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List of Publications

1. A. Mohanbabu, N. Mohankumar, R. Saravanakumar, "Comparative assessment of InGaAs sub-channel and InAs composite channel Double gate (DG)-HEMT for Sub-millimeter wave applications", AEU - International Journal of Electronics and Communications, Vol. 83, , Pages 462-469, January 2018.Impact factor: 1.147. (SCI indexed journal).

2. A. Mohanbabu, N. Mohankumar, R. Saravanakumar, "Noise Characterization of Enhancement-mode AlGaN Graded barrier MIS-HEMT Devices", Superlattices and Microstructures, Vol. 112 , Pages 604-618, December 2017.Impact factor: 2.123. (SCI indexed journal).

3. A.Mohanbabu, N.Mohankumar, R.SaravanaKumar, "Simulation of InGaAs Sub-channel DG-HEMT for analog/RF application", International Journal of Electronics, Taylor and Francis journal, pp. 1-11, Sep. 2017., Impact factor: 0.55. (SCI indexed journal).

4. A.Mohanbabu, N.Mohankumar, R.SaravanaKumar, D.Godwinraj "$In_{0.7}Ga_{0.3}As$/ $InAs/In_{0.7}G_{a0.3}As$ Composite Channel Double Gate (DG)-HEMT Devices for High-Frequency Applications", Journal of Computational electronics, Springer, Vol. 16, issue. 3, pp. 732-740, Sep. 2017.Impact factor: 1.526. (SCI indexed journal).

5. A. Mohanbabu, N. Mohankumar, D. Godwin Raj, Sarkar P, Saha SK."Device characteristics of enhancement mode double heterostructure DH-HEMT with boron-doped GaN gate cap layer for full-bridge inverter circuit".Int J Numer Model. Wiley publication, pp. 1-15; Vol. e2276, August 2017, Impact factor: 0.68. (SCI indexed journal).

6. A.Mohanbabu, N. Mohankumar, D. Godwin raj, Partha Sarkar, "Investigation of enhancement mode HfO_2 insulated N-polarity $GaN/InN/GaN/In_{0.9}Al_{0.1}N$ heterostructure MISHEMT for high-frequency applications", PHYSICA E Journal, pp. 23-29, Vol. 92, Aug. 2017. Impact factor: 1.9 (SCI indexed journal).

7. A.Mohanbabu, N.Mohankumar, S.Baskaran, "Analysis and Impact of Al mole concentration 'x' in Double Heterojunction AlGaN with Source and Gate Field plated

HEMT for High breakdown and High Frequency applications" Global Journal of Pure and Applied Mathematics (GJPAM),Vol. 13, no. 10, pp. 7339-7352, (2017). Impact factor: 0.61.

8. A.Mohanbabu, N.Mohankumar, S.Baskaran, "A Charge Based Compact Physical Model with Unified 2DEG for AlGaN/AlN/GaN MISHEMTs including SCEs". International Journal of Control Theory and Applications, Vol.10, no. 36, pp. 11-29, (2017). Impact factor: 0.61.

9. A.Mohanbabu, N. Mohankumar, D.Godwin raj, Partha Sarkar, Samar K. Saha"Efficient III-Nitride MIS-HEMT devices with high-κ gate dielectric for high-power switching boost converter circuits", Superlattices and Microstructures, Vol. 103, pp. 270-284, Mar. 2017. Impact factor: 2.04. (SCI indexed journal).

10. A.Mohanbabu, N. Mohankumar, S.Baskaran, P.Anandan, N.Anbuselvan and P.Bharathivikkiraman"Modeling of Sheet Carrier Density, DC and Transconductance of Novel $In_xAl_{1-X}N$/GaN-Based HEMT Structures" Advanced Materials Research, Vol. 1105, pp. 99-104, May 2015. Impact Factor: 0.23.

11. A.Mohanbabu, N.Mohankumar, N.Anbuselvan, Godwin Raj, Chandan Kumar Sarkar"Modeling of Sheet carrier density and Microwave frequency characteristics in Spacer based AlGaN/AlN/GaN HEMT Devices",Journal of Solid State Electronics, Vol. 91 pages 44–52, (2014). Impact Factor 1.514. (SCI indexed journal).

12. A.Mohanbabu, N.Mohankumar, S.Baskaran, N.Anbuselvan, Godwin Raj, Chandan Kumar Sarkar"Modeling of Sheet carrier density and DC characteristics in Spacer based AlGaN/AlN/GaN HEMT Devices", Journal of Superlattices and microstructures, Vol. 64, pp. 470–482, (2013). Impact Factor 1.979. (SCI indexed journal).

13. A.Mohanbabu, N.Mohankumar, N.Anbuselvan "Analytical noise characterization of quaternary AlInGaN HEMTs", MANUSCRIPT ID: 18-1913-RR, Accepted for publication in Journal of Nanoelectronics and Optoelectronics, 2018. (Scopus)

14. A. Mohanbabu, N. Anbuselvan, N. Mohankumar "Analytical modeling of 2DEG with 2DHG Polarization Charge density drain current and Small-signal model of Quaternary AlInGaN HEMTs for Microwave frequency Applications", International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Vol. 32, Issue 5, Sep/Oct 2019, e2609. (SCI indexed journal).

15. A. Mohanbabu "Retinal Microaneusysms section using local convergence index features" International Journal of Innovative Technology and Exploring Engineering (IJITEE), 2019. (Scopus)

16. A. Mohanbabu “GSM based Door lock System” International Journal of Innovative Technology and Exploring Engineering (IJITEE), 2019. (Scopus)

17. A.Mohanbabu, Yusuf U.Tarauni, JohnThiruvadigal, BijoJoseph, "Optimization of enhancement mode P-type Mg-doped $In_{0.2}Ga_{0.8}N$ cap gate DH-HEMT for low-loss high power efficient boost converter circuits", Materials Science in Semiconductor Processing, Vol. 103, Nov. 2019, 104624. (SCI indexed journal).

18. Baskaran Subramanian, Mohanbabu Anandan, Saminathan Veerappan, Murugapandiyan Panneerselvam, Mohammed Wasim "Switching Transient Analysis and Characterization of an E-Mode B-Doped GaN-Capped AlGaN DH-HEMT with a Freewheeling Schottky Barrier Diode (SBD)", Journal of Electronic Materials (2020).

19. P.Murugapandiyan, A.Mohanbabu, V.RajyaLakshmi, V.N.Ramakrishnan, ArathyVarghese, "Performance analysis of HfO2/InAlN/AlN/GaN HEMT with AlN buffer layer for high power microwave applications", Journal of Science: Advanced Materials and Devices, April 2020.

20. Mohanbabu A, Daniel Raj A; Sanjoy Deb; Saravana Kumar R, "Impact of Recessed Δ-shaped Gate Vertical CAVET AlGaN/GaN MIS-HEMT for High-power, low-loss switching applications", Journal of Electronic Materials, Springer, 2020 (Submitted - Under Review).