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Title:	Synergistic effect of Fano resonance and optical nonlinearity in laser trapping of silver nanoparticles
Authors:	Yadav, Sumit (/jspui/browse?type=author&value=Yadav%2C+Sumit) Devi, A. (/jspui/browse?type=author&value=Devi%2C+A.) De, A.K. (/jspui/browse?type=author&value=De%2C+A.K.)
Keywords:	Synergistic ano resonance optical nonlinearity laser trapping
Issue Date:	2020
Publisher:	American Physical Society
Citation:	Physical Review A, 102(4)
Abstract:	Optical trapping efficiency for silver nanoparticles is theoretically estimated using dipole approximation and generalized Lorenz-Mie theory, including higher-order optical nonlinear effects. Here, we show a reversal in asymmetry of axial trapping potential due to Fano resonance is observed, along with a splitting of trapping potential well due to optical nonlinearity. Further, it is shown that there exists a limit for particle size beyond which the particle cannot be trapped and how this limit can be extended by harnessing optical nonlinearity under femtosecond pulsed excitation
URI:	<a href="https://journals.aps.org/pr/abstract/10.1103/PhysRevA.102.043511">https://journals.aps.org/pr/abstract/10.1103/PhysRevA.102.043511</a> ( <a href="https://journals.aps.org/pr/abstract/10.1103/PhysRevA.102.043511">https://journals.aps.org/pr/abstract/10.1103/PhysRevA.102.043511</a> ) <a href="http://hdl.handle.net/123456789/3284">http://hdl.handle.net/123456789/3284</a> ( <a href="http://hdl.handle.net/123456789/3284">http://hdl.handle.net/123456789/3284</a> )
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