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**No. 1C-a20 NaTaO<sub>3</sub>–KTaO<sub>3</sub>**

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1b Phase diagram: Fig. 1C-a20-001.

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3a Lattice parameters: Fig. 1C-a20-002.

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5a Dielectric constant: Fig. 1C-a20-003, Fig. 1C-a20-004.

Dielectric relaxation: Fig. 1C-a20-005.

Pressure effect on transition temperature: Fig. 1C-a20-006.

Infrared absorption: see

69Per

c Remanent polarization: Fig. 1C-a20-007.

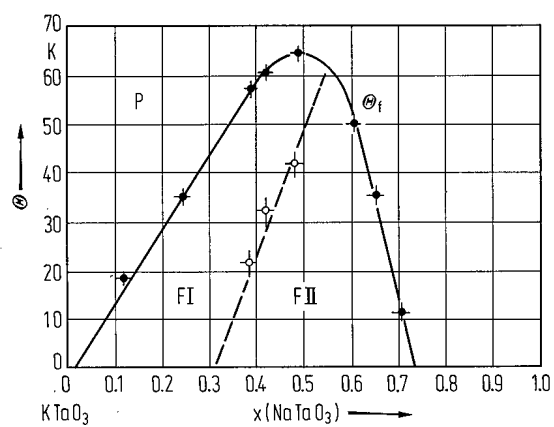
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10a Raman scattering: Fig. 1C-a20-008.

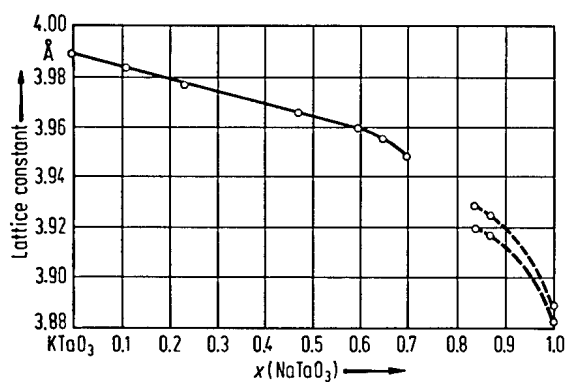
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13a NMR: Fig. 1C-a20-009.

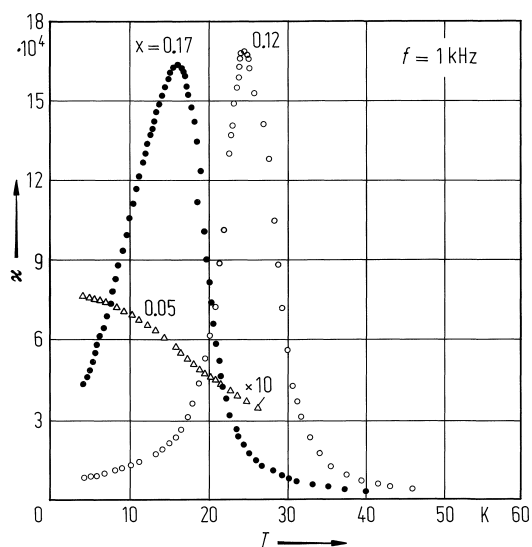
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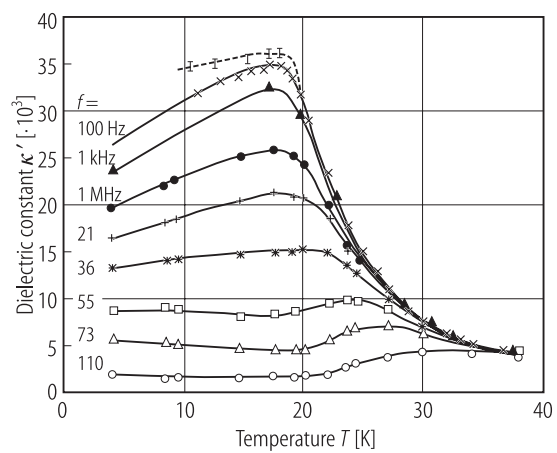
**Fig. 1C-a20-001.**  $(K_{1-x}Na_x)TaO_3$ .  $\Theta$  vs.  $x$  [70Dav]. P: paraelectric cubic, F I: ferroelectric tetragonal, F II: ferroelectric orthorhombic (?).



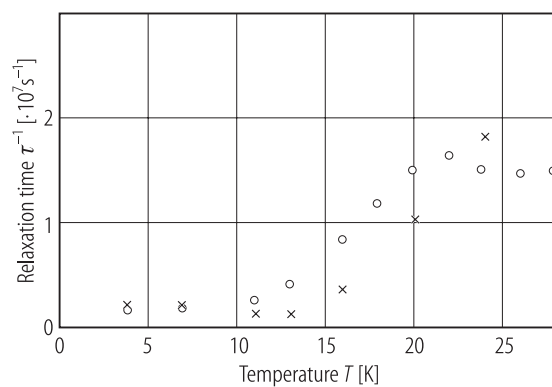
**Fig. 1C-a20-002.**  $(\text{K}_{1-x}\text{Na}_x)\text{TaO}_3$ , Lattice parameter vs.  $x$  [70Dav]. Structure for  $x = 0.84$  appears to be tetragonal.



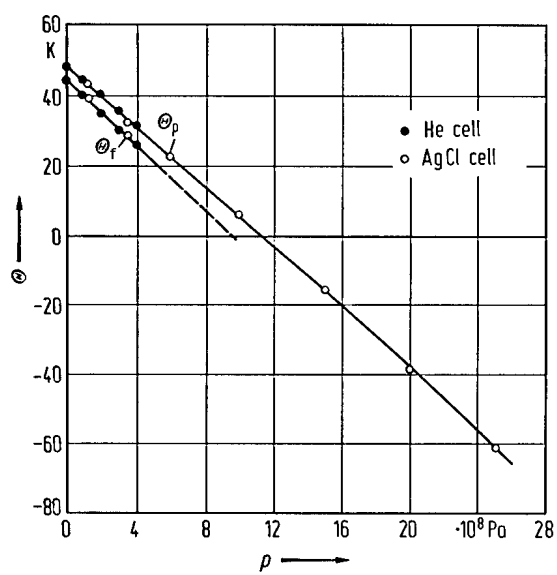
**Fig. 1C-a20-003.**  $(K_{1-x}Na_x)TaO_3$ .  $\kappa$  vs.  $T$  [83van].  
Parameter:  $x$ .  $f = 1$  kHz.



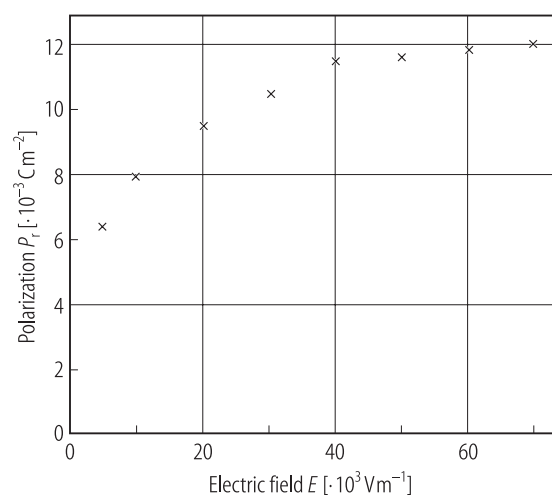
**Fig. 1C-a20-004.**  $(K_{0.8}Na_{0.2})TaO_3$ .  $\kappa'$  vs.  $T$  [86Mag].  
Parameter:  $f$ . Broken line: static dielectric constant from  
Kramers-Kronig analysis.



**Fig. 1C-a20-005.**  $(\text{K}_{0.8}\text{Na}_{0.2})\text{TaO}_3$ .  $\tau^{-1}$  vs.  $T$  [88Mag].  $\tau$  : relaxation time. Circles: dielectric, crosses: acoustic.

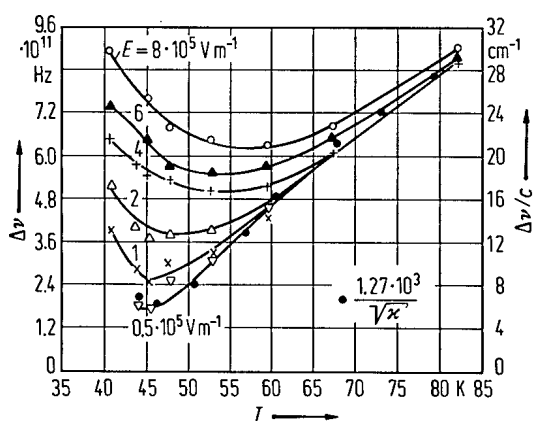


**Fig. 1C-a20-006.**  $(\text{K}_{0.72}\text{Na}_{0.28})\text{TaO}_3$ .  $\Theta$  vs.  $p$  [74Sam].  $\Theta_p$ : paraelectric Curie temperature.

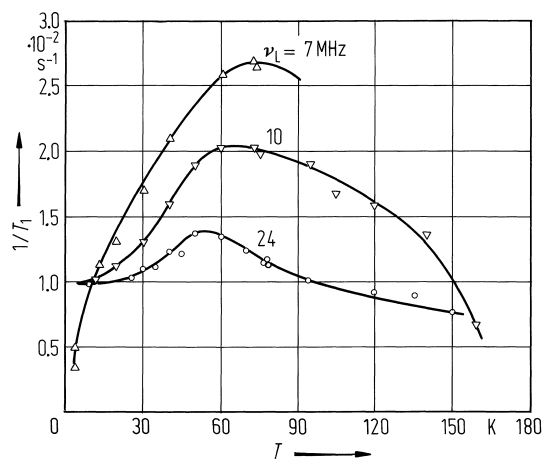


**Fig. 1C-a20-007.**  $(\text{K}_{0.82}\text{Na}_{0.18})\text{TaO}_3$ .  $P_r$  vs.  $E$  [87Lan].  $E$ : applied electric field.





**Fig. 1C-a20-008.**  $(\text{K}_{0.7}\text{Na}_{0.3})\text{TaO}_3$ .  $\Delta\nu$  vs.  $T$  [72Dav].  $\Delta\nu$ : Raman frequency shift of the soft phonon mode. Parameter: electric field along [001] axis. Full circles indicate best fit of low-field data to  $\kappa^{-1/2}$ .



**Fig. 1C-a20-009.**  $(\text{K}_{0.82}\text{Na}_{0.18})\text{TaO}_3$ .  $1/T_1$  vs.  $T$  [83Hoc].  
 Parameter:  $\nu_L$  (Larmor frequency).  $T_1$ : spin-lattice relaxation time of  $^{23}\text{Na}$  nuclei.

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