Centre of Excellence for Nanotechnology (CoE-NANO)

Centre of Excellence for Nanotechnology (CoE-NANO), Department of ECE at KLEF is a multidisciplinary research hub that integrates expertise from electronics, materials science, biology, physics, and biotechnology to drive innovation and address complex societal challenges. In 2024, CoE-NANO achieved significant milestones, including publishing 125 high-quality research papers (55 in IEEE journals), securing 10 patents, and earning 3,000+ citations. The centre welcomed a new faculty member with postdoctoral experience from the University of Texas, USA, strengthening its team of seven researchers. Key initiatives include the introduction of Nanotechnology and Optoelectronics (NTO) courses for undergraduate students, the establishment of two international student chapters (SPIE/OPTICA), and the launch of the Nanotechnology Research Group (NTRG). With over 12 project proposals submitted to external agencies and contributions as editors and reviewers for top journals, CoE-NANO continues to foster academic excellence and global collaboration while advancing cutting-edge research.

The centre is led by a team of distinguished researchers and educators, each bringing unique expertise to advance the frontiers of nanotechnology:

Leadership Team

Dr. Suman Maloji, Professor, Department of ECE (CoE-NANO, Mentor)
Dr. Santosh Kumar, Professor, Department of ECE (CoE-NANO, Group Head)
Dr. Ragini Singh, Associate Professor, Department of Biotechnology
Dr. Chella Santhosh, Associate Professor, Department of ECE
Dr. SR Srither, Associate Professor, Department of ECE
Dr. Balaji Ramachandran, Assistant Professor, Department of ECE
Dr. V. Yesudasu, Assistant Professor, Department of ECE
Dr. Sourabh Jain, Assistant Professor, Department of ECE
Dr. Sahiti Vankalayapati, Assistant Professor, Department of ECE

Vision and Mission

The Centre aims to push the boundaries of nanotechnology through interdisciplinary research, innovation, and collaboration. CoE-NANO actively promotes knowledge sharing among researchers to inspire novel solutions in areas such as healthcare, environmental sustainability, and energy systems. By fostering a vibrant research environment, CoE-NANO is committed to contributing impactful advancements to the global scientific community.

Student Chapters:

- KLEF SPIE Student Chapter (USA Technical Society)
- KLEF Optica Student Chapter (USA Technical Society)

University Research Group: Nanotechnology Research Group (NTRG)

UG Courses offered: Nanotechnology and Optoelectronics (NTO)

List of Equipment's Available:

1. Fusion Splicer (Fujikura 88s)
2. Tungsten Halogen Source
3. Spectrometer
4. Multimode Reader
5. Probe Sonicator
6. Ultra-Sonic Cleaner (Water-Bath)
7. Weighing Machine (µg Range)
8. Vacuum Oven (Up to 200°C)
9. Magnetic Stirrer (Up to 120°C)
10. Centrifugal Machine (Up to 10,000 RPM)
11. Rectangular Fume Chamber (Fume Hood)
12. Refrigerator (2–8°C and -20°C).


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Koneru Lakshmaiah
Education Foundation
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SPIE IS THE INTERNATIONAL SOCIETY FOR OPTICS AND PHOTONICS
SPIE. STUDENT CHAPTER