Circuit. IEEE Transactions on Industry Applications, 2008, 44, 836-844.	4.9	52
104	Active Snubber Circuit for Source Commutated Converters Utilizing the IGBT in the Linear Region. IEEE Transactions on Power Electronics, 2008, 23, 2595-2601.	7.9	30
105	Space vector modulation for mutually commutated isolated three-phase converter systems. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	2
106	Control strategies for mutually commutated converter systems without cycloconverter turn-off capability. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	2
107	Modulation strategies for a mutually commutated converter system in wind farms. , 2007, , .		3
108	Active snubber circuit for source commutated converters utilizing the IGBT in the linear region. , 2007, , .		0

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109	Experimental Study of a Soft-Switched Isolated Bidirectional AC DC Converter Without Auxiliary Circuit. IEEE Transactions on Power Electronics, 2006, 21, 1580-1587.	7.9	89
110	A primary-switched line-side converter using zero-voltage switching. IEEE Transactions on Industry Applications, 2001, 37, 1824-1831.	4.9	21
111	Harmonic Mitigation in Single Phase Mutually Commutated Converter Systems. , 0, , .		0
112	Wide-Range Prediction of Ultra-High Voltage SiC IGBT Static Performance Using Calibrated TCAD Model. Materials Science Forum, 0, 1004, 911-916.	0.3	3