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## The use of green synthesized silver nanoparticles on leather

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The present work shows the determination of total phenolic compounds in plant leaves extract of *Azadirachta indica*, *Conocarpus erectus* and *Nerium indicum* and then Silver nanoparticles (Ag NPs) were prepared by using plant leaf extract as reductant and their application on leather. Ag NPs were characterized by SEM (Scanning Electron Microscope) and XRD (X-Ray Diffractometer) methods. The size of Ag NPs size was assessed in the limit of 30-80 nm. UV-Visible spectroscopy and SEM was used to confirm that Ag NPs were set down on the collagen fibers surface and inner side of the skin collagen matrix of fibers (leather). The antibacterial and antifungal effect of Ag NPs was assessed by general microbiological test for seven days. The result showed power full strength of silver nanoparticles against bacterial or fungal attack for long duration of time. This permits us to deliberate the assimilation of these nanoparticles into leather as a feasible substitute of other than commercially available expensive products in order to gain leather with enhanced antimicrobial properties.

### Biography

Kashif Ahmed is currently working as an Associate Professor, Department of Chemistry, NED University of Engineering and Technology, Karachi, Pakistan. He has about 20 years of research and teaching experience. He also worked as a Lecturer in Chemistry at Collegiate branch of Education and Literacy Department, Government of Sindh, Pakistan. He is the author of 35 publications in various national and international journals.

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