

Synthesis, characterization and visible light photocatalytic activity of PANI modified TiO₂/Cu nanocomposite

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TiO₂ was synthesized by hydrolysis of tetra ethyl ortho titanate at room temperature in presence of ammonia. TiO₂/Cu was prepared by conventional impregnation method. PANI modified TiO₂/Cu was prepared by chemical oxidative polymerization method. The synthesized composite was characterized by X-ray diffraction analysis (XRD), Fourier transform infrared spectroscopy (FT-IR), Diffuse Reflectance Ultraviolet-Visible Spectroscopy (DRS-UV-Vis) and UV-Visible spectroscopy. It is found that composite exhibits excellent photocatalytic activity towards photodegradation of organic dye under visible light.

Keywords: Polyaniline, titania, photocatalyst, nanocomposite, organic dye.