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Authors:Liu, R.Y. (1); Zuo, J.W. (1); Li, Y.R. (1); Zhou, Y.R. (1); Wang, Y.P. (1)
Author affiliation:(1) Chinese Acad Sci, Inst Phys, Beijing Natl Lab Condensed Matter Phys, Beijing 100190, Peoples R China
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Abstract:Frequency-domain terahertz transmission spectra of Mn-3 and Mn-12 single molecule magnets (SMMs) have been measured at different temperatures, and hence the anisotropic parameters D (2) and D (4) of the spin Hamiltonian have been calculated. For Mn-12 SMM, D (2)=-10.9 GHz and D (4)=-2.59x10(-2) GHz, while for Mn-3 SMM, D (2)=-22.0 GHz and D (4) can be considered negligible. This suggests Mn-3 SMM can be considered as a simpler and more suitable candidate for magnetic quantum tunneling research.
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