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Title:	Nonlinear Splitting of Optical Trap of Metallic Nanoparticles
Authors:	Devi, A. (/jspui/browse?type=author&value=Devi%2C+A.) Nair, S.S. (/jspui/browse?type=author&value=Nair%2C+S.S.) De, A.K. (/jspui/browse?type=author&value=De%2C+A.K.)
Keywords:	Nanoparticles OKE Femtosecond
Issue Date:	2019
Publisher:	Institute of Electrical and Electronics Engineers
Citation:	2019 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2019
Abstract:	Recently, the role of ultrafast pulsed excitation in laser trapping of dielectric nanoparticles has been explored [1-4] and it was observed that optical Kerr effect (OKE) plays an important role in determining the stability of the trap [2-4]. Here, we theoretically investigate trapping behaviour of metallic (silver) nanoparticles and studied the effect of OKE (up to sixth order) under high repetition-rate femtosecond pulsed excitation. We observe that the trapping potential well splits into two wells along axial direction, enabling the study of long-range interaction between the metal nanoparticles.
URI:	<a href="https://ieeexplore.ieee.org/abstract/document/8871799">https://ieeexplore.ieee.org/abstract/document/8871799</a> ( <a href="https://ieeexplore.ieee.org/abstract/document/8871799">https://ieeexplore.ieee.org/abstract/document/8871799</a> ) <a href="http://hdl.handle.net/123456789/2003">http://hdl.handle.net/123456789/2003</a> ( <a href="http://hdl.handle.net/123456789/2003">http://hdl.handle.net/123456789/2003</a> )
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