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Double Transition Effect in Anderson Transition

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Abstract: In this work we have studied the electronic mobility μ within a completely disordered lattice system by using the strong interatomic hopping potential V(r) = (- {\frac{{r}}{{a_o} }}) \exp(- r / a_o) for site representation of the Hamiltonian. It is shown that a metallic system of a completely disordered lattice first goes insulating and then goes back to metallic again at higher atomic density ρ .

Key Words: Anderson Transition, Double Transition Effect

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