

Polyaniline/vanadium pentoxide layer-by-layer electrodes for energy storage

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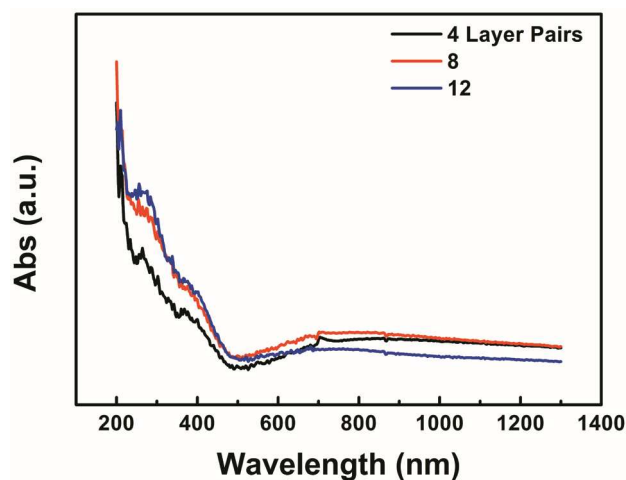


Figure S1. UV-Vis spectra of H-PANI/V₂O₅ LbL films assembled at pH 2. The absorption intensity does not increase with layer pair number, suggesting that LbL growth was unsuccessful.

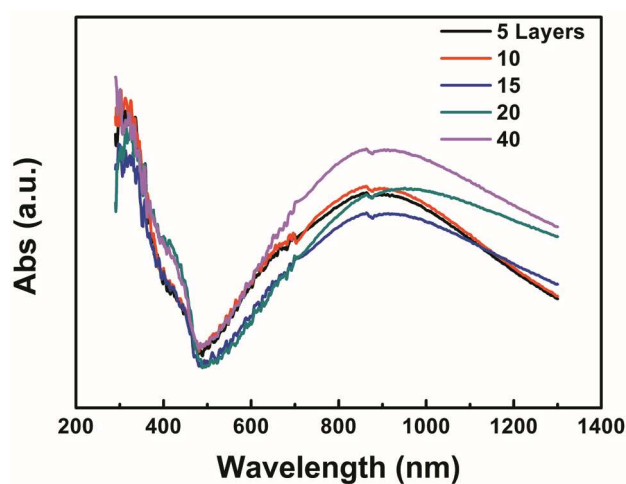


Figure S2. UV-Vis spectra of LbL films, where H-PANI is the only dipping solution. Rinsing between steps was conducted as described in the Experimental Section. The absorbance does not monotonically increase with layer pair, indicating poor growth.

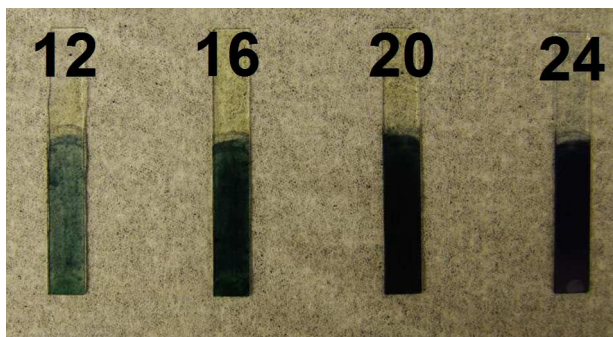


Figure S3. APTES($V_2O_5/C\text{-PANI}$)_n LbL films of varying number of layer pairs.

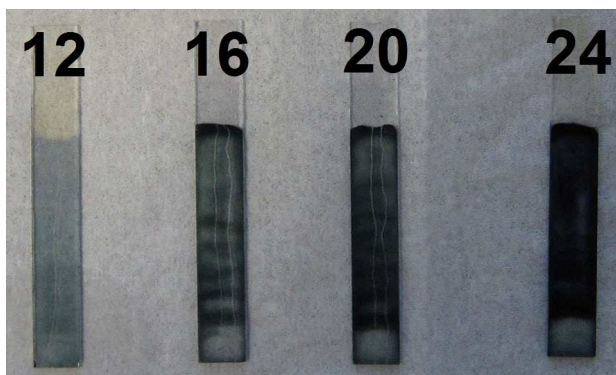


Figure S4. APTES(V_2O_5 /H-PANI) $_n$ LbL films of varying number of layer pairs. The scratches were made for profilometry measurements.

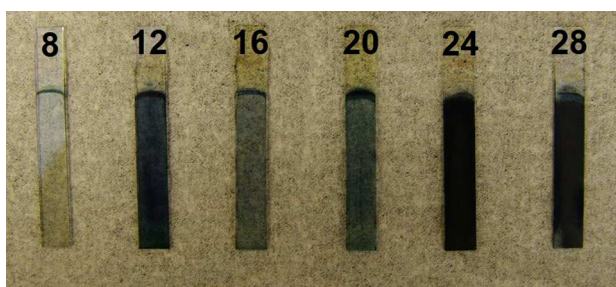


Figure S5. PEI(V_2O_5 /C-PANI) $_n$ LbL films. Here, the variation in transparency indicates poor growth.

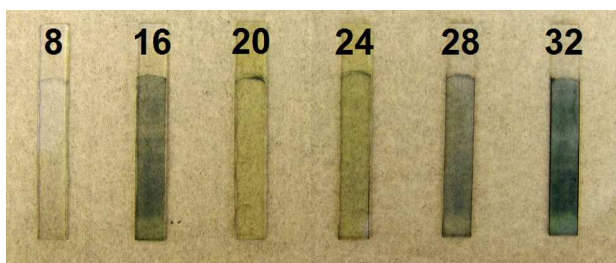


Figure S6. PEI(V_2O_5 /H-PANI) $_n$ LbL films. Here, the variation in transparency indicates poor growth.

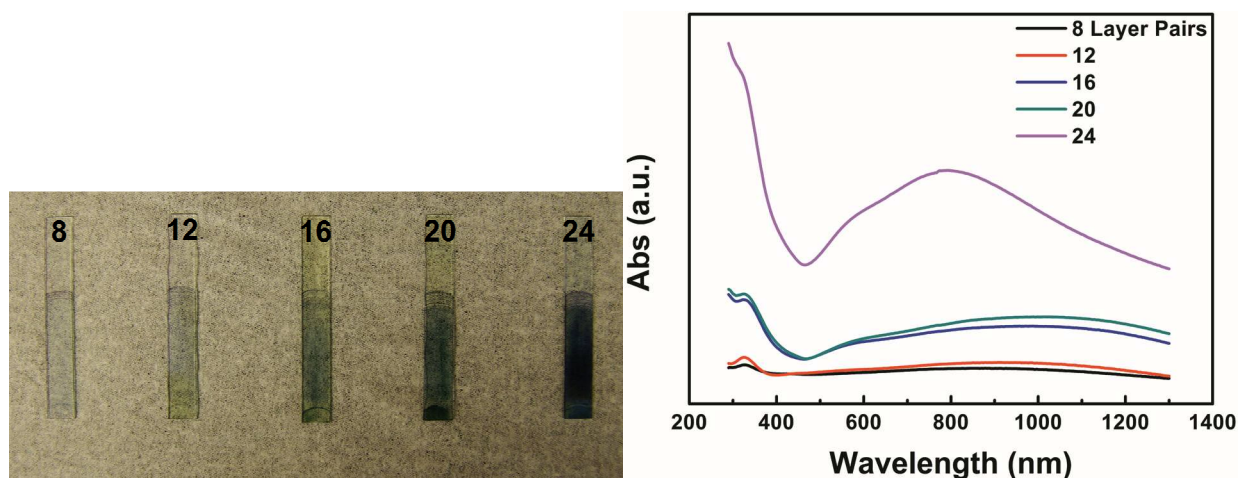


Figure S7. Images and UV-Vis spectra of NMP(V₂O₅/C-PANI)_n LbL films. Here, the variation in transparency indicates poor growth.

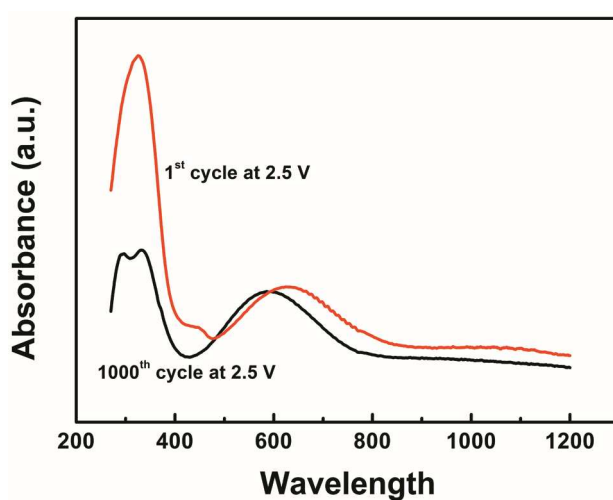


Figure S8. UV-Vis spectra of APTES(V₂O₅/C-PANI)₁₂ LbL films at 2.5 V before and after 1,000 charge-discharge cycles.

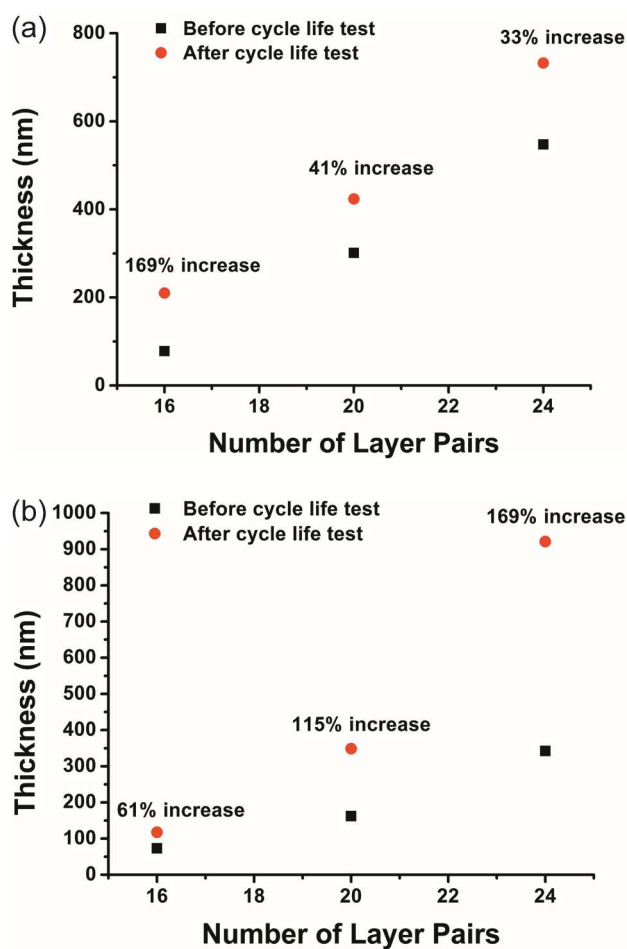


Figure S9. Thickness comparison for (a) APTES(V₂O₅/C-PANI)_n and (b) APTES(V₂O₅/H-PANI)_n LbL films before and after cycling 1000 times.