

Biosynthesis of silver nanoparticles using *Piper nigrum* and its application in the photocatalytic degradation

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Stable silver nanoparticles (AgNPs) were synthesized from the leaf extract of *Piper nigrum*. It is a simple and environmentally benign method. The successful formation of AgNPs was characterized by UV-Visible spectroscopy (UV-Vis) at 447 nm and Scanning electron microscope (SEM) studies showed that the synthesized stable AgNPs was spherical in nature. The synthesized AgNPs has exhibited good photocatalytic properties in the degradation of dye (methyl orange).

Keywords: *Piper nigrum*, leaf extract, AgNPs, photocatalytic degradation, methyl orange.