Faculty Profile

1. Name: Dr. Rakshith B
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5. Work Experience: 4.5 Years Teaching
6. Specialization: VLSI, lab-on-chip, Thin films
7. Subjects Taught: CMOS VLSI Circuits, Advances in VLSI, Circuit Theory, Digital System Design, Embedded Systems, Basic electronics, Control Systems, Mechatronics and Robotics
8. Research Guidance: Guideship received from JSS STU
9. Publications:

Journals

1. Shivamurthy, A., Boranna, R., & Bommegowda, K. B. (2026). Impact of water absorption and gamma irradiation on electrical equivalent circuit parameters of carbon fiber reinforced polymer composites. IEEE Transactions on Dielectrics and Electrical Insulation, 33(2), 923–929. https://doi.org/10.1109/TDEI.2026.3663300
2. Naik Parrikar, V., Boranna, R., Pahal, S. *et al.* Sub-nanometer scale investigation of polyelectrolyte adsorption and desorption processes using etched fiber Bragg grating technique. *Commun Chem* **8**, 208 (2025). https://doi.org/10.1038/s42004-025-01602-2
3. Shivamurthy, A., Boranna, R., Chikkakuntappa, R., Jagannat, R. K., & Prashanth, G. R. (2024). Gamma radiation impact on dielectrics and RH sensitivity of nylon–carbon–GNP–epoxy composites. Polymer Engineering & Science. https://doi.org/10.1002/pen.26622
4. Shivamurthy, A., Boranna, R., Jagannat, R. K., Prashanth, G. R., Bheemappa, S., & Darshan, S. M. (2024). Mechanical properties and analysis of two-body abrasive wear behaviour of graphene modified carbon/epoxy composites using Taguchi's technique. Tribology in Industry. https://doi.org/10.24874/ti.1512.07.23.09
5. Shivamurthy, A., Boranna, R., Kongara, M. C., Thondagere Nataraj, C., Kogravalli Jagannat, R., & Prashanth, G. R. (2024). Feasibility studies on the use of carbon epoxy composites for humidity sensing applications. Wireless Personal Communications. https://doi.org/10.1007/s11277-024-11620-3
6. Pahal, S., Boranna, R., Tripathy, A., Goudar, V. S., Veetil, V. T., Kurapati, R., Prashanth, G. R., & Vemula, P. K. (2023). Nanoarchitectonics for free-standing polyelectrolyte multilayers films: Exploring the flipped surfaces. ChemNanoMat. https://doi.org/10.1002/cnma.202200462

7. Shivamurthy, A., Kogravalli Jagannat, R., Prashanth, G. R., Suresha, B., Rajini, N., Muhammed, F. F., Al-Lohedan, H. A., Boranna, R., & Krishnan, K. (2023). Carbon-graphene-epoxy sandwich dielectric for improved dielectric response to humidity. Journal of Materials Research and Technology. https://doi.org/10.1016/j.jmrt.2023.09.322
8. Boranna, R., Vishwaraj, N. P., Pahal, S., Nataraj, C. T., Jagannath, R. K., Nanjunda, S. B., & Prashanth, G. R. (2022). Fast-dip layer-by-layer self-assembly of polyelectrolytes as a low-cost biosensing platform. Macromolecular Chemistry and Physics. https://doi.org/10.1002/macp.202200054
9. Boranna, R., Nataraj, C. T., Bannur Nanjunda, S., Pahal, S., Jagannath, R. K., & Prashanth, G. R. (2022). Fluorescence signal enhancement by a spray-assisted layer-by-layer technique on aluminum tape devices for biosensing applications. Langmuir, 38(10), 3149–3157. https://doi.org/10.1021/acs.langmuir.1c03186
10. Pahal, S., Boranna, R., Prashanth, G. R., & Varma, M. M. (2022). Simplifying molecular transport in polyelectrolyte multilayer thin films. Macromolecular Chemistry and Physics. https://doi.org/10.1002/macp.202100330
11. Boranna, R., Nataraj, C. T., Jagannath, R. K., Pahal, S., Varma, M. M., & Prashanth, G. R. (2021). Spin-speed independent thickness and molecular adsorption behaviour of polyelectrolyte multilayers. The European Physical Journal Applied Physics, 93(2), Article 20301. https://doi.org/10.1051/epjap/2021200294

Conferences

1. Naik Parrikar, V., Boranna, R., Pahal, S., Thondagere Nataraj, C., Kogravalli Jagannath, R. P., Gurusiddappa, R. P., & Bannur Nanjunda, S. (2025). Sub-nanometer scale investigation of polyelectrolyte adsorption and desorption processes using etched fiber Bragg grating technique. Communications Chemistry. https://doi.org/10.1038/s42004-025-01602-2
2. Siddarajamma, B., Praveen Kumar, M. S., Sivaprasad, N., & Boranna, R. (2022). Machine learning-based approach to detect and classify rice blast disease. In 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon). IEEE. https://doi.org/10.1109/MysuruCon55714.2022.9972605
3. B. Bommegowda, D. Prasad and R. Boranna, "Design and Implementation for Performance Evaluation of a Compensated PWM Inverter," *2025 Fifth International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT)*, Bhilai, India, 2025, pp. 1-7, doi: 10.1109/ICAECT63952.2025.10958954.
4. B. Rakshith, T. N. Chandrika, M. M. Varma and G. R. Prashanth, "Ultra Low Cost All Polymer Systems for Biosensing Applications," *2018 IEEE SENSORS*, New Delhi, India, 2018, pp. 1-3, doi: 10.1109/ICSENS.2018.8589843.

12. Patents:
13. Projects/Consultancy:
14. Book(s) Published:

15. FDPs organised/attended: 5
16. Achievements:
17. Professional Membership: