Supporting Information

Effect of Li Concentration-dependent Material Properties on Diffusion Induced Stresses of Sn Anode

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1- Radial stresses of Sn micropillar with plasticity and creep effect

**Figure S1.** Radial stresses of Sn micropillar with constant material properties in (a) elastoplastic deformation and (b) elastoplastic and creep deformation. And radial stresses of Sn micropillar with concentration-dependent material properties in (c) elastoplastic deformation and (b) elastoplastic and creep deformation.
2- Effect of concentration-dependent material properties to stress distribution

Figure S2. Hoop stresses of Sn micropillar with (a) $D_c, E, \nu$ and (b) $D_c, E_c, \nu_c$. 