

Production and Utilization of Surface Engineered SPIONS for Enhanced Removal of Dye from Water †

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Abstract: SPIONs, being the only metal oxide nanoparticles clinically approved, have shown a great promise in the various clinical applications, including environmental remediation, specifically water treatment. In this study, SPIONs are produced by the chemical co-precipitation method used for dye removal studies, where isotherm kinetics were studied. In conclusion, it was shown that both naked and coated SPIONs successfully demonstrated the removal of crystal violet from the water, thereby enabling to apply SPIONs for the treatment of contaminated water with textile dyes.

Keywords: SPIONs; co-precipitation; isotherm; water treatment.

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Conflicts of Interest

The authors declare no conflict of interest.