

Nanochemistry and biotechnology

Synthesis of silver nanoparticles using Iranian violaceae flower Pharmaceutical plant

Sh. Mohseni

*Department of chemistry, Quchan Branch, Islamic Azad University, Quchan, Iran.
E-mail: sh_mohseni2003@yahoo.com*

Nanotechnology is a principally attractive area of research related with production of variable sizes, shapes, chemical compositions, disparity and their possible application for human being benefits. Creation, manipulation and utilization of metallic nano particles, because of reduction of materials dimensions, affect on the physical properties and results in displaying extraordinary thermal, electronic and optical properties of nano materials. The biological approaches to synthesis of nanoparticles are better than chemical and physical procedures because of low energy and time expenditure. In this study, biosynthesis of stable silver nanoparticles was done by using extract of Iranian violaceae flower. The formation of the silver nanoparticles was observed within 30min at room temperature. Precise size of nanoparticles measured by Particle Size Analysis (PSA) between 44 – 1000 nm. UV-visible spectroscopy was used to monitor the quantitative formation of silver nanoparticles. The results recorded from scanning electron microscopy (SEM) support biosynthesis of silver nanoparticles. The biological synthesis methods are environmentally safer than other methods of synthesis of nanoparticles because they are without toxic products.