

Correction to Kinetic Study of the Electrochemical FePO₄ to LiFePO₄ Phase Transition

Jan L. Allen,* T. Richard Jow, and Jeffrey Wolfenstine *Chem. Mater.* **2007**, *19*, 2108–2111. DOI: 10.1021/cm0629630

P ages 2110–2111. The reported value of the activation energy is incorrect owing to a calculation error. The correct activation energy determined from the slope of the curve in Figure 3 should be 29 kJ/mol not 13 kJ/mol as originally

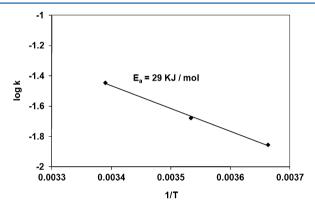


Figure 3. Activation energy was obtained from this Arrhenius plot of the electrochemical lithiation of $FePO_4$ to form $LiFePO_4$, using the values of the Avrami rate constant parameter obtained from Figure 2. The trend line is a linear best fit of the data points. The slope of the line was used to obtain the activation energy for this process.

published. This correction does not affect the discussion/conclusion of the original article that the activation energy is low for a solid—solid transformation. However, while this activation still implies a low energy pathway for Li ion diffusion and it is lower than that reported by Takahashi et al. (ref 23 in the original article) for lattice Li ion diffusion in LiFePO₄ (39 kJ/mol), the corrected activation energy is less consistent with a phase boundary mechanism for Li ion diffusion suggested in the original article. A corrected Figure 3 is shown.

Received: March 7, 2012 Accepted: March 9, 2012 Published: March 22, 2012

