

**Exercise 1.** For following oxides, write down the defect formation processes (Schottky, Anti-Schottky, Frenkel, Antti-Frenkel) and suitable reaction constant for each:

- $\text{Cu}_2\text{O}$
- $\text{TiO}_2$

**Exercise2.** For  $\text{Cr}_2\text{O}_3$ , write defect formation processes (and reaction constants) assuming nonstoichiometry of compounds. Take under consideration all possible cases:

- Excess of a metal ( $\text{Me}_{n+y}\text{X}_m$ )
- Shortage of an oxidant ( $\text{Me}_n\text{X}_{m-y}$ )
- Shortage of a metal ( $\text{Me}_{n-y}\text{X}_m$ )
- Excess of an oxidant ( $\text{Me}_n\text{X}_{m+y}$ )