Corrigendum

I the thesis on pages 128 and 129 there was a numerical error in the calculations of the activity coefficient of magnesium at infinite dilution in silicon. The Gibbs energy of the reaction:

$$2Mg(l) + O_2(g) = 2MgO(s)$$

was given with an erroneous value. The correct value should be $\Delta G = -784.402 \text{ kJ/mol}$ at 1600 °C according to the NIST-JANAF Tables. The corresponding equilibrium constant is then $1.54 \cdot 10^{-6}$. Using this value gives:

$$\gamma_{\rm Mg}^0 = 0.20$$

This value is also more in agreement with the extrapolated value at 1600 °C from Miki et al. (1998) of 0.22. The erroneous Gibbs energy has no influence on any of the other calculations in the thesis. Neither has the incorrect activity coefficient of magnesium at infinite dilution in silicon.