Magnetic polaron in quantum well

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Abstract: The zero temperature state of electron strongly interacting with localized spins in quantum well (QW) (magnetic polaron in QW) is studied using double-exchange model and variational method. The numerical calculation shows that the ground state binding energy of magnetic polaron in QW well is lower than that in one dimension (1D) case. ?? 2006 Elsevier B.V. All rights reserved. Author Keywords: Double exchange; Magnetic polaron; Quantum well Index Keywords: Binding energy; Electron energy levels; Magnetism; Numerical methods; Semiconductor quantum wells; Double exchange; Magnetic polarons; Variational method; Polarons

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