

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Polarization model revisited MICHAEL GALPERIN, Los Alamos National Laboratory, ABRAHAM NITZAN, Tel Aviv University, MARK A. RATNER, Northwestern University — We revisit a polaron model proposed by us as a possible mechanism for nonlinear conductance, and discuss difference in polaron formation within isolated system vs. molecular junction situation. Within one-level model we present approximate expression for electronic Green function corresponding to inelastic transport case, which in appropriate limits reduces to expressions presented previously for isolated molecule and for molecular junction coupled to slow vibration (static limit). Relevance of the isolated molecule-type consideration to describe properties of molecular junctions is discussed.

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Date submitted: 29 Nov 2007

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