

³⁵Cl NQR in Glassy Crystal of 2-chlorothiophene

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Stable crystalline 2-chlorothiophene has two glass transitions at 164 and 186 K. ³⁵Cl NQR measurements were carried out between 77 and 200 K. Two NQR signals with full widths of about 100 kHz at half maximum were observed in this temperature range. The spin-lattice relaxation times T_1 were measured at the two peak frequencies. The activation energy $\Delta\varepsilon_a$ obtained from the results of the T_1 measurements showed a fairly good agreement with those estimated from calorimetric measurements.

Key words: NQR; 2-chlorothiophene; Glassy Crystal; Glass Transition.