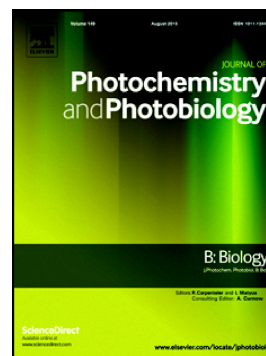


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Improved Conductivity and Antibacterial activity of poly(2-aminothiophenol)-silver nanocomposite against human pathogens

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Abstract

A rapid and simple chemical synthesis of poly(2-aminothiophenol)-silver (P2ATP-Ag) nanocomposite using conductive and electroactive silver nanoparticles (AgNPs) is reported. The AgNPs was synthesized by chemical reduction method using tri-sodium citrate as reducing agent and poly(N-vinyl-2-pyrrolidone) (PVP) as stabilizing agent. P2ATP-Ag nanocomposite was synthesized by using potassium peroxodisulphate as oxidant and the samples were characterized. The presence of AgNPs in the composite was confirmed from UV-Vis, FTIR and X-ray diffraction studies. Morphology of the P2ATP and its composite were investigated by SEM. HR-TEM images show spherical, trigonal and rod like morphologies with sizes of Ag nanoparticles and its composite. Thermal analysis revealed

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