

substance: Er₂O₃

property: crystal structure, physical properties

Er₂O₃ [88L]

structure: cubic

activation energy for conductivity

E_A	3.04 eV	$T = 800 \dots 1200 \text{ K}$,	energy band diagram: Fig. 1
		val.-cond. band	

conductivity

σ	$1.66 \cdot 10^3 \text{ } \Omega^{-1} \text{ m}^{-1}$	p-type
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mobility

μ_p	$0.449 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$	$T = 900 \text{ K}$
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μ_n	$0.420 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$	$T = 900 \text{ K}$
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References:

88L Lal, H.B., Kanchan Gaur: J. Mater. Sci. 23 (1988) 919.

Fig. 1.

Energy band diagram for rare-earth sesquioxides [88L].

