

Faculty Profile

Name : Dr. Vinuth M	
Designation : Assistant Professor	
Department : Chemistry	
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About me: I, Dr. Vinuth M, am working as an Assistant Professor in the Department of Chemistry, NIE north campus Mysore. I work in the area of preparation of clay minerals, remediation of environmental toxicants like Cr, Ar and Mo etc., using Fe(II) and Fe(III)–Mt in aqueous medium and detailed study on removal of toxic metals. Furthermore, having sufficient knowledge in the preparation of MWCNTS composites with ferrite nanoparticles and their role in degradation. I also have expertise in the preparation of nanoparticles through the microwave method, their application in photocatalytic activity, and detailed studies on the optical, structural and magnetic properties of a few elements and thin films. Further, I have published more than 30 research articles in peer-reviewed international journals, associated with most preferred publishing houses, such as RSC, Elsevier, Springer, Taylor and Francis, Willey, VBRI press and so forth. In addition, I have presented more than 25 research findings at National and International conferences and seminars. In addition to teaching, I have taken up responsibilities which include an Anti-ragging squad member, class monitoring committee member, research and development member, data coordination committee member, etc. Further, I am a recognized research supervisor at VTU-Belagavi. I am looking for good students to guide under my supervision.

Qualification:

Kuvempu University Ph.D.: Inorganic Chemistry and Nanoscience (2012- Jan7th, 2017)

Course work with Ph.D. (First Class)

Kuvempu University (DDE) PGD: Human Resource Management (Distance Education)

University of Mysore M.Sc.: *Manasagangothri*, General Chemistry (2009 – 2011)

University of Mysore B.Sc.: PCM, *Yuvaraja's College* (2006 – 2009)

Courses Taught: Physical Chemistry, Inorganic Chemistry, Engineering Chemistry, Material Science Nanoscience/Technology, Polymer Chemistry

Publications

Journal Publications

1. Yashwanth H.J., Madhukara Naik. M., Udayabhanu M., Prathap Kumar M., **Vinuth.. M.** Dileep S. Narasimha murthy. K.N. (2025). “Enhanced photocatalytic hydrogen evolution via Nitrogen and Sulfur Co-Functionalized Carbon Quantum Dot-Modified ZnO

- nanocomposites: Experimental insights and mechanistic understanding”, *Journal of Environmental Chemical Engineering*, 13 (6), 119249.
2. Rekha, M.M., **Vinuth M.**, Madhukara Naik M., Swarupa V., Subbulakshmi G. (2025). “Nickel ferrite-driven microwave method for eco-friendly in-situ acetalization of furfural from defatted rice bran”. *Nanotechnology for Environmental Engineering*, 10,1-12.
 3. Chetana S., Guddappa H., Vikas N.T., Niraj K., Naveen C. J., **Vinuth M.**, Manjunath S., (2024) “Electrochemical investigation of Fe₃O₄/TNT/PANI composites for enhanced super capacitor applications”. *Journal of Materials Science: Materials in Electronics*, 35 595.
 4. Surendranaik Y., Talavara V., Ereshnaik, **Vinuth M.**, (2024). “Red-emitting 4-methyl coumarin fused barbituric acid as an electrochemical sensor for catechol detection and probe for latent fingerprints”, *Luminescence*. 39:e4825 1-13.
 5. Madhukara Naik M., Yashwanth H.J., **Vinuth M.**, Nagaraju G., Hareesh K., Bhojya Naik H.S., (2024). “Microwave radiation assisted synthesis of NiFe₂O₄-CoFe₂O₄ nanocomposites for photocatalytic and photoelectrochemical water splitting applications”, *Inorganic Chemistry Communications* 160, 111898.
 6. Madhukara Naik M., **Vinuth M.**, Kumar V. U., Hemakumar K. H., Preethi G., Kumar M.P. & Nagaraju G.,(2023). “A facile green synthesis of nickel ferrite nps using Tamarindus Indica seeds for magnetic and photocatalytic studies”, *Nanotechnology for Environmental Engineering* 8 143–151.
 7. Upendranath K., Talavara V., Vinuth M., (2022). “Development and visualization of level II, III features of latent fingerprints using some new 4-(4-substitutedphenyl)-6-(4-substitutedphenyl)-2-oxo-1,2-dihydropyridine-3-carbonitrile derivatives: Synthesis, characterization, optoelectronic and DFT studies. *Journal of the Indian Chemical Society* 99 (3) 100388.
 8. Sarala E., **Vinuth M.**, Madhukara Naik M., Rami Reddy Y.V. (2022). “Green synthesis of nickel ferrite nanoparticles using *Terminalia catappa*: Structural, magnetic and anticancer studies against MCF-7 cell lines”. *Journal of Hazardous Materials Advances* 8 100150.
 9. Sarala E., Madhukara Naik M., **Vinuth M.**, Rami Reddy Y. V.& Sujatha H. R., (2020) “Green synthesis of Lawsonia inermis-mediated zinc ferrite nanoparticles for magnetic studies and anticancer activity against breast cancer (MCF-7) cell lines”. *Journal of Materials Science: Materials in Electronics* 31 8589–8596.
 10. Madhukara Naik M., Bhojya Naik H.S., Nagaraju G., **Vinuth M.**, Viswanath R., (2019) “Green synthesis of zinc doped cobalt ferrite nanoparticles: Structural, optical, photocatalytic and antibacterial studies”. *Nano-Structures & Nano-Objects* 19 100322.
 11. Naik M.M., Bhojya Naik H.S., Nagaraju K., **Vinuth M.**, Nagaraju G., Prabhakara M.C., (2019). “Multifunctional properties of microwave-assisted bioengineered nickel doped cobalt ferrite nanoparticles”. *Journal of Sol-Gel Science and Technology*, 91(3)578.
 12. Karthik K., Pushpa S., Madhukara Naik M. & **Vinuth M.**, (2019). “Influence of Sn and Mn on structural, optical and magnetic properties of spray pyrolyzed CdS thin films” *Materials research innovations* 18.
 13. Madhukara Naik M., Bhojya Naik H.S., Nagaraju G., **Vinuth M.**, Raja Naika H., Vinu K., (2019). “Green synthesis of zinc ferrite nanoparticles in *Limonia acidissima* juice:

- Characterization and their application as photocatalytic and antibacterial activities”. *Microchemical Journal* 146 1227–1235.
14. **Vinuth M.**, Madhukara Naik M., Karthik K., Bhojya Naik H. S., Hemakumar K. H. (2019). “Detailed study on reduction of hazardous Cr(VI) at acidic pH using modified montmorillonite Fe(II)-Mt under ambient conditions”. *Research on Chemical Intermediates*.
 15. Madhukara Naik M., Bhojya Naik H. S., Nagaraju G., **Vinuth M.**, Vinu K., Rashmi S. K. (2018). “Effect of aluminum doping on structural, optical, photocatalytic and antibacterial activity on nickel ferrite nanoparticles by sol–gel auto-combustion method”. *Journal of Materials Science: Materials in Electronics* 23.
 16. Karthik K., Madhukara Naik M., Shashank M., **Vinuth M.**, Revathi V., (2018). “Microwave-Assisted ZrO₂ Nanoparticles and Its Photocatalytic and Antibacterial Studies”. *Journal of Cluster Science* 30 (2) 311-318.
 17. **Vinuth M.**, Bhojya Naik H.S., Mahadev Swamy M.M., Vinoda B.M., Viswanath R., Gururaj H., (2017). “Rapid Adsorption of Malachite Green Dye Using Eco-Friendly Fe(III)–Montmorillonite: Effective Clay Mineral for Dye Effluents Containing Wastewater”. *Advanced Materials Letters* 8(1) 49-57.
 18. **Vinuth M.**, Bhojya Naik H.S., Vinoda B.M., Gururaj H, Thomas N., G. Arun kumar, (2017). “Enhanced removal of methylene blue dye in aqueous solution using eco-friendly Fe(III)–montmorillonite”. *Materials Today* 4(2) 424–433.
 19. **Vinuth M.**, Bhojya Naik H.S., Mahadev Swamy M.M., Prabhakara, M.C., (2017). “Environmentally Benign Fe(III)–Montmorillonite for Rapid adsorption of Methylene Blue dye in Aqueous Medium Under Ambient Conditions”. *Fashion and Textiles* 4:8.
 20. Arun Kumar G., Bhojya Naik H.S., Viswanath R., **Vinuth M.**, Suresh Gowda I.K., (2017) “Optical characterization of EDTA-assisted CdS:Mn Nanoparticles Synthesized by Sonochemical Method” *Materials Today* (2) 8336-8344.
 21. Arun K. Bhojya Naik H.S., Viswanath R., Suresh Gowda I.K., Vinuth M., (2017). “Investigation on the structural and optical properties of hexamethylene tetramine (HMTA) capped ZnS:Mn nanocrystals synthesized by microwave irradiation method”. *Materials Today* 4(2) 3932–3941.
 22. Vinoda B.M, Bodke Y.D, **Vinuth M.**, Sindhe M.A, Venkatesh T., (2016). “One Pot Synthesis, Antimicrobial and in Silico Molecular Docking Study of 1,3-Benzoxazole-5-Sulfonamide Derivatives”. *Organic Chemistry Current Research* 5:1.
 23. Vinoda B.M, Yadav D. B., **Vinuth M.**, Kenchappa R., Sandeep T., (2016). “Synthesis of Some Novel 1,3-Thiazine Derivatives Using e(III)–Montmorillonite Catalysts as Potent Antimicrobial Agents”. *Inventi Rapid: Med Chem* 2:1-8.
 24. **Vinuth M.**, Bhojya Naik H.S, Vinoda B.M, Pradeepa S.M, Arun Kumar G. and Chandra Sekhar K, (2016). “Rapid Removal of Hazardous Rose Bengal Dye Using Fe(III)–Montmorillonite as an Effective Adsorbent in Aqueous Solution”. *Journal of Environmental & Analytical Toxicology* 6:2.
 25. Vinoda B.M, **Vinuth M.**, Yadav D. Bodke and Manjanna J., (2015). “Photocatalytic Degradation of Toxic Methyl Red Dye Using Silica Nanoparticles Synthesized from Rice Husk Ash”. *Journal of Environmental & Analytical Toxicology* 5:336.

26. **Vinuth M.**, Bhojya Naik H. S, Manjanna J., (2015). “Remediation of hexavalent chromium from aqueous solution using clay mineral Fe(II) montmorillonite: Encompassing anion exclusion impact” *Applied Surface Science* 357 1244–1250.
27. **Vinuth M.**, Bhojya Naik H.S., Chandra sekhar K., Manjanna J., Vinoda B.M., (2015) “Environmental Remediation of Hexavalent Chromium in Aqueous Medium Using Fe(II)-Montmorillonite as Reductant”. *Procedia Earth and Planetary Science* 11 275 – 283.

Conference Proceedings

28. M. Madhukara Naik, **M. Vinuth***, K. Karthik, B. Suresha., G. Nagaraju, and H. R. Sujatha, (2020) “Photocatalytic degradation of dyes by cobalt ferrite nanoparticles synthesized by sol-gel method” organized by Ramaiah University on Proceedings of international conference on advances in materials research (ICAMR – 2019) Bangalore, India during 25–27 July 2019.

Book chapters

1. Mohan Kumar; H. Nagarajaiah; **Vinuth M.**, R.S. Veerapur; Prasad Nagaraj Bapat; Pramod Gopal Pai; J. G. Manjunatha, (2023). New Approach to the Preparation of Cationic, Anionic, Neutral, and Gemini Sensors. *RSC Detection Science* 23 248 pages Hardback ISBN: 978-1-83767-116-8.
2. Mohan Kumar, H. Nagarajaiah, M. Praveen, Sathish reddy, **Vinuth M.**, S.T. Aveesh, C.M. Praveen Kumar, N. Sreeharsa, (2024). Food additives and their determination by surfactant-based electrodes. *ELSEVIER Surfactant Based Electrochemical Sensors and Biosensors* Pages 387-414.

Textbook

ENGINEERING CHEMISTRY (Chemical Science, Material Science & Nano Technology) by Dr. Vinuth Mirle and Dr. Mohan Kumar, (2022), 1, 1-145, ISBN No: 978-81-960018-3-4, <https://iipbooks.com/published-book> .

Patent publication

1. **Vinuth M.** Gnanasangeetha, Sudhir S.H., Nellore M. K.*et al.*, Application of high resolution electron microscopy for 3D characterization of nanoscale materials. **2024/5/17, 20/2024, 202441037319.**
2. Siddharthan N., Sridevi N., Manoj Kumar N, **Vinuth M.**, *et al.*, High Performance Electrode Fabrication: New approaches in Synthesizing MgO Carbon Nanocomposites. **30/12/2024;10/01/2025, 202441104651.**

Patent(Design/grant)

1. Venkatesh Y., Ramachandramurthy P., Rajayya M., **Vinuth M.**, Raj Kumar G., Govindarajan R., Subhasis R., Title of Design Patent: Nanotechnology-Enhanced Solar Energy Conversion Device. **06/04/2025,454409-001.**