

**Photoresponse of KNbO₃-AFeO₃ (A = Bi³⁺ or La³⁺)
ceramics and its relationship with bandgap narrowing**

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SUPPLEMENTARY INFORMATION

Photoresponse of $\text{KNbO}_3\text{-AFeO}_3$ ($\text{A} = \text{Bi}^{3+}$ or La^{3+}) ceramics and their relationship with bandgap narrowing

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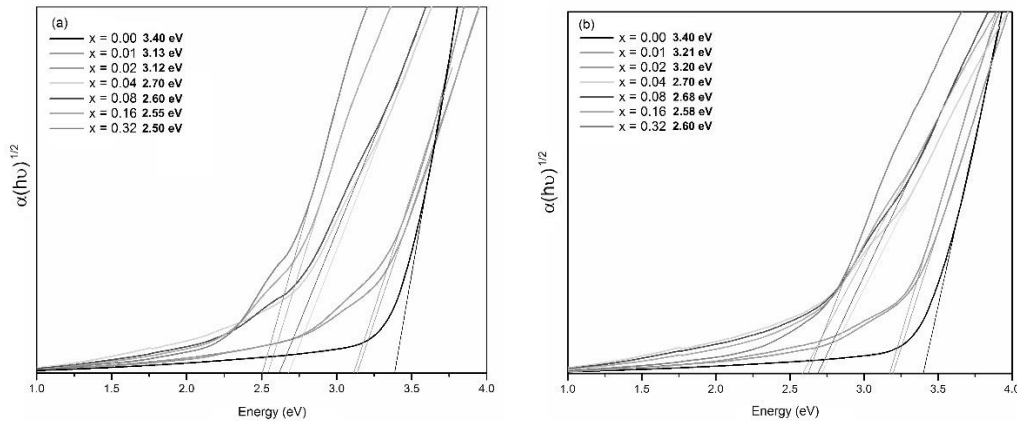


Figure 1 – Tauc plots for KNBF (a) and KNLF (b) ceramics.

All ceramics show Urbach tails, which is expected for any material with disorder, as well as a shoulder that increases with increasing x , that can be associated with charge–transfer excitations and *gap* defects states probably related to oxygen vacancies[1]. Interestingly, the lone-pair of electrons brought by Bi^{3+} appear to have limited effect on the bandgap narrowing behaviour.

Reference

[1] F. Burkert, J. Kreisel, C.A. Kuntscher, Appl Phys Lett. 109 (2016) 182903.