

The Frequency Offset Effects of NQR of Spin $I = 1$ for Remote Detection

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The frequency offset effects of the signal interference during steady-state pulse sequences for remote nuclear quadrupole resonance (NQR) of ^{14}N nuclei were investigated for the purposes of optimization in remote NQR. The experimental investigations with the separation of interfering NQR signals in sequences for observing signals $\{\alpha^{0^\circ}|\beta^{90^\circ} - \tau - \alpha^{180^\circ}|\beta^{90^\circ} - \tau\}$ and $\{\alpha^{0^\circ}|\beta^{90^\circ} - \tau - \alpha^{0^\circ}|\beta^{270^\circ} - \tau\}$ were carried out. The applications of the spherical tensor method for pure NQR of spin $I = 1$ for the investigation of these sequences and one pulse sequence, two pulse sequences are presented, too.

Key words: NQR; Frequency Offset; Multipulse Sequences; FID; Echo; Interference Signal.