

Abstract Submitted
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The effect of spin fluctuations on scattering rates in diluted magnetic semiconductors¹ MATTHEW MOWER, GIOVANNI VIGNALE, University of Missouri — We study the scattering rate of carriers due to large spin fluctuations in diluted magnetic semiconductors near the ferromagnetic transition. Both the carrier-impurity and carrier-carrier scattering rates are considered. We calculate an enhancement of the carrier resistivity when crossing from the paramagnetic to ferromagnetic regimes. The enhanced resistivity has a noticeable impact on spin lifetimes from the Dyakonov-Perel and Elliott-Yafet spin relaxation mechanisms.

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