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# Biosynthesis of silver nanoparticles by using *Camellia japonica* leaf extract for the electrocatalytic reduction of nitrobenzene and photocatalytic degradation of Eosin-Y

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## Highlights

- Green synthesize of Ag-NPs prepared from the leaves of *Camellia japonica extract*
- The Ag-NPs was confirmed by XRD and morphology was studied by TEM analysis
- The Ag-NPs showed excellent electrocatalytic activity towards nitrobenzene reduction
- Photocatalytic activity was performed using Ag-NPs for the Eosin-Y dye
- Photocatalytic Eosin-Y dye degradation was found to be > 97%

## Abstract

In the present study, sphere-like silver nanoparticles (Ag-NPs) were synthesized by using *Camellia japonica* leaf extract and its remediation industrial pollutants such as nitrobenzene and Eosin-Y (EY). As-prepared sphere-like Ag-NPs were characterized