## **Supplementary Information**

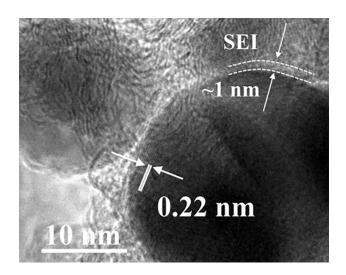


Figure S1. HRTEM image of the G-TiP electrodes after discharging to 1.9 V in a voltage of 0.1-2.8 V for Lithium cells.

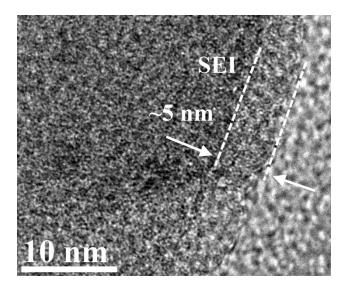


Figure S2. HRTEM image of the G-TiP electrodes after discharging to 0.1 V in a voltage of 0.1-2.8 V for Lithium cells.

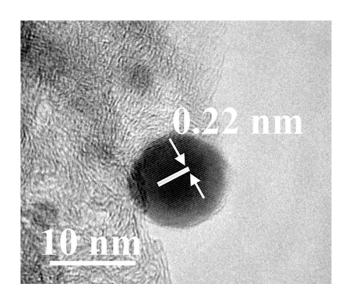


Figure S3. HRTEM image of the G-TiP electrode after charging to 2.8 V in a voltage of 0.8-2.8 V for Lithium cells.