
No. 1C-c41 $\text{PbTiO}_3\text{--PbZrO}_3\text{--A}(\text{A}'_{1/3}\text{Nb}_{2/3})\text{O}_3$ ($\text{A} = \text{Ba, Sr}$; $\text{A}' = \text{Pb, Ca, Sr}$)

1b	Phase diagram: Fig. 1C-c41-001. Ferroelectric phase transition temperature: Fig. 1C-c41-002.	
3a	Unit cell parameter: Fig. 1C-c41-003.	
5a	Dielectric constant: Fig. 1C-c41-004.	
7a	Piezoelectricity: Fig. 1C-c41-004.	
9a	Transmittance: see	81Yok
b	Electrooptic effect: Table 1C-c41-001.	

Table 1C-c41-001. $(1-x)\text{Pb}(\text{Zr}_y\text{Ti}_{1-y})\text{O}_3 \cdot x \text{A}(\text{A}'_{1/3}\text{Nb}_{2/3})\text{O}_3$ (ceramics) (A = Ba, Sr; A' = Ca, Sr).
 r_c , \bar{L} : Linear and quadratic electrooptic coefficients [81Yok].

Compounds				r_c	\bar{L}
A	A'	x	y	$[\cdot 10^{-10} \text{mV}^{-1}]$	$[\cdot 10^{-16} \text{m}^2 \text{V}^{-2}]$
Ba	Sr	0.12	0.50	6.60	
Sr	Ca	0.12	0.50	4.02	
Ba	Ca	0.13	0.45	2.27	
Ba	Sr	0.15	0.50		5.11
Ba	Ca	0.18	0.50		1.10
Ba	Ca	0.25	0.30		0.70

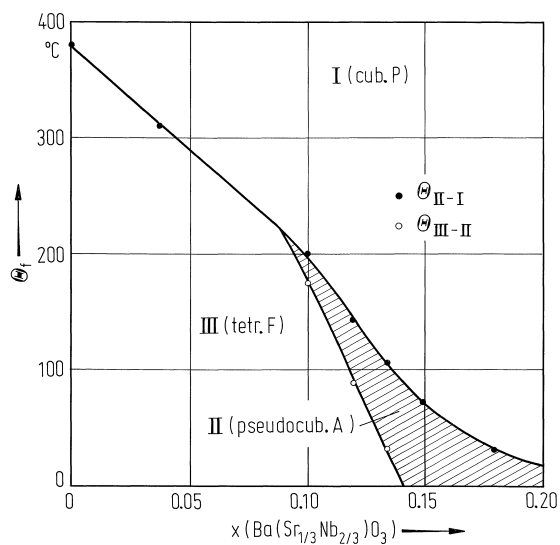


Fig. 1C-c41-001. $(1-x)\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.5})\text{O}_3 \cdot x \text{Ba}(\text{Sr}_{1/3}\text{Nb}_{2/3})\text{O}_3$ (ceramics). Θ vs. x [81Yok].

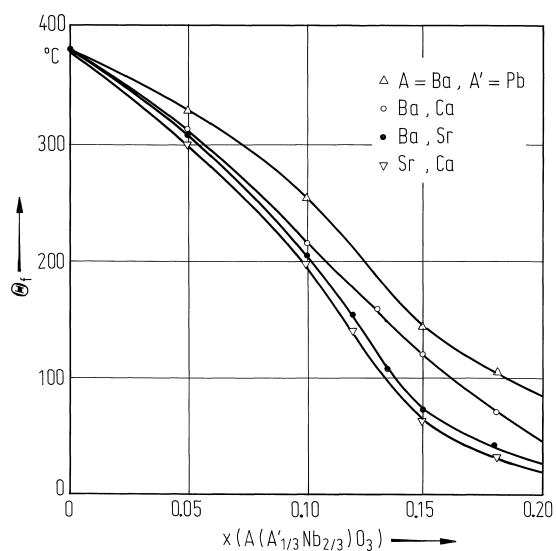


Fig. 1C-c41-002. $(1-x)\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.5})\text{O}_3 \cdot x \text{A}(\text{A}'_{1/3}\text{Nb}_{2/3})\text{O}_3$ (ceramics) (A = Ba, Sr; A' = Pb, Ca, Sr). Θ_f vs. x [81Yok].

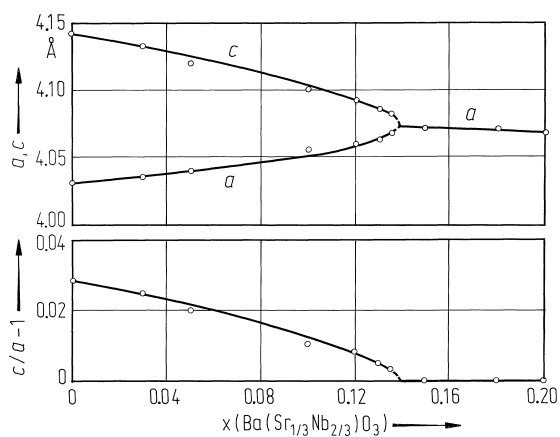


Fig. 1C-c41-003. $(1-x)\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.5})\text{O}_3 \cdot x \text{Ba}(\text{Sr}_{1/3}\text{Nb}_{2/3})\text{O}_3$ (ceramics). c , a , $c/a-1$ vs. x [81Yok].

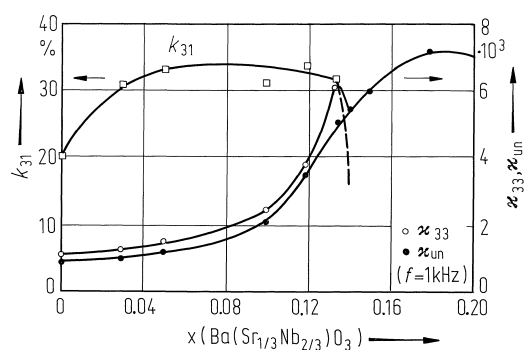


Fig. 1C-c41-004. $(1-x)\text{Pb}(\text{Zr}_{0.5}\text{Ti}_{0.5})\text{O}_3 \cdot x \text{Ba}(\text{Sr}_{1/3}\text{Nb}_{2/3})\text{O}_3$ (ceramics). k_{31} , κ_{33} , κ_{un} vs. x [81Yok]. κ_{un} : dielectric constant of unpoled specimen. $f = 1 \text{ kHz}$.

Reference

- 81Yok Yokosuka, M., Miura, S., Ochiai, T., Marutake, M.: Jpn. J. Appl. Phys. **20**, Suppl. 20-4 (1981) 75.