

Anti-Microbial Activity of Ag-N Co-Doped ZnS and ZnS-Fe₂O₃ Composite Nanoparticles

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Abstract : Ag-N co-doped ZnS and ZnS/Fe₂O₃ composite nanoparticles have been synthesized by chemical and sol-gel methods. As-synthesized nanomaterial have been characterized by XRD and TEM techniques and their antimicrobial effects were studied using paper disc diffusion technique against gram positive (Staphylococcus aureus) and gram negative (Escherichia coli) bacteria. As-synthesized nanomaterial showed potent antimicrobial activity against studied bacterial strains. Antimicrobial activity of synthesized nanomaterial has also been compared with some commonly used antibiotics.

Keywords : antibiotic, Escherichia coli, nanomaterial, TEM, Staphylococcus aureus

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