Modeling of 3D Optical Antenna Using Method of Auxiliary Sources

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Research paper presents investigation of optical nanostructures. Optical antennas are very attractive for modern devices that are expected to have a strong impact on future developments in the area of high density integration, communication technology, and bio-medical equipment. It is demonstrated that difficult numerical problems are caused because optical antennas exhibit strong material dispersion, loss, and plasmon-polariton effects that require a very accurate numerical simulation (Figure 1, Figure 2).
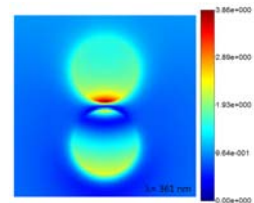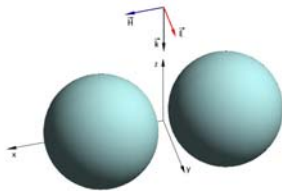
Figure 1 Geometry of coupled metallic nanoparticles.   Figure 2 Near field distributions at the different wavelength

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