

Single Particle Spectroscopic Studies on Two-photon Photoluminescence of Coupled Au Nanorod Dimers

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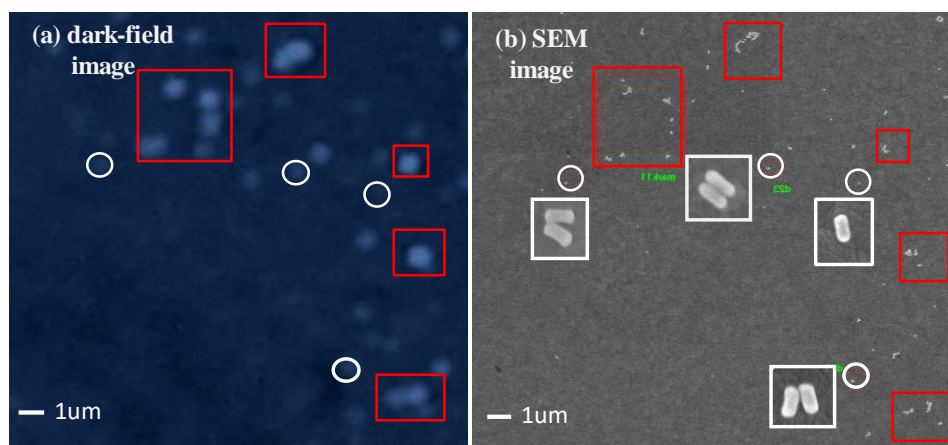


Figure S1. Pattern matching between dark-field scattering image (a) and SEM image (b).

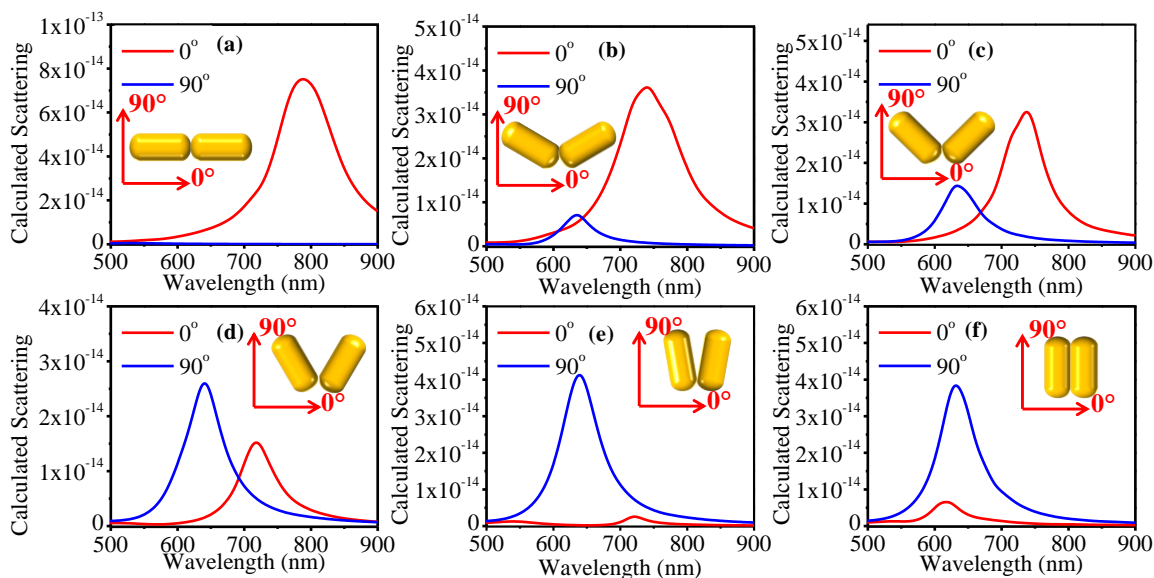


Figure S2. Calculated scattering spectra of Au NR dimers of different geometries under $\theta=0^\circ$ and $\theta=90^\circ$ polarizations.

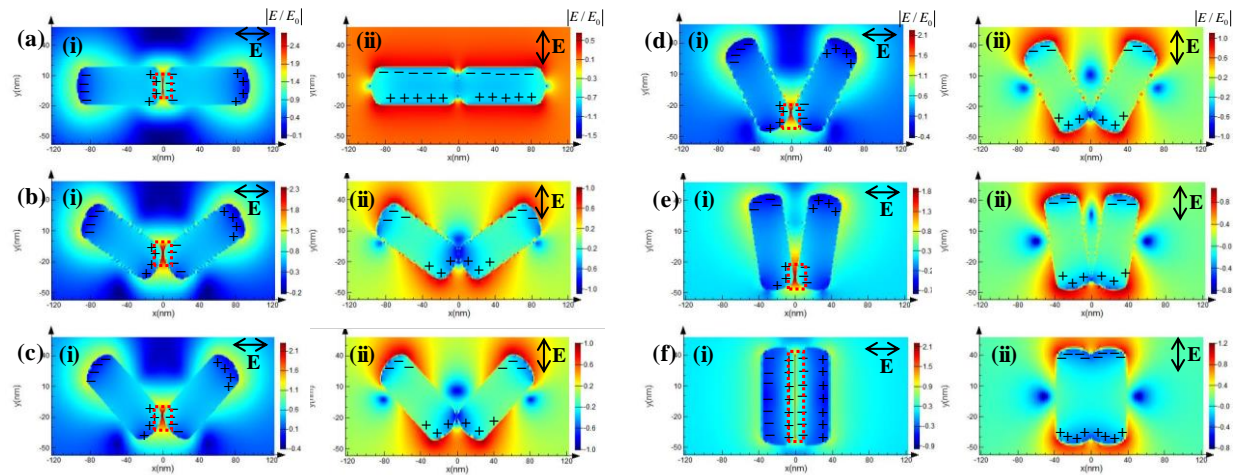


Figure S3. (a-f) Log-plot of E-field ($|E/E_0|$) enhancements and the associated charge distribution of Au NR dimers under 0° (i) and 90° (ii) polarizations.

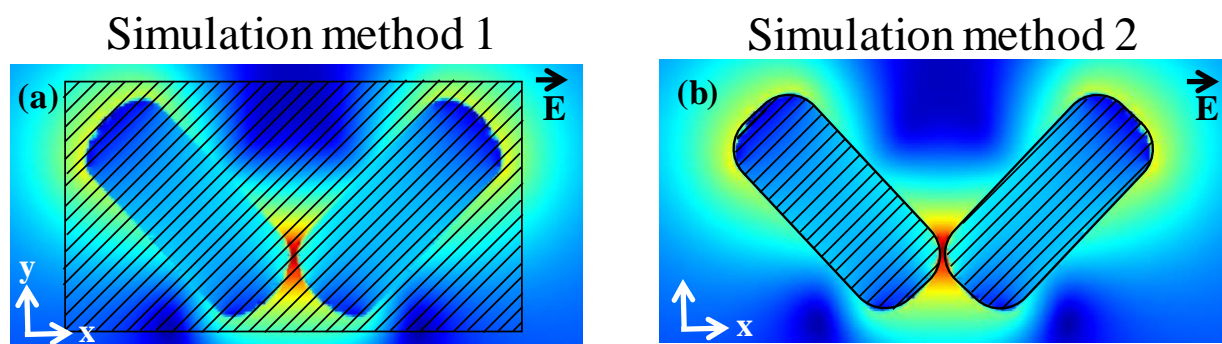


Figure S4. Graphic illustrations of FDTD simulation method 1 (a) and method 2 (b) for Au NR dimers. 2-dimensional integration was performed over the patterned areas as shown on the electric-field plots during electric-field calculations. 2-dimensional integral of E-field using method 1 was performed over a rectangular region on the X-Y plane that bisects the Au NRs through its center, which takes into account of both the metal nanoparticles and a part of surrounding region. 2-dimensional integration of E-field by method 2 was performed only over the metal nanoparticles, which includes the interior and the outer surface of the metal nanoparticles.