

Verdampfungsverhalten von Lanthantrihalogeniden

Evaporation Behaviour of Lanthanum Trihalides

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Lanthanum Trihalides, Evaporation, Enthalpy, Entropy

The evaporation of LaCl_3 , LaBr_3 and LaI_3 was investigated in closed tubes under argon atmosphere and correlated with data in the literature. The enthalpies and entropies of evaporation were derived from the temperature functions of pressure:

$$\Delta H^\circ(\text{v}, \text{LaCl}_3, T) = 48,5 \pm 2 \text{ kcal/mol}, \quad \Delta S^\circ(\text{v}, \text{LaCl}_3, T) = 22,0 \pm 3 \text{ cal/K}\cdot\text{mol}$$

$$\Delta H^\circ(\text{v}, \text{LaBr}_3, T) = 48,0 \pm 2 \text{ kcal/mol}, \quad \Delta S^\circ(\text{v}, \text{LaBr}_3, T) = 24,0 \pm 2 \text{ cal/K}\cdot\text{mol}$$

$$\Delta H^\circ(\text{v}, \text{LaI}_3, T) = 49,5 \pm 2 \text{ kcal/mol}, \quad \Delta S^\circ(\text{v}, \text{LaI}_3, T) = 29,0 \pm 2 \text{ cal/K}\cdot\text{mol}$$