

Abstract Submitted
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The Holstein polaron: beyond the standard model CARL J. CHANDLER, FRANK MARSIGLIO, University of Alberta — The paradigm for describing the polaron is the Holstein model, where only local interactions between the electron and optical phonon modes are considered. We present several variants of this model and discuss the impact on various observables, such as the effective mass. Possible variations include further than nearest neighbour hopping, longer range interactions, and even models that go beyond the Holstein/Frohlich coupling, i.e. the BLF/SSH (Barisic-Labbe-Friedel/Su-Schrieffer-Heeger) model. Recent progress on these models will be described.

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