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Evaluation of Spin Relaxation Time by Polarization- and Time-Resolved Pump and Probe Measurements

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Polarization- and time-resolved pump and probe (PP) measurements were performed to observe spin superposition in GaAs/AlGaAs multiple quantum wells (MQWs). We used a linearly polarized right for pump light under resonant excitation condition. Order of the relaxation times were very close to that of the spin superposition obtained by polarization- and time-photoluminescence (PL) measurements and dependence on quantum confinement energy also showed same trend as that of the PL measurement.

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