



Tailoring Mid InfraRed Radiation at the nanoscale



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Abstract

With the advent of fabrication and imaging at the nanoscale, many unexpected properties of thermal radiation have been explored in the last twenty years. The first part of the talk will be devoted to a review of key features including spatial coherence of incandescent sources, temporal coherence of incandescent sources in the near field, enhanced energy density in the near field, enhanced radiative heat transfer at the nanoscale, validity of a local permittivity at the nanoscale. In the second part of the talk, recent results on an incandescent source that can be modulated beyond 10MHz, six orders of magnitude faster than commercially available hot membranes, will be presented.

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