

Abstract Submitted
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Modeling pump-probe spectroscopy in systems with electron-phonon coupling¹ ALEXANDER F. KEMPER, BRIAN MORITZ, THOMAS P. DEVEREAUX, Stanford University — In pump-probe experiments, the electronic system is driven out of equilibrium by the application of a strong electric field. Phonons are of critical importance in returning the system to its original state, as they dissipate the energy introduced by the field. Using the non-equilibrium Keldysh formalism, we study how phonons affect the electronic current and energy in the Migdal limit, for both pulsed and continuous fields, and how this affects various spectroscopic measurements. Finally, we consider charge density- wave systems and their behavior in pump-probe experiments.

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