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Entanglement Dynamics of Multipartite Systems Under Decoherence from a Spin Environment

XIE Guo-Qiu,[1,2] WANG An-Min,[1] and MA Xiao-San[1]

[1] Department of Modern Physics, University of Science and Technology of China, Hefei 230026, China
[2] Department of Electronic Information and Engineering, Huangshan University, Huangshan 245000, China
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Abstract: The entanglement evolution of multipartite quantum states under a spin environment is analyzed. Due to interaction, the extent to which the entanglement vanishes depends not only on the size of system and the structure of quantum states, but also on the exchange couplings with environment. The decoherence-free subspaces have been identified by using the linear entropy.

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