Excitation transfer in a three-site spin chain; global vs local approach

L Memarzadeh

Department of Physics, Sharif University of Technology, Tehran, Iran

E-mail: memarzadeh@sharif.edu

Abstract

We study excitation transfer in a spin chain in presence of noise. To model noise, we assume that each qubit of the spin chain is interacting with a Bosonic environment and has Markovian evolution. We derive the explicit form of master equation both in global and local approaches. Comparing the results of each approach, we discuss the noise effect on excitation transfer and in addition to that we show that the results of local approach are not a limiting case of global approach.

For full article, refer to the Persian section