
No. 1C-b8 $\text{BaTiO}_3\text{--}(\text{Na}_{1/2}\text{Bi}_{1/2})\text{TiO}_3$

1b Phase diagram: Fig. 1C-b8-001.
Morphotropic boundary: Fig. 1C-b8-002.

5a Dielectric constant: Fig. 1C-b8-003.

7a Electromechanical coupling coefficient: Fig. 1C-b8-004.
Piezoelectricity of ceramics partially substituted by PbTiO_3 : see

92Tak

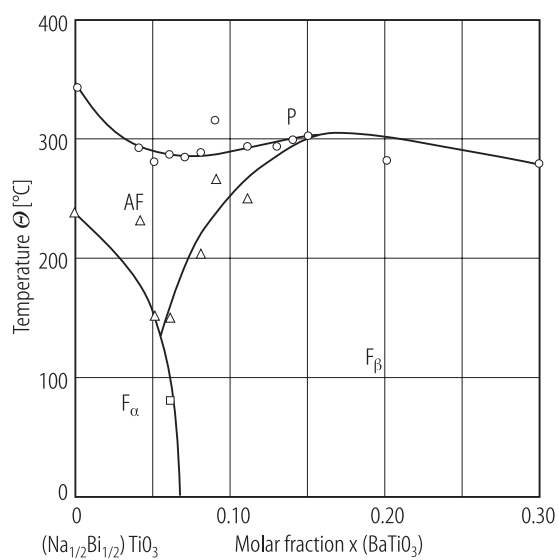


Fig. 1C-b8-001. $(1-x)(\text{Na}_{1/2}\text{Bi}_{1/2})\text{TiO}_3 \cdot x \text{BaTiO}_3$. Θ vs. x [91Tak].

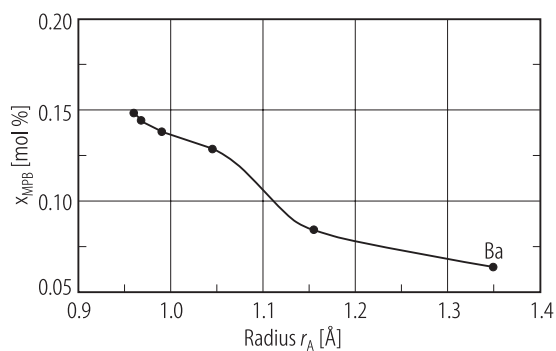


Fig. 1C-b8-002. $(1-x)(\text{Na}_{1/2}\text{Bi}_{1/2})\text{TiO}_3 \cdot x \text{A}^{2+}\text{TiO}_3$, x_{MPB} vs. r_A [91Tak]. x_{MPB} : value of x corresponding to morphotropic boundary ($F_\alpha \rightarrow F_\beta$), r_A : ionic radius of A ion.

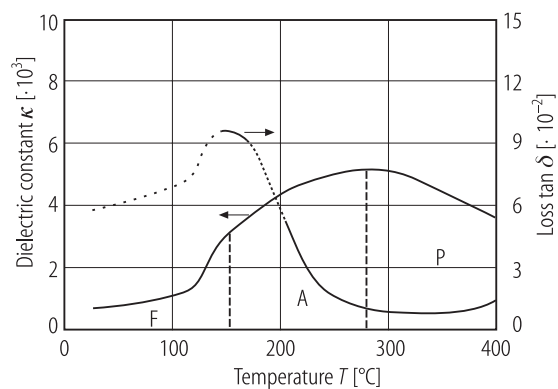


Fig. 1C-b8-003. $[(\text{Na}_{1/2}\text{Bi}_{1/2})_{0.95}\text{Ba}_{0.05}]\text{TiO}_3$ (ceramics). κ and $\tan \delta$ vs. T [91Tak]. $f = 1$ MHz.

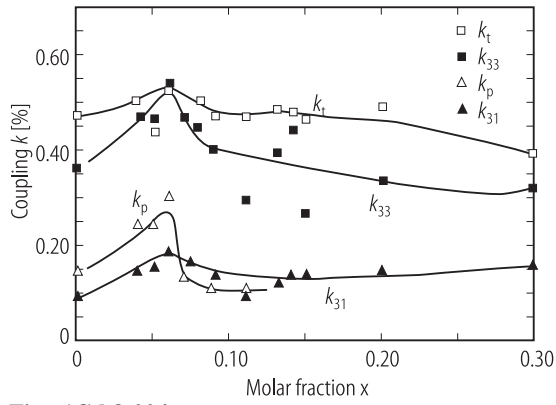


Fig. 1C-b8-004. $[(\text{Na}_{1/2}\text{Bi}_{1/2})_{1-x}\text{Ba}_x]\text{TiO}_3$ (ceramics). k_{31} , k_{33} , k_p and k_t vs. x [91Tak]. k : electromechanical coupling coefficient, p: planar, t: thickness-extensional.

References

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