



Iranian Journal of Physics Research, Vol. 21, No. 1, 2021  
DOI: 10.47176/ijpr.21.1.71098

## The study of optical bistability in a hydrodynamic metallic nanoparticle

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(Received 26 July 2020 ; in final form 25 November 2020)

### Abstract

In this paper, the optical bistability in a plasmonic nanoparticle by using the hydrodynamic model for conduction electrons is investigated. It is shown that the optical bistable threshold, the bistable region and the shape of optical hysteresis are dependent on the surrounding medium dielectric constant, and the material of plasmonic nanoparticles.

**Keywords:** optical bistability, plasmonic nanoparticle, hydrodynamic model

For full article, refer to the Persian section