

No. 2B-3 Li₂O–Nb₂O₅–M₂O₃ (M = Cr, Co, Sc, Fe, Eu, Er, Tm)

1b	Phase relation: Fig. 2B-3-001.	
2a	Sc ₂ O ₃ doped crystal grown by float zone method: see	92Yam1
	Growth and characterization of Sc ₂ O ₃ doped crystal: see	93Yam
3a	Unit cell parameters: Fig. 2B-3-002.	
9a	Absorption: Fig. 2B-3-003.	
	Optical absorption in Tm ³⁺ doped crystals: see	93Nun1
e	Sc ₂ O ₃ doping: noncritical phase matching: see	94Yam
11	Photovoltaic effect in Mg and Fe doped crystals: see	89Som
13c	Mössbauer effect: Fig. 2B-3-004.	
14c	EXAFS of Co and Fe doped crystals: see	91Cat
16	Lattice site of iron in Fe ³⁺ doped crystal by PIXE/channeling technique: see	91Reb
	Er ³⁺ doped waveguide laser: see	91Bri
	Cr ³⁺ optical bands in LiNbO ₃ :Zn,Cr crystals: see	94Vod
	Fluorescence of Eu ³⁺ in LiNbO ₃ :Eu ³⁺ and LiNbO ₃ :MgO:Eu ³⁺ : see	93Son
	Tm ³⁺ absorption spectra and luminescence in LiNbO ₃ :Tm ³⁺ : see	93Nun1, 93Nun2
	Increase in optical damage resistance in Sc ₂ O ₃ doped crystal: see	92Yam2
	Sc ₂ O ₃ doping: photorefractive damage: see	94Yam
	Photorefractive properties of LiNbO ₃ :Fe: see	91Ohi

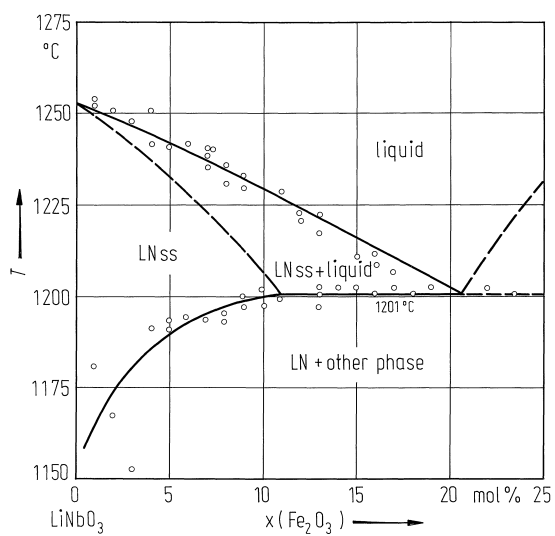


Fig. 2B-3-001. $(1-x)\text{LiNbO}_3 \cdot x\text{Fe}_2\text{O}_3$. Phase diagram [82Tak1]. Li/Nb ratio is 48.6/51.4.

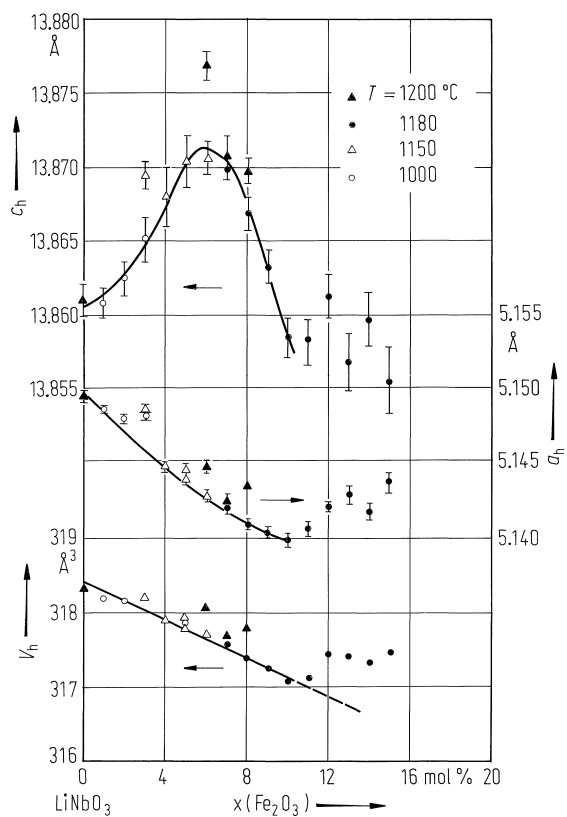


Fig. 2B-3-002. $(1-x)\text{LiNbO}_3 \cdot x\text{Fe}_2\text{O}_3$. Unit cell parameters vs. x [82Tak1]. Li/Nb ratio is 48.6/51.4. Parameter: firing temperature.

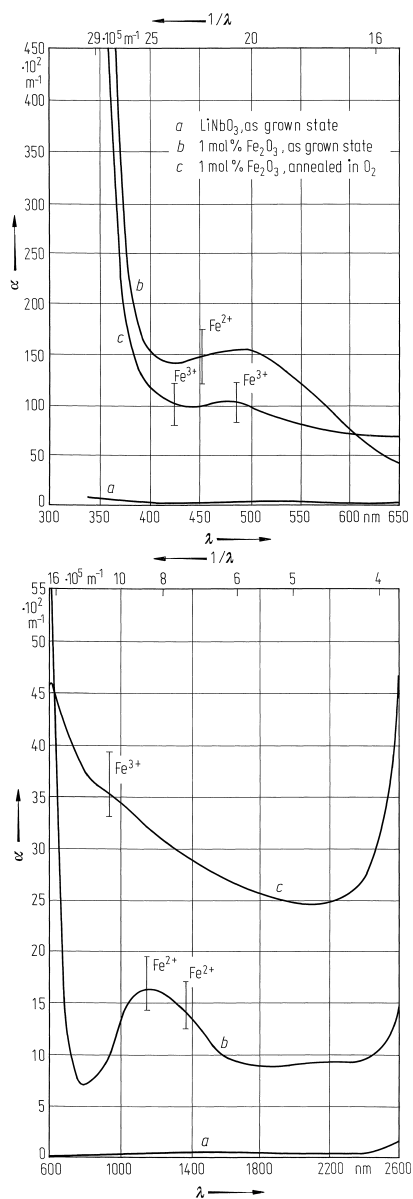


Fig. 2B-3-003. LiNbO₃ (Fe doped). α vs. λ [82Tak2]. α : optical absorption coefficient.

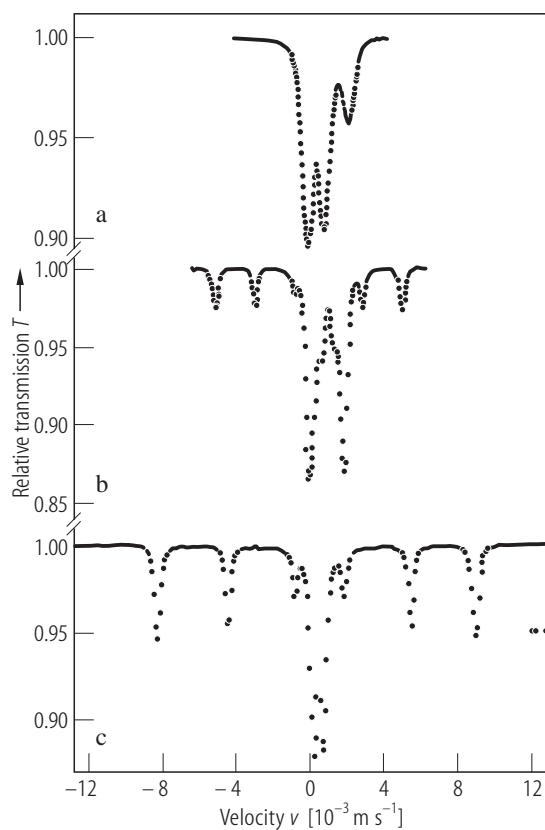


Fig. 2B-3-004. LiNbO₃–Fe₂O₃ (9.8 mol%) (amorphous). ⁵⁷Fe Mössbauer spectra [89Eng]. Sample (a): roller quenched in as-quenched state; (b): after treatment in vacuum $6.6 \cdot 10^{-4}$ Pa at 800 °C for 12 h; (c): after treatment in air at 800°C for 6h.

References

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