Exact Solutions of Two Coupled Harmonic Oscillators Related to the Sp(4,R) Lie Algebra

 PAN Feng and DAI Lian-Rong

Department of Physics, Liaoning Normal University, Dalian 116029, China
(Received: 2000-7-25; Revised:)

Abstract: Exact solutions of the eigenvalue problem of two coupled harmonic oscillators related to the Sp(4,R) Lie algebra are derived by using an algebraic method. It is found that the energy spectrum of the system is determined by one-boson excitation energies built on a vector coherent state of Sp(4,R)\supset U(2).

[Full text: PDF]

Close