Seminar

Prof. Rupert Frank

Caltech

Derivation of an effective evolution equation
for a strongly coupled polaron

Monday, July 20, 2015

at 16:00 h

ESI, Boltzmann Lecture Hall

Abstract: Fröhlich's polaron Hamiltonian describes an electron coupled to the quantized phonon field of an ionic crystal. We show that in the strong coupling limit the dynamics of the polaron is approximated by an effective non-linear partial differential equation due to Landau and Pekar, in which the phonon field is treated as a classical field.

L. Erdoes, R. Seiringer, S. Warzel

July 15, 2015