
No. 2B-16 Li₂O–Ta₂O₅–MO₃ (M = Mo, W)

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|----|---|-------|
| 1b | Phase relation: Table 2B-16-001; Fig. 2B-16-001.
Ferroelectric transition temperature: Table 2B-16-001; Fig. 2B-16-001.
Li ₂ O–Ta ₂ O ₅ –(WO ₃) ₂ ternary system: see | 94Elo |
| 3a | Unit cell parameters: Fig. 2B-16-002. | |
| 5a | Dielectric constants: Fig. 2B-16-003, Fig. 2B-16-004. | |
| 11 | Electric conductivity: see Fig. 2A-2-064 in 2A-2. | |
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Table 2B-16-001. $\text{Li}_{1+p}\text{Ta}_{1+q}\text{Mo}_r\text{O}_3$. Solid solution limits and ferroelectric transition temperatures at solubility limits [85Rav].

Solid solutions	x_{max}	Θ_f [°C] at x_{max}
$\text{Li}_{1+x}\text{Ta}_{1-(5x/7)}\text{Mo}_{(3x/7)}\text{O}_3$	0.097	700
$\text{Li}_{1+x}\text{Ta}_{1-5x}\text{Mo}_{4x}\text{O}_3$	0.01	695
$\text{Li}_{1-x}\text{Ta}_{1-x}\text{Mo}_x\text{O}_3$	0.058	635

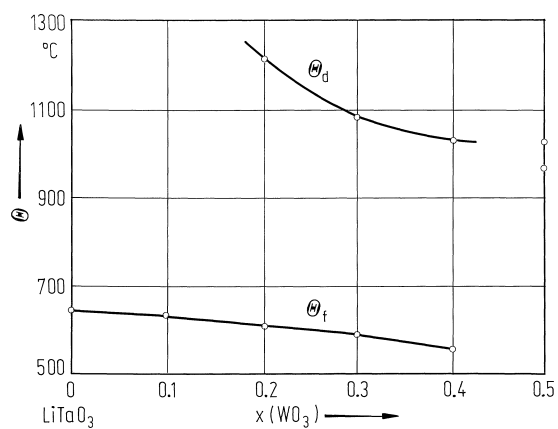


Fig. 2B-16-001. $Li_{1-x}Ta_{1-x}W_xO_3$, Θ vs. x [85Kaw]. Θ_d : decomposition temperature of the $LiTaO_3$ phase.

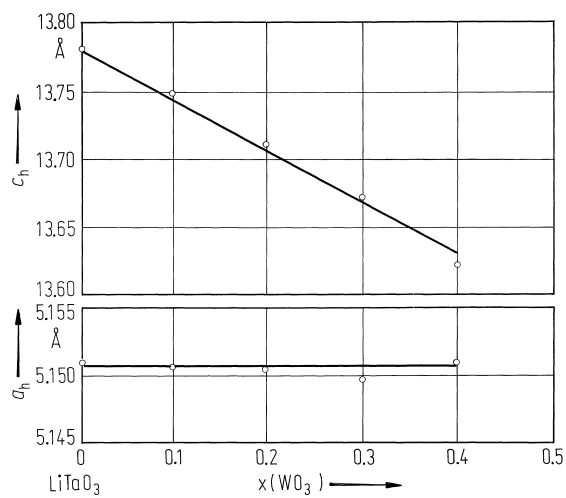


Fig. 2B-16-002. Li_{1-x}Ta_{1-x}W_xO₃. Unit cell parameters vs. x [85Kaw].

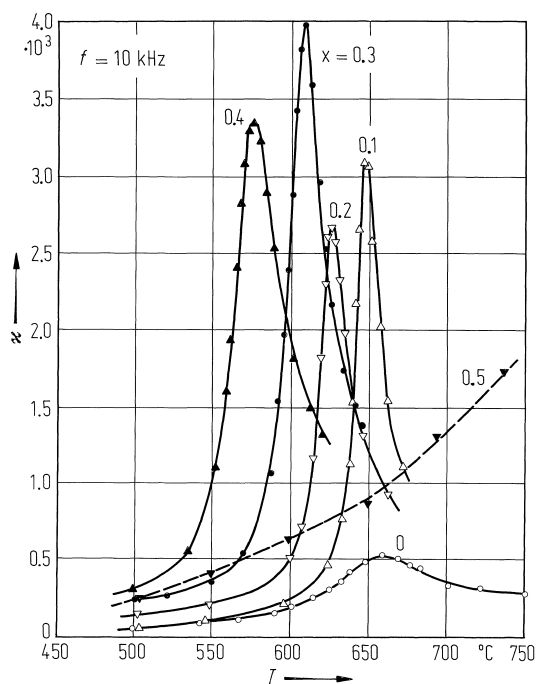


Fig. 2B-16-003. $\text{Li}_{1-x}\text{Ta}_{1-x}\text{W}_x\text{O}_3$ (ceramics). κ vs. T
[85Kaw]. Parameter: x .

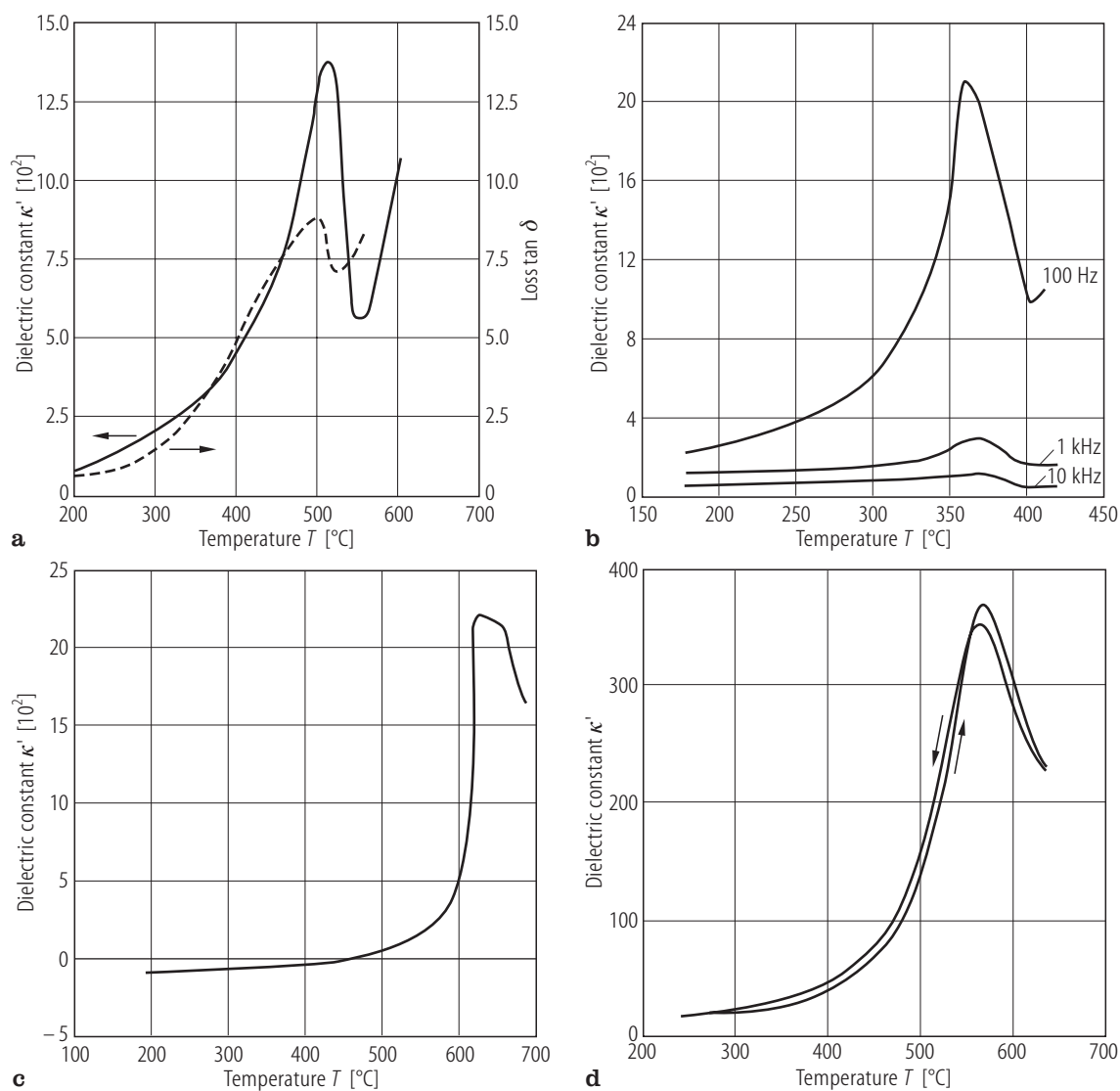


Fig. 2B-16-004. $\text{Li}_2\text{O}-\text{Ta}_2\text{O}_5-(\text{WO}_3)_2$. κ' , $\tan \delta$ vs. T [87Elo]. (a) $\text{Li}_{1.16}\text{Ta}_{0.92}\text{W}_{0.04}\text{O}_3$; (b) $\text{Li}_{1.14}\text{Ta}_{0.90}\text{W}_{0.06}\text{O}_3$; (c) $\text{Li}_{1.015}\text{Ta}_{0.925}\text{W}_{0.06}\text{O}_3$; (d) $\text{Li}_{0.901}\text{Ta}_{0.943}\text{W}_{0.064}\text{O}_3$. Parameter: f .

References

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