IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 4, Issue 2, March 2024

Synthesis and Characterization of Iron Bimetallic Nano Particles from Neolamarckiakadamba

Mrs. K. Bharathi, Mrs. D. Ganga Bhavani, Mr. M. Anand Kumar, Mrs. A. R. N. L. Sirisha
Assistant Professor, Department of Chemistry
Sir CRR College of Engineering, Eluru, India

Abstract: *This paper describes rapid, sensitive and specific method for the preparation ofbimetallic nano particles of Iron and Zincwhich are later used in various in pharmaceutical preparations and also in Electrochemical cellsfrom green compounds along with characterization techniques. The physicochemical properties of the bimetallic Fe–Zn nanoparticles were investigated via TEM, SEM-EDX, XRD, IRand BET surface area analysis. SEM analysis confirmed the presence of nanoparticle crystals useful for the determination of the porosity, particle shape, and size. Therefore, the morphology of the nanomaterial was spherical in shape, and the particle size was in the nano range.*

Keywords: Bimetallic Nano particles of Fe &Zn, Green synthesis, Characterization techniques IR, SEM

REFERENCES

[1].Agarwal, H., Kumar, S. V., & Rajesh kumar, S. (2017). A review on green synthesis of zinc oxide nano particles–An eco-friendly approach. Resource-Efficient Technologies.
[2].Karam, C., Habchi, R., Tingry, S., Miele, P., &Bechelany, M. (2018). Design of Multilayers of Urchin-like ZnO Nanowires Coated with TiO2 Nanostructures for Dye-Sensitized Solar Cells. ACS Applied Nano Materials.
[3].Kumari, R., Sahai, A., & Goswami, N. (2015). Effect of nitrogen doping on structural and optical properties of ZnO nanoparticles. Progress in Natural Science: Materials International, 25(4), 300-309.
[4].Rochman, N. T., &Akwalia, P. R. (2017, May). Fabrication and characterization of Zinc Oxide (ZnO) nanoparticle by sol-gel method. In Journal of Physics: Conference Series (Vol. 853, No. 1, p. 012041). IOP Publishing.
[5]. Datta, A., Patra, C., Bharadwaj, H., Kaur, S., Dimri, N., & Khajuria, R. (2017). Green synthesis of zinc oxide nanoparticles using partheniumhysterophorus leaf extract and evaluation of their antibacterial properties. Journal of Biotechnology and Biomaterials, 7, 271-275.
[6].Sutradhar, P., &Saha, M. (2016). Green synt M. Roosta *et al.* Experimental design based response surface methodology optimization of ultrasonic assisted adsorption of safaranin O by tin sulfide nanoparticle loaded on activated carbon Spectrochim. Acta, Part A (2014)
[7] R.K. Gautam *et al.* Kinetic, equilibrium, thermodynamic studies and spectroscopic analysis of Alizarin Red S removal by adsorption onto mustard husk