

Dr. Vijay P. Kothavale

A] Research Paper Publications: -

1. **V. P. Kothavale**, K. K. Patankar, S. L. Kadam, V. L. Mathe, C. M. Kanamadi and B. K. Chougule, "Dielectric behaviour and magnetoelectric effect in $\text{Ni}_{0.25}\text{Co}_{0.75}\text{Fe}_2\text{O}_4\text{--Ba}_{0.8}\text{Pb}_{0.2}\text{TiO}_3$ ceramic composites," *British Ceramic Transactions*, vol. 102, no. 1, pp. 19–22, 2003, doi: 10.1179/096797803225009247.
2. **V. P. Kothavale et al.**, "Hyperbranched amino modified magnetic nanoparticles for simultaneous removal of heavy metal ions from aqueous solutions," *Mater. Chem. Phys.*, vol. 292, Dec. 2022, doi: 10.1016/j.matchemphys.2022.126792
3. **V. P. Kothavale**, V. D. Chavan, S. R. Shingte, S. C. Sahoo, P. S. Patil, and P. B. Patil, "Adsorption of Ni(II) ions from aqueous solution on the DMSA functionalized magnetic nanoadsorbents," in *AIP Conference Proceedings*, 2020, p. 030573. doi: 10.1063/5.0016738.
4. **V. P. Kothavale et al.**, "Carboxyl and thiol-functionalized magnetic nanoadsorbents for efficient and simultaneous removal of Pb(II), Cd(II), and Ni(II) heavy metal ions from aqueous solutions: Studies of adsorption, kinetics, and isotherms," *Journal of Physics and Chemistry of Solids*, vol. 172, Jan. 2023, doi: 10.1016/j.jpcs.2022.111089.
5. **Kothavale, V. P.**, Chavan, V. D., Sahoo, S. C., Kollu, P., Dongale, T. D., Patil, P. S., & Patil, P. B. (2019). Removal of Cu(II) from aqueous solution using APTES-GA modified magnetic iron oxide nanoparticles: kinetic and isotherm study. *Materials Research Express*, 6(10), 106103. <https://doi.org/10.1088/2053-1591/ab3590>
6. **V. P. Kothavale**, T. S. Patil, P. B. Patil, and C. H. Bhosale, "Photoelectrocatalytic degradation of Rhodamine B using N doped TiO_2 thin Films," *Mater. Today Proc.*, vol. 23, pp. 382–388, 2020, doi: 10.1016/j.matpr.2020.02.057.
7. **V.P. Kothavale**, C.M. Kanamadi, P.B. Patil, Synthesis and characterization of sprayed nitrogen doped TiO_2 Thin films, *Mater. Today Proc.* (2020) 2–5. doi:10.1016/j.matpr.2020.06.358.
8. **V. P. Kothavale**, V. C. Karade, P. P. Waifalkar, S. C. Sahoo, P. S. Patil, and P. B. Patil, "Removal of Cu(II) metal ions from aqueous solution by amine functionalized magnetic nanoparticles," in *AIP Conference Proceedings*, 2018, p. 050038. doi: 10.1063/1.5028669.
9. **V. P. Kothavale**, V. S. Mohite, V. P. Malekar, C. H. Bhosale, SYNTHESIS AND CHARACTERIZATION OF SPRAYED ZnO , Fe_2O_3 , AND $\text{Fe}_2\text{O}_3/\text{ZnO}$ THIN FILMS,

10. V.D. Chavan, **V.P. Kothavale**, S.C. Sahoo, P. Kollu, T.D. Dongale, P.S. Patil, P.B. Patil, Adsorption and kinetic behavior of Cu(II) ions from aqueous solution on DMSA functionalized magnetic nanoparticles, *Phys. B Condens. Matter.* 571 (2019) 273–279. doi:10.1016/j.physb.2019.07.026.
11. S. M. Nikam **V. P. Kothavale et al.**, “Nickel ion-doped vertical nanorod array network of ZnO engineered by chemical bath deposition for versatile NO₂ gas sensor,” *Journal of the Korean Ceramic Society*, vol. 62, no. 2, pp. 330–349, Mar. 2025, doi: 10.1007/s43207-024-00469-8.
12. V.S. Mohite, M.A. Mahadik, S.S. Kumbhar, **V.P. Kothavale**, A.V. Moholkar, K.Y. Rajpure, C.H. Bhosale, Photoelectrocatalytic degradation of benzoic acid using sprayed TiO₂ thin films, *Ceram. Int.* 41 (2015) 2202–2208. doi:10.1016/j.ceramint.2014.10.020.
13. V. P. Malekar Dr. V. J. Fulari , **V. P. Kothavale**, Characterization and holographic study of nanostructure copper Sulphide thin films Grown at om temperature, *INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY*,5 (2017/11) 148-151.
14. P. B. Patil and **V. P. Kothavale**, “Functionalized magnetic iron oxide-based composites as adsorbents for the removal of heavy metals from wastewater,” in *Advances in Metal Oxides and their Composites for Emerging Applications*, Elsevier, 2022, pp. 401–424. doi: 10.1016/B978-0-323-85705-5.00016-6.
15. T. S. Patil **V. P. Kothavale et al.**, “Structural, optical, morphological, and supercapacitive studies of electrophoretically deposited nanostructured Mn₃O₄ thin films,” *Thin Solid Films*, vol. 792, Mar. 2024, doi: 10.1016/j.tsf.2024.140252.
16. M. R. Charapale **V. P. Kothavale et al.**, “Enhancing capacitive performance of MoS₂ through Fe doping: Synthesis, characterization, and electrochemical evaluation for supercapacitor applications,” *Surfaces and Interfaces*, vol. 52, Sep. 2024, doi: 10.1016/j.surfin.2024.104814.
17. T. S. Patil **V. P. Kothavale et al.**, “Effect of Nickel (Ni) Ion Doping on the Morphology and Supercapacitive Performance of Mn₃O₄ Thin Films,” *J. Electron. Mater.*, vol. 53, no. 1, pp. 394–407, Jan. 2024, doi: 10.1007/s11664-023-10765-4.

B] Publication of Books :-

Sr. No.	Title with page nos.	Type of Book International /National / Chapter in Edited Book / Editor of Book by International / Editor of Book by National Publisher	Publisher & ISBN No.
1	Functionalized magnetic iron oxide-based composites as adsorbents for the removal of heavy metals from wastewater Pages :- 401-424	Book Chapter Book Name:- Advances in Metal Oxides and Their Composites for Emerging Applications Paperback: Elsevier publishing	Elsevier publishing ISBN: 9780323857055 eBook ISBN: 9780323857062
2	Experiments in physics (B.Sc. II)	International	Tejas Publication, Kolhapur. ISBN:- 978-81-908298-7-8
3	Electricity and Magnetism-I Physics (DSC-II : Paper – II)	National	Nirali Prakashan
4	Physics Practical -I & II B.Sc. Part-I Semester- I &II	National	Nirali Prakashan
5	Digital And Analog Circuits and Instrumentation Physics (DSE-E4): Paper-XII	National	Nirali Prakashan
6	Practical Physics B.Sc. Part-III Semester-V &VI	National	Nirali Prakashan
7	Waves and Optics-I Physics (DSC-C2): Paper-VI	National	Nirali Prakashan
8	Practical Physics-II B.Sc. Part-II Semester- III &IV	National	Nirali Prakashan