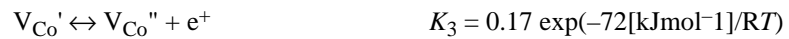
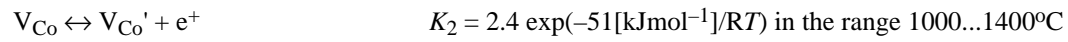
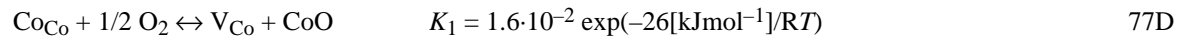


**substance: CoO**  
**property: defects**

Deviation from stoichiometry in  $\text{Co}_{1-\delta}\text{O}$ : Fig. 1.

$T - x$  diagram: Fig. 2.

**dominant equilibria** in solid  $\text{Co}_{1-\delta}\text{O}$  [77D]



$\Delta H$  for the formation of singly ionized vacancies  $94 \text{ kJ mol}^{-1}$  [72B],  $54 \text{ kJ mol}^{-1}$  [66F],  $55 \dots 60 \text{ kJ mol}^{-1}$ .  
Second ionization energy  $E_2$  is  $63 \text{ kJ mol}^{-1}$  [66F],  $74.3 \text{ kJ mol}^{-1}$  [72B].

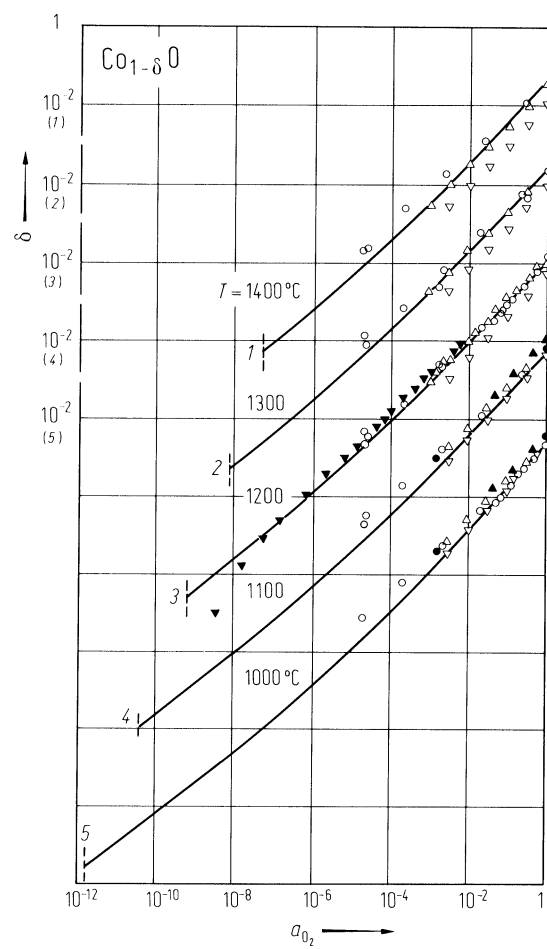
Three regions noted by [66F]: region  $A_1$  has unionized vacancies dominant, region  $A_2$  has singly ionized vacancies dominant and region B has doubly ionized vacancies dominant.

## References:

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**Fig. 1.**

$\text{Co}_{1-\delta}\text{O}$ . Deviation from stoichiometry vs. oxygen activity. Data from [54C, 64F, 72B, 68S, 68E, 76F]. [77D].



**Fig. 2.**

$\text{Co}_{1-\delta}\text{O}$ .  $T - x$  diagram, where  $x$  is the mole fraction of Co, and the dotted lines are oxygen isobars, the numbers being  $-\log_{10}a_{\text{O}_2}$ . [77D].

