

Scattering for Entangled State Switching in Molecular Dimers

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A Green's function solution to the one dimensional steady state spin scattering problem is introduced. Physical realizations of constructive quantum interference are demonstrated as a means of detecting entanglement. The physical origin of switching between unentangled and maximally entangled states in the scattering picture is clarified and extended to a number of systems. Scattering as a vehicle for entanglement preparation is demonstrated in a realistic molecular system.