

substance: VO₂

property: transport in doped material

Ga_xV_{1-x}O₂: conductivity: Fig. 1, thermoelectric power: Fig. 2.

Al_xV_{1-x}O₂: conductivity: Fig. 3, thermoelectric power: Fig. 4.

Cr_xV_{1-x}O₂: conductivity: Fig. 5, thermoelectric power: Fig. 6.

Fe_xV_{1-x}O₂: conductivity: Fig. 7, thermoelectric power: Fig. 8.

Ti_xV_{1-x}O₂: conductivity: Fig. 9 (also [74K2, 73C]).

Nb_xV_{1-x}O₂: behaviour very complex. For low values of x ($x \leq 0.10$), the conductivity of the semiconducting state rises, but as x increases, the conductivity falls, and the metal– semiconductor transition is suppressed: Figs. 10...12 (also [76M, 76T]).

W_xV_{1-x}O₂: conductivity: Fig. 13, thermoelectric power: Fig. 14 (also [74K1]).

Mo_xV_{1-x}O₂: conductivity: Fig. 15 (also [73P]).

Re_xV_{1-x}O₂: conductivity: Fig. 16.

VO_{2-x}F_x: conductivity: Fig. 17 (also [71C]).

References:

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Fig. 1.

$\text{Ga}_x\text{V}_{1-x}\text{O}_2$. Resistivity vs. reciprocal temperature for polycrystalline samples of different composition [78P].

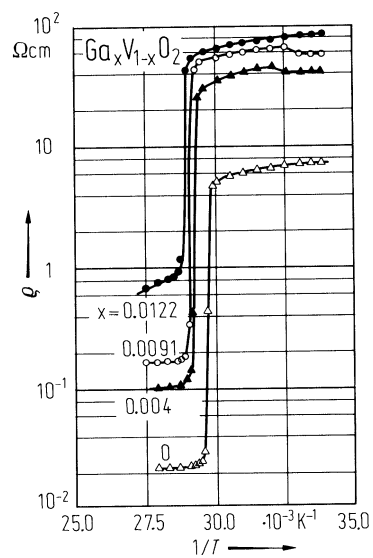


Fig. 2.

$\text{Ga}_x\text{V}_{1-x}\text{O}_2$. Thermoelectric power vs. temperature for polycrystalline samples with $x = 0$ (1), 0.0039 (2) and 0.0078 (3) [76B2].

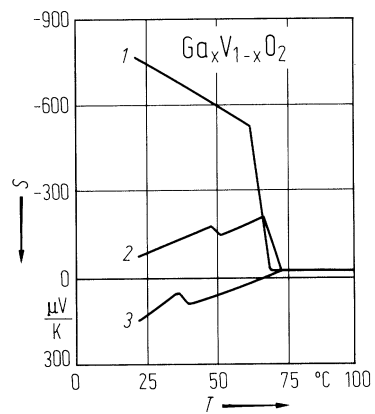


Fig. 3.

$\text{Al}_x\text{V}_{1-x}\text{O}_2$ Conductivity $\parallel c_R$ vs. reciprocal temperature for samples of different composition, (b) conductivity vs. reciprocal temperature for different orientations and $x = 0.013$, (c) details of conductivity $\parallel c_R$ near the T–M₂ transition [75V].

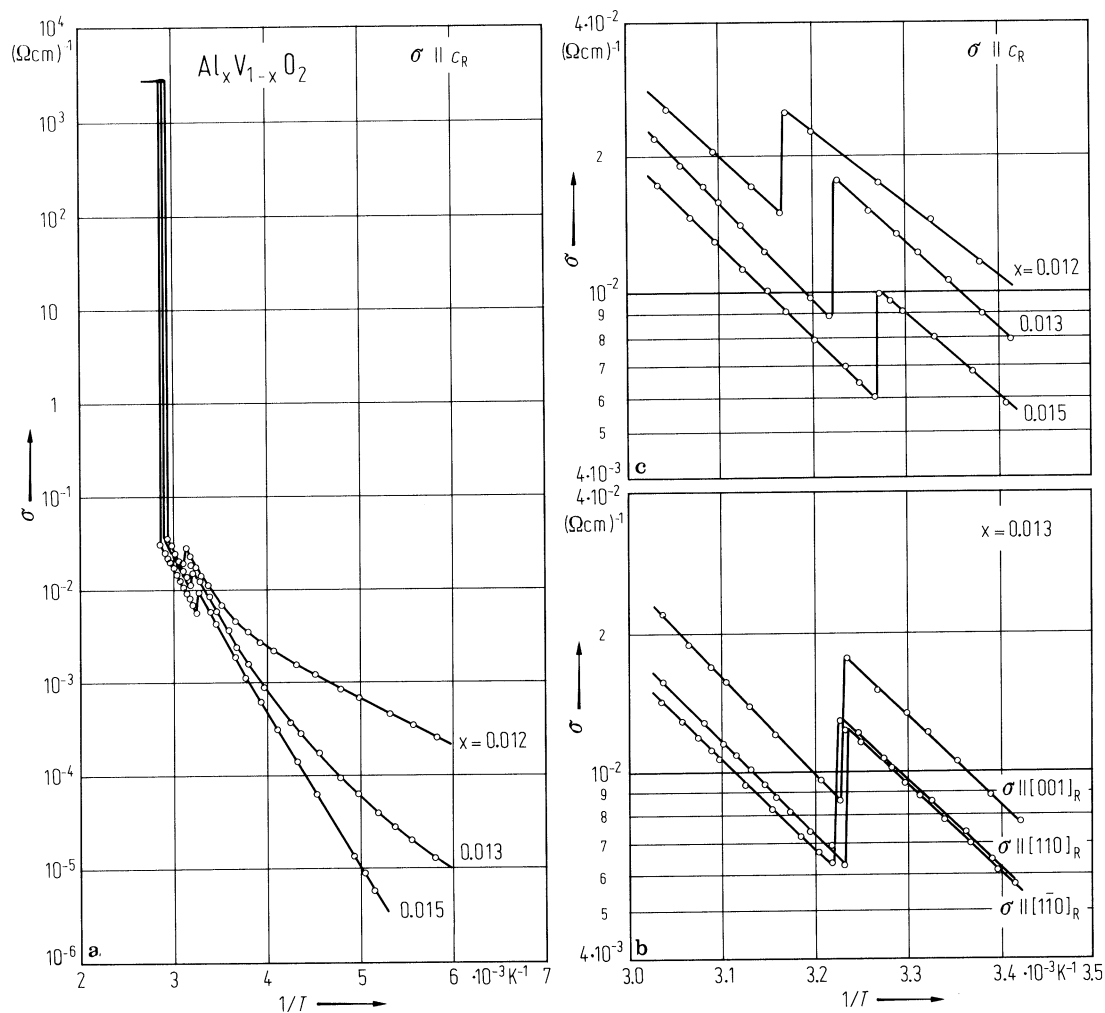


Fig. 4.

$\text{Al}_{0.013}\text{V}_{0.987}\text{O}_2$. Thermoelectric power vs. reciprocal temperature near the T– M_2 transition [75V].

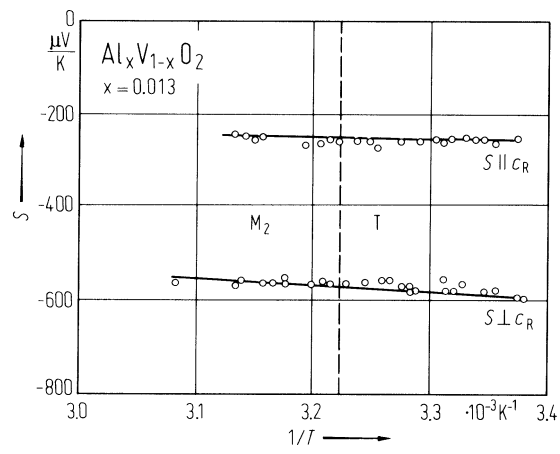


Fig. 5.

$\text{Cr}_x\text{V}_{1-x}\text{O}_2$. Electrical conductivity vs. reciprocal temperature for two polycrystalline samples of different composition [71V].

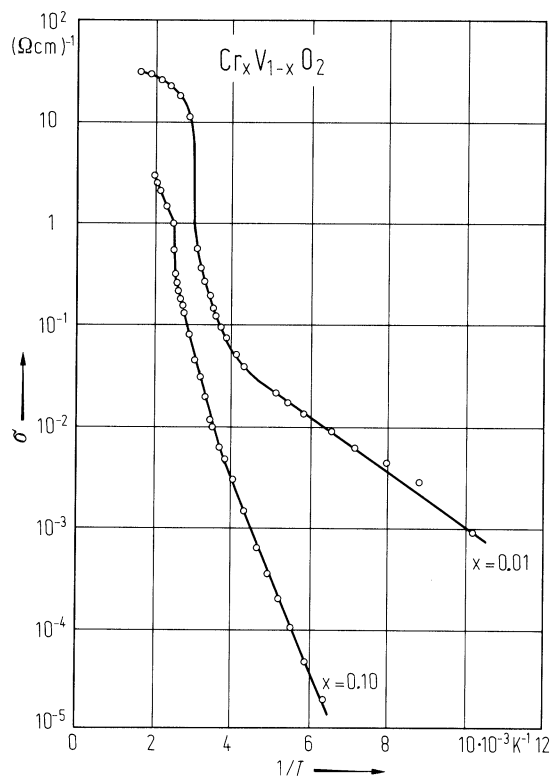


Fig. 6.

$\text{Cr}_{0.1}\text{V}_{0.9}\text{O}_2$. Thermoelectric power of polycrystalline sample vs. reciprocal temperature [71V].

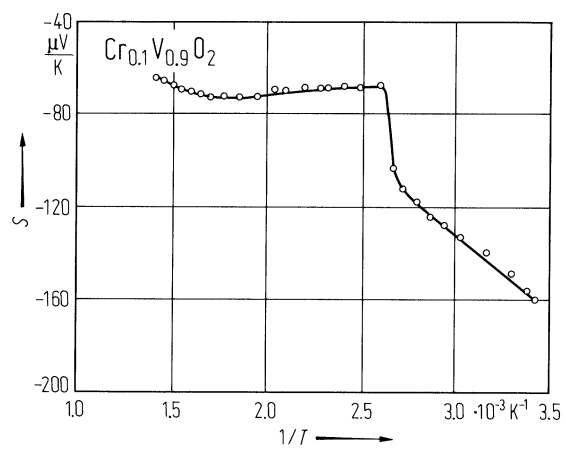


Fig. 7.

$\text{Fe}_x\text{V}_{1-x}\text{O}_2$ (a) Resistivity vs. temperature for polycrystalline samples of different composition, (b) shows ρ (20°C) vs. x [76B1].

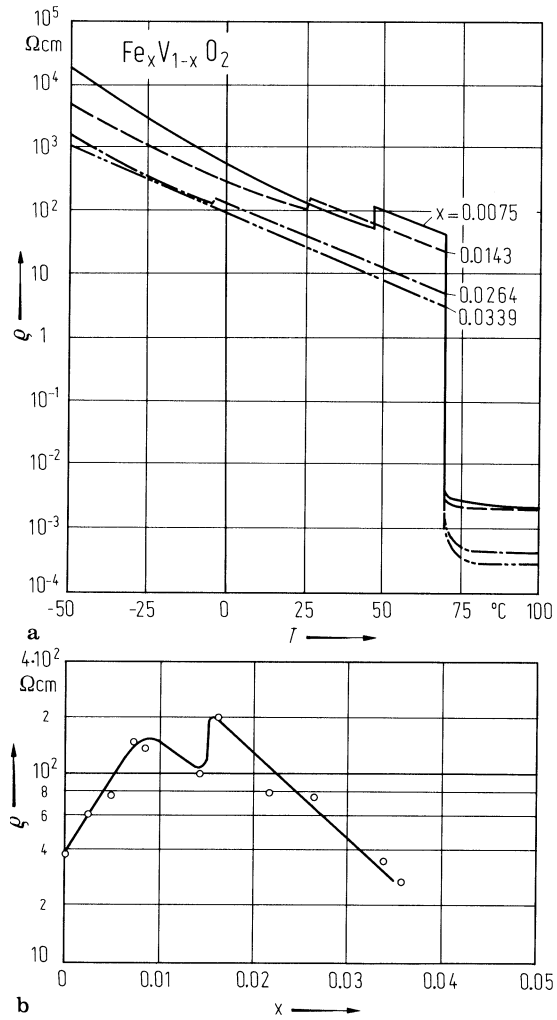


Fig. 8.

$\text{Fe}_x\text{V}_{1-x}\text{O}_2$. (a) Thermoelectric power vs. composition at 30°C, (b) thermoelectric power vs. temperature for $x = 0.014$ [76H1]. Polycrystalline samples for (a).

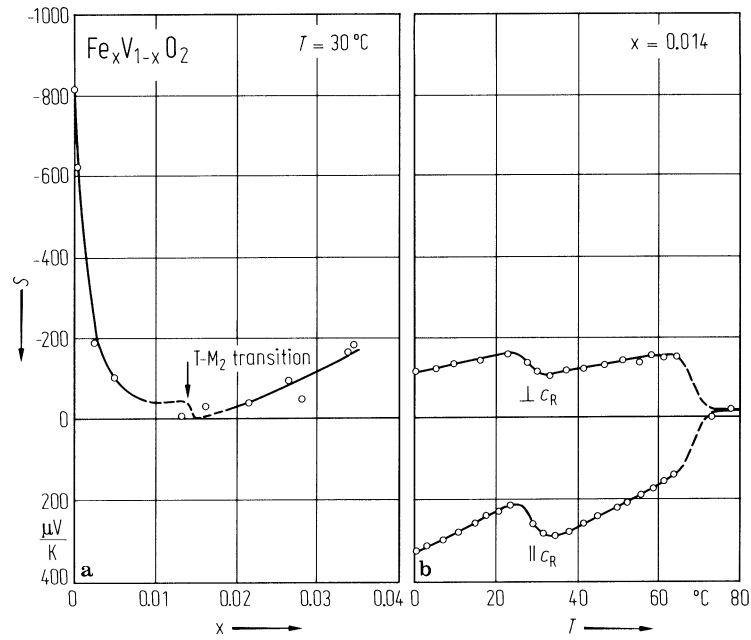


Fig. 9.

$\text{Ti}_{0.04}\text{V}_{0.96}\text{O}_2$, VO_2 . Conductivity vs. reciprocal temperature (a) and details near T_{tr} (b) [76H2]. Polycrystalline samples.

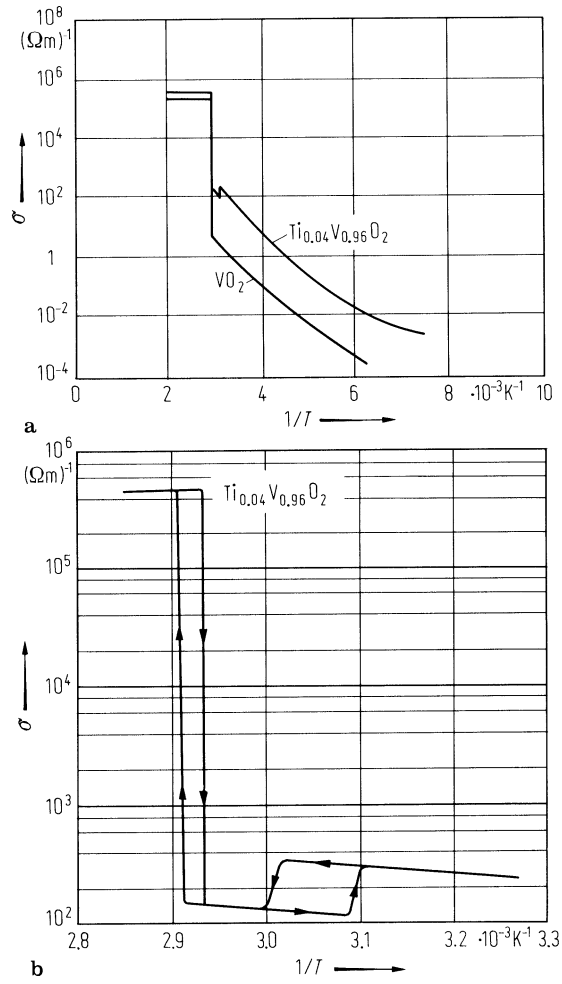


Fig. 10.

$\text{Nb}_x\text{V}_{1-x}\text{O}_2$. (a, b) Conductivity vs. reciprocal temperature for polycrystalline samples of different composition, (c) thermoelectric power vs. reciprocal temperature [74V].

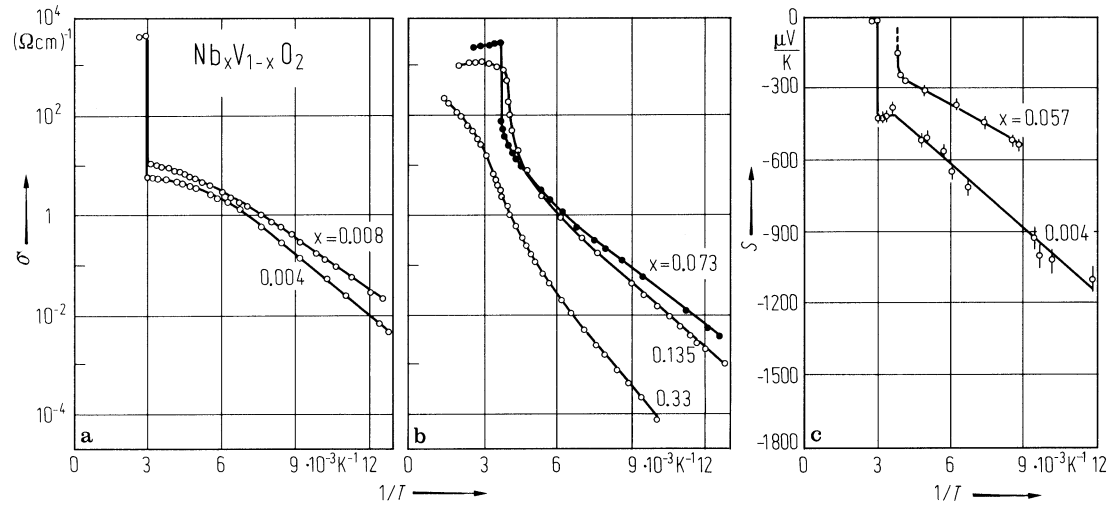


Fig. 11.

$\text{Nb}_x\text{V}_{1-x}\text{O}_2$. Conductivity vs. reciprocal temperature for polycrystalline samples of different composition [72V].

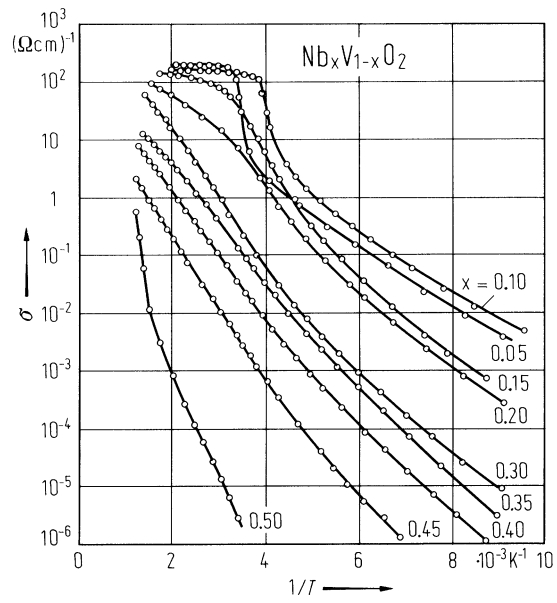


Fig. 12.

$\text{Nb}_x\text{V}_{1-x}\text{O}_2$. Thermoelectric power vs. reciprocal temperature for polycrystalline samples of different composition [72V].

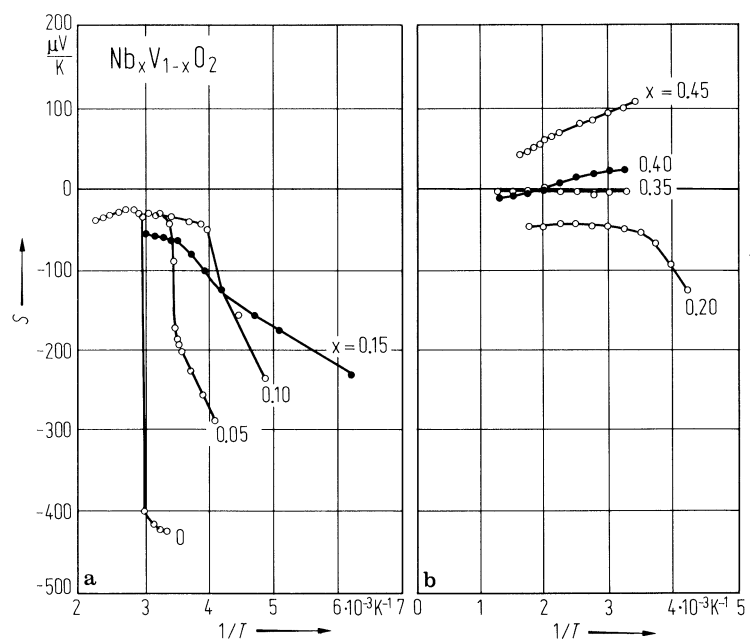


Fig. 13.

$W_xV_{1-x}O_2$. Conductivity vs. reciprocal temperature for polycrystalline samples of different composition [72H].

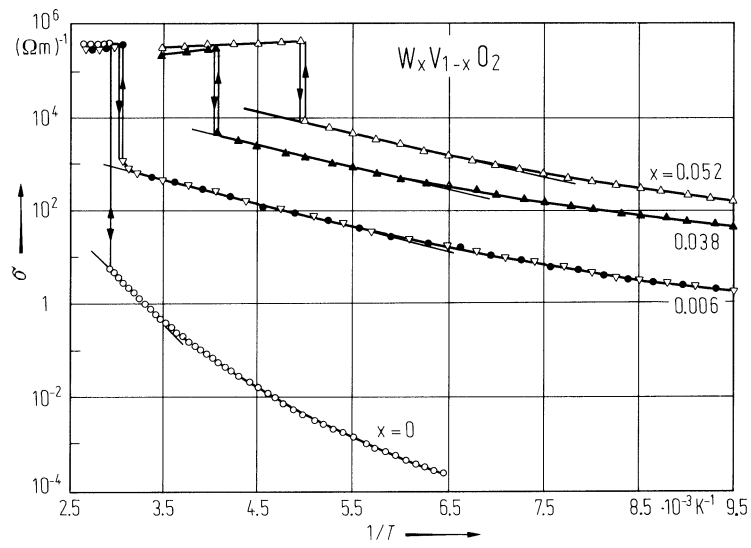
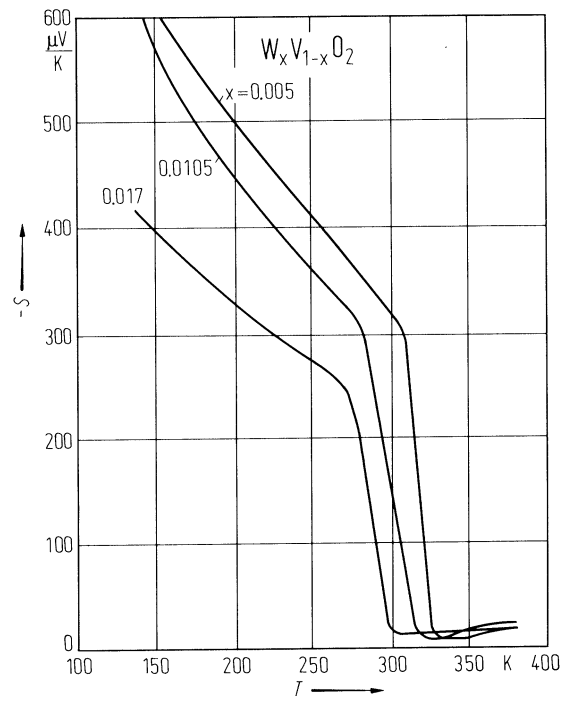


Fig. 14.

$W_xV_{1-x}O_2$. Thermoelectric power vs. temperatur for polycrystalline samples of different composition [73H]



Mo_xV_{1-x}O₂. Conductivity vs. reciprocal temperature for single-crystalline samples of different composition [73H]. $\sigma \parallel c_R$.

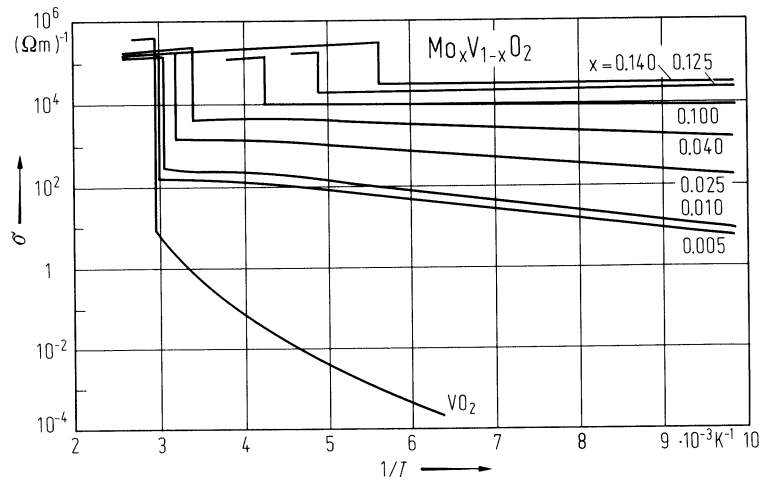


Fig. 16.

$\text{Re}_x\text{V}_{1-x}\text{O}_2$. (a) Conductivity vs. reciprocal temperature for polycrystalline samples of different composition, (b) activation energy vs. composition [77S].

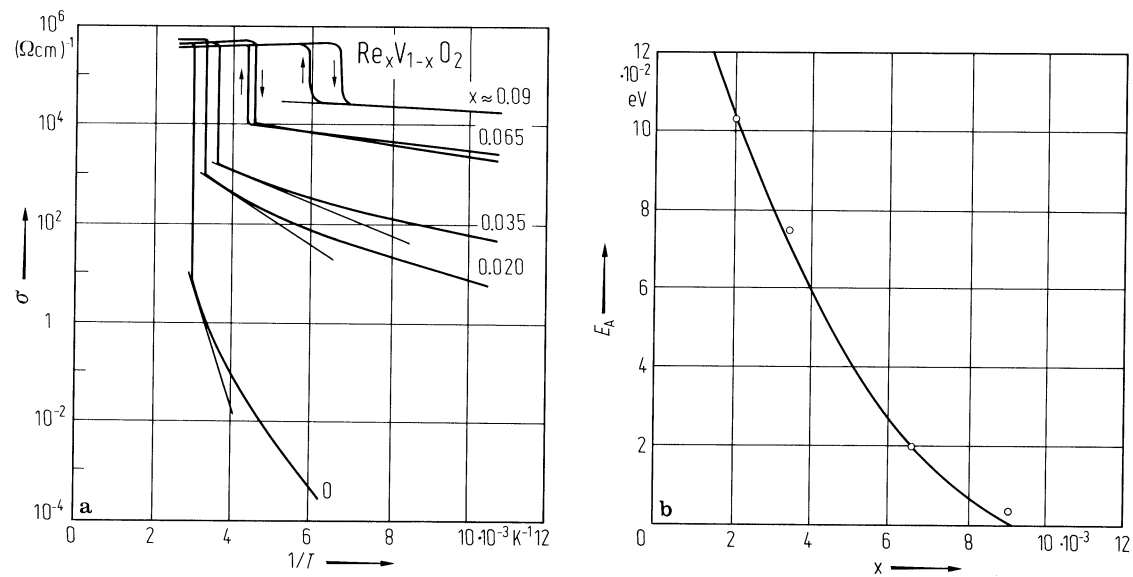


Fig. 17.

$\text{VO}_{2-x}\text{F}_x$. Resistivity vs. reciprocal temperature for polycrystalline samples of different composition [71B]. Arrows indicate transition temperatures.

