



Dr. Ashwath Narayana B S
Dip. (EI&CE), B.E. (E&CE), M.Tech (Nanotechnology), Ph.D (Nanotechnology)

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OBJECTIVE

Seeking a position with an organization where I can contribute skills for organization's success and synchronize with new technology while being resourceful, innovative and flexible.

SKILL SET

- Hardware Description Languages : Verilog, System Verilog, VHDL.
- Platforms : LINUX, Windows.
- Architectures : μ P 8085, μ C 8051.
- Assembly Programming : μ P 8085, μ C 8051.

TECHNICAL EXPERTISE 4+ YEARS

- Synthesis of various nanomaterials such as metal oxides using green synthesis approach.
- Fabrication of transistor devices, sensor devices such as capacitor sensor, resistive sensor.
- Hands on experience with various deposition tools such as spin coater, thermal evaporator and characterization tools like XRD, SEM, XPS, AFM, FTIR, I-V characterization Keithley SCS-4200.

ACADEMIC EXPERIENCE 4+ YEARS

- Currently, working as Associate Professor in Department of Biomedical Engineering at Rajiv Gandhi Institute of technology (RGIT), Bangalore.
- Worked as lecturer in Department of Electronic & Communication Engineering at East West College, Bangalore.

RESEARCH EXPERIENCE 5+ YEAR

- Worked at IIT-Bombay for 6 months on project work of Organic Field Effect Transistors based gas sensors.
- Currently, collaborated with CeNS (Centre for Nano and Soft Matter Sciences) and KAUST (King Abdullah University of Science & Technology, Saudi Arabia) for Green Nanomaterials based OFETs for various Applications.
- Worked at VTU Research Centre as PhD Scholar for 1 year on synthesis of nanoparticles using various approaches for biological and chemical applications.

AWARDS

- **“Research Excellence Award”** from Institute of Scholars in 2020.
- **“Best Young Faculty Award”** from DK International Research Foundation in 2019.
- **“Teacher Innovation Award”** Appreciation from Zero-Investment Innovations for Education Initiatives, Sri Aurobindo Society in 2019 & 2020.

RESEARCH GRANTS

- Received research grant for the project entitled **“Synthesis and characterization of Zinc Oxide nanoparticles using betel leaves extract and its biological application in Growth Performance, Immune Response and Pediatric Stoma Care”** from **Karnataka State Council for Science and Technology** in 2019.
- Received research grant for the project entitled **“Pulse Oximeter based on Organic Optoelectronics”** from **Karnataka State Council for Science and Technology** in 2020.

ACADEMIC PROFILE

Degree	Board / University	Year of passing	Percentage
PhD [Nanotechnology]	VTU, Bangalore	2021	Awarded
M.Tech [Nanotechnology]	VTU, Bangalore	2015	75%
B.E [ECE]	VTU, Belgaum	2013	67%
Diploma[EI&CE]	PVP Polytechnic	2010	86%

PROJECTS & TECHNICAL ACHIEVEMENTS

- Presented poster presentation entitled **“Synthesis approach of Zinc Oxide nanoparticles using Betel Leaves”** in 10th Bengaluru Indian Nano 2018.
- Presented Oral presentation entitled **“Fabrication of Low Cost ZnO based OFETs for CO Sensing”** in “International Conference on Nanotechnology (ICNano-2016) at VTU.
- Presented Oral presentation entitled **“H₂S detection using low cost SnO₂ nanoparticles”** at Indian Science Congress in Jan 2016.
- Project entitled **“Fabrication of OFETs (Organic Field Effect Transistors) with bi-layer approach using P3HT, SnO₂ and ZnO for toxic gas sensing application”** was carried out at IIT Bombay in 2015 through INUP Programme.
- Project entitled **“Synthesis and Characterization of herbal Zinc Oxide and Tin Oxide”** was carried out at IIT Bombay & SRIVT, Guntur in 2015.

- Poster Presentation entitled **“Synthesis and Fabrication of OFETs using Zinc Oxide nanoparticles for Sensing Applications”** in International Conference on **“Ceramic & Advanced Materials for energy and Environment”** at Christ University, Bengaluru in 2015.
- Project entitled **“A Novel Approach to Generate Electricity using Body Heat”** was carried out at Acharya Institute of Technology in 2013.
- Project entitled **“Student Based Monitoring System”** was carried out at PVP Polytechnic in 2010.
- Presented Oral Presentation entitled **“Smart Materials for Future”** in a State level paper presentation Competition in 2010 and 2013.

WORKSHOPS & CONFERENCES

- One Day Workshop on **“IOT in Agriculture: Karnataka Focus”** at IISC in 2019.
- **“International Conference on Engineering & Technology”** at RGIT in 2019.
- **“INUP Hands-on Training Workshop on Nanofabrication Technologies”** at IIT-B in 2015.
- **“International Conference on Science, Engineering & Technology”** at RGIT in 2017.
- **“International Conference on nanotechnology (ICNANO-2016)”** at VTU CPGS in 2016.
- **“International Conference on Ceramic & Advanced Materials for energy and Environment”** at Christ University, Bengaluru in 2015.
- **“National Conference on “Advanced Functional Materials (AFM-2015)”** at Dayananda Sagar College of Engineering in 2015.
- **“5th Bangalore Indian Nano”** at Ashoka hotel Bangalore in 2013.
- 3days **“Workshop on Nano Electronics”** at VTU CPGS Mysore in 2014.
- 3days **“Workshop on Microcontroller Programming”** at VTU CPGS Bangalore 2013.
- **“International Conference on Energy Conservation”** at Indian Institute of Engineers 2014.
- **“27th National Convention of Metallurgical & Materials Engineers and National Seminar on Multi-functional & Adaptive Materials”** at Indian Institute of Engineers Bangalore.

AREAS OF RESEARCH

- Nano sensors and applications.
- Synthesis of Nanomaterials using green route approach and sensing applications.
- Fabrication of Nano electronic Devices.
- Nano Science and Nano Materials.

MEMBERSHIPS

- Life time Member of “**International Society for Research and Development**”
Membership ID: M4150906052.
- Full Professional Membership of “**International Association for Educators and Researchers**” Membership ID: 181009 since 3rd Oct 2018.

PATENTS

- “**Cost Effective Wireless Electrocardiogram (ECG) Monitoring Using MQTT Protocol of IOT Based System**” Patent Number: 201941025056 (Application Filed).
- “**Synthesis of Zinc Oxide Nanoparticles Using Lotus Leaf Extract**” Patent Number: 201941027534, publication dated 15/01/2021.

RESEARCH PAPER PUBLICATION

- **Ashwath Narayana, Sachin Bhat, Almas Fathima, Lokesh S V, Surya S G, & Yelamaggad C V, “Green and low-cost synthesis of zinc oxide nanoparticles and their application in transistor-based carbon monoxide sensing”. RSC Advances, 10(23), (2020), 13532–13542. doi:10.1039/d0ra00478b.**
- **Mallem K, Ju M, Ashwath Narayana, Chodary S, Kim J, Park J, Yi J, “Effects of post-metallisation annealing on surface–interfacial and electrical properties of HfO₂/Ge stacks modified in situ with SiO₂ interfacial layer”. Materials Research Express. 6, (2019), 086442. doi:10.1088/2053-1591/ab2263.**
- **Ashwath Narayana, K Sannaki Uday, Tarannum Nazia, Lokesh S V, “High Performance Room Temperature Ethanol Detection Using OFETs Based on Polymer and Low Cost SnO₂ Nanoparticles Synthesized from Aegle Marmelos Fruit”. Sensor Letters, 17, (2019), 1–6. doi.org/10.1166/sl.2019.4113.**
- **Surya S G, Ashwath Narayana, Mishra S, A R B Karthik, Sastry A B, B L V Prasad, Rao V R, “H₂S detection using low-cost SnO₂ nano-particle Bi-layer OFETs”. Sensors and Actuators B: Chemical, 235, (2016), 378–385. doi:10.1016/j.snb.2016.05.096.**
- **Ashwath Narayana, Nazia Tarannum, Mahaboob S, B N Shobha, Sundar Raj, Lokesh S V, “Synthesis of SnO₂ Nanoparticles using Ficus Religosa Leaf Extract and their Application in Fabrication of OFETs for Glucose Monitoring”. Advanced Materials Research, 1159, (2020), 67-77. https://doi.org/10.4028/www.scientific.net/AMR.1159.67.**
- **Kiran K S, Ashwath Narayana, Lokesh S V, “Synthesis of SrTiO₃ Nanotubes from Green TiO₂ nanoparticles for Enhanced Photocatalytic Activity”. Asian Journal of Chemistry, 32(10), (2020), 2520-2528. https://doi.org/10.14233/ajchem.2020.22820.**

- G Balanagireddy, Ashwath Narayana, M Roopa, “Investigation of OFETs based NO₂ Sensing Response using Low-Cost Green Synthesized Zinc Oxide Nanoparticles”. Asian Journal of Chemistry, **33(1)**, 2020, 31-36.
- Hamsaveni R, Kiran A G, Ashwath Narayana, S V Lokesh, “Green Synthesis of α -Fe₂O₃ Nanoparticles using *Murraya Koenigii* Extract”. Solid State Technology, **63(4)**, 2020, 1707-1711.
- Kiran K S, Ashwath Narayana, S V Lokesh, “Enhanced Photocatalytic Activity of Perovskite SrTiO₃ Nanorods”. Solid State Technology, **63(4)**, 2020, 1913-1920.
- Ashwath Narayana, Kushal pandey, Nasehuddin Azmi, Tejaswini M, Umang Shrestha, S V Lokesh, "Synthesis and Characterization of Zinc Oxide (ZnO) Nanoparticles Using Mango (*Mangifera Indica*) Leaves", IJRAR, **5(3)**, (2018), 432-439. doi.one/10.1729/Journal.18354.
- Ashwath Narayana, Almas Fathima, Basavaraj Tumbad, Janaranajani R, Pranathi P, Sundar Raj, S V Lokesh, “Green Route Synthesis Approach to extract Zinc Oxide (ZnO) Nanoparticles Using Banana leaves”. JETIR, **6(2)**, 2019, 89-93.

PROFESSIONAL STRENGTHS

- Self-motivated and detailed oriented with strong commitment to quality of work.
- Ability to enter into new areas and domains of work and make significant contributions.

REFERENCES

1. Dr. C V Yelamaggad

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