

Novel Design of Quantum Dot Arrays to Enhance Near-Fields Excitation Resonances

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Abstract : Semiconductor crystals smaller than about 10 nm, known as quantum dots, have properties that differ from large samples, including a band gap that becomes larger for smaller particles. These properties create several applications for quantum dots. In this paper, new shapes of quantum dot arrays are used to enhance the photo physical properties of gold nanoparticles. This paper presents a study of the effect of nano-particles shape, array, and size on their absorption characteristics.

Keywords : quantum dots, nano-particles, LSPR

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