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EFFECT OF LASER WAVELENGTH ON THE FABRICATION OF GOLD NANOPARTICLES BY LASER ABLATION

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ABSTRACT

In this work gold nanoparticles has been prepared via ablation of pure Au metal target in doubled distilled water was accomplished using Q-switched Nd:YAG pulse width 10 ns energy was 700 mJ number of shots was 90 shot at different laser wavelength(532 nm and 1064 nm) The effect of laser wavelength on the optical and surface morphology have been studied the result showed decrease in particle size when the wavelength of laser increase and UV-Visible result show a blue shift in the absorption spectra when the wavelength is increase.

KEYWORDS: Gold Nanoparticle, Laser Ablation, Laser Wavelength, Noble Metals Nanoparticles & Size