

**NEAR-FIELD RADIATIVE HEAT TRANSFER BETWEEN CLUSTERS OF  
DIELECTRIC NANOPARTICLES**

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**ABSTRACT.** We calculated near-field radiative thermal conductance between clusters of silicon carbide nanoparticles using the many-body radiative heat transfer theory. The compact clusters have larger conductance than that of lacy ones in the near-field. The conductance will be overestimated dramatically by the equivalent volume sphere, whereas underestimated if the interference among nanoparticles is neglected. The conductance becomes insensitive to the morphology of clusters in the far-field. The relative orientation between the clusters is also an important factor in the near-field.