

Schiff base as a Nanosorbent for Eliminating Lead from Contaminated Water

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Abstract

Schiff base was first created, and it was subsequently employed as a reducing and capping agent to create silver nanoparticles. Schiff base serves as a capping to stop silver oxide from overgrowing. Schiff base provides silver nanoparticles a new form, producing them in a distinctive manner. Spectral information from the ¹H nuclear magnetic resonance, mass spectra, were used to analyze the structure of schiff base. UV-Vis Spectroscopy was used to characterize the structure of silver nanoparticles in order to track how the surface plasmon band that emerges at (433.5) nm affects the formation of silver nanoparticles. In order to analyze the morphology of silver nanoparticles, scanning electron microscopy (SEM) was performed. In the image, silver nanoparticles with sizes between 50 and 100 nm have spherical shapes. Energy dispersive x-ray spectroscopy EDX was also employed the spectra shows silver at 49.4% in the specimen. Dynamic light scattering (DLS) prove that prepared silver nanoparticles in nano size. The prepared sample schiff base coated nanoparticles was applied for adsorption lead from polluted water and the percentage of adsorption was 74.34.