Nanoscale Surface Adsorption and Disordering in Battery Materials

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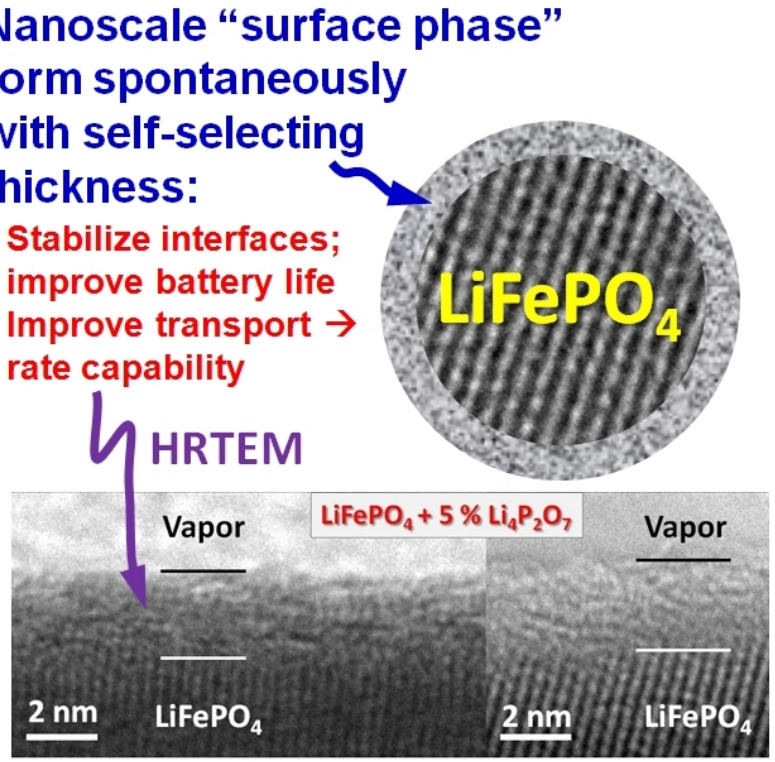
The Scientific Basis (built largely via a CAREER program during 2005-10) – Nanoscale "surface phases" with the following *distinct characteristics*:
•a self-selecting or "equilibrium" thickness;
•structures and compositions that are neither observed nor stable as bulk phases; and
•properties unattainable by bulk phases.

Twofold Objectives of the New Project (2010-14):
•using nanoscale "surface phases" of self-selecting thickness to improve the performance of ***lithium-ion battery materials***; and
•using lithium-ion battery materials as model systems to advance the fundamental interfacial science for high-T ceramic systems.



A. Kayyar, H. Qian and J. Luo
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