Chapter 7

REFERENCES

Adler, R. J., Kiuttu, G. F., Simpkins, B. E., Sullivan, D. J. and Voss, D. E., "Improved electron emission by use of a cloth fiber cathode," *Review of scientific instruments*, vol. 56, no. 5, pp. 766-767, 1985.

Agee, F. J., Calico, S. E., Hendricks, K. J., Haworth, M. D., Spencer, T. A., Ralph, D. R., Blankenship, E., Clark, M. C. and Lemke, R. W., "Pulse shortening in the magnetically insulated line oscillator (MILO)," *Intense Microwave Pulses IV*, vol. 2843 pp. 144-152, 1996.

Barker, R. J., and Schamiloglu, E., Eds., High Power Microwave Sources and Technologies, *IEEE Press/J. Wiley & Sons*, New York, 2001.

Basu, B. N., Electromagnetic Theory and Applications in Beam-Wave Electronics, Singapore: World Scientific, 1996.

Bekefi, G., and Orzechowski, T. J., "Giant microwave bursts emission from field emission, relativistic-electron-beam magnetron," *Phys. Rev. Lett.*, vol. 37, no. 6, pp. 379, 1976.

Benford, J., "History and Future of the Relativistic Magnetron," Microwave Sciences, Lafayette, CA USA, 2010.

Benford, J., Granatstein, V. L., and Alexeff, I., Relativistic magnetron, High Power Microwave Sources, Eds. Boston, MA: Artech House, pp. 351-395, 1987.

Benford, J., Swegle, J. A. and Schamiloglu, E., High Power Microwaves, 2nd ed. Boca Raton, FL, USA: CRC Press, ch. 3, pp. 43–103, 2007.

Champeaux, S., Gouard, P., Cousin, R. and Larour, J., "3-D PIC numerical investigations of a novel concept of multistage axial vircator for enhanced microwave generation," *IEEE Transaction on Plasma Science*, vol. 43, no. 11, pp. 3841-3855, 2015.

Chen, D. B., Wang, D., Meng, F. B. and Fan, Z. K., "Bifrequency magnetically insulated transmission line oscillator," *IEEE transactions on plasma science*, vol. 37, no. 1, pp. 23-29, 2008.

Chen, D. B., Wang, D., Meng, F. B., Fan, Z. K., Qin, F. and Wen, J., "Bifrequency HPM generation in a MILO with azimuthal partition," *IEEE transactions on plasma science*, vol. 37, no. 10, pp. 1916-1920, 2009.

Chen, Y. K., "The constant impedance tapered lossless transmission line," M.S. thesis, Dept. Elec. Comp. Eng., Univ. Missouri, Rolla, MO, USA, 1966.

Clark, M. C., Marder, B. M. and Bacon, L. D., 1988. "Magnetically insulated transmission line oscillator," *Applied physics letters*, vol. 52, no. 1, pp.78-80, 1988.

Cousin, R., "Compréhension des mécanismes régissant le fonctionnement d'un tube hyperfréquence de type MILO" Ph.D. thesis, Ecole Polytechnique X, France, 2005

Cousin, R., Larour, J., J. Gardelle, B., Cassany, Modin, P., Gouard, P. and Raymond, P., "Gigawatt emission from a 2.4-GHz compact magnetically insulated line oscillator (MILO)," *IEEE transactions on plasma science*, vol. 35, no. 5, pp. 1467-1474, 2007.

Davis, J. G. and Gibson, A. A. P., "Higher order mode impedances and cut-off frequencies of overmoded coaxial waveguides," *International journal of electronics*, vol. 93, no. 05, pp. 335-346, 2006.

Dixit, G. and Jain, P. K., "Equivalent circuit analysis of the disk-loaded coaxial structure for MILO," *IEEE Transactions on Plasma Science*, vol. 44, no. 2, pp. 157-164, 2016.

Dixit, G. and Singh, B., "Study on Load-Side Optimization in Bifrequency MILO Source," IEEE Transactions on Plasma Science, vol. 48, no. 10, pp. 3552-3557, 2020.

Dixit, G., "Equivalent Circuit Approach to the Beam-Wave Interaction Analysis of Magnetically Insulated Line Oscillator (MILO)" Ph.D. thesis, IIT (BHU), Varanasi, India, 2016.

Dixit, G., Kumar, A. and Jain, P. K., "Design analysis and simulation study of an efficiency enhanced *L*-band MILO," *Physics of Plasmas*, vol. 24, no. 1, pp. 013113, 2017.

Dwivedi, S. and Jain, P. K., "Beam-wave interaction analysis of a magnetically insulated line oscillator," *Physics of Plasmas*, vol. 19, no. 8, pp. 082110, 2012.

Dwivedi, S. and Jain, P. K., "Design expressions for the magnetically insulated line oscillator," *IEEE Transactions on Plasma Science*, vol. 41, no. 5, pp. 1549-1556, 2013.

Dwivedi, S. and Jain, P. K., "Electromagnetic analysis of a disk-loaded coaxial waveguiding structure for MILO," *IEEE Transactions on Plasma Science*, vol. 40, no. 4, pp. 1032-1041, 2012.

Dwivedi, S. and Jain, P. K., "Performance improvement study of tapered magnetically insulated line oscillator through impedance matching," *IEEE Transactions on Plasma Science*, vol. 42, no. 9, pp. 2186-2192, 2014.

Eastwood, J. W., Hawkins, K. C. and Hook, M. P., "The tapered MILO," *IEEE transactions on plasma science*, vol. 26, no. 3, pp. 698-713, 1998.

Esteban, J. and Rebollar, J. M., "Characterization of corrugated waveguides by modal analysis," *IEEE transactions on microwave theory and techniques*, vol. 39, no. 6, pp. 937-943, 1991.

Fan, Y. W., Wang, X. Y., Zhang, Z. C., Xun, T. and Yang, H. W., "A high-efficiency repetitively pulsed magnetically insulated transmission line oscillator," *Vacuum*, vol. 128, pp. 39-44, 2016.

Fan, Y. W., Yuan, C. W., Zhong, H. H., Shu, T. and Luo, L., "Simulation investigation of an improved MILO," *IEEE transactions on plasma science*, vol. 35, no. 2, pp. 379-383, 2007.

Fan, Y. W., Yuan, C. W., Zhong, H. H., Shu, T., Zhang, J. D., Yang, J. H., Yang, H. W., Wang, Y. and Luo, L., "Experimental investigation of an improved MILO," *IEEE transactions on plasma science*, vol. 35, no. 4, pp. 1075-1080, 2007.

Fan, Y. W., Zhong, H. H., Li, Z. Q., Shu, T., Yang, H. W., Zhou, H., Yuan, C. W., Zhou, W. H. and Luo, L., "Repetition rate operation of an improved magnetically insulated transmission line oscillator," *Physics of Plasmas*, vol. 15, no. 8, pp. 083102, 2008.

Fan, Y. W., Zhong, H. H., Li, Z. Q., Shu, T., Zhang, J. D., Zhang, J., Zhang, X. P., Yang, J. H. and Luo, L., "A double-band high-power microwave source," *Journal of Applied Physics*, vol. 102, no. 10, pp. 103304, 2007.

Fan, Y. W., Zhong, H. H., Li, Z. Q., Yang, H. W., Shu, T., Zhou, H., Yuan, C. W., Zhang, J. and Luo, L., "A metal-dielectric cathode," *Journal of Applied Physics*, vol. 104, no. 2, pp. 023304, 2008.

Fan, Y. W., Zhong, H. H., Shu, T. and Li, Z. Q., "Theoretical investigation of the fundamental mode frequency of the magnetically insulated transmission line oscillator," *Physics of Plasmas*, vol. 15, no. 12, pp. 123504, 2008.

Fan, Y., Wang, X., Li, G., Yang, H., Zhong, H. and Zhang, J., "Experimental demonstration of a tunable load-limited magnetically insulated transmission line oscillator," *IEEE Transactions on Electron Devices*, vol. 63, no. 3, pp. 1307-1311, 2016.

Friedman, M., Krall, J., Lau, Y. Y. and Serlin, V., "Efficient generation of multigigawatt rf power by a klystronlike amplifier," *Review of scientific instruments*, vol. 61, no. 1, pp.171-181, 1990.

Gandhi, O. P., Microwave Engineering and Applications, New York: Pergamon Press, 1981.

Gold, S. H. and Nusinovich, G. H., Review of high-power microwave source research," *Beam Physics Branch, Plasma Physics Division, Naval Research Laboratory, Washington*, DC 20375-5346. 1997.

Gold, S. H., and Nusinovich, G. S., Review of high-power source research, Zh. Tech. Fiz., vol. 52, pp. 106, 1982.

Granatstein, V. L. and Alexeff, I., "High-Power Microwave Sources," Artech House Boston-London, 1987.

Haworth, M. D., Baca, G., Benford, J., Englert, T., Hackett, K., Hendricks, K. J., Henley, D., LaCour, M., Lemke, R.W., Price, D. and Ralph, D., "Significant pulse-lengthening in a multigigawatt magnetically insulated transmission line oscillator," *IEEE transaction on plasma science*, vol. 26, no. 3, pp. 312-319, 1998.

Haworth, M. D., Cartwright, K. L., Luginsland, J. W., Shiffler, D. A. and Umstattd, R. J., "Improved electrostatic design for MILO cathodes," *IEEE transactions on plasma science*, vol. 30, no. 3, pp.992-997, 2002.

Haworth, M. D., Luginsland, J. W. and Lemke, R. W., "Evidence of a new pulseshortening mechanism in a load-limited MILO," *IEEE transactions on plasma science*, vol. 28, no. 3, pp. 511-516, 2000.

He, J., Cao, Y., Zhang, J., Wang, T. and Ling, J., "Design of a dual-frequency high-power microwave generator," *Laser and Particle Beams*, vol. 29, no. 4, pp. 479-485, 2011.

Jiang, T., He, J., Zhang, J., Li, Z. and Ling, J., "An improved Ku-band MILO with tapered choke cavity and enlarged first interaction cavity," *IEEE Transactions on Electron Devices*, vol. 64, no. 1, pp. 286-292, 2016.

Ju, J. C., Fan, Y. W., Shu, T. and Zhong, H. H., "Proposal of a gigawatt-class L/Ku dualband magnetically insulated transmission line oscillator," *Physics of Plasmas*, vol. 21, no. 10, pp. 103104, 2014.

Ju, J. C., Fan, Y. W., Zhong, H. H. and Shu, T., "A novel dual-frequency magnetically insulated transmission line oscillator," *IEEE transactions on plasma science*, vol. 37, no. 10, pp. 2041-2047, 2009.

Kesari, V., Jain, P. K. and Basu, B. N., "Analysis of a circular waveguide loaded with thick annular metal discs for wide-band gyro-TWTs," *IEEE transactions on plasma science*, vol. 33, no. 4, pp. 1358-1365, 2005.

Kesari, V., Jain, P. K. and Basu, B. N., "Analytical approaches to a disc-loaded cylindrical waveguide for potential application in wide-band gyro-TWTs," *IEEE transactions on plasma science*, vol. 32, no. 5, pp. 2144-2151, 2004.

Kim, D. H., Jung, H. C., Min, S. H., Wang, M. C., Rhee, M. J., Park, G. S., Kim, C. H. and Yim, D. W., 2006, "Experimental investigation of giga-watt magnetically insulated transmission line oscillator (MILO) by improved axial power extraction," *IEEE International Vacuum Electronics Conference*, pp. 561-562, 2006.

Kumar, A., Dwivedi, S. and Jain, P. K., "MILO Performance Improvement Study—An Equivalent Circuit Approach," *IEEE Transactions on Plasma Science*, vol. 47, no. 10, pp. 4642-4649, 2019.

Kumar, A., Tripathi, P., Dwivedi, S. and Jain, P. K., "Analysis of Azimuthal Partition Periodic Disk-Loaded Coaxial Structure for Bifrequency MILO Using Equivalent Circuit Approach," *IEEE Transactions on Plasma Science*, vol. 48, no. 9, pp. 3030-3039, 2020.

Lemke, R. W. and Collins Clark, M., "Theory and simulation of high-power microwave generation in a magnetically insulated transmission line oscillator," *Journal of applied physics*, vol. 62, no. 8, pp. 3436-3440, 1987.

Lemke, R. W., Calico, S. E. and Clark, M. C., "Investigation of a load-limited, magnetically insulated transmission line oscillator (MILO)," *IEEE transactions on plasma science*, vol. 25, no. 2, pp. 364-374, 1997.

Lemke, R. W., DeMuth, G. E. and Biggs, A. W., "Theoretical and experimental investigation of axial power extraction from a magnetically insulated transmission line oscillator," *In Intense Microwave and Particle Beams*, vol. 1226, pp. 199-208, 1990.

Lemke, R.W., "Linear stability of relativistic space-charge flow in a magnetically insulated transmission line oscillator," *Journal of applied physics*, vol. 66, no. 3, pp. 1089-1094, 1989.

Li, A. K. and Fan, Y. W., "Preliminary experimental study of a carbon fiber array cathode," *Journal of Applied Physics*, vol. 120, no. 6, pp. 065105, 2016.

Li, A. K., Fan, Y. W., Qian, B. L., Li, S. and Yang, H. W., "Improvement of vacuum maintenance capability and output pulse limit in a hard-tube MILO with a carbon fiber array cathode," *Vacuum*, vol. 181, pp. 109723, 2020.

Mahto, M. and Jain, P. K., "Oscillation condition and efficiency analysis of the reltron," *IEEE Transaction on Plasma Science*, vol. 44, no. 7, pp. 1056-1062, 2016.

Miller, R. B., "Mechanism of explosive electron emission for dielectric fiber (velvet) cathodes," *Journal of applied physics*, vol. 84, no. 7, pp. 3880-3889, 1998.

Nallasamy, V., Datta, S. K., Reddy, S. U. and Jain, P. K., "Advances and present trends in magnetically insulated line oscillator," *Journal of electromagnetic waves and applications*, vol. 31, no. 17, pp.1864-1874, 2017.

Nallasamy, V., Narasimhamurthy, C., Geetha, B., Gupta, S. K., Datta, S. K., Umamaheshwara Reddy, S. and Jain, P. K., "Electromagnetic simulation and experimental characterization of RF interaction structure of an S-band magnetically insulated line oscillator," *Journal of electromagnetic waves and applications*, vol. 31 no. 4, pp. 375-382, 2017.

Orfanidis, S. J., Electromagnetic Waves and Antennas, 2013.

Qin, F., Wang, D., Xu, S., Zhang, Y. and Fan, Z. K., "Repetitive operation of an L-band magnetically insulated transmission line oscillator with metal array cathode," *Review of Scientific Instruments*, vol. 87, no. 4, pp. 044703, 2016.

Sagor, R. H. and Amin, M. R., "Linear analysis of an X-band backward wave oscillator with a circular-edge disk-loaded cylindrical waveguide driven by an annular electron beam," *The European Physical Journal Plus*, vol. 132, no. 10, pp. 428, 2017.

Singh, K., Jain, P. K. and Basu, B. N., "Analysis of a coaxial waveguide corrugated with wedge-shaped radial vanes considering azimuthal harmonic effects," *Progress In Electromagnetics Research*, vol. 47, pp. 297-312, 2004.

Smith P.D., and Cloude S.R., Eds., *Ultra-Wideband, Short-Pulse Electromagnetics 5*, New York, 2002.

Tang, Y., Meng, L., Li, H., Zheng, L., Wang, B. and Yin, Y., "An X-band dual-frequency coaxial relativistic backward-wave oscillator," *IEEE Transactions on Plasma Science*, vol. 40, no. 12, pp. 3552-3559, 2012.

Wagner, D., Thumm, M. and Kasparek, W., "Hybrid modes in highly oversized corrugated rectangular waveguides," *International journal of infrared and millimeter waves*, vol. 20, no. 4, pp. 567-581, 1999.

Walker, L. R. and Wax, N., "Non-uniform transmission lines and reflection coefficients," *Journal of Applied Physics*, vol. 17, no. 12, pp. 1043-1045, 1946.

Wang, D., Chen, D., Qin, F. and Fan, Z., "Improved bifrequency magnetically insulated transmission line oscillator," *IEEE transactions on plasma science*, vol. 38, no. 1, pp.19-25, 2009.

Wang, D., Fan, J., Chen, D., and Deng, J., "Rigorous analysis of the coaxial disk-loaded waveguide slow-wave structures," *Proc. Int. Conf. Microwave and Millimeter wave Tech.*, Apr. 18-21, 2007.

Wang, D., Fan, Z. K., Chen, D. B. and Deng, J. K., "Investigation of dispersion characteristics in coaxial disk-loaded slow-wave structures with both symmetric and asymmetric modes," *IEEE transaction on plasma science*, vol. 35, no. 4, pp. 1070-1074, 2007.

Wang, D., Fan, Z. K., Chen, D. B. and Deng, J. K., "Simulation of S-band magnetically insulated transmission line oscillator," *High Power Laser and Particle Beams*, vol. 19, no. 11, pp. 24, 2007.

Wang, D., Fan, Z. K., Chen, D. B., and Deng, J. K., "Design and Simulation of Double Ladder Cathode Magnetically Insulated Transmission Oscillator," *High power laser particles and beams*, vol. 19, no. 4, pp. 647–650, 2007.

Wang, H., Yang, Z., Zhao, L. and Liang, Z., "Numerical computation of dispersion curves for symmetric and asymmetric modes in an arbitrary cylindrical metal SWS," *IEEE transactions on plasma science*, vol. 33, no. 1, pp. 111-118, 2005.

Wang, X., Fan, Y., Shu, T., Li, A. and Liu, Z., "Design and Simulation of a Novel High-Efficiency Magnetically Insulated Transmission Line Oscillator," *IEEE Transactions on Plasma Science*, vol. 48, no. 4, pp. 884-887, 2020.

Wang, X., Fan, Y., Shu, T., Li, A., Yu, Y. and Liu, Z., "A High-Efficiency Magnetically Insulated Transmission Line Oscillator with Ridged Disk-Loaded Vanes," *IEEE Transaction on Plasma Science*, vol. 47, no. 8, pp. 3974-3977, 2019.

Watkins, D. A., Topics in Electromagnetic Theory, New York: John Wiley, 1958.

Wen, J., Chen, D. B., Wang, D. and Qin, F., "Preliminary experimental research on Kuband MILO," *IEEE Transactions on Plasma Science*, vol. 41, no. 9, pp. 2501-2505, 2013. Xiao, R., Sun, J., Chen, C., Zhang, Y. and Shao, H., "High efficiency annular magnetically insulated line oscillator-transit time oscillator with three separate frequencies in three bands," *Journal of Applied Physics*, vol. 106, no. 3, pp. 033308, 2009.

Xu, H., Wang, X. Y., Fan, Y. W., Li, A. and Liu, Z., "A High-Efficiency Ridged Magnetically Insulated Transmission Line Oscillator," *IEEE Transactions on Electron Devices*, vol. 67, no. 10, pp. 4442-4446, 2020.

Xun, T., Fan, Y. W., Yang, H. W., Zhang, Z. C., Chen, D. Q. and Zhang, J. D., "A vacuum-sealed, gigawatt-class, repetitively pulsed high-power microwave source," Journal of Applied Physics, vol. 121, no. 23, pp. 234502, 2017.

Yang, Z., Liang, Z., Zhang, B., Li, J., Ma, W., Hu, S. and Liu, S., "A Cherenkov oscillator operating at two different wave bands," *International journal of infrared and millimeter waves*, vol. 20, no. 1, pp. 83-92, 1999.

Yu-Wei, F., Hui-Huang, Z., Zhi-Qiang, L., Ting, S., Han-Wu, Y., Jian-Hua, Y., Yong, W., Ling, L. and Yan-Song, Z., "Investigation of an X-band magnetically insulated transmission line oscillator," *Chinese Physics B*, vol. 17, no. 5, pp. 1804, 2008.

Yu-Wei, F., Ting, S., Yong-Gui, L., Hui-Huang, Z., Zhi-Qiang, L., Yong, W., Yan-Song, Z. and Ling, L., "A compact magnetically insulated line oscillator with new-type beam dump," *Chinese Physics Letters*, vol. 22, no. 1, pp. 164, 2005.

Zhang, H. and Chen, K. J., "A stub tapped branch-line coupler for dual-band operations," *IEEE Microwave and wireless components letters*, vol. 17, no. 2, pp. 106-108, 2007.

Zhang, K. Q. and Li, D. J., Electromagnetic Theory for Microwave and Optical devices, Berlin, Germany: Springer-Verlag, 1998.

Zhang, X. P. and Zhong, H. H., "Analysis of the dispersion on MILO coaxial SWS," *High Power Laser and Particle Beams*, vol. 16, no. 3, pp. 363-366, 2004.

Zhang, X., Dang, F., Zhang, J., Fan, Y. and Li, Z., "Preliminary investigation of an improved metal-dielectric cathode for magnetically insulated transmission line oscillator," *Review of Scientific Instruments*, vol. 86, no. 2, pp. 024705, 2015.

Zhang, X., Li, Y., Li, Z., Zhong, H. and Qian, B., "Preliminary experimental investigation of a complex dual-band high power microwave source," *Review of Scientific Instruments*, vol. 86, no. 10, pp. 104703, 2015.

Zhang, Y., Mo, Y. and Zhou, X., "Rigorous analysis of the disk-loaded waveguide slowwave structures," *International journal of infrared and millimeter waves*, vol. 24, no. 4, pp. 525-535, 2003.

Zhang, Y., Mo, Y. L., Xu, R. M., Yan, B. and Xie, X. Q., "An investigation of periodic waveguides with axial and azimuthal corrugations," *IEEE transactions on plasma science*, vol. 33, no. 6, pp. 2017-2026, 2005.

Zhang, Y., Mo, Y., Zhou, X. and Li, J., "Study of disk-loaded waveguide filled with plasma," *International Journal of Infrared and Millimeter Waves*, vol. 24, no. 12, pp. 2085-2094, 2003.

Zhi-Qiang, L., Hui-Huang, Z., Yu-Wei, F., Ting, S., Bao-Liang, Q., Liu-Rong, X. and Yan-Song, Z., "Investigation of an S-band tapered magnetically insulated transmission line oscillator," *Chinese Physics Letters*, vol. 26, no. 5, pp. 055201, 2009

AUTHOR'S RELEVANT PUBLICATIONS

Journals:

- Arjun Kumar, Smrity Dwivedi and P. K. Jain, "MILO Performance Improvement Study--An Equivalent Circuit Approach," *IEEE Transaction on Plasma Science*, vol. 47, no. 10, pp. 4642-4649, Oct. 2019.
- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Analysis of Azimuthal Partition Periodic Disc Loaded Coaxial Structure for Bi-Frequency MILO using Equivalent Circuit Approach," *IEEE Transaction on Plasma Science*, vol. 48, no. 9, pp. 3030-3039, Sept. 2020.
- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Beam-Wave interaction analysis of an azimuthally partitioned axially periodic disc loaded coaxial structure for bi-frequency MILO," *IEEE Transaction on Plasma Science.* vol. 49, no. 4, pp. 1323-1332, Apr. 2021.
- **4.** Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Analysis, design, and simulation of an axially-partitioned dielectric-loaded bi-frequency MILO," *Defence Science Journal (DSJ)*. vol. 71, no. 3, pp. 309-314, May 2021.

Conferences/Workshops/ Symposia

- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Simulation Investigation of S/Ku dual-band magnetically insulated line Oscillator," *IMaRC* 2018, 22-24 November 2018, Kolkata, India.
- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "PIC Simulation Study of L-band Bifrequency Magnetically Insulated Line Oscillator," URSI AP-RASC 2019, New Delhi, India, 09 - 15 March 2019.
- Arjun Kumar, Gargi Dixit, and P. K. Jain, "Performance Improvement Study of MILO Using Optimization of Load Parameters," *National conference on Emerging trend in vacuum electronics device and applications (VEDA)*, 3-5 December 2015, MTRDC, DRDO, Bangalore, India.
- 4. Arjun Kumar, and P. K. Jain, "Simulation Study of S-band Tapered Magnetically Insulated Line Oscillator," *National conference on Emerging trend in vacuum electronics device and applications (VEDA)*, 16-18 March 2017, IPR, Gandhinagar, India.

- 5. Arjun Kumar, M. Thottappan and P. K. Jain, "Study of Asymmetric Mode Generation in Magnetically Insulated Line Oscillator," *National conference on Emerging trend in vacuum electronics device and applications (VEDA)*, 17-19 November 2017, IIT, Roorkee, Uttarakhand, India.
- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Eigenmode and PIC Simulation Study of S-band Bifrequency MILO," *National conference on Emerging trend in vacuum electronics device and applications (VEDA)*, 22-24 November 2018, IIT Guwahati, Assam India.
- 7. Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Analysis and 3D PIC simulation of axial-partition dielectric loaded bifrequency MILO," *National conference on Emerging trend in vacuum electronics device and applications (VEDA)*, 21-23 November 2019, NIT Patna, India.
- Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "Electromagnetic analysis of ohmic quality factor of corrugated coaxial cavity structure for MILO," URSI Regional Conference on Radio Science (RCRS) 2020, 12-14 February 2020, IIT (BHU), Varanasi, India.
- 9. Arjun Kumar, Prabhakar Tripathi, Smrity Dwivedi and P. K. Jain, "PIC simulation study of dielectric-filled S-band magnetically insulated line oscillator (MILO)," URSI Regional Conference on Radio Science (RCRS) 2020, 12-14 February 2020, IIT (BHU), Varanasi, India.