

No. 39A-5 [N(CH₃)₄]₂FeCl₄, Tetramethylammonium tetrachloroferrate
 (*M* = 345.95; [D: 370.10])

1a	Ferroelectricity in the pressure-induced phase VI of [N(CH ₃) ₄] ₂ FeCl ₄ was discovered by Shimizu et al. in 1980.					80Shi
b	phase	V	IV	III ^{a)}	II [*]	I ^{a)} 82Mas
	state	P	P	P		^{b)} 80Shi
	crystal system	monoclinic	monoclinic	ortho-rhombic ^{c)}		^{c)} 90Kas
	space group	P12 ₁ /c1–C _{2h} ^{5 a)}	P112 ₁ /n–C _{2h} ⁵	P2 ₁ 2 ₁ 2 ₁ –D ₂ ^{4 c)}		Pmcn–D _{2h} ¹⁶
	Θ [°C]	–32 ^{b)}	–6.9 ^{b)}	–2.5 ^{a)}	6.9 ^{b)}	
	*) Incommensurate structural modulation was found along the <i>c</i> axis. See subsection 14a.					82Mas
	<i>P_s</i> [001] in phase VI.					80Shi
	<i>ρ</i> = 1.32(1) · 10 ³ kg m ^{–3} , <i>ρ_X</i> = 1.326 · 10 ³ kg m ^{–3} .					75Lau
2a	Crystal growth: evaporation method from aqueous solution in an atmosphere of nitrogen.					80Shi
3a	Unit cell parameters: <i>a</i> = 9.033(2) Å, <i>b</i> = 15.580(3) Å, <i>c</i> = 12.312(2) Å.					75Lau
b	<i>Z</i> in each phase:					
	phase	V	IV	III	II	I 82Mas
	<i>Z</i>	4	12	28		4
	Crystal structure: see					75Lau, 90Kas
	Interatomic distances and bond angles: see					75Lau
4	Lattice distortion: Fig. 39A-5-001, Fig. 39A-5-002.					
5a	Dielectric constant: Fig. 39A-5-003, Fig. 39A-5-004, Fig. 39A-5-005, Fig. 39A-5-006. Phase diagram in regard to <i>p</i> : Fig. 39A-5-002, Fig. 39A-5-007, Fig. 39A-5-008; Table 39A-5-001.					
6a	Specific heat: Fig. 39A-5-009. Transition heat, transition entropy: Table 39A-5-002.					
8a	Sound velocity and attenuation: Fig. 39A-5-010, Fig. 39A-5-011, Fig. 39A-5-012, Fig. 39A-5-013.					
14a	Bragg reflection due to structural modulation: Fig. 39A-5-014. Distribution of modulation wavenumber in Θ vs. <i>p</i> phase diagram: Fig. 39A-5-015.					
16	Effect of defect on the incommensurate structure: see					93Pol