

substance: Sm_2O_3

property: crystal structure, physical properties

Sm_2O_3 [88L]

structure: monoclinic

activation energy for conductivity

E_A	2.12 eV	$T = 800 \dots 1200 \text{ K}$,	energy band diagram: Fig. 1
		val. band- $4f^6$	

conductivity

σ	$2.68 \cdot 10^2 \text{ } \Omega^{-1} \text{ m}^{-1}$	p-type
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mobility

μ_p	$0.084 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$	$T = 900 \text{ K}$
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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].

