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Areas of Research:

Semiconductor Devices and Wireless communication.

Patent published:

A patent for **"AN INTEGRATED DUAL-GATE DUAL INSULATING CONTACT (IDGDIC) SILICON BASED ORGANIC THIN FILM TRANSISTOR"** by Rajesh Agarwal and R. Nirosha has been published in **Indian Patent Application No. 202241042265 dated 23/07/2022.**

Published Paper:

1. **Nirosha. R.,** and Rajesh Agarwal. "Dual-Gate Dual-Contact Integrated Silicon Based Organic Thin Film Transistor for Analog and Digital Applications." ***Silicon*** **14**, no. 12 (2022): 6661-6677. **Impact Factor: 2.941.**

2. **Nirosha.R.,** and Rajesh Agarwal. "Comprehensive Temperature-Dependent DC Characterization of Organic Thin Film Transistor for Sensing Applications." ***IEEE Sensors Journal*** **22.17** (2022): 16794-16803. **Impact Factor:4.325.**

3. **R. Nirosha** and R. Agarwal, "Microelectronics Reliability Characterization and modeling of threshold voltage for organic and amorphous thin-film transistors," *Microelectron. Reliab.*, vol. 147, no. June, p. 115054, 2023, doi: 10.1016/j.microrel.2023.115054. **Impact Factor:1.418.**

3. Singh, A.K., Misra, R., Wadhwa, G., **Nirosha.R** and Agarwal, R., 2022, September. Design and Performance Analysis of Partially Depleted and Fully Depleted Silicon on Insulator MOSFET. In ***Journal of Physics****: Conference Series* (Vol. 2335, No. 1, p. 012042). IOP Publishing. **Impact Factor:0.547.**

4. **R. Nirosha**, Biometric watermarking Techniques in Frequency Domain In **International Journal of Applied Engineering Research.**

SCOPUS INDEXED INTERNATIONAL CONFERENCES

1. Nirosha R, Agarwal R. **Study of Contact Resistance in Amorphous Zinc Oxide Based Thin-Film Transistors**. IEEE 3rd Global Conference for Advancement in Technology (GCAT) 2022 Oct 7 (pp. 1-6). IEEE

2. R. Nirosha, Rajesh Agarwal, and T. Rama Rao. **Dual-Gate Integrated Organic Thin Film Transistor for Digital Applications**. 1st International Conference of Electronics, Photonics and Smart Technologies (ICePhaST-2020) Vol-1,2020, ISBN 978-93-84136-20-8.

3. R. Nirosha, Aishiki Halder, Rajesh Agarwal, Vaishnavi upendran. **Analysis of the Effect of Different Electrical and Physical Parameters on Contact Resistance in Organic Thin Film Transistors and Optimization Using Machine Learning**. 2nd International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Computational Intelligence (RAEEUCCI-2023) and published in IEEE.

Professional Bodies:

Member & Treasure in IEEE student chapter society