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Radiative Heat Transfer in Linear Chains of SiC Nanoparticles LUCAS WEBSTER, STEPHEN SANDERS, University of New Mexico, VINCENZO GIANNINI, Spanish National Research Council (CSIC), DIEGO A. R. DALVIT, WILTON J. M. KORT-KAMP, Los Alamos National Laboratory, ALEJANDRO MANJAVACAS, University of New Mexico — The transfer of heat through radiation plays a crucial role in the thermalization of nanoscale objects thanks to the involvement of evanescent waves. Therefore, the understanding of this phenomenon is critical for the development of novel nanoscale devices. Here, we investigate the thermalization of linear chains of spherical SiC nanoparticles. To that end, we develop an analytical approach that allows us to calculate the natural thermalization modes of the system, together with their corresponding decay rates. Using this approach, we analyze the time evolution of the temperature distribution of different structures.

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