

69 C₅H₆NBF₄

69A Pure compound

No. 69A-1 C₅H₆NBF₄, Pyridinium tetrafluoroborate

(*M* = 166.91)

1a	Ferroelectricity in C ₅ H ₆ NBF ₄ was reported by Czarnecki et al. in 1994.			94Cza	
b	phase	III	II	I	94Cza
	state		F		
	crystal system			trigonal ^{a)}	^{a)} 89Was
	space group			R $\bar{3}m - D_{3d}^5$ ^{a)}	
	θ [°C]	205		240	
3a	Unit cell parameters: $a = 5.626(15)$ Å, $\alpha = 97.51(10)^\circ$ at $T = 253$ K.				89Was
b	$Z = 1$ in phase I.				89Was
5a	Dielectric constant: Fig. 69A-1-001, Fig. 69A-1-002.				
c	Spontaneous polarization and coercive field from hysteresis loop at $T = 237$ K: $P_s = 1 \cdot 10^{-3}$ C m ⁻² , $E_c = 8 \cdot 10^4$ V m ⁻¹ .				94Cza
6	Thermal analysis: see				94Cza
13a	NMR: Fig. 69A-1-003, Fig. 69A-1-004.				
14a	Neutron diffraction spectra: Fig. 69A-1-005.				

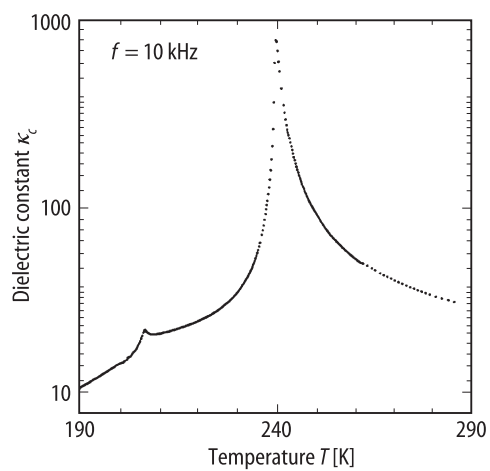


Fig. 69A-1-001. C₅H₆NBF₄. κ_c vs. T [94Cza].

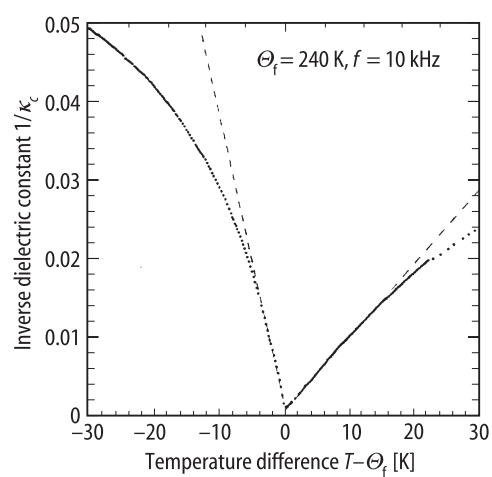


Fig. 69A-1-002. C₅H₆NBF₄. κ_c^{-1} vs. $T - \Theta_f$ [94Cza].

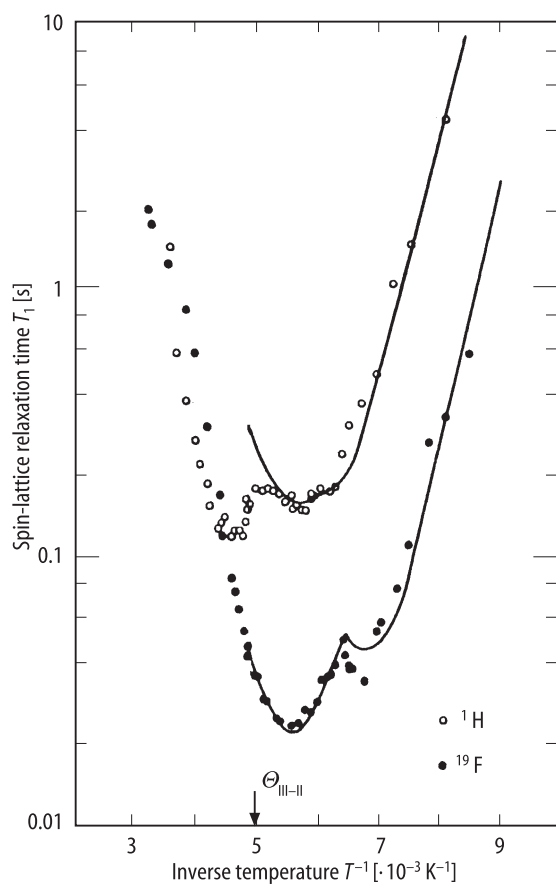


Fig. 69A-1-003. C₅H₆NBF₄. T_1 vs. T^{-1} [90Was]. T_1 : spin-lattice relaxation time. Open circle: ^1H , full circle: ^{19}F .

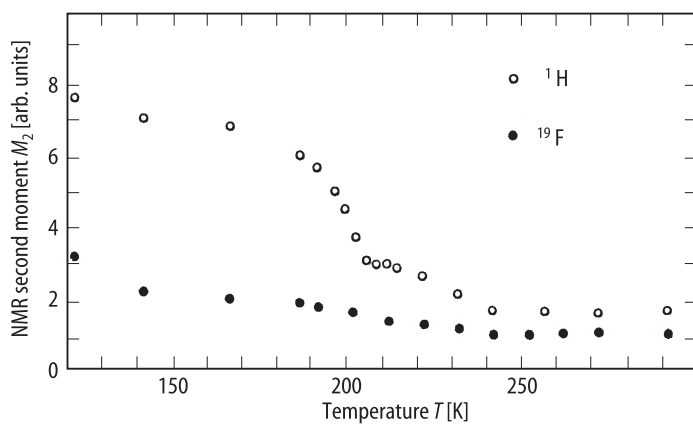


Fig. 69A-1-004. C₅H₆NBF₄. M_2 vs. T [90Was]. M_2 : NMR second moment. Open circle: ^1H , full circle: ^{19}F .

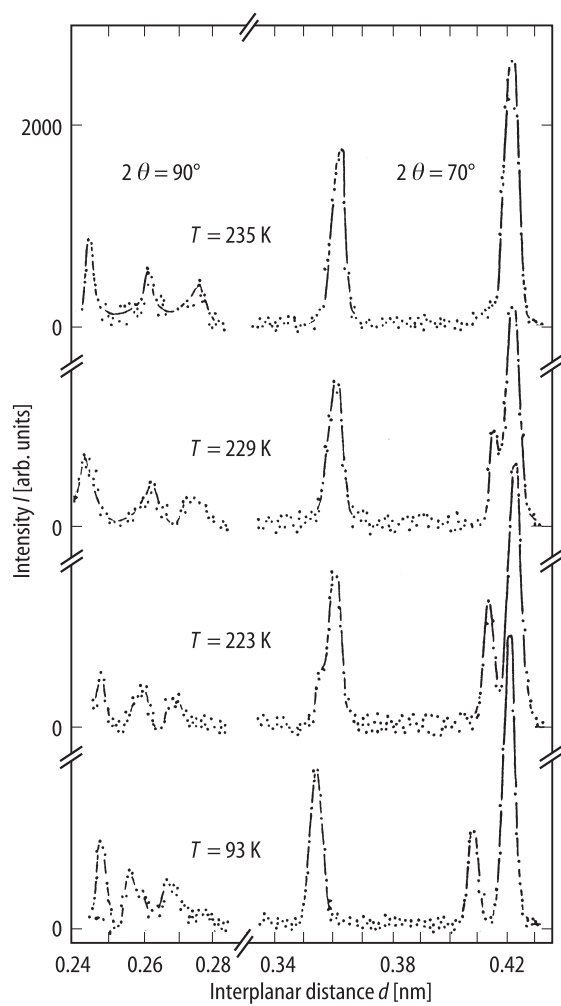


Fig. 69A-1-005. $\text{C}_5\text{H}_6\text{NBF}_4$. I vs. d [89Was]. I : intensity of neutron scattering. d : interplanar distance. Parameter: T . 2θ : scattering angles.

References

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