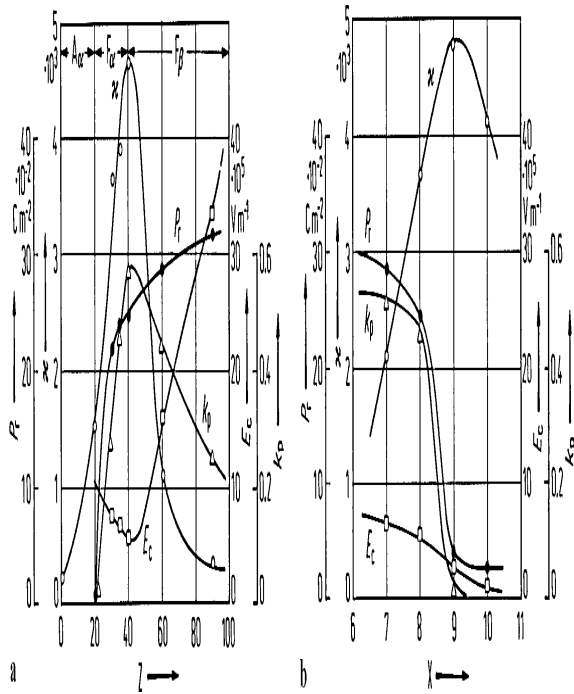


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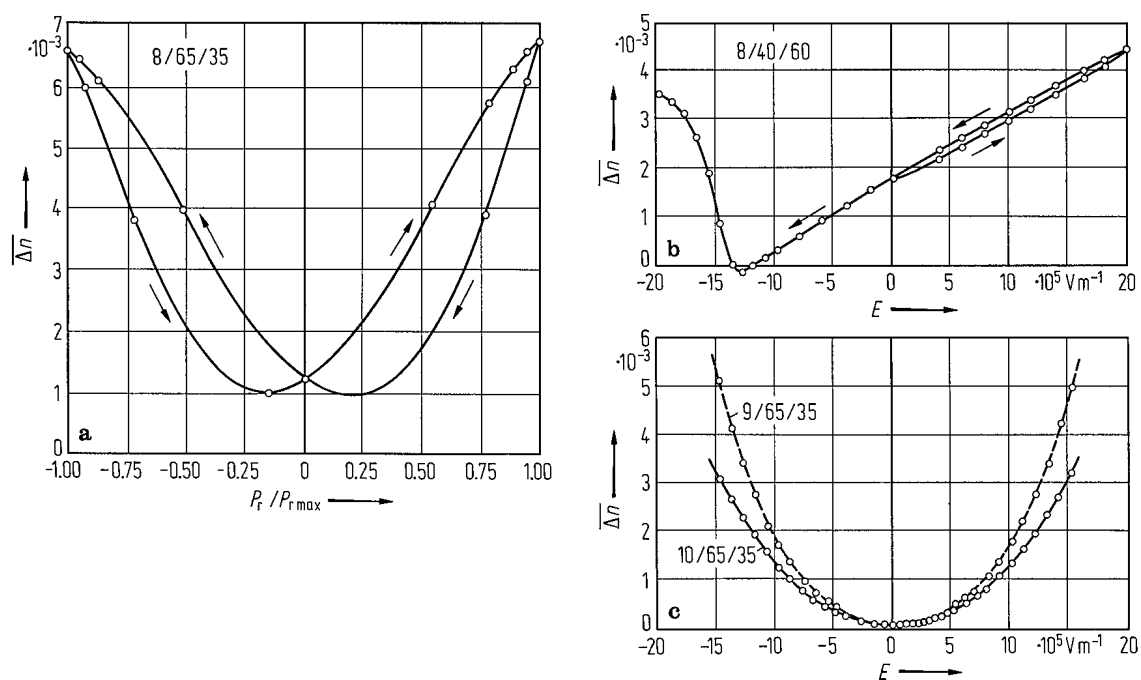
**No. 1C-c64 PbTiO<sub>3</sub>–PbHfO<sub>3</sub> modified with La (PLHT)**

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|--|--|-------|
| 1b   | The PLHT means the ceramics of La-modified Pb(Hf,Ti)O <sub>3</sub> . The composition is often specified by (Pb <sub>1-x</sub> La <sub>x</sub> )(Hf <sub>y</sub> Ti <sub>1-y</sub> ) <sub>1-x/4</sub> O <sub>3</sub> , or X/Y/Z, where X = 100x, Y = 100y, and Z = 100(1-y). The true composition is not known. | 73Cut |
| <hr/>  |  |       |
| 5a,caDielectric constant, polarization, coercive field: Fig. 1C-c66-001. |  |       |
| <hr/>  |  |       |
| 7a   | Electromechanical coupling coefficient: Fig. 1C-c66-001.   |       |
| <hr/>  |  |       |
| 9b   | Electrooptic effect: Fig. 1C-c66-002; see also   | 73Ain |
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**Fig. 1C-c64-001.** PLHT(ceramics). **(a)**  $8/(100-Z)/Z$ .  $\kappa$ ,  $P_r$ ,  $E_c$  and  $k_p$  vs.  $Z$ . **(b)**  $X/65/35$ .  $\kappa$ ,  $P_r$ ,  $E_c$  and  $k_p$  vs.  $X$  [73Cut]. Abscissas  $Z$  and  $X$  indicate Ti and La contents, respectively.



**Fig. 1C-c64-002.** PLHT (ceramics). Transverse electrooptic effect. **(a)** 8/65/35.  $\Delta n$  vs.  $P_r / P_{rmax}$ . **(b)** 8/40/60.  $\Delta n$  vs.  $E$ . **(c)** 9/65/35 and 10/65/35.  $\Delta n$  vs.  $E$  [73Cut].  $P_r$ : remanent polarization.  $\Delta n$ : effective birefringence.  $\lambda = 633 \text{ nm}$ .

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**References**

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73Cut Cutchen, J.T., Haertling, G.H.: J. Am. Ceram. Soc. **56** (1973) 225.