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Theory of quasienergetic phenomena in nuclear gamma resonance

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Abstract

An analysis is conducted of the resonance scattering of γ quanta when a ferromagnet scatterer experiences a single exposure to a strong radiofrequency field which is at resonance with respect to the Zeeman system of nuclear sublevels. The role of the quasienergetic spectrum arising in these conditions (analogous to the effect of a strong field in optics) in the formation of a scattering spectrum and, in particular, the intensity of the additional lines is demonstrated. The relation of the results obtained to those of other workers is discussed. © 1982 Plenum Publishing Corporation.

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