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(B) IEEE Transactions/Journals:

- 1. Prem P, Sivaraman, D. Almakhles, P. Sanjeevikumar, Z. Leonowicz, Matheswaran, **M.A.J Sathik**, "A New Multilevel Inverter Topology with Reduced Power Components for Domestic Solar PV Applications," *IEEE Access*. (Accepted)
- 2. **M.A.J Sathik**, D. Almakhles, S. Ahamed Ibrahim, S. Alyami, S. Sivakumar and M. S. Basker, "A Generalized Multilevel Inverter Topology with Reduction of Total Standing Voltage," *IEEE Access*, doi: 10.1109/ACCESS.2020.3022040 (Online).
- 3. N. Sandeep, **M.A.J Sathik**, U. R. Yaragatti, K. Vijayakumar, A.K. Verma and Hemanshu Pota, "Common-Ground-Type Five-Level Transformerless Inverter Topology with Full DC-Bus Utilization," *IEEE Transactions on Industry Applications*, (Online)
- 4. **M.A.J Sathik,** N, Sandeep, Dhafer Almakhles, and F. Blaabjerg, "Cross Connected Compact Switched-Capacitor Multilevel Inverter (C³-SCMLI) Topology with Reduced Switch Count," *IEEE Transaction on Circuits and System Express II* (Online)
- 5. Marif Daula Siddique, **M.A.J Sathik**, et.al, "Reduce Switch Count Based Single Source 7L Boost Inverter Topology," *IEEE Transaction on Circuits and System Express II* (Online)
- 6. Dhafer Almakhles, **M.A.J Sathik**, et.al, "An Original Hybrid Multilevel DC-AC Converter Using Single-Double Source Unit for Medium Voltage Applications: Hardware Implementation and Investigation," *IEEE Access*, (Online) (Q1-Indexed).
- 7. Marif Daula Siddique, Saad Mekhilef, Noraisyah Mohamed shah, **M.A.J Sathik**, et al, "A Single DC Source Nine-Level Switched-Capacitor Boost Inverter Topology with Reduced Switch Count," *IEEE Access* vol. 8, pp. 5840-5851, 2020.
- 8. **M.A.J Sathik,** N, Sandeep, and F. Blaabjerg, "High Gain Active Neutral Point Clamped Seven-Level Self-Voltage Balancing Inverter," *IEEE Transaction on Circuits and System Express II* (Online).
- 9. Marif Daula Siddique, Saad Mekhilef, Noraisyah Mohamed shah, **M.A.J Sathik**, Mohammad Meraj and Atif Iqbal, "A New Single-Phase Single Switched-Capacitor Based Nine-Level Boost Inverter Topology with Reduced Switch Count and Voltage Stress," *IEEE Access*, vol. 7, pp. 174178-174188, 2019.
- 10. Marif Daula Siddique, Saad Mekhilef, Noraisyah Mohamed Shah, **M.A.J Sathik** and F. Blaabjerg, "A New Switched Capacitor 7L Inverter with Triple Voltage Gain and Low Voltage Stress," *IEEE Transaction on Circuits and System Express II*, doi:10.1109/TCSII.2019.2932480, (Online).
- 11. **M.A.J Sathik,** K. Bhatnagar, N. Sandeep and F. Blaabjerg, "An Improved Seven-Level PUC Inverter Topology with Voltage Boosting," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 67, no. 1, pp. 127-131, Jan. 2020.
- 12. N. Sandeep, **M.A.J Sathik**, U. R. Yaragatti and K. Vijayakumar, "Switched-Capacitor-Based Quadruple-Boost Nine-Level Inverter," *IEEE Transactions on Power Electronics*, vol. 34, no. 8, pp. 7147-7150, Aug. 2019.
- 13. N. Sandeep, **M.A.J Sathik**, U. R. Yaragatti and K. Vijayakumar, "A Self-Balancing Five-Level Boosting Inverter with Reduced Components," *IEEE Transactions on Power Electronics*, vol. 34, no. 7, pp. 6020-6024, July 2019.
- 14. **M.A.J Sathik,** et al, "A New Generalized Multilevel Converter Topology with Reduced Voltage on Switches, Power losses and Components," *IEEE Journal of Emerging Selected Topics in Power Electronics*, vol. 7, no. 2, pp. 1094-1106, June 2019.
- 15. **M.A.J Sathik et** al., "A New Generalized Multilevel Converter Topology Based on Cascaded Connection of Basic Units," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 7, no. 4, pp. 2498-2512, Dec. 2019.
- 16. **M.A.J Sathik,** K. Vijayakumar, "Compact Switched Capacitor Multilevel Inverter (CSCMLI) with Self-Voltage Balancing and Boosting Ability," *IEEE Transaction on Power Electronics*, vol. 34, no. 5, pp. 4009-4013, May 2019.

(C) Other ISI Journals:

- 1. Ponnusamy P, Velliangiri S, and **M.A.J Sathik**, "A Hybrid Switched Capacitor Multi-Level Inverter with High Voltage Gain and Self-Voltage Balancing Ability," *Electric Power Components and Systems*.: vol. 1, no. 4, Sep. 2020. doi.org/10.1080/15325008.2020.1821832.
- 2. P. Prem, Sivaraman, J. S. Sakthi Suriya Raj, **M.A.J Sathik** and Dhafer Almakhles, "Fast charging converter and control algorithm for solar PV battery and electrical grid integrated electric vehicle charging station," *Automatika* (Online) https://doi.org/10.1080/00051144.2020.1810506
- 3. Marif D S, Mekhilef Saad, Noraisyah M Shah, **M.A.J Sathik** et al., "A New Switched-Capacitor Based Boost Multilevel Inverter Topology with Higher Voltage Gain," *IET Power Electronics*, (Online).
- 4. Marif Daula Siddique, **M.A.J Sathik**, et.al, 'Design and Implementation of a New Unity Gain Nine-Level Active Neutral Point Clamped (UG-9L-ANPC) Multilevel Inverter Topology," *IET Power Electronics*, (Online)
- 5. **M.A.J Sathik,** Sandeep.N, Dhafer Almakhles, Frede Blaabjerg "Improved "K" Type Seven-Level Switched-Capacitor Inverter (K-7LSCI) Topology with Self-Balancing," *International Journal of Circuit Theory and Applications*, (Online)
- 6. Marif Daula Siddique, Saad Mekhilef, **M.A.J Sathik et.al**, "A New Switched-Capacitor Based Boost Inverter Topology with Reduced Switch Count," *Journal of Power Electronics*. (Online)
- 7. **M.A.J Sathik** et al, "A Seven-Level Boosting ANPC Inverter Using Cross-Connected Switched Capacitor Cells", IET Power Electronics, DOI: <u>10.1049/iet-pel.2020.0107</u> (Online).
- 8. **M.A.J Sathik** et al, "Switched-capacitor multilevel inverter with self-voltage-balancing for high frequency power distribution system", *IET Power Electronics*, DOI: <u>10.1049/iet-pel.2019.1249</u>, (Online).
- 9. Prem. P, Vidyasagar, A. Ibrahim, **M.A.J Sathik** et al, 'A Novel Cross-Connected Multilevel Inverter Topology for Higher Number of Voltage Levels with Reduced Switch Count. *Int Trans Electr Energ Syst.*, (Online).
- 10. P. Prem, S. Suresh, **M.A.J Sathik,** and S.H.E. Abdel Aleem, "A new generalized cross-connected switched capacitor multilevel inverter topology with the high gain output voltage for single phase solar PV unit," *Journal of Engineering Research, kuwait* Accepted.
- 11. S. Selvaraj, G. Kumaresan, **M.A.J Sathik**, "Modified 'K' Type Multilevel Inverter Topology with Reduced Switches, DC Sources and Power Loss." *Int Trans Electr Energ Syst.*, (Online)
- 12. **M.A.J Sathik,** Prabaharan, N, Ibrahim, SAA, Vijayakumar, K, Blaabjerg, F. A new generalized switched diode multilevel inverter topology with reduced switch count and voltage on switches. *Int J Circ Theor Appl.* 2019; 1–19. https://doi.org/10.1002/cta.2732.
- 13. George F. Savari, Vijayakumar Krishnasamy, **M.A.J Sathik**, Ziad M. Ali, Shady H.E. Abdel Aleem, Internet of Things based real-time electric vehicle load forecasting and charging station recommendation, *ISA Transactions*, (Feb-2019) (Online).
- 14. Prem.K, Sivaraman, **M.A.J Sathik**, et al, "A new asymmetric dual source multilevel inverter topology with reduced power switches," *Journal of the Chinese Institute of Engineers* 42:5, 460472, 2019.
- 15. Karthikeyan D, Vijayakumar K and **M.A.J Sathik,** "Generalized Cascaded Symmetric and Level Doubling Multilevel Converter Topology with Reduced THD for Photovoltaic Applications" *Electronics, MDPI publisher*, Vol.8. No 2, 2019. 2018.
- 16. Ahamed Ibrahim, Anbazghan and **M.A.J Sathik,** A New Asymmetric Cascaded Switched Diode Multilevel Inverter Structure with Minimized Switch Count" *Journal of Circuits, Systems and Computers*, Vol. 28, No. 4, pp.1950064 (1-30), 2019.
- 17. Palanisamy. R, Vijayakumar. K, **M.A.J Sathik**, Ziad M. Ali, Shady H. E. Abdel Aleem, "Three-Dimensional Space Vector Modulation Strategy for Capacitor Balancing in Split Inductor Neutral Point Clamped Multilevel Inverters"- *Journal of Circuits, Systems and Computers*, Vol. 27, No. 14, pp.1850232, 2018.
- 18. **M.A.J Sathik,** K. Vijayakumar, "An Assessment of Recent Multilevel Inverter Topologies with Reduced Power Electronics Components for Renewable Applications," *Renewable & Sustainable Energy Reviews, Elsevier*, vol.83, no. 2, pp. 3379-3399, 2018.
- 19. D.Karthikeyan, K. Vijayakumar, **M.A.J Sathik**, "Development of a Switched Diode Asymmetric Multilevel Inverter Topology," *Journal of Power Electronics*, (Vol. 18, No. 2, March 2018.
- 20. **M.A.J Sathik,** Shady Abdel Aleem, K.Ramani and Ahmed Zobaa, A New Switched DC –Link Capacitor Based Multilevel Converter (SDC2MLC), *Electric Power Components and Systems, Taylor & Francis*, Vol.45, No.9,pp.1001-1015, June-2017.
- 21. Sivakumar.S, **M.A.J Sathik**, Manoj.S, Sundarajan.G," An Assessment of Performance of DC-DC Converters for Renewable Energy Applications", *-Renewable & Sustainable Energy Reviews*, Elsevier, Vol.58, pp- 1475–1485, May 2016.
- 22. **M.A.J Sathik** and Ramani.K, "A New Symmetric cascaded Multilevel Inverter Topology Using Single and Double Source Unit", *Journal of Power Electronics*, Vol.15, No.4, pp.951-963, July2015.

23. K. Ramani, **M.A.J Sathik**, and S. Sivakumar. "A New Symmetric Multilevel Inverter Topology Using Single and Double Source Sub-Multilevel Inverters", *Journal of Power Electronics*, Vol.15. No. 1, pp 96-105, Jan-2015.

(D) Scopus Indexed Journals (Total No-04):

- 1. Ahamed Ibrahim, Anbazghan and **M.A.J Sathik,** A New Symmetric Switched Diode Multilevel Inverter Structure with Minimized Switch Count" *IET Journal of Engineering*, Online June 22, 2017.(Web of Science Indexed)
- 2. Lakshmi khandhan, Andy Srinivasan and **M.A.J Sathik**, "Single DC Source-Based Multilevel Converter Topology with Reduced Power Switches and Conduction Losses", *Journal Of Electrical Engineering*, vol.17, no.4,2017.
- 3. S. Mohamed Yousuf, S. Latha and **M.A.J Sathik**, "Creative Structure of Symmetric and Asymmetric Multilevel Converter Topology Using Single-Double Source Unit," *Applied Mathematics & Information Sciences*" *An International Journal*. Vol. 11, No. 2, pp:1-12 (2017).
- 4. P. Vijayarajan, A. Shunmugalatha and **M.A.J Sathik**, "A New Hybrid Multilevel Inverter Topology for Medium and High Voltage Applications", *Applied Mathematics & Information Sciences*" *An International Journal* Vol. 11, No. 2, pp. 1-12 (2017).
- 5. **M.A.J Sathik** and Ramani.K, "Investigation of Novel Symmetric and Asymmetric Multilevel Converter Topology with Reduced Power Switches"- *International Journal of Power Electronics*, Vol.7, No.3-4, pp.226-242, 2015.

(E) Other Indexed Journals (Total No-07):

- 1. Yousuf, S. M., Latha, S., **M.A.J Sathik**, & Mani, S. V. (2017). An Innovative Structure of Single-Phase Multi- Step DC-AC Converter with Addition-Subtraction in DC Voltage Sources. Asian Journal of Research in Social Sciences and Humanities, 7(3), 1162-1180. (ICI Indexed)
- 2. **M.A.J Sathik** & Ramani, K. A, "Novel Approach of Multilevel Inverter with Reduced Power Electronics Devices", Published inWASETVol.8, No.11, Dec-2014, (Google Scholar-Indexed).
- 3. Vinothini, K., **M.A.J Sathik**., & Ramani, K. "Modelling and Analysis Of Induction Motor Drive With Novel Multilevel Inverter", Published in International Journal of Scientific & Engineering Research, Vol.5, No.4, Nov-2014 ISSN 2229-5518, (Google Scholar-Indexed).

- Yazhini, R., M.A.J Sathik., & Ramani, K. Analysis and Modelling of New Modified Multilevel Inverter with PMSM Applications, Published in International Journal of Scientific & Engineering Research, Vol.5, No.4, Nov-2014 ISSN 2229-5518, (Google Scholar-Indexed).
- 5. G. Murugesan, M. Praveen, **M.A.J Sathik**, "A New Multilevel Inverter Topology using Less Number of Switches," Published in International Journal of Engineering Science and Technology (IJEST)Vol.
 - 3 No. 2 Feb 2011-ISSN: 0975-5462, (Google Scholar-Indexed).
- 6. G. Manoranjitha, **M.A.J Sathik**, R. Solairaj," Automatic Control of Hydraulic Machine using PLC,"

Published in Coimbatore Institute of Information and Technology (CIIT) April 2011, ISSN 0974 – 9551.

7. K. Immanuel Arokia James, **M.A.J Sathik**, M. Praveen, "GSM Based Data Logger System," Published

in International Journal of Scientific & Engineering Research, Vol.2, No.11, Nov-2011 ISSN

2229-5518. (Google Scholar-Indexed).

- (F) International Conference (Total No-10):
 - N. Sandeep, M.A.J Sathik, A. Kumar Verma and U. R. Yaragatti, "Three-Phase Magnetic-Less Boosting Multilevel Inverter Topology with Reduced Components," 2019 IEEE Transportation Electrification Conference (ITEC-India), Bengaluru, India, 2019, pp. 1-5.
 - 2. N. Sandeep, **M.A.J.Sathik**, A. K. Verma and U. R. Yaragatti, "Reduced Component Boost Seven- Level Inverter (RCB7LI) with Self-Voltage Balancing," 2020 *IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy* (PESGRE2020), Cochin, India, 2020, pp. 1-5.
 - 3. **M.A.J. Sathik**, Z. Tang, Y. Yang, K. Vijayakumar, and F. Blaabjerg, "A New 5-Level ANPC Switched
 - Capacitor Inverter Topology for Photovoltaic Applications," IEEE-IECON 2019-Portugal.
 - 4. **M.A.J. Sathik,** N. Sandeep, K. Vijayakumar, R. Yaganthi, Frede Blaabjerg, "Hybrid Multilevel Inverter Topology with Reduced Part Count", *IEEE conference PEDES-18*, Dec 2018.
 - 5. Sandeep.N, **M.A.J. Sathik.**, et.al, "Switched-Capacitor-Based Three-Phase Five-Level Inverter
 - Topology with Reduced Components", IEEE conference IICPE-18, Dec-2018.
 - 6. **M.A.J Sathik,** R.S. Alishah, K. Vijayakumar, "A New Symmetric Multilevel Converter Topology with Reduced Voltage on Switches and DC Source" *IEEE conference*, *ICETEST Conference 2018*, Thrissur, Kerala. India.
 - 7. **M.A.J Sathik,** Ramani Kannan, Mohd. Fakhizan Romlie," New Cascaded Multilevel Converter Topology Based on Basic Unit with Reduction of DC Sources "- *IEEE Explore Digital Library*" *CENCON 2015*, Malaysia.
 - 8. **M.A.J Sathik,** Abdullah, Yogesh Raj, "Modified new GSM Based Data Logger System with Two-
 - Way Communication"-"IEEE Explore Digital Library"- INCOSET 12, India.
 - 9. V.Arun Kumar, **M.A.J Sathik**, "Input Power factor improvement of rectifier followed by two quadrant shunt active filter"-*SET 12 at Vellore Institute of Technology*, India.
 - 10. R. Yazhini, **M.A.J Sathik** & Ramani, K., "Analyzing and Modelling of New Modified Multilevel

Inverter using with PMSM applications"- ICECC-2014, India.

11.	K. Vinothini, M.A.J Sathik & Ramani, K., "Analysis and modelling of induction motor drive with novel multilevel inverter" <i>ICECC-2014</i> , India.