

VIII-L Rotational Echo Double Resonance (REDOR) Experiments with Overtone Adiabatic Inversion Pulses

The effect of an overtone adiabatic inversion pulse on solid-state ^{14}N spins was investigated.

VIII-L-1 The Observation of REDOR Phenomena for Solid-State ^{13}C - ^{14}N Spin Systems with the Help of Overtone Adiabatic Inversion Pulses

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We applied overtone adiabatic inversion pulses to ^{13}C - ^{14}N spin systems in powdered *L*-alanine undergoing MAS in order to observe REDOR phenomena. The damping of ^{13}C resonance line intensities was compared with that corresponding to the REDOR experiments with normal RF pulses having a constant frequency. We tried to establish the theoretical treatment for the REDOR experiments with adiabatic inversion pulses. The computer simulations for the REDOR experiments revealed that overtone adiabatic pulses had little dependence on the offsets of rf carrier frequencies.