Exact ground-state behavior of a four-atom generalized Hubbard model

Rössler, J.

Fernndez, B.

Kiwi, M.

The exact ground state of a four-atom system described by the generalized form of the Hubbard Hamiltonian is obtained. Next, the solution is used to extract relevant physical information on the dynamics of the cluster states and also to check on the applicability and validity of approximations commonly invoked in the treatment of Hubbard-type models. © 1981 The American Physical Society.