

Charging Effect On Transport Through A Nonlinear Impurity

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Summary

We use a generalized discrete nonlinear Schrodinger (DNLS) equation to describe tunnelling through a single magnetic impurity connected to two perfect leads, in the presence of a magnetic field. The charge build up at the impurity site is taken into account through the use of a self consistent Hartree approach. The transmission and conductance through the localized impurity is being considered in the presence of both local nonlinear interaction and a magnetic field which lifts the spin degeneracy at the impurity site. (C) 2004 Elsevier B.V. All rights reserved.

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