substance: FeO ($Fe_{1-x}O$)
property: carrier mobility

hole mobility
(in $cm^2/V\ s$)

μ_p	$\mu_0\ \beta^{1/2}\ (1–4\beta)$		formula used to fit data in Fig. 1;	70S
	$\cdot\exp(–0.01[eV]/kT\ [K])$		$\beta = [Fe_c']$	
	≈ 1	T = 1000...1300°C		70S
	0.137(7)	T = 1000°C		67B
	$\approx A\ T^{-1}\ \exp\ (–0.2[eV]/kT\ [K])$		for higher temperatures, see Fig. 2	67B
	10	near T_N in "stoichiometric" FeO	analysed from Fig. 3 assuming large-polaron behaviour	74B

References:

67B Bransky, I., Tannhauser, D. S.: Physica 37 (1967) 547.
70S Seltzer, M. S., Hed, A. Z.: J. Electrochem. Soc. 117 (1970) 815.
74B Balberg, I.: Phys. Semicond. Proc. Int. Conf. 1974, 920.

Fig. 1.

$Fe_{1-x}O$. Electrical conductivity vs. oxygen partial pressure at various temperatures. Solid lines: fit to a complex defect model [70S].

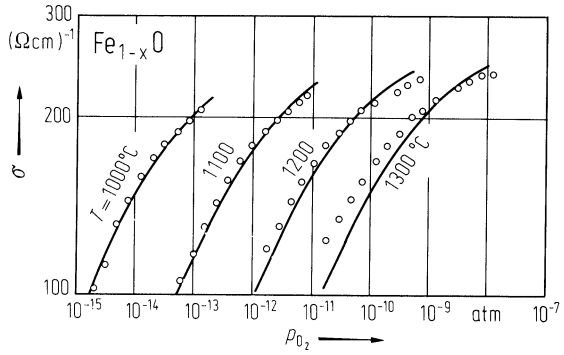

Fig. 2.

$Fe_{1-x}O$. Drift mobility vs. (reciprocal) temperature for two values of p_{CO_2}/p_{CO} [67B].

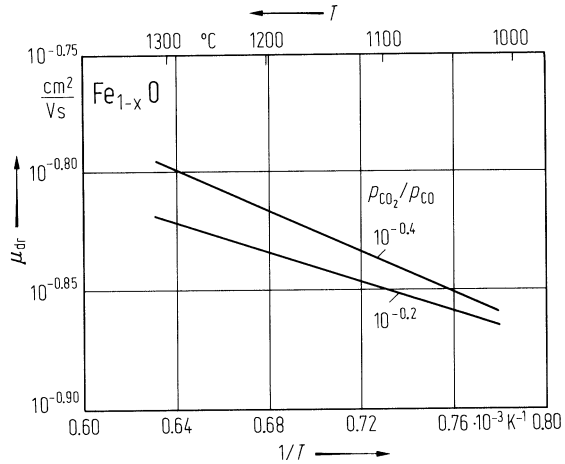

Fig. 3.

FeO. Resistivity vs. temperature near T_N. Solid line: experimental value; dotted line: calculated assuming no critical behaviour [74B].