

Abstract Submitted
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Electromagnetic Contribution to Enhanced Raman Scattering from a Metal Nanoshell Dimer¹ KE ZHAO, University of Tennessee, ZHENYU ZHANG, Oak Ridge National Laboratory & University of Tennessee — We present a theoretical framework for calculating the electromagnetic contribution to enhanced Raman scattering from a metal nanoshell dimer, using time dependent local density approximation within density functional theory, and going beyond existing dipole excitation treatments. When applied numerically to silver and gold nanoshell dimers, we obtain results that can be compared with those derived from classical electrodynamics, which in turn allows to test the validity of using local dielectric functions to describe nanoshell dimers.

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