

Erratum: “Radiative heat transfer between metallic nanoparticles” [Appl. Phys. Lett. 92, 201906 (2010)]

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We correct Fig. 3 of our article [Appl. Phys. Lett. 92, 201906 (2008)]. None of the conclusions of the article are affected but the correct exchanged power between nanoparticles is now given.

In our article entitled “Radiative heat transfer between metallic nanoparticles” [Appl. Phys. Lett. 92, 201906 (2008)]¹ we plotted erroneous curves in Fig. 3. These two curves have to be replaced by the new ones, here labeled as Fig. 1.

None of the conclusions of the mentioned article are affected, but the correct power levels are now calculated and shown in Fig. 1. One can note additionally that the power range is higher for the dielectric particles than for the metallic ones. In addition, in the case of the metallic particles, one can observe that the electric and magnetic power are not strongly different.

In summary, we replace erroneous figures and give now the correct power due to the heat exchanged between nanoparticles.

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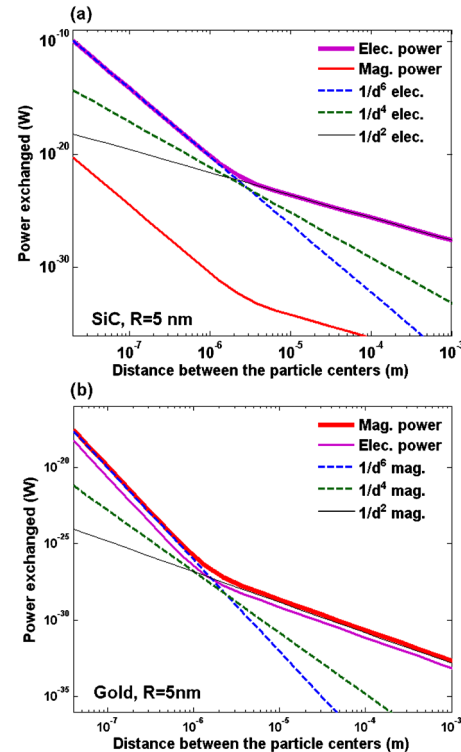


FIG. 1. (Color online) Radiative power exchange between two (a) SiC and (b) gold nanoparticles of 5 nm radii, one being at 300 K and the other at 400 K. Dielectric-particle's relative permittivities are assimilated to a Lorentz model $\varepsilon = \varepsilon_\infty [1 + (\omega_L^2 - \omega_T^2) / (\omega^2 - \omega_T^2 - i\Gamma\omega)]$ (Refs. 2 and 3) and metallic-particle ones are assimilated to a modified Drude model $\varepsilon = 1 - \omega_p^2 / \{\omega[\omega + i(\nu_0 + A v_F / R)]\}$. v_F as the Fermi velocity, and A as a constant on the order of unity, account for confinement effects (see Ref. 4 for parameters).

¹P.-O. Chapuis, M. Laroche, S. Volz, and J. J. Greffet, *Appl. Phys. Lett.* 92, 201906 (2008).

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