Surface Engineering Enables Robust SEI Growth towards Stable and Efficient Lithium-Ion Batteries SiO_x Anode

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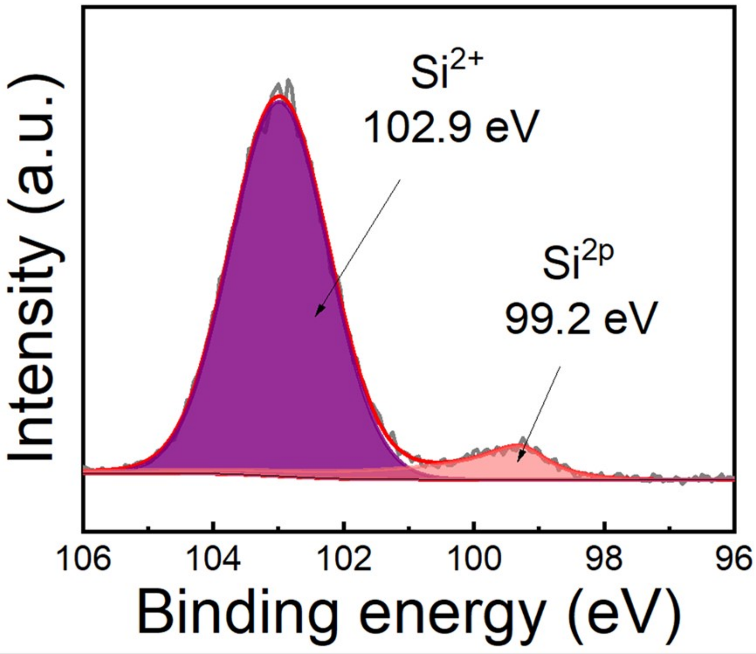

Fig S1: High-resolution XPS spectra of Si 2p.

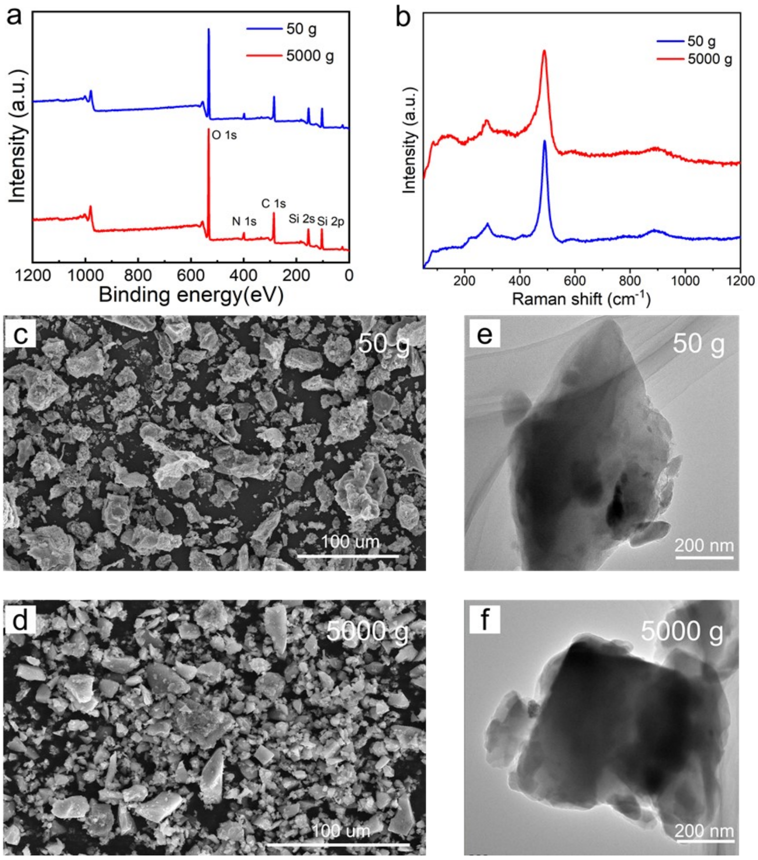

Fig S2. (a) X-ray photoelectron spectroscopy (XPS) full spectrum of 50g and 5000g CNS samples. (b) Raman spectrum of 50g and 5000g CNS samples. (c, d) scanning electron microscopy (SEM) image of 50g and 5000g CNS samples. (e, f) transmission electron microscopy (TEM) images of 50g and 5000g CNS samples.

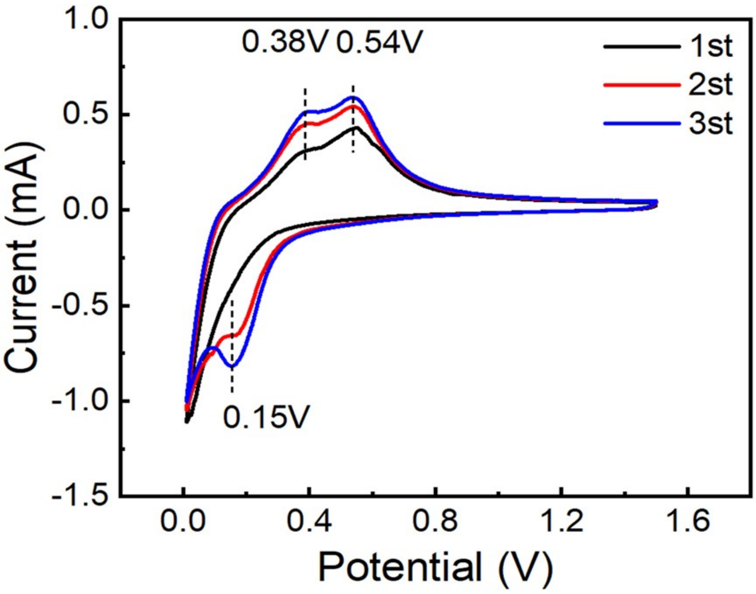

Fig S3: CV profiles of CS at 0.1 mV s^{-1}.

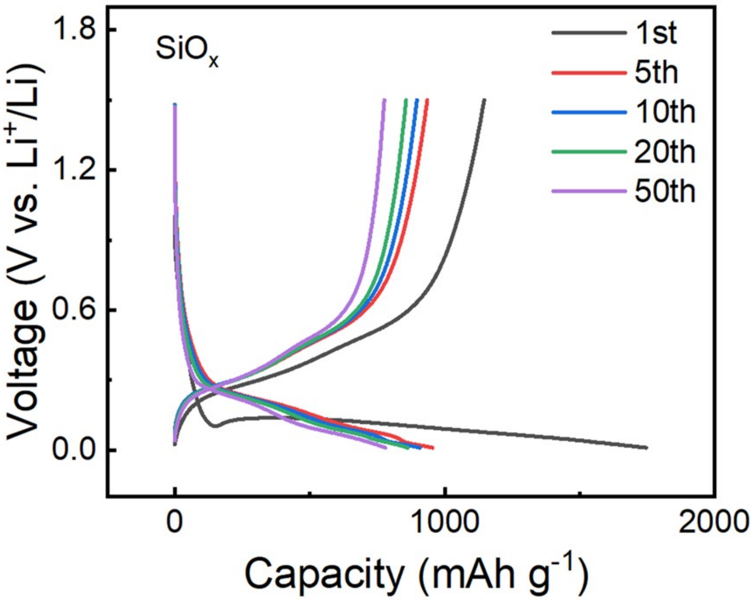

Fig S4: Discharge-charge voltage curves of SiO$_x$ at 100 mAh g^{-1}.

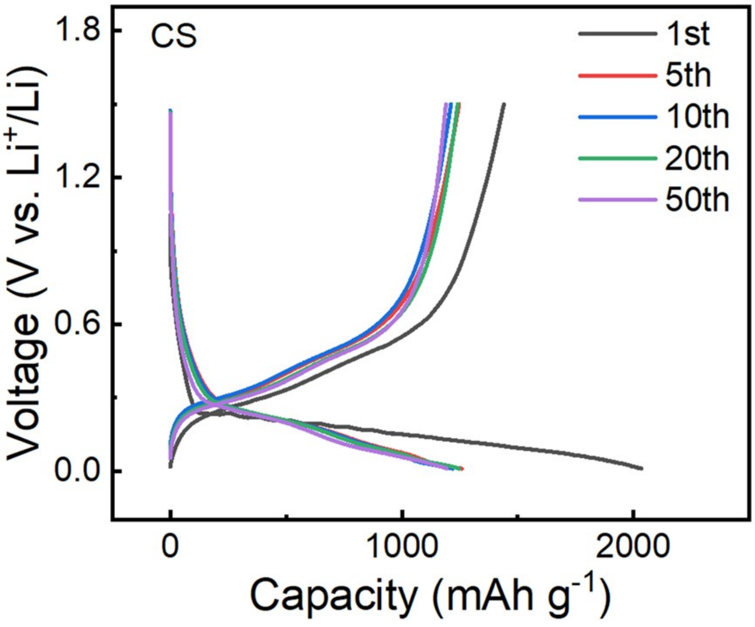

Fig S5: Discharge-charge voltage curves of CS at 100 mAh g^{-1}.

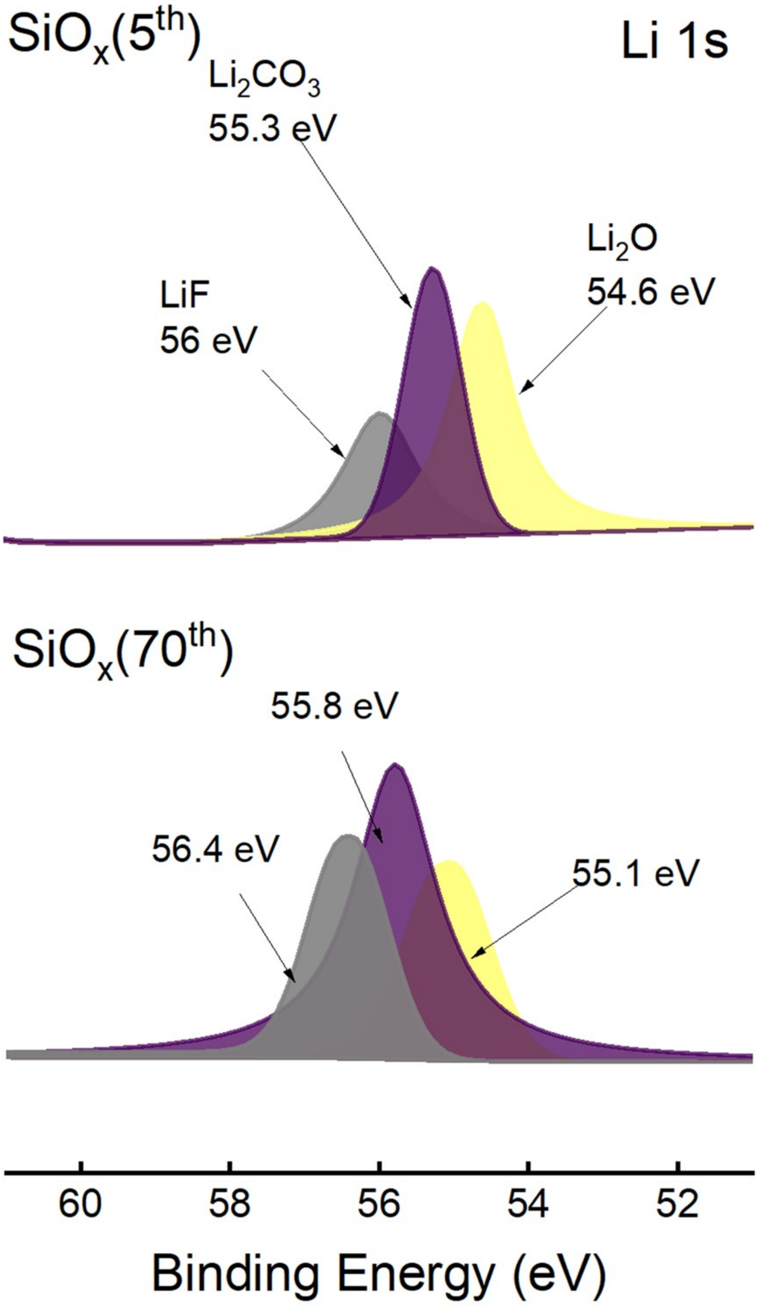

Fig S6: Comparison of high-resolution XPS spectra of Li 1s in the fifth and seventieth circles of SiO_x.

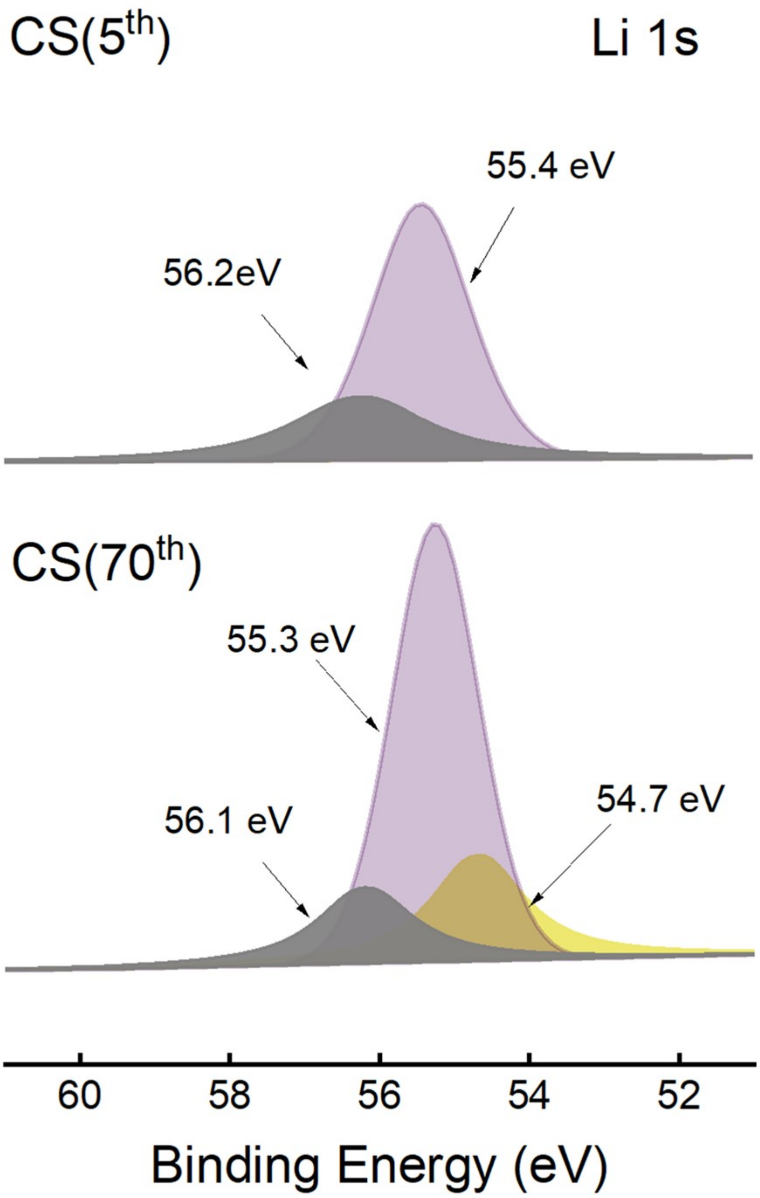

Fig S7: Comparison of high-resolution XPS spectra of Li 1s in the fifth and seventieth circles of CS.

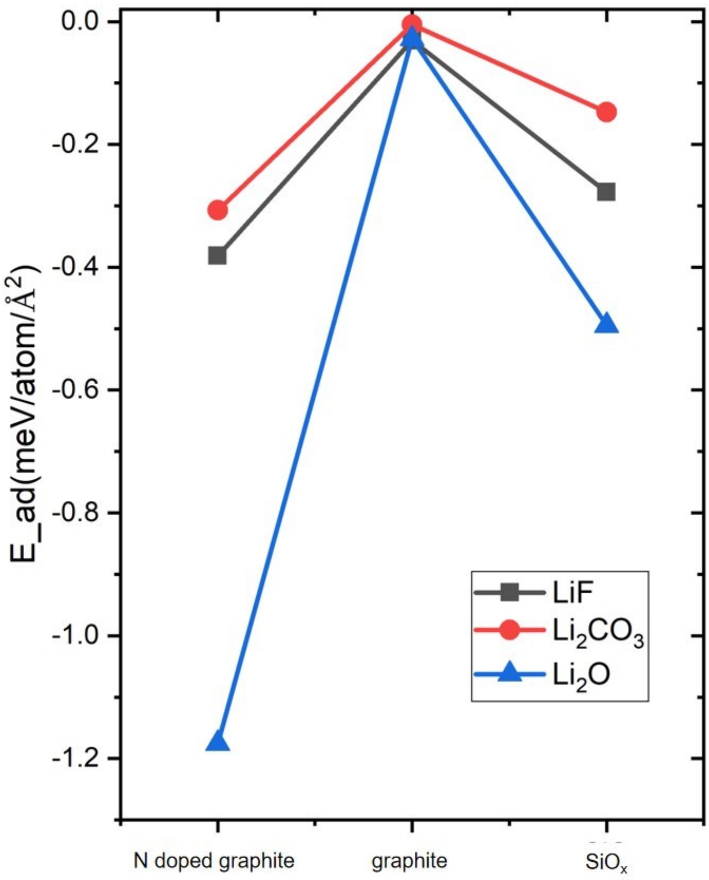

Fig S8: Formation of LiF/Li_2CO_3/Li_2O adsorbed on the surfaces of N doped graphite, graphite and SiO_x, respectively.