

Abstract Submitted
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Spin Tunneling in a Rotating Nanomagnet MICHAEL O'KEEFFE,
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LEHMAN COLLEGE THEORETICAL CONDENSED MATTER PHYSICS
TEAM — We study spin tunneling in a magnetic nanoparticle with biaxial
anisotropy that is free to rotate about its anisotropy axis. Exact instanton of the cou-
pled equations of motion is found that connects degenerate classical energy minima.
We show that mechanical freedom of the particle renormalizes magnetic anisotropy
and increases the tunnel splitting.

M. F. O'Keeffe and E. M. Chudnovsky, cond-mat, arXiv:1011.3134.

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