

PROSPECTIVE OF QUANTUM INFORMATION

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Abstract

In this communication we discuss different aspects of Bioinformatics models and its application quantum information and quantum computer. We focus on the dynamics of charge qubits coupled to a nanomechanical resonator under influence of both a phonon bath in contact with the resonator and irreversible decay of the qubits. Even in the presence of environment, the inherent entanglement is found to be rather robust. Due to this fact, together with control of system parameters, the system may therefore be especially suited for quantum computer. Our findings also shed light on the evolution of open quantum many-body systems.

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