

Title	First Author	Other Authors	Citations	Conference	Year	Link
An average model of solid state transformer for dynamic system simulation	Tiefu Zhao	Jie Zeng, Subhashish Bhattacharya, Mesut E. Baran, Alex Q. Huang	72	IEEE Power & Energy Society General Meeting	2009	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5275542/
Design considerations of high voltage and high frequency transformer for solid state transformer application	Seunghun Baek	Gangyao Wang, Subhashish Bhattacharya	15	IECON-36th Annual Conference on IEEE Industrial Electronics Society	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5674991/
Identifying techniques, topologies and features for maximizing the efficiency of a distribution grid with solid state power devices	Karl Stefanski	Hengsi Qin, Badrul H. Chowdhury, Jonathan W. Kimball, Subhashish Bhattacharya	5	North American Power Symposium	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5618966/
Comparisons of 6.5kV 25A Si IGBT and 10-kV SiC MOSFET in Solid-State Transformer application	Gangyao Wang	Xing Huang, Jun Wang, Tiefu Zhao, Subhashish Bhattacharya, Alex Q. Huang	33	IEEE Energy Conversion Congress and Exposition	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5618069/
Design considerations of high voltage and high frequency three phase transformer for Solid State Transformer application	Chun-kit Leung	Sumit Dutta, Seunghun Baek, Subhashish Bhattacharya	25	IEEE Energy Conversion Congress and Exposition	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5618234/
Voltage and power balance control for a cascaded multilevel solid state transformer	Tiefu Zhao	Gangyao Wang, Jie Zeng, Sumit Dutta, Subhashish Bhattacharya, Alex Q. Huang	46	Twenty-Fifth Annual IEEE Applied Power Electronics Conference and Exposition (APEC)	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5433584/

New inductor current feedback control with active harmonics injection for inverter stage of solid state transformer	Xiaohu Zhou	Yu Liu, Subhashish Bhattacharya, Alex Huang	2	IECON-36th Annual Conference on IEEE Industrial Electronics Society	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5675216/
Design and development of Generation-I silicon based Solid State Transformer	Subhashish Bhattacharya	Tiefu Zhao, Gangyao Wang, Sumit Dutta, Seunghun Baek, Yu Du, Babak Parkhideh, Xiaohu Zhou, Alex Q. Huang	73	Twenty-Fifth Annual IEEE Applied Power Electronics Conference and Exposition (APEC)	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5433455/
Comparison of 10-kV SiC power devices in solid-state transformer	Jun Wang	Gangyao Wang, Subhashish Bhattacharya, Alex Q. Huang	14	IEEE Energy Conversion Congress and Exposition	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5617759/
High-voltage high-frequency transformer design for a 7.2kV to 120V/240V 20kVA solid state transformer	Yu Du	Seunghun Baek, Subhashish Bhattacharya, Alex Q. Huang	38	IECON-36th Annual Conference on IEEE Industrial Electronics Society	2010	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5674828/
Power synchronization control for capacitor minimization in Solid State Transformers (SST)	Tiefu Zhao	Xu She, Subhashish Bhattacharya, Gangyao Wang, Fei Wang, Alex Huang	8	IEEE Energy Conversion Congress and Exposition	2011	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6064147/
Analytical modeling of a medium-voltage and high-frequency resonant coaxial-type power transformer for a solid state transformer application	Seunghun Baek	Subhashish Bhattacharya	3	IEEE Energy Conversion Congress and Exposition	2011	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6064014/

Design and hardware implementation of Gen-1 silicon based solid state transformer	Gangyao Wang	Seunghun Baek, Joseph Elliott, Arun Kadavelugu, Fei Wang, Xu She, Sumit Dutta, Yang Liu, Tiefu Zhao, Wenxi Yao, Richard Gould, Subhashish Bhattacharya, Alex Q. Huang	45	Twenty-Sixth Annual IEEE Applied Power Electronics Conference and Exposition (APEC)	2011	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/5744766/
Transformer less Intelligent Power Substation design with 15kV SiC IGBT for grid interconnection	Kamalesh Hatua	Sumit Dutta, Awneesh Tripathi, Seunghun Baek, Giti Karimi, Subhashish Bhattacharya	44	IEEE Energy Conversion Congress and Exposition	2011	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6064346/
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Black start control of a solid state transformer for emergency power restoration	Nicholas Parks	Sumit Dutta, Vivek Ramachandram, Kamalesh Hatua, Subhashish Bhattacharya	5	IEEE Energy Conversion Congress and Exposition (ECCE)	2012	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6342824/
Auxiliary power supply for Solid State Transformers	Arun Kadavelugu	Gangyao Wang, Subhashish Bhattacharya, Alex Huang	8	IEEE Energy Conversion Congress and Exposition (ECCE)	2012	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6342647/

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Architecture of solid state transformer-based energy router and models of energy traffic	Jianhua Zhang	Wenye Wang, Subhashish Bhattacharya	11	IEEE PES Innovative Smart Grid Technologies (ISGT)	2012	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6175637/
A three-phase three winding topology for Dual Active Bridge and its D-Q mode control	Awneesh K Tripathi	Kamalesh Hatua, Hesam Mirzaee, Subhashish Bhattacharya	20	Twenty-Seventh Annual IEEE Applied Power Electronics Conference and Exposition (APEC)	2012	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6165998/
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Thermal design considerations for 12kV SiC n-IGBT based 3L NPC converter	Giti Karimi-Moghaddam	Richard D. Gould, Sachin Madhusoodhana n, Kamalesh Hatua, Subhashish Bhattacharya, Scott Leslie, Sei-Hyung Ryu, Mrinal Das, Anant Agarwal, David Grider	7	IEEE Energy Conversion Congress and Exposition (ECCE)	2012	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/6342445/

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Integration of multi-terminal DC to DC hub architecture with solid state transformer for renewable energy integration	Sumit Dutta	Sudhin Roy, Subhashish Bhattacharya	3	IEEE Energy Conversion Congress and Exposition	2013	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6647345/
Power flow analysis for 3-port 3-phase dual active bridge dc/dc converter and design validation using high frequency planar transformer	Seunghun Baek	Sudhin Roy, Subhashish Bhattacharya, Sungmin Kim	5	IEEE Energy Conversion Congress and Exposition	2013	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6646727/
Transient overvoltage rating and BIL of the transformerless intelligent power substation	Joseph Carr	Zhenyuan Wang, Subhashish Bhattacharya, Dhaval Patel	4	IEEE Power & Energy Society General Meeting	2013	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6672424/
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Control technique for 15 kV SiC IGBT based active front end converter of a 13.8 kV grid tied 100 kVA transformerless intelligent power substation	Sachin Madhusoodhanan	Subhashish Bhattacharya, Kamalesh Hatua	16	IEEE Energy Conversion Congress and Exposition	2013	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6647331/
A system level study employing improved solid state transformer average models with renewable energy integration	Vivek Ramachandran	Abhijit Kuvar, Urvir Singh, Subhashish Bhattacharya, Mesut Baran	3	IEEE PES General Meeting Conference & Exposition	2014	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6939922/
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Solid State Transformer and MV grid tie applications enabled by 15 kV SiC IGBTs and 10 kV SiC MOSFETs based multilevel converters	Sachin Madhusoodhanan	Awneesh Tripathi, Dhaval Patel, Krishna Mainali, Arun Kadavelugu, Samir Hazra, Subhashish Bhattacharya, Kamalesh Hatua	8	International Power Electronics Conference (IPEC-Hiroshima 2014 - ECCE ASIA)	2014	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6869800/

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Wide-band Gap (WBG) WBG devices enabled MV power converters for utility applications — Opportunities and challenges	Subhashish Bhattacharya		4	IEEE Workshop on Wide Bandgap Power Devices and Applications	2014	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/6964611/

A Transformerless Intelligent Power Substation: A three-phase SST enabled by a 15-kV SiC IGBT	Krishna Mainali	Awneesh Tripathi, Sachin Madhusoodhan, Arun Kadavelugu, Dhaval Patel, Samir Hazra, Kamalesh Hatua, Subhashish Bhattacharya	46	IEEE Power Electronics Magazine	2015	https://ieeexplore-ieee.org.prox.lib.ncsu.edu/document/7240109/
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Start-up scheme for solid state transformers connected to medium voltage grids	Krishna Mainali	Sachin Madhusoodhan, Awneesh Tripathi, Dhaval Patel, Subhashish Bhattacharya	7	IEEE Applied Power Electronics Conference and Exposition (APEC)	2015	https://ieeexplore-ieee.org.prox.lib.ncsu.edu/document/7104473/
Design, analysis and implementation of discontinuous mode Dyna-C AC/AC converter for solid state transformer applications	Ankan De	Subhashish Bhattacharya	2	IEEE Energy Conversion Congress and Exposition (ECCE)	2015	https://ieeexplore-ieee.org.prox.lib.ncsu.edu/document/7310369/
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Grid connected CM noise considerations of a three-phase multi-stage SST	Awneesh Tripathi	Sachin Madhusoodhanan, Krishna Mainali, Arun Kadavelugu, Dhaval Patel, Subhashish Bhattacharya, Kamalesh Hatua	9	9th International Conference on Power Electronics and ECCE Asia (ICPE-ECCE Asia)	2015	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/7167873/
Medium voltage power converter design and demonstration using 15 kV SiC N-IGBTs	Arun Kadavelugu	Krishna Mainali, Dhaval Patel, Sachin Madhusoodhanan, Awneesh Tripathi, Kamalesh Hatua, Subhashish Bhattacharya, Sei-Hyung Ryu, David Grider, Scott Leslie	16	IEEE Applied Power Electronics Conference and Exposition (APEC)	2015	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/7104530/
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Comparative evaluation of 15 kV SiC IGBT and 15 kV SiC MOSFET for 3-phase medium voltage high power grid connected converter applications	Sachin Madhusoodhanan	Krishna Mainali, Awneesh Tripathi, Arun Kadavelugu, Kasunaidu Vechalapu ; Dhaval Patel, Subhashish Bhattacharya	3	IEEE Energy Conversion Congress and Exposition (ECCE)	2016	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/7854933/
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Transforming the transformer	Subhashish Bhattacharya		0	IEEE Spectrum	2017	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/7951721/
Isolation design considerations for power supply of medium voltage silicon carbide gate drivers	Tushar Batra	Ghanshyam Gohil, Arun Kumar Sesham, Nicholas Rodriguez, Subhashish Bhattacharya	6	IEEE Energy Conversion Congress and Exposition (ECCE)	2017	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/8096485/
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Protection Design Considerations of a 10 kV SiC MOSFET Enabled Mobile Utilities Support Equipment Based Solid State Transformer (MUSE-SST)	Venkat N. Jakka	Sayan Acharya, Anup Anurag, Yos Prabowo, Ashish Kumar, Sanket Parashar, Subhashish Bhattacharya	0	IECON-44th Annual Conference of the IEEE Industrial Electronics Society	2018	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/8592886/
Grid connected CM noise considerations of a three-phase multi-stage SST	Awneesh Tripathi	Sachin Madhusoodhana n, Krishna Mainali, Arun Kadavelugu, Dhaval Patel, Subhashish Bhattacharya, Kamalesh Hatua	9	9th International Conference on Power Electronics and ECCE Asia (ICPE-ECCE Asia)	2018	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/7167873/
Mobile Utility Support Equipment based Solid State Transformer (MUSE-SST) for MV Grid Interconnection with Gen3 10 kV SiC MOSFETs	Anup Anurag	Sayan Acharya, Yos Prabowo, Venkat Jakka, Subhashish Bhattacharya	0	IEEE Energy Conversion Congress and Exposition (ECCE)	2018	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/8557388/
Design of a Medium Voltage Mobile Utilities Support Equipment based Solid State Transformer (MUSE-SST) with 10 kV SiC MOSFETs for Grid Interconnection	Anup Anurag	Sayan Acharya, Yos Prabowo, Venkat Jakka, Subhashish Bhattacharya	3	9th IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG)	2018	https://ieeexplore-ieee-org.prox.lib.ncsu.edu/document/8447766/

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Single shot avalanche energy characterization of 10kV, 10A 4H-SiC MOSFETs	Ashish Kumar	Sanket Parashar, Jayant Baliga, Subhashish Bhattacharya	2	IEEE Applied Power Electronics Conference and Exposition (APEC)	2018	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/8341404/
High Power Medium Voltage 10 kV SiC MOSFET Based Bidirectional Isolated Modular DC-DC Converter	Sayan Acharya	Ritwik Chattopadhyay, Anup Anurag, Satish Rengarajan, Yos Prabowo, Subhashish Bhattacharya	0	International Power Electronics Conference (IPEC-Niigata 2018 -ECCE Asia)	2018	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/8507406/
Practical Design Considerations for MV LCL Filter Under High dv/dt Conditions Considering the Effects of Parasitic Elements	Sayan Acharya	Anup Anurag, Yos Prabowo, Subhashish Bhattacharya	2	9th IEEE International Symposium on Power Electronics for Distributed Generation	2018	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/8447701/
Isolation Transformer for 3-Port 3-Phase Dual-Active Bridge Converters in Medium Voltage Level	Seunghun Baek	Subhashish Bhattacharya	0	IEEE Access	2019	https://ieeexplore-ieee.org/prox.lib.ncsu.edu/document/8630942/