

Fig. 32A-1-001. KIO_3 , A vs. T [61Her]. A : solubility in water (solute/solvent).

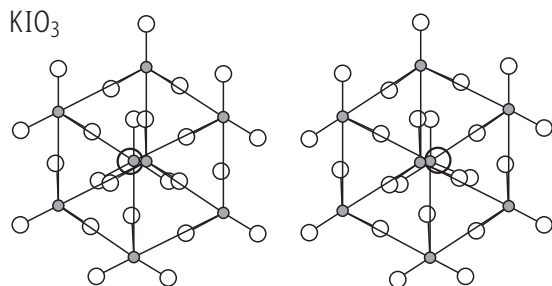


Fig. 32A-1-002. KIO_3 . Crystal structure of phase I at $T = 523 \text{ K}$ [87Byr]. A stereo view approximately along $[111]$ direction with c axis vertical. Space group: $R\bar{3}-C_3^4$. IO_3 groups are distinguished. The atoms are represented by circles of reducing size: K, O, I, respectively.

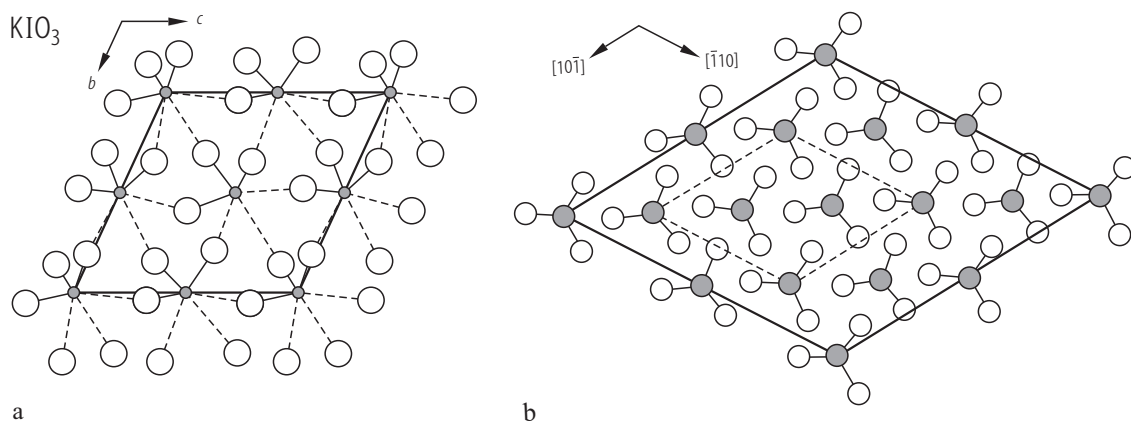


Fig. 32A-1-003. KIO_3 . Crystal structure of phase III at RT [78Kal]. (a) Projection along a axis with IO_3 groups distinguished. Dashed lines indicate longer I–O bonds of $2.63\ldots 2.83 \text{ \AA}$ in length. The potassium atoms locate above or below the iodine atoms. (b) Projection along $[111]$. Rhombohedral pseudocell is drawn by dashed lines.

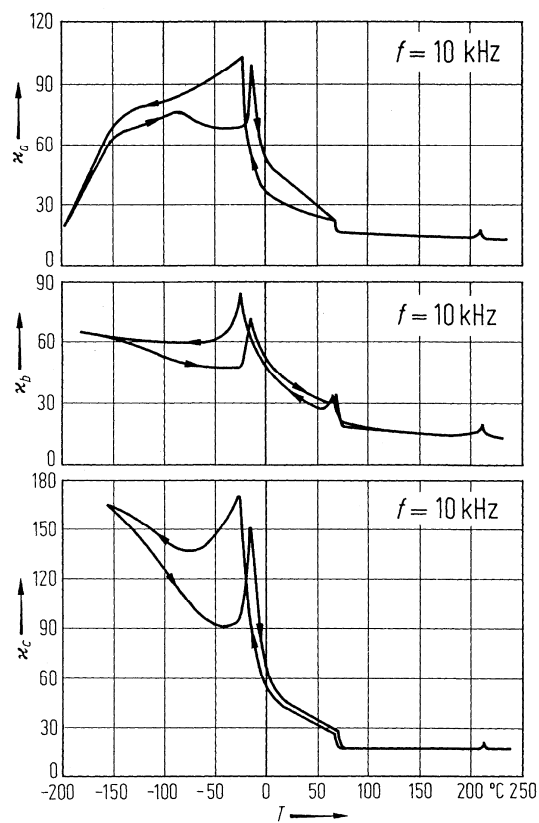


Fig. 32A-1-004. KIO₃. κ_a , κ_b , κ_c vs. T [70He]. $f = 10$ kHz. The axes a , b , c refer to the pseudocubic cell.

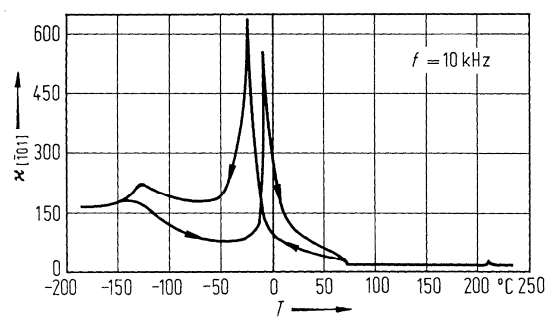


Fig. 32A-1-005. KIO₃. $\kappa_{[\bar{1}01]}$ vs. T [70He]. $f = 10$ kHz. $[\bar{1}01]$ refers to the pseudocubic cell.

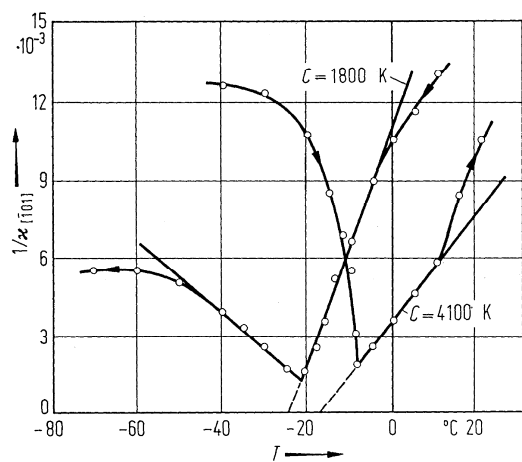


Fig. 32A-1-006. KIO₃. $\kappa_{[\bar{1}01]}^{-1}$ vs. T [70Hel]. $f = 10$ kHz. $[\bar{1}01]$ refers to the pseudocubic cell. The two curves correspond to different treatment of specimens. C : Curie-Weiss constant.

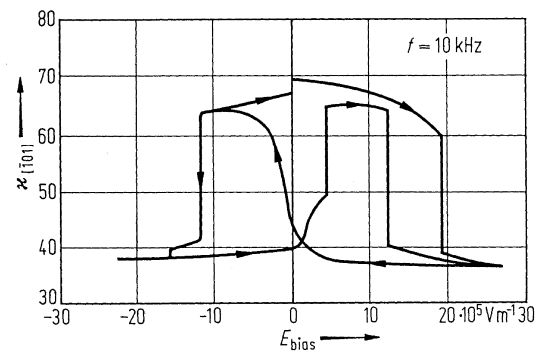


Fig. 32A-1-007. KIO₃. $\kappa_{[\bar{1}01]}$ vs. E_{bias} [70Hel]. $f = 10$ kHz. $T = 22$ °C. $[\bar{1}01]$ refers to the pseudocubic cell.

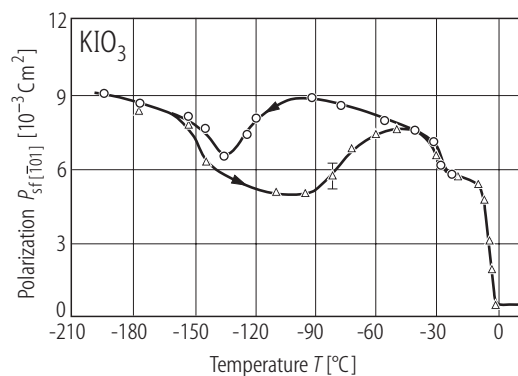


Fig. 32A-1-008. KIO₃. $P_{\text{sf}[\bar{1}01]}$ vs. T [70Hel]. $\mathbf{E} \parallel [\bar{1}01]$. $[\bar{1}01]$ refers to the pseudocubic cell. $P_{\text{sf}[\bar{1}01]} = \sqrt{3} P_{\text{sf}}/2$.

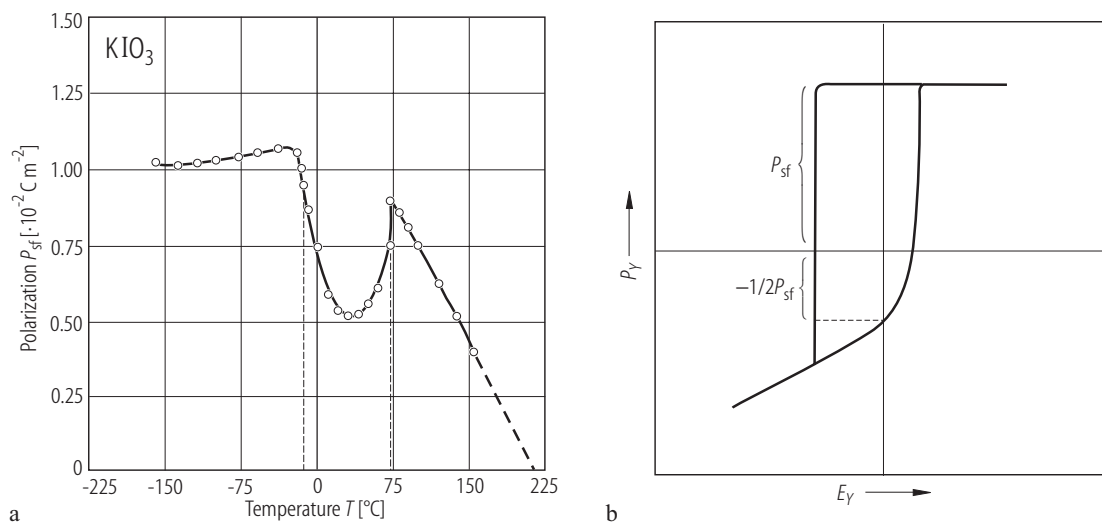


Fig. 32A-1-009. KIO₃. (a) P_{sf} vs. T , (b) the hysteresis loop [73Shu]. Y -cut specimen. Dashed lines in (a) indicate Θ_{IV-III} and Θ_{III-II} . See subsection 2b for orthogonal coordinate system.

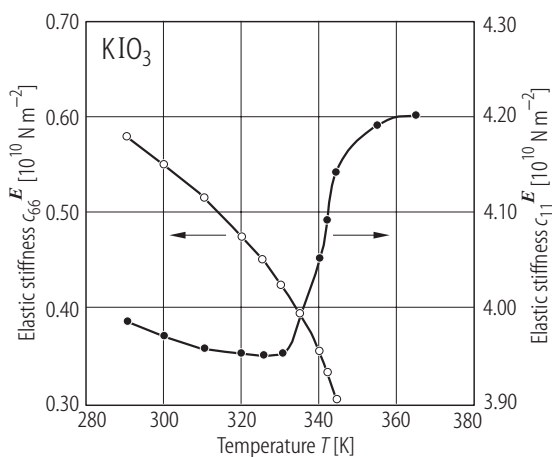


Fig. 32A-1-010. KIO₃. c_{66}^E , c_{11}^E vs. T [95Hau]. See subsection 2b for orthogonal coordinate system.

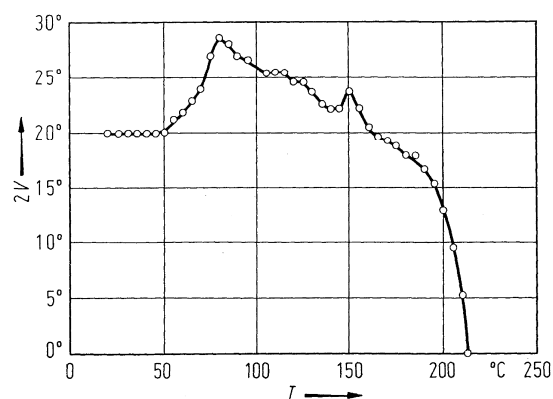


Fig. 32A-1-011. KIO₃. $2V$ vs. T [72Cra]. $2V$: optical axial angle.

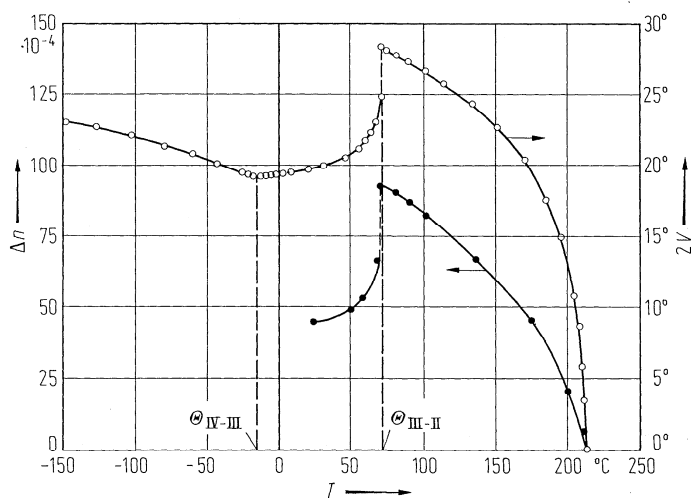


Fig. 32A-1-012. KIO₃. Δn , $2V$ vs. T [73Shu]. $\Delta n = n_Y - n_X$. $2V$: optical axial angle. See subsection 2b for orthogonal coordinate system.

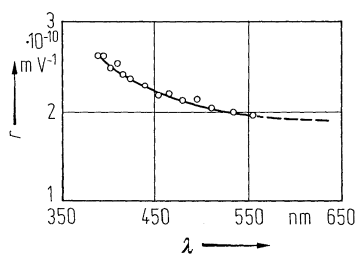


Fig. 32A-1-013. KIO₃. r vs. λ [73Shu]. $r = r_{12} - (n_Y/n_X)^3 r_{22}$. $T = 20$ °C. See subsection 2b for orthogonal coordinate system.

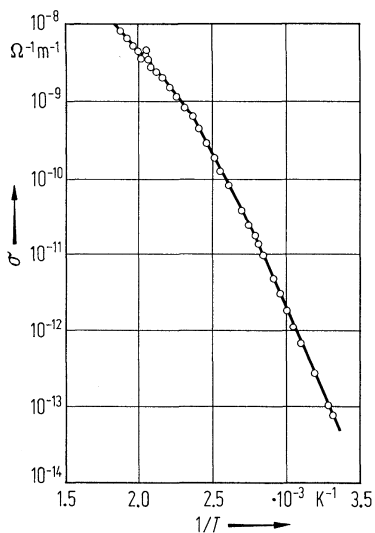


Fig. 32A-1-014. KIO₃. σ vs. $1/T$ [69Gur]. Conductivity σ was measured in dry air by the two-terminal method with vacuum evaporated Ag electrodes. Applied field $E = 120$ kV m⁻¹.

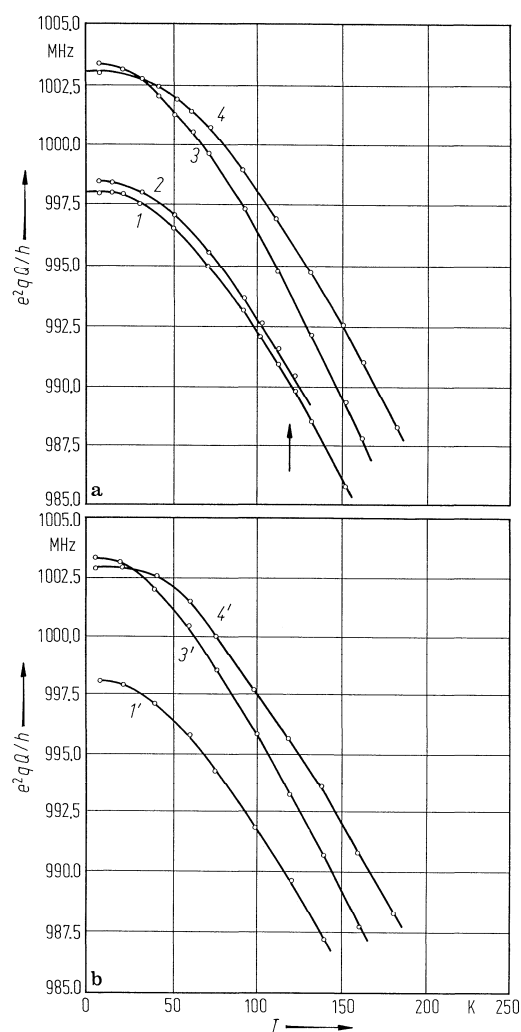


Fig. 32A-1-015. KIO₃. e^2qQ/h vs. T [82Bai]. e^2qQ/h : ^{127}I quadrupole coupling constants determined by multiple lines. (a) HIO₃ doped single crystal, (b) chemically pure polycrystalline specimen.

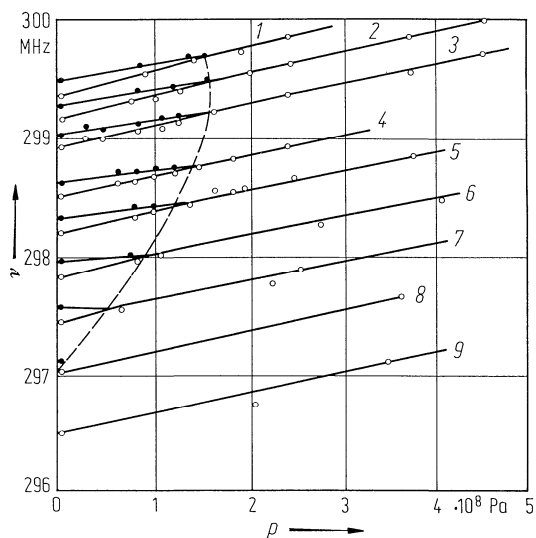


Fig. 32A-1-016. KIO_3 . ν vs. p [82Bai]. HIO_3 doped specimen. ν : NQR frequency of $^{127}\text{I}(\pm 3/2 \leftrightarrow \pm 5/2)$ transition. Parameter: T ; curve 1: 4.2...20 K, 2: 40 K, 3: 60 K, 4: 77 K, 5: 90 K, 6: 100 K, 7: 110 K, 8: 120 K, 9: 130 K. Open and closed circles represent the transitions corresponding to the lines 1 and 2 of Fig. 32A-1-015(a), respectively.

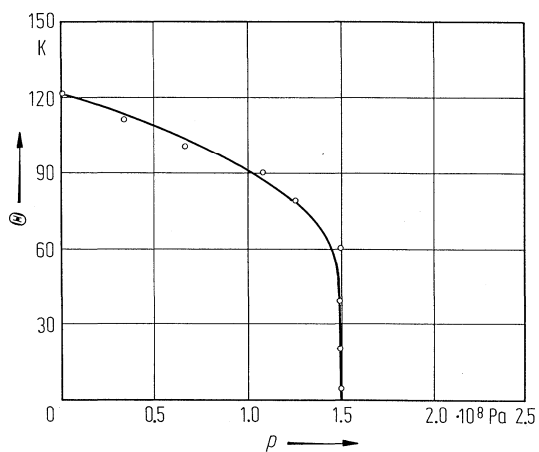


Fig. 32A-1-017. KIO_3 . Θ vs. p [82Bai]. HIO_3 doped specimen. Θ, p : temperature and pressure at which the multiplicity in the ^{127}I NQR spectrum changes; see Fig. 32A-1-016.

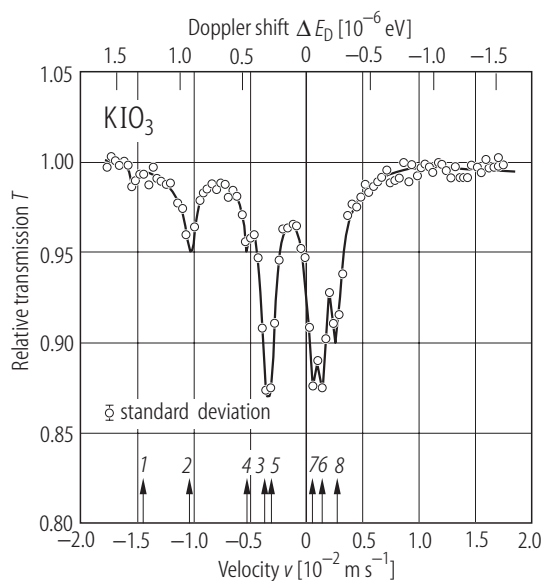


Fig. 32A-1-018. KIO₃. Relative transmission vs. v , ΔE_D at $T = 80$ K [63DeW]. v : source velocity. ΔE_D : Doppler shift. The absorber is K¹²⁹IO₃, the source is ⁶⁶Zn¹²⁹Te. The arrows indicate the calculated positions of the hyperfine components.

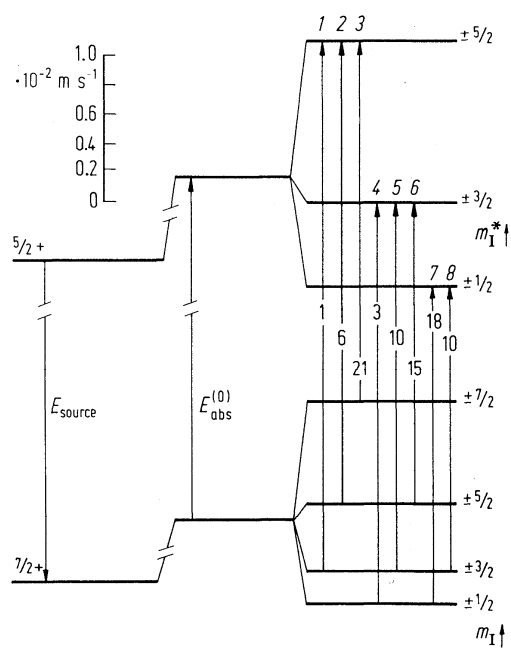


Fig. 32A-1-019. KIO₃. Nuclear energy levels for ground and first excited states of ¹²⁹I and KIO₃ [63DeW]. $T = 80$ K. m , m^* : magnetic quantum number of ground and excited states.