

Abstract Submitted
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Theory of Brillouin Light Scattering from Ferromagnetic Nanospheres¹ PING CHU, DOUGLAS MILLS, University of California, Irvine
— We develop the theory of Brillouin light scattering (BLS) from spin waves in ferromagnetic nanospheres, within a framework that incorporates the spatial variation of the optical fields within the sphere. Through use of our recent theory [1] of exchange dipole spin wave modes of the sphere, we develop a method which properly normalizes the eigenvectors. We then describe the BLS spectrum associated with the first few dipole/exchange spin wave modes with emphasis on their relative intensity. We also discuss the stokes/anti stokes ratio.

References:

[1] Rodrigo Arias, Ping Chu and D. L. Mills, Phys. Rev.B71, 224410 (2005).

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