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**SUMMARY OF INTERNATIONAL JOURNAL/ CONFERENCE/ BOOK
PUBLICATIONS – (Given in Annexure)**

Year	International Journal Publications	Internation al Conferen ce Publicatio ns	National Conferen ce publicatio ns	Book/Chapt er
2009 - 2020	53	38	5	5

INTERNATIONAL JOURNALS PUBLICATIONS

2020	
53	J.Ajayan, D.Nirmal , P.Mohankumar, M.Saravanan, M.Jagadesh and L.Arivazhagan, "A review of photovoltaic performance of organic/inorganic solar cells for future renewable and sustainable energy technologies" Superlattices and Microstructures, https://doi.org/ 10.1016/j.spmi.2020. 106549 , (2020) pp 1-53 (Impact Factor:2.385).
52	K.Husna Hamza and D. Nirmal , " A review of GaN HEMT broadband power amplifiers", International Journal of Electronics and Communications (AEU), Vol 116, (2020) DOI: 10.1016/j.aeue.2019.153040 (Impact Factor:2.853)
51	D.Godfrey, D.Nirmal , L. Arivazhagan, R.Rathes kannan, P.Issac Nelson, S.Rajesh, B.Vidhya and N.Mohankumar " A novel ZnPc nanorod derived piezoelectric nanogenerator for energy harvesting " Physica E Low-Dimensional Systems and Nanostructures Vol.118 (2020) (Impact Factor:3.176).
50	S.Angen, J. Grace jency and D.Nirmal , " A wearable energy storage capacitor using graphene oxide and magnesuim oxide as electrodes" Physica E Low-Dimensional Systems and Nanostructures 115 (2020) (Impact Factor:3.176).
49	A.S. Augustine Fletcher, D. Nirmal , L. Arivazhagan, J. Ajayan and Varghese, A, " Enhancement of Johnson figure of merit in III-V HEMT combined with discrete field plate and AlGaIn blocking layer", International Journal of RF and Microwave Computer-Aided Engineering, vol 30, Issue 2(2020). (Impact Factor:1.472)
2019	
48	Rani, C.S.H., Bagan, K.B., Nirmal, D and Roach, R.S., " Enhancement of Performance in TFET by Reducing High-K Dielectric Length and Drain Electrode Thickness" Silicon, doi:10.1007/s12633-019- 00328-w (2019) (Impact Factor:1.210).
47	M.Manikandan, D.Nirmal , J.Ajayan, P.Mohankumar, P.Prajoon and L.Arivazhagan "A review of blue light emitting diodes for future solid state lighting and visible light communication applications", Superlattices and Microstructures 136 (2019). https://doi.org/ 10.1016/j.spmi. 2019.106294 , (Impact Factor:2.385).
46	J.Ajayan, D.Nirmal , Dheena Kurian, P.Mohankumar, L.Arivazhagan , A.S. Augustine Fletcher ,T.D.Subash and M.Saravanan" Investigation of impact of gate underlap/overlap on the analog/RF performance of composite channel double gate MOSFETs" Journal of Vacuum Science & Technology B 37 , 062201 (2019); https://doi.org/10.1116/1.5116199 (Impact Factor:1.351).
45	J.Ajayan, D.Nirmal , P.Mohankumar, Dheena Kurian, A.S. Augustine Fletcher , L.Arivazhan and B.Santhosh kumar" GaAs metamorphic high electron mobility transistors for future deep space-biomedical- millitary and communication system applications: A review" Microelectronics journal, https://doi.org/10.1016/j.mejo. 2019.104604 Vol 108, (2019) (Impact Factor:1.284).
44	J.Ajayan, D.Nirmal , P.Mohankumar, and L.Arivazhan, " Investigation of Impact of Passivation Materials on the DC/RF Performances of InP-HEMTs for Terahertz Sensing and Imaging" Silicon, doi.org/10.1007/s12633-019-00226-1 (2019) pp 1-6 (Impact Factor:1.210).

43	L. Arivazhagan , , D. Nirmal , D.Godfrey, J. Ajayan , P.Prajoon A.S. Augustine Fletcher, A.Amir Anton Jone and J.S.Raj Kumar, "Improved RF and DC performance in AlGa _N /Ga _N HEMT by P-type doping in Ga _N buffer for millimetre-wave applications", International Journal of Electronics and Communications (AEU), Vol 108, (2019) Pg 189-194. (Impact Factor:2.853)
42	A.S. Augustine Fletcher, D. Nirmal , J. Ajayan and L. Arivazhagan, "Analysis of AlGa _N /Ga _N HEMT using discrete field plate technique for high power and high frequency applications", International Journal of Electronics and Communications (AEU), Vol 99, (2019) Pg 325-330. (Impact Factor:2.853)
41	Suresh Subramanian, B. Sundarambal and D. Nirmal , "Investigation on Simulation-Based Specific Absorption Rate in Ultra-Wideband Antenna for Breast Cancer Detection", IEEE Sensors Journal, Vol 18 No.24, 20 Dec 2018, (Impact Factor:2.617)
40	D. Gracia, D. Nirmal and D. Jackuline Moni, "Impact of Leakage Current in Germanium Channel based DMDG TFET using Drain-gate underlap technique", International Journal of Electronics and Communications (AEU), Vol 96, (2019) Pg 164-169. (Impact Factor:2.853)
39	P. Vanitha, T.S. Arun Samuel and D. Nirmal , "A New 2D Mathematical Modeling of Surrounding Gate Triple material Tunnel FET using Halo Engineering for Enhanced Drain Current", International Journal of Electronics and Communications (AEU), Vol 99, (2019) Pg 34-39. (Impact Factor: 2.115)
2018	
38	J.Ajayan, T.Ravichandran, P.Mohankumar, P.Prajoon, J.Charles Pravin and D.Nirmal, " Investigation of DC and RF Performance of Novel MOSHEMT on Silicon Substrate for Future Submillimeter Wave Applications" Semiconductors, vol. 52,No.16,(2018) pp 1191-1997 (Impact Factor:0.672).
37	R.Ratheskumar,P.Isaac Nelson, S.Rajesh, T.Ponmudi selvi, A.Mohan , B.Vidhya, D.Nirmal and Arivazhan " Curtailed recombination rate and fast carrier transport in ZnPc/Ga As/ Zn Pc Stacked hybrid structure " Optical Materials, vol. 85,(2018) pp 287-294.(Impact Factor:2.320).
36	D.Gracia , D.Nirmal and D.Jackuline Moni, " Impact of leakage current in germanium channel based DMDG TFET using drain- gate underlap technique" " International Journal of Electronics and Communications (AEÜ), vol.96,(2018) pp 164-169.(Impact Factor:2.115).
35	J. Ajayan , D. Nirmal , T.Revichandran, P.Mohankumar, P. Prajoon, L. Arivazhagan , Chandran Kumar Sarkar " InP high electron mobility transistors for submillimeter wave and terahertz frequency applications: A review " International Journal of Electronics and Communications (AEÜ), vol.94,(2018) pp 199-214.(Impact Factor:2.115).
34	J. Hengsteler, P. Prajoon, D. Nirmal , " Analysis of High Efficiency InGa _N Multiple-Quantum-Well Light- Emitting-Diodes Using InGa _N Step-Graded Barriers" Journal of Nanoelectronics and Optoelectronics, vol.13,(2018) pp 939-943.(Impact Factor:1.019).
33	J. Ajayan , T.Revichandran, P.Mohankumar, P. Prajoon, J. Charles Pravin, D. Nirmal , " Investigation of breakdown performance in $L_g = 20$ nm novel asymmetric InP HEMTs for future high-speed high- power applications" Journal of Computational Electronics, vol.17,(2018) pp 265-272.(Impact Factor:1.431).

32	J. Ajayan , T.Revichandran, P.Mohankumar, P. Prajoon, J. Charles Pravin, D. Nirmal , “ Investigation of DC-RF and breakdown behaviour in $L_g = 20$ nm novel asymmetric GaAs MHEMTs for future submillimetre wave applications” International Journal of Electronics and Communications (AEÜ), vol.84,(2018) pp 387- 393.(Impact Factor:2.115).
31	J. charles pravin, p. prajoon, flavia princess nesamania, p. senthil kumar, D. Nirmal , and G.sriresh,“ Nanoscale High-k Dielectrics for Junctionless Nanowire Transistor for Drain Current Analysis” " Journal of ELECTRONIC MATERIALS " https://doi.org/10.1007/s11664-018-6075-2 (Impact factor: 1.676)
30	P. Prajoon , M. Anuja Menokey , J. Charles Pravin , J. Ajayan , S. Rajesh , D. Nirmal , “ Investigation of efficiency enhancement in InGaN MQW LED with compositionally step graded GaN/InAlN/GaN multi-layer barrier” "Superlattices and Microstructures DOI:10.1016/j.spmi.2018.02.008 (Impact factor: 2.123).
2017	
29	D. Nirmal , L. Arivazhagan, A.S.Augustine Fletcher, J. Ajayan, P. Prajoon “ Current collapse modeling in AlGaIn/GaN HEMT using small signal equivalent circuit for high power application” " Superlattices and Microstructures https://doi.org/10.1016/j.spmi.2017.12.027 (Impact factor: 2.123)
28	J. Ajayan , D. Nirmal , P. Prajoon and J. Charles Pravin “Analysis of nanometer-scale InGaAs/InAs/InGaAs composite channel MOSFETs using high-K dielectrics for high speed applications” International Journal of Electronics and Communications (AEÜ), vol.79,(2017)pp 151-157(Impact Factor:1.147).
27	A.S. Augustine Fletcher, and D.Nirmal , “ A survey of Gallium Nitride HEMT for RF and highpower applications” " Superlattices and Microstructures DOI: 10.1016/j.spmi.2017.05.042(Impact factor: 2.123)
26	P. Murugapandiyan, S.Ravimaran, J.William, J Ajayan and D.Nirmal , “ DC and microwave characteristics of 20 nm T-gate InAlN/GaN high electron mobility transistor for high power RF applications” " Superlattices and Microstructures DOI: 10.1016/j.spmi.2017.05.060 (Impact factor: 2.123)
25	D.Gracia , D.Nirmal and A. Nisha Justeena, “ Investigation of Ge based Double Gate Dual Metal Tunnel FET Novel Architecture using Various Hetero dielectric Materials” " Superlattices and Microstructures DOI: 10.1016/j.spmi.2017.04.045 (Impact factor: 2.123)
24	J. Ajayan and D. Nirmal , “20 nm In 0.75 Ga0.25 As channel-based HEMTs on InP/GaAs substrates for future THz applications” Journal of semiconductors, vol.38,No.4(2017)pp 1-6.
23	Charles Pravin J, D.Nirmal , Prajoon P , N.Mohan kumar and Ajayan J, “Investigation of 6T SRAM memory circuit using high-k dielectrics based nano scale junctionless transistor” " Superlattices and Microstructures DOI: 10.1016/j.spmi.2017.03.012(Impact factor: 2.117)
2016	
22	J. Ajayan and D. Nirmal , “20 nm high performance enhancement mode InP HEMT with heavily doped S/D regions for future THz applications " Superlattices and Microstructures DOI: 10.1016/j.spmi.2016.10.011 (Impact factor: 2.117)
21	P.Prajoon, D. Nirmal , Anuja Menokey and J.Charlespravin, “Temperature dependant efficiency droop analysis of In GaN MQW light emitting diode with

	modified ABC model.”, J Comput Electron , Vol 16 (2016) pp 1511–1520. (Impact factor – 1.104).
20	J. Ajayan and D. Nirmal , “20-nm enhancement-mode metamorphic GaAs HEMT with highly doped InGaAs source/drain regions for high frequency applications" International Journal of Electronics DOI: 10.1080/00207217.2016.1218066 (Impact factor:0.729)
19	J. Ajayan and D. Nirmal , “20-nm T-gate composite channel enhancement-mode metamorphic HEMT on GaAs substrates for future THz applications" J Comput Electron Vol 16(2016), pp 1291–1296. (Impact factor:1.104)
18	Charles Pravin J, D.Nirmal , Prajoon P and Anuja Menokey M., “A New Drain Current Model for Dual Metal Junctionless Transistor for Enhanced Digital Circuit Performance” IEEE Trans. Electron Devices, VOL. 63, NO. 9(2016) pp 3782-3789. (Impact Factor – 2.207).
17	Prajoon P, D. Nirmal , AnujaMenokey M, J Charles Pravin “Efficiency Enhancement of InGaN MQW LED Using Compositionally Step Graded InGaN Barrier on SiC Substrate” IEEE J. Display Technology , DOI: 10.1109/JDT.2016.2570814, (2016) 1117 - 1121. (Impact Factor – 1.925).
16	P.Prajoon, D .Nirmal , AnujaMenokey and J.Charlespravin, “A Modified ABC Model in InGaN MQW LED Using Compositionally Step Graded Alternating Barrier for Efficiency Improvement”, Superlattices and Microstructures, 96 (2016) 155-163. (Impact factor – 2.097).
15	J. Charles Pravin, D. Nirmal , P. Prajoon and J. Ajayan, “Implementation of nanoscale circuits using dual metal gate engineered Nanowire MOSFET with high-k dielectrics for low power applications” Physica E 83 (2016) 95–100. (Impact Factor: 2.00).
2015	
14	J. Ajayan and D. Nirmal , “A review of InP/InAlAs/InGaAs based transistors for high frequency applications" Superlattices and Microstructures 86 (2015) 1–19. (Impact factor: 2.097)
13	Binola k Jebalin, ShobhaRekh, Prajoon, N.Mohankumar and D.Nirmal ,“The influence of high-k passivation layer on breakdown voltage of schottky AlGaIn/GaN HEMTs” Microelectronics Journal. Vol. 46 (12), (2015), 1387–1391. (Impact factor: 0.836).
12	Binola k Jebalin, ShobhaRekh, Prajoon, N.Mohankumar and D.Nirmal , “Unique model of polarization engineered AlGaIn/GaN Based HEMTs for high power applications” Superlattices and Microstructures 78(2015)210-223. (Impact factor: 2.097).
11	B. Padmanaban, R. Ramesh, D. Nirmal and S. Sathiyamoorthy, “Numerical modeling of triple material gate stack gate all-around (TMGSGAA) MOSFET considering quantum mechanical effects” Superlattices and Microstructures 82 (2015) 40–54. (Impact factor: 2.097)

INTERNATIONAL CONFERENCE PUBLICATIONS

2020	
38	L. Arivazhagan, Anwar Jarndal, Subhash Chander, Godfrey D, Raj Kumar J S, S Bhagyalakshmi, Pavan Kumar Reddy and D.Nirmal , “Self-Heating Analysis of GaN-HEMT for Various Ambient Temperature and Substrate Thickness” IEEE Conference Proceedings on 2020 5th International Conference on Devices, Circuits and Systems, ICDCS20, Coimbatore, India, 5 th -6 th March 2020.
37	Husna Hamza K, D.Nirmal and L. Arivazhagan, “Impact of AlGa _N Back Barrier in AlGa _N /Ga _N HEMT on Ga _N substrate” IEEE Conference Proceedings on 2020 5th International Conference on Devices, Circuits and Systems, ICDCS20, Coimbatore, India, 5 th -6 th March 2020.
36	Godfrey D, D.Nirmal , L. Arivazhagan, Brigis Roy, Yu-Lin Chen, Tien-Han Yu, Wen-Kuan Yeh and Godwinraj D, “Investigation of AlGa _N /Ga _N HEMT Breakdown analysis with Source field plate length for High power applications” IEEE Conference Proceedings on 2020 5th International Conference on Devices, Circuits and Systems, ICDCS20, Coimbatore, India, 5 th -6 th March 2020.
2019	
35	Arivazhagan.L, D.Nirmal , Ajayan.J, Rajkumar.J.S, Godfry.D, Bhagya.S, “Modeling of self-heating for AlGa _N /Ga _N HEMT with thermal conductivity degradation effect” AIP Conference Proceedings 2nd International Conference on Material Science, Smart Structures and Applications, ICMSS 2019, Erode, India, Volume 2201, 17 December 2019.
34	Arivazhagan.L, D.Nirmal , Ajayan.J, Rajkumar.J.S, Godfry.D, Bhagya.S, “Enhancement of drain current in AlGa _N /Ga _N HEMT using Al _N passivation” AIP Conference Proceedings 2nd International Conference on Material Science, Smart Structures and Applications, ICMSS 2019, Erode, India, Volume 2201, 17 December 2019.
2018	
33	Moni.D.J, Anucia.A.J, D.Gracia, D.Nirmal , “Performance Analysis of GaSb/InAs Tunnel FET for Low Power Applications” IEEE International Conference on Devices, Circuits and Systems, ICDCS 2018; Karunya University, Coimbatore, pp- 335-338.
32	Pandit.P.P, Arivazhagan.L, D.Nirmal , Prajoon.P, Ajayan.J, Rajkumar.J.S, “DC Performance analysis of AlGa _N /Ga _N HEMT for future High power applications” IEEE International Conference on Devices, Circuits and Systems, ICDCS 2018; Karunya University, Coimbatore, pp- 313-318.
2017	
31	Nisha Justeena.A , D.Nirmal , Gracia.D,”Design and Analysis of Tunnel FET using High K Dielectric Materials” IEEE International Conference on Innovations in Electrical,Electronics, Instrumentation and Media technology (ICIEEIMT’17), Karunya University, Coimbatore, pp-177-180, 4 March-2017.

30	Pratik.P.Pandi, Grace Jency, J,Monic Babu, Kishore Kumar, D.Nirmal ,”Fabrication of Ultra Flexible Super Capacitor using PVdf” IEEE International Conference on Innovations in Electrical,Electronics, Instrumentation and Media technology (ICIEEIMT’17), Karunya University, Coimbatore, pp-98-102, 4 March-2017.
29	Subash Chander, Ajay, D.Nirmal , Mridula Gupta,”30nm Normally Off Enhancement Mode AlGaIn/GaN HEMT on SiC Substrate for Future High Speed Nanoscale Power applications” ” IEEE International Conference on Innovations in Electrical,Electronics, Instrumentation and Media technology (ICIEEIMT’17), Karunya University, Coimbatore, pp-293-296, 4 March-2017.
2016	
28	AnujaMenokey, D Nirmal , Prajoon P, J Charles Pravin, “Green InGaIn/GaN LEDs with n-GaN Interlayer for efficiency droop improvement” International Conference on Devices, Circuits and Systems (ICDCS’16), Karunya University, Coimbatore, pp-216-219, 3 March-2016.
27	Charles Pravin., D.Nirmal , PrajoonP., Altrin Sharma., AnujaMenokey M “Impact of Gate Length on the Performance of a Junctionless Dual Metal Transistor with High-k dielectrics”, International Conference on Devices, Circuits and Systems (ICDCS’16), Karunya University, Coimbatore, pp-291-294, 3 March-2016.
2015	
26	S sreeram, J Ajayan, K Vivek, D. Nirmal and V Rajesh “ A high speed 256-bit carry look ahead adder design using 22 nm strained silicon technology” IEEE Sponsored 2Nd international conference on electronics and communication system ICECS-2015, Karpagam College of Engineering, Coimbatore, Tamil Nadu,26-27 Feb. 2015 pp 174 – 179.
25	Jerrin K. Joy, D. Nirmal and P. Prajoon “Effect of quantum well thickness and molar concentration for obtaining different wavelength using AlGaAs/GaAs single quantum well LASER” IEEE sponsored 2Nd international conference on electronics and communication systems (ICECS 2015), of IEEE International Conference on Electronics and Communication System ICECS’14, Karpagam College of Engineering, Coimbatore, Tamil Nadu Vol-3, (2015) pp:1738-174.
24	Surya A, D. Nirmal and Charles Pravin “Performance enhancement of Junctionless Gate transistor with high ON/OFF ratio” International Conference on Innovation in Information, embedded and communication systems (ICIIECS-2015), Karpagam College of Engineering, Coimbatore, Tamil Nadu 19 Mar - 20 Mar 2015 pp 1-4.
