

Dr. Vijeth

Assistant Professor,
Department of Physics,
Nagaland University (A Central University),
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Academic Details

- **PhD in Physics** (2016-2020)
Department of Physics, Mangalore University, Mangalore, Karnataka, India.
Thesis title: Synthesis and Characterization of Conjugated Polymer Nanocomposite for Electrochemical Applications.
- **MSc in Physics** (2013-2015)
National Institute of Technology Karnataka (NITK), Surathkal, Karnataka, India.

Professional Experience

- **Assistant Professor:** Department of Physics, Nagaland University (A Central University) India (March 2022 - till date)
- **Assistant Professor:** Department of Physics, Mangalore Institute of Technology and Engineering, Moodbidri, India (February 2020- February 2022).
- **Assistant Professor (Guest),** Department of Physics, Mangalore University, Mangalore, Karnataka, India (August 2015- February 2016).

Research Interest

- Synthesis of functional nanomaterials consisting of metal oxides, doped metal oxides, transition metal Chalcogenides and 2D materials-based nanocomposites using hydrothermal, solvothermal, co-precipitation and ultrasonic techniques.
- Design and development of novel nanostructured materials capable of exhibiting good electrochemical properties and for supercapacitor application.
- Fabrication of symmetric and asymmetric solid state supercapacitor devices.
- Fabrication of electrodes for electrochemical sensor applications.
- Fabrication of MSM Photo detectors.
- Semiconductor based materials for Nonlinear Optical Studies.

Research Projects (As Principal Investigator)

Project Title: Fabrication of High Voltage MXene based flexible Solid-State Supercapacitor using Ionogel Electrolytes. (Completed) (₹39,01,440).

Period: 2023-2026

Funding Agency: Anusandhan National Research Foundation (ANRF), Govt. of India.

Project Title: Development of Electrochemical Sensors for the Detection of Dopamine based on 2D materials. (Ongoing) (₹43,16,693).

Period: 2024-2027

Funding Agency: Anusandhan National Research Foundation (ANRF), Govt. of India.

Project Title: Fabrication and Characterization of Metal Chalcogenide Nanostructures for Flexible Supercapacitor Applications. (Ongoing) (₹ 2,28,120)

Period: 2024-2025

Funding Agency: Collaborative Research Scheme (CRS) Project of UGC-DAE CSR.

Principal Collaborator from UGC-DAE CSR: Dr. Ram Janay Choudhary.

Supervision Experience (at NU Lumami)

- **Ph.D. STUDENTS:**

1. Ms. PEWE-U- MARHU (2022- Ongoing)
2. Mr. NEILIE NAGI (2023- Ongoing)
3. Ms. VINITUONO KROSE (2024- Ongoing)
4. Ms. SOMA MAJUMDER (2024- Ongoing)

- **MSc. PROJECT STUDENTS:**

1. Ms. EYILOBENI M KITHAN (MSc. 2022)
2. Ms. LIANG M PHOM (MSc. 2022)
3. Ms. MONGYO KONYAK (MSc. 2022)
4. Ms. SENTIJUNGLA JAMIR (MSc. 2022)
5. Ms. DOLLY (MSc. 2023)
6. Ms. SENKATULA (MSc. 2023)
7. Ms. KHROLO (MSc. 2023)
8. Mr. HONLEM (MSc. 2023)
9. Mr. KEDO YHOSHU (MSc. 2024)
10. Mr. TOKI V SUMI (MSc. 2024)
11. Ms. LORENI ODYUO (MSc. 2024)
12. Ms. LIMASANGLA (MSc. 2024)
13. Mr. NOKRA LONGKUMER (MSc. 2025)
14. Mr. THANGO (MSc. 2025)
15. Ms. ARCHITA SHARMA (MSc. 2026)
16. Mr. LUMRO S SANGTAM (MSc. 2026)
17. Mr. PETEKHRIELIE VILUO (MSc. 2026)
18. Mr. SENCHUMO N OVUNG (MSc. 2026)

Teaching Experience

- Teaching of theory courses at Department of Physics, Nagaland University, Lumami.

No.	Course	Class	Semester
1.	PHY454 - Statistical Mechanics	M.Sc. (Physics)	Even Semester
2.	PHY-402- Mathematical Methods – I	M.Sc. (Physics)	Odd Semester
3.	PHY502- Solid State Physics - I	M.Sc. (Physics)	Odd Semester
4.	PHY553(B)- Dielectric and Luminescence Properties of Solids	M.Sc. (Physics)	Even Semester

- Teaching of several laboratory courses for M.Sc. (Physics) students.

Community Service

- Referee for peer-reviewed journals:**

- Chemical Engineering Journal (Elsevier publication),
- Optics and Laser Technology (Elsevier publication),
- Journal of applied polymer science (Wiley publication)
- Chemistry Select (Wiley publication)
- Material chemistry and physics (Elsevier publication)
- Thin Solid Films (Elsevier publication)
- Diamond and Related Materials (Elsevier publication)
- Materials Today Proceedings (Elsevier publication)
- Applied Physics A (Materials Science & Processing) (Springer Nature)
- Physica Scripta (IOP)
- Polymer-Plastics Technology and Materials (Taylor and Francis)
- RSC Advances (Royal Society of Chemistry)
- Journal of Inorganic and Organometallic Polymers and Materials
- Nanotechnology for Energy Applications (Frontiers in Nanotechnology)
- Optical and Quantum Electronics (Springer Nature)
- Journal of Physics and Chemistry of Solids (Elsevier publication)
- Solid State Ionics (Elsevier publication)
- Scientific reports (Springer Nature)
- Ionics (Springer Nature)
- Vacuum (Elsevier publication)
- Material Research Express (IOP)
- Synthetic Metals (Elsevier publication)
- Journal of Energy Storage (Elsevier publication)
- Journal of Power Sources (Elsevier publication)

Administrative/Organizational Activities

- Planning Board Member, Nagaland University, Lumami (2022-2025).
- Member of the School Board of Science, Nagaland University (2025-2027)
- Member of the Board of Studies (BoS) in Physics (2023-2026).
- NAAC Department Coordinator.
- SWAYAM Department Coordinator.
- Library Department Coordinator.
- Convenor, Department PG admission committee 2023.
- Convenor, Department PhD admission committee 2023 (Winter Session).
- Convenor, Department PhD admission committee 2024 (Autumn Session).
- Convenor, Department PhD admission committee 2025 (Winter Session).

List of Publications (SCI / Scopus / Web of Science Journals only)

1. Pewe u marhu, **Vijeth H***, Comparative Study of W, V, and Co Doping in MoSe₂ for High-Performance Flexible All-Solid-State Supercapacitors, RSC Advances, 2025, 15, 26830 - 26842. (IF 4.6) <https://doi.org/10.1039/d5ra03192c>
2. Pewe u marhu, **Vijeth H***, Tailored Vanadium Diselenide Nanoflowers Doped with Transition Metals (Co, Mo, W) for High-Energy Density Flexible Supercapacitor Devices, Journal of Power Sources, 667, 2026, 239224. (IF 7.9) <https://doi.org/10.1016/j.jpowsour.2025.239224>
3. Vandana Molahalli, C Sanjith, Sushanth L Shetty, Aman Sharma, H Ganessa, **H Vijeth***, Nattaporn Chattham, Advanced materials for hydrogen production, storage, and conversion: Mechanistic insights, comparative benchmarks, and sustainability roadmaps, International Journal of Hydrogen Energy, 202, 2026, 152904. (IF 8.3) <https://doi.org/10.1016/j.ijhydene.2025.152904>
4. Raghavendra Bairy, **H Vijeth***, Rajesh K, Suresh Kulkarni, Neelamma Gummagol, Murari MS, Enhanced Optical Third-Harmonic Generation in Phase-Engineered Nanostructured Zn_{1-x}Cd_xS Thin Films for Optoelectronic Device Applications, Journal of Physics D: Applied Physics, 57, 165102, 2024. <https://doi.org/10.1088/1361-6463/ad1edd> (IF 3.4)
5. N Pawan Nayak, Raghavendra Bairy, **H Vijeth***, MJ Nagesh Khadri, GS Nanjundaswamy, Aarti S Bhat, PB Yashika, Tuning the properties of cobalt oxide thin films via precursor solution engineering for high-performance supercapacitor applications, Inorganic Chemistry Communications, 183, 2025, 115729. <https://doi.org/10.1016/j.inoche.2025.115729> (IF 5.4)
6. **H. Vijeth**, Rabah Boukherroub, SP Ashokkumar, Vandana M, H Devendrappa*. Self-Assembled Polypyrrole Nanotubes/MoS₂ Quantum Dots for High Performance Solid State

- Flexible Symmetric Supercapacitor. *Sustainable Energy & Fuels*, 5(24), 6338-6351, 2021. <https://doi.org/10.1039/D1SE01391B> (IF 6.8)
7. **H. Vijeth**, L Yesappa, SP Ashokkumar, Vandana M, H Devendrappa*. Hybrid Core-Shell nanostructure made of Chitosan incorporated Polypyrrole Nanotubes decorated with NiO for All-Solid-State Symmetric Supercapacitor Application. *Electrochimica Acta* 354, 136651, 2020. <https://doi.org/10.1016/j.electacta.2020.136651> (IF 5.6)
 8. **Vijeth H**, Ashokkumar SP, Yesappa L, Niranjana M, Vandana M, Devendrappa H*. Flexible all Solid-State Asymmetric Supercapacitor Based on Polythiophene Nanocomposites/Charcoal with High Energy Density. *RSC Advances* 55, 31414-31426, 2018. <https://doi.org/10.1039/C8RA06102E> (IF 4.6)
 9. **H. Vijeth**, S. P. Ashokkumar, L. Yesappa, M. Niranjana, M. Vandana, H. Devendrappa*. Camphor sulfonic acid assisted synthesis of polythiophene composite for high energy density all-solid-state symmetric supercapacitor. *Journal of Materials Science: Materials in Electronics* 30, 7471-7484, 2019. <https://doi.org/10.1007/s10854-019-01060-2> (IF 2.7)
 10. **H. Vijeth**, L Yesappa, SP Ashokkumar, Vandana M, H Devendrappa. Camphor Sulfonic Acid Surfactant Assisted Polythiophene Nanocomposite for Efficient Electrochemical Hydrazine Sensor. *Material research expresses* 12, 125375, 2020. <https://doi.org/10.1088/2053-1591/ab5ef5> (IF 2.0)
 11. K. M. Ajay, M. N. Dinesh, B. Gopala Krishna, M.G. Radhika, N.Kathyayini, **H Vijeth**, Electrochemical investigations on low cost KOH activated carbon derived from orange-peel and polyaniline for hybrid supercapacitors, *Inorganic Chemistry Communication*, 127, 108523, 2021. (IF 5.4) <https://doi.org/10.1016/j.inoche.2021.108523>
 12. K M Ajay, M N Dinesh, M Yashaswini, B Gopalakrishna, N Kathyayini, Y Sundarayya, **H Vijeth***, Natural Biomass Derived Microporous Activated Carbon Electrodes for Highly Efficient Supercapacitor Applications, *Chemistry Select*, 7, e202201301, 2022, (IF 2.3) <https://doi.org/10.1002/slct.202201301>
 13. Raghavendra Bairy, **H Vijeth***, Suresh D Kulkarni, MS Murari, Udaya K Bhat, Improvement of third-order NLO properties of vacuum deposited Cd_{1-x}Pb_xS nanostructured thin films for optoelectronic device applications, *Materials Research Bulletin*, 161, 112146, 2023, (IF 5.6) <https://doi.org/10.1016/j.materresbull.2023.112146>
 14. Nagaraju Y. S, Ganesh. H, Veerasha.S, **Vijeth. H**, Devendrappa H, Synthesis of hierarchical ZnO/NiO nanocomposite Wurtz Hexagonal Nanorods via Hydrothermal for high-performance symmetric Supercapacitor application, *Journal of Energy Storage*, 56, 105924, 2022. (IF 9.8) <https://doi.org/10.1016/j.est.2022.105924>

15. Y Sundarayya, **H Vijeth**, D Nagaraju, KC Kumara Swamy, CS Sunandana, Isovalent Substitution of Vanadium in LiFePO_4 : Evolution of Monoclinic $\alpha\text{-Li}_3\text{Fe}_2(\text{PO}_4)_3$ Phase, *Inorganic Chemistry Communications*, 150, 110530, 2023. (IF 5.4)
<https://doi.org/10.1016/j.inoche.2023.110530>
16. YS Nagaraju, H Ganesh, S Veeresh, **H Vijeth**, H Devendrappa, A strategy of making waste profitable: Self-templated synthesis of helical rod structured porous carbon derived from Ganoderma Lucidem for advanced supercapacitor electrode, *Diamond and Related Materials*, 131, 109607, 2023. (IF 4) <https://doi.org/10.1016/j.diamond.2022.109607>
17. D Haleshappa, Raghavendra Bairy, Sridevi, S N Kakathkar, **Vijeth H**, Neelamma Gummagal, Thiophene-Centered PMMA Unified Thin Films with Electrical, Photoluminescence, and Third-Order Nonlinear Optical Potentials for Optoelectronic Applications, *Materials Today Communications*, 35, 106052, 2023.
<https://doi.org/10.1016/j.mtcomm.2023.106052> (IF 3.6)
18. S Veeresh, H Ganesha, YS Nagaraju, **H Vijeth**, H Devendrappa, activated carbon incorporated graphene oxide with SnO_2 and $\text{TiO}_2\text{-Zn}$ nanocomposite for supercapacitor application, *Journal of Alloys and Compounds*, 952, 169907, 2023. (IF 6.3)
<https://doi.org/10.1016/j.jallcom.2023.169907>
19. K Samatha, **H Vijeth**, Raghavendra Sagar, Electrical and electrochemical properties of nanostructured Ni and Zn substituted Co_3O_4 spinels for thermistors and supercapacitor applications, *Journal of Energy Storage*, 52, 104871, 2022. (IF 9.8)
<https://doi.org/10.1016/j.est.2022.104871>
20. Ganesha H, Veeresh S, Nagaraju Y S, Vandana M, Basappa M, **Vijeth H**, Devendrappa H, 2-Dimensional layered Molybdenum disulfide nanosheets and CTAB assisted Molybdenum disulfide nanoflower for High Performance Supercapacitor Application, *Nanoscale Advances*, 4, 521-531, 2022. (IF 4.7) <https://doi.org/10.1039/D1NA00664A>
21. S Veeresh, H Ganesha, YS Nagaraju, **H Vijeth**, M Vandana, M Basappa, H Devendrappa, Graphene oxide/cobalt oxide nanocomposite for high-performance electrode for supercapacitor application, *Journal of Energy Storage* 52, 104715, 2022. (IF 9.8)
<https://doi.org/10.1016/j.est.2022.104715>
22. M Basappa, H Ganesha, S Veeresh, YS Nagaraju, M Vandana, **H Vijeth**, H Devendrappa, Preparation, characterization, and electrochemical properties of PEO/PVDF blend films, *Chemical Physics Letters*, 799, 139609, 2022. (IF 2.7)
<https://doi.org/10.1016/j.cplett.2022.139609>

23. Nayana Acharya, Chaitra U, Vijeth H, Raghavendra Sagar, Highly dense Mn_3O_4 and $CuMn_2O_4$ spinels as efficient protective coatings on solid oxide fuel cell interconnect and their chromium diffusion studies, *Journal of Alloys and Compounds*, 918, 165377, 2022. <https://doi.org/10.1016/j.jallcom.2022.165377> (IF 6.3)
24. M Vandana, S Veeresh, H Ganesh, YS Nagaraju, **H Vijeth**, M Basappa, H Devendrappa, Graphene oxide decorated SnO_2 quantum dots/polypyrrole ternary composites towards symmetric supercapacitor application, *Journal of Energy Storage* 46, 103904, 2022. <https://doi.org/10.1016/j.est.2021.103904> (IF 9.8)
25. Y S Nagaraju, H Ganesh, S Veeresh, **H Vijeth**, M Basappa, H Devendrappa. Self-Templated One-Step Hydrothermal Synthesis of Hierarchical Actinomorphic Flower-like SnO_2 -ZnO Nanorods for High-Performance Supercapacitor Application, *Journal of Electroanalytical Chemistry*, 900, 115741, 2021. <https://doi.org/10.1016/j.jelechem.2021.115741> (IF 4.5)
26. Y S Nagaraju, H Ganesh, S Veeresh, **H Vijeth**, M Basappa, H Devendrappa, Single-Step Hydrothermal Synthesis of ZnO/NiO Hexagonal Nanorods for High-performance Supercapacitor Application, *Materials Science in Semiconductor Processing*, 142, 106429, 2022. <https://doi.org/10.1016/j.mssp.2021.106429> (IF 4.6)
27. M. Vandana, Y. S. Nagaraju, H. Ganesh, S. Veeresh, **H. Vijeth**, M. Basappa and H. Devendrappa. A SnO_2 QDs/GO/PPY ternary composite film as positive and graphene oxide/charcoal as negative electrodes assembled solid state asymmetric supercapacitor for high energy storage applications, *RSC Advances* 11, 27801-27811, 2021. <https://doi.org/10.1039/D1RA03423E> (IF 4.6)
28. Raghavendra Bairy, Jayarama A*, Suresh D Kulkarni, Murari M S, **Vijeth H**. Improved nonlinear optical absorption mechanism and susceptibility ($\chi(3)$) of CdS nanostructured thin films: Role of zinc doping. *Materials Science in Semiconductor Processing* 121, 105400, 2021. <https://doi.org/10.1016/j.mssp.2020.105400> (IF 4.6)
29. S Veeresh, H Ganesh, YS Nagaraju, M Vandana, SP Ashokkumar, **H Vijeth**, MVN Ambika Prasad, H Devendrappa*, UV-irradiated Hydrothermal Synthesis of Reduced Graphene Quantum Dots for Electrochemical Applications, *Diamond and Related Materials*, 114, 108289, 2021. (IF 4) <https://doi.org/10.1080/25740881.2020.1784221>
30. L Yesappa, M Niranjana, SP Ashokkumar, **H Vijeth**, Ganesh Sanjeev, H Devendrappa*. Modified Thermal, Dielectric, and Electrical Conductivity of PVDF-HFP/LiClO₄ Polymer Electrolyte Films by 8 MeV Electron Beam Irradiation. *ACS Omega* 3, 14188–14200, 2018. <https://doi.org/10.1080/10420150.2018.1486840> (IF 4.1)

31. SP Ashokkumar, Yesappa L, **H Vijeth**, M Niranjana, M Vandana, Devendrappa, H*. Structure, morphology, thermal and electrochemical studies of electrochemically synthesized polyaniline / copper oxide nanocomposite for energy storage devices. *Materials Research Express* 6, 125557, 2020. <https://doi.org/10.1088/2053-1591/ab5dde>(**IF 2.0**)
32. SP Ashokkumar, **H Vijeth**, L Yesappa, M Niranjana, M Vandana, H Devendrappa*. Electrochemically Synthesized Polyaniline / Copper Oxide Nano composites: To Study Optical band gap and electrochemical performance for Energy Storage Devices. *Inorganic Chemistry Communications* 115, 107865, 2020. <https://doi.org/10.1016/j.inoche.2020.107865>.(**IF 3.4**)
33. M Vandana, **H Vijeth**, SP Ashokkumar, H Devendrappa*. Hydrothermal Synthesis of Quantum dots Dispersed on Conjugated Polymer as an Efficient Electrodes for Highly Stable Hybrid Supercapacitors. *Inorganic Chemistry Communications* 117, 107941, 2020. <https://doi.org/10.1016/j.inoche.2020.107865>(**IF 5.4**)
34. H Ganesha, S Veeresh, Y S Nagaraju, M Vandana, S P Ashokkumar, **H Vijeth**, Devendrappa H*. Growth of 3-Dimensional MoS₂-PANI nanofiber for high electrochemical performance. *Materials Research Express* 7, 084001, 2020. <https://doi.org/10.1088/2053-1591/ab9e30> (**IF 2**)
35. M Vandana, **H Vijeth**, S P Ashokkumar, Devendrappa H*. Effect of Different Gel Electrolytes on Conjugated Polymer - Graphene Quantum Dots Based Electrode for Solid State Hybrid Supercapacitors. *Polymer-Plastics Technology and Materials* 59, 2020, 2068-2075. <https://doi.org/10.1080/25740881.2020.1784221>(**IF 2.4**)
36. Raghavendra Bairy*, P.S. Patil, Shivaraj R. Maidur, **Vijeth H**, Murari M. S, UdayaBhat K. The role of cobalt doping in tuning the band gap, surface morphology and third-order optical nonlinearities of ZnO nanostructures for NLO device applications, *RSC Advances* 9, 22302, 2019. <http://doi.org/10.1039/C9RA03006A>(**IF 4.6**)
37. Raghavendra Bairy, Jayarama A*, Suresh D Kulkarni, Murari M S, **Vijeth H**. Role of Zn in tuning the band gap, surface morphology, photoluminescence and optical nonlinearities of CdO nanostructures for photonic device applications. *Material Research Express* 9, 096447, 2019. <https://doi.org/10.1088/2053-1591/ab3329>(**IF 2.0**)
38. K Rajesh, Vincent Crasta*, Rithin Kumar NB, Gananatha Shetty, Y Sangappa, Jyothi Kudva, **H Vijeth**. Effect of MoO₃nanofiller on structural, optical, mechanical, dielectric and thermal properties of PVA/PVP blend. *Materials Research Innovations Taylor & Francis*, 24, 270-278, 2019. <https://doi.org/10.1080/25740881.2020.1784221>

39. L. Yesappa, S. P. Ashokkumar, **H Vijeth**, M. Basappa, Sanjeev Ganesh, H. Devendrappa*. Effect of electron beam irradiation on structure, morphology, and optical properties of PVDF-HFP/PEO blend polymer electrolyte films. *Journal of Radioanalytical and Nuclear Chemistry* 322, 5-10, 2019. <https://doi.org/10.1007/s10967-019-06466-0L>(**IF 1.7**)
40. L. Yesappa, M. Niranjana, SP. Ashokkumar, **H Vijeth**, M. Basappa, Jishnu Dwivedi, VC. Petwal, S. Ganesh, H. Devendrappa*, Optical properties and ionic conductivity studies of an 8 MeV electron beam irradiated poly (vinylidene fluoride-co-hexafluoropropylene)/LiClO₄ electrolyte film for optoelectronic applications. *RSC Advances* 8, 15297-15309, 2018. <https://doi.org/10.1039/C8RA00970H>(**IF 4.6**)
41. L. Yesappa, M. Niranjana, S. Ashokkumar, **H Vijeth**, S. Raghu, H. Devendrappa*. Characterization, Electrical Conductivity and Electrochemical Performance of Polyaniline-LiClO₄-CuO Nanocomposite for Energy Storage Applications. *Polymer-Plastics Technology and Engineering* 58, 1-13, 2018. <https://doi.org/10.1080/03602559.2018.1466175>.(**IF 2.4**)
42. L. Yesappa, M. Niranjana, SP. Ashokkumar, **H Vijeth**, Ganesh Sanjeev, H. Devendrappa*. Increased porous morphology and thermal degradation of electron beam-irradiated PVDF-HFP/LiClO₄ polymer electrolyte. *Radiation Effects and Defects in Solids* 173, 601-607, 2018. (**IF 1.02**) <https://doi.org/10.1080/10420150.2018.1486840>
43. L. Yesappa, M. Niranjana, SP. Ashokkumar, **H Vijeth**, C. Sharanappa, S. Raghu, H. Devendrappa*. Investigation of the Structure, Optical and Electrical Properties of Lithium Perchlorate Doped Polyaniline Composite: Aloe Vera Used as a Bio-Plasticizer. *Journal of Electronic Material* 46, 1-12, 2017. <https://doi.org/10.1007/s11664-017-5724-1>(**IF 2.04**)
44. M. Niranjana, L. Yesappa, S. P. Ashokkumar, **H Vijeth**, S. Raghu, H. Devendrappa*. Localized polarons in situ synthesized polyaniline nanocomposite improve the morphology and the thermal and electrical conductivity. *RSC Advances* 6, 115074-115084, 2016. (**IF 3.3**) <https://doi.org/10.1039/C6RA24137A> (**IF 4.6**)
45. **Vijeth H**, Niranjana M, Yesappa L, Ashokkumar SP, Sharanappa Chapi, Raghu S, Devendrappa H. Surfactant-assisted Surface Morphology and Thermal Properties of Polythiophene Composites. *AIP Conference Proceedings* 2017, 1849, 020043. <http://dx.doi.org/10.1063/1.4984190>
46. **Vijeth H**, Niranjana M, Yesappa L, Ashokkumar SP, Devendrappa H. Polythiophene nanocomposites as a high-performance electrode material for supercapacitor application *AIP conference proceedings* 2018, 1942, 140017. <https://doi.org/10.1063/1.5029148>

47. **Vijeth H**, Niranjana M, Yesappa L, Ashokkumar SP, Devendrappa H. Investigation on structural, optical and electrical properties of polythiophene-Al₂O₃ composites. *AIP conference proceedings* 2018, 1953, 050008. <https://doi.org/10.1063/1.5032663>
48. **Vijeth H**, Ashokkumar SP, Yesappa L, Vandana M and Devendrappa H Photocatalytic Degradation of Methylene Blue and Rhodamine B Using Polythiophene Nanocomposite under Visible and UV light. *AIP Conference Proceedings* 2019, 2115, 030536. <https://doi.org/10.1063/1.5113375>
49. **Vijeth H**, Yesappa L, Ashokkumar SP, Vandana M, Devendrappa H. Influence of Nickel Oxide Nanoparticles on the Structure, Electrical and Dielectric Properties of Polypyrrole Nanocomposite. *AIP Conference Proceedings* 2019, 2142, 150029. <https://doi.org/10.1063/1.5122578>
50. **Vijeth H**, Ashokkumar SP, Yesappa L, Vandana M, Devendrappa H. Nickel oxide nanoparticle incorporated polypyrrole nanocomposite for supercapacitor application. *AIP Conference Proceedings* 2020, 2244, 040008. <https://doi.org/10.1063/5.0009088>

Awards

1. Vice chancellors award for **Best teacher of the year 2023**, from Nagaland University (A Central University), Lumami, Nagaland, India.
2. First Prize in Oral Presentation at the 4th International Conference on Global Trends in Sustainable Technology and its Application in Applied Science (**ICGTSTAS-2024**) held at Reva University, Bengaluru, India.

Conference/Workshop Conducted

1. As a Convenor, conducted **Two-Day National Level Workshop on the “Fundamental Aspects of Nano Horizon”** during 6-7th March, 2025 at Nagaland Central University, Lumami.
2. Co-Convenor, conducted **XV National Conference of Physics Academy of the North-East (PANE-2025)** on 18-20th November, 2025 at Nagaland Central University, Lumami.

Paper Presentations

Foreign visit

- Participated & presented an article entitled “*Nickel oxide nanoparticle incorporated polypyrrole nanocomposite for supercapacitor application*” in the 5th edition of Nanotech

France 2019 International Conference and Exhibition NANOTECH FRANCE 2019 held at PARIS – FRANCE, during 26-28th June 2019.

Conferences paper presentation

1. Participated and presented a paper entitled *Cobalt doped Molybdenum diselenide Electrodes for High-Performance All-Solid-State Supercapacitors* in 13th National Conference on Condensed Matter Physics and Applications (**CMPA-2025**), organized by the Department of Physics, MIT, Manipal, on 8th and 9th of December, 2025.
2. Participated and presented a paper entitled *Fabrication of Wearable Solid State Supercapacitor using Nickel Oxide-Polypyrrole Nanotube* at "National Conference on Sustainable Energy Conversion and Storage: Functional Materials, Systems, and Applications (**NCSECS-2024**)", held at CHRIST (Deemed to be University) Bangalore on 18-20 April 2024.
3. Participated and presented a paper entitled *Fabrication of Flexible Solid-State Supercapacitor using Nanostructured Materials* at National Conference on Recent Trends in Material Sciences for Electronics and Engineering Applications (**RTMSEE-2024**), held at Kristu Jayanti College, AUTONOMOUS, Bengaluru on 15th -16th April 2024.
4. Participated and presented a talk on "*Fabrication of Flexible Supercapacitor using Polypyrrole Nanotube Composites*" in International Conclave on Materials, Energy & Climate (**ICMEC-2022**), 12th to 14th December 2022 at Indira Gandhi Delhi Technical University for Women, New Delhi.
5. Participated and presented a paper on *Chitosan-Polypyrrole/MoS₂ Nanocomposite for All Solid State and Flexible Symmetric Supercapacitor Applications* in **ICTN-KLC 2021** held at Indian Institute of Technology Delhi, New Delhi, India during 24th to 26th August, 2021.
6. Participated and presented a paper on *Hybrid Core-Shell Nanostructured Materials for Supercapacitor Application* in 7th International Conference on Nano science and Nanotechnology (**ICONN-2023**) organized by Department of Physics and Nanotechnology, SRM IST, India during March 27- 29, 2023.
7. Participated and presented a paper on *Polymer nanocomposites for Flexible Supercapacitor Applications* in **NACMEA- 2021** held at Kristu Jayanti College (Autonomous) Bengaluru, India during 10th August, 2021.

8. Participated and presented a paper on *Soft Template Approach for Synthesis of Polypyrrole Nanotube decorated with MoS₂ quantum dot for All Solid-State Supercapacitor Applications* in **ICPN-2019** held at Mangalore University, Mangalore during 19-21, September 2019.
9. Participated and presented an article entitled *Influence of Nickel Oxide Nanoparticle on the Structural, Electrical and Dielectric Properties of Polypyrrole Nanocomposite* in **ICABS-2019** Organized by GDC Memorial College Bahal, Bhiwani Haryana, India during 7-9th February 2019.
10. Participated and presented an article entitled *Photocatalytic Degradation of Methylene Blue and Rhodamine B using Polythiophene Nanocomposites under Visible and UV light* in **DAE Solid State Symposium 2018** Organized by Guru Jambheshwar University of Science & Technology, Hisar, Haryana, India during 18-22th December 2018.
11. Participated and presented an article entitled *Surfactant-assisted Surface morphology and Thermal Properties of Polythiophene Composites* in **OPTICS-2017** Organized by NIT Calicut, Kerala, India during 9-11th January 2017.
12. Participated and presented a paper entitled *Polythiophene nanocomposites as high-performance electrode material for supercapacitor application* in **DAE symposium - 2017** Organized by BARC Mumbai, India during 26-30th December 2017.
13. Participated and presented a paper entitled *Investigation on Structural, Optical and Electrical Properties of Polythiophene-Al₂O₃ Composites* in **ICC-2017** organized by Govt. Engineering College Bikaner Rajasthan, India during 24-25th November 2017.
14. Participated and presented a paper entitled *Structural and Surface Morphology of Methylene Red Dye-doped PMMA Films* in **RAMSB-2018** organized by Department of Physics, Mangalore University, Mangalore India during 23-25th January 2018.
15. Participated and presented a paper entitled *Variational Calculation of Exciton Confined in a Spherical Quantum Well* in **CMPA- 2016** Organized by Manipal Institute of Technology (MIT) Manipal, Karnataka, India during 23-24th May 2016.
