

Entanglement of the diamond spin cluster

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The entanglement of diamond spin systems in thermodynamic equilibrium has been studied in various papers (for, example, [1, 2, 3, 4]). We focus on the evolution of entanglement in a diamond spin-1/2 cluster. This cluster consists of two central spins described by the anisotropic Heisenberg model, which interact with two side spins via an Ising interaction. The influence of the interaction coupling with the side spins on the entanglement of the central spins is investigated [5, 6]. It is demonstrated that the behavior of entanglement between the central spins can be controlled by choosing the appropriate value of this coupling. Additionally, we examine the influence of a bosonic bath on the entanglement of the central spins.

References

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