Thermal and Plasma Enhanced Atomic Layer Deposition of TiO_2 from Amide and Alkoxide Precursors: Growth Characteristics and Photoelectrochemical Performance.

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Accompanying Abstract Figures

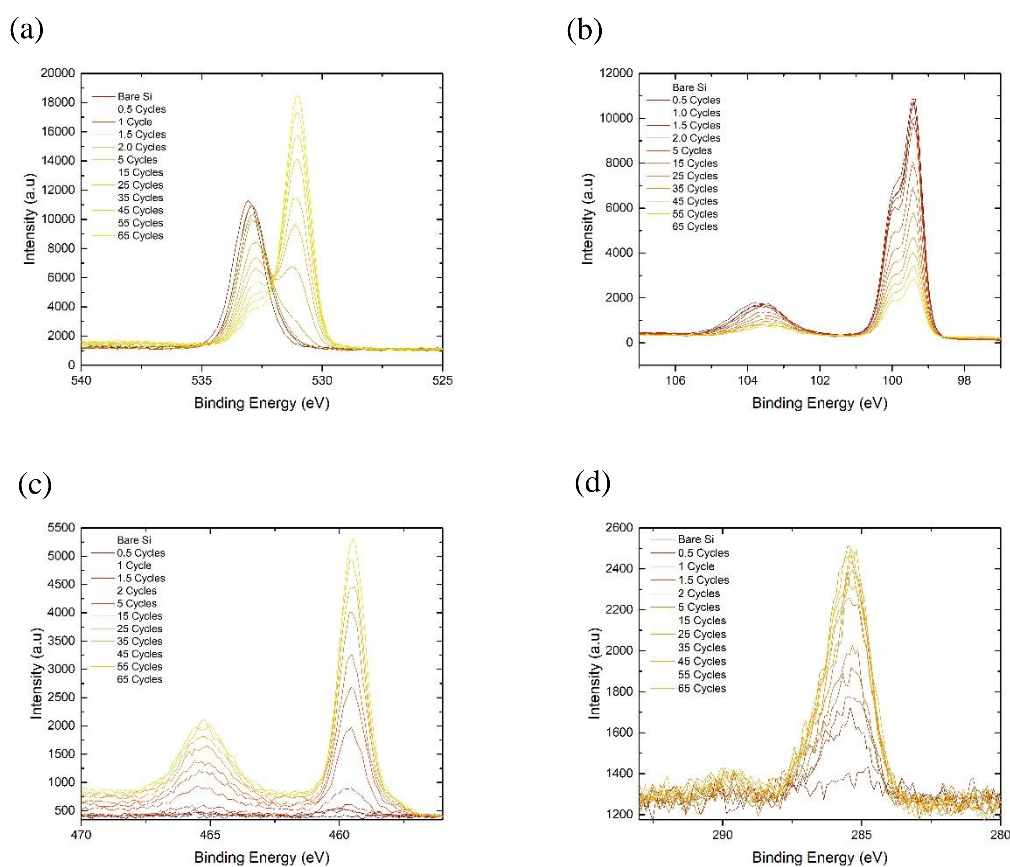

Figure 1: XPS core level signal evolution increasing number of ALD Ti cycles, from 0 to 65 cycles, depicting the change in composition as the thickness of the titanium overlayer increases during TDMAT thermal growth. (a) Evolution of the O1s photoemission peak as it changes from a SiO_2 dominant peak TiO_2 dominant (b) Attenuation of the SiO_2 peak is shown (c) Ti2p region showing peak intensity increase with increasing cycles (d) C1s peak showing remnant carbon incorporation in the film.

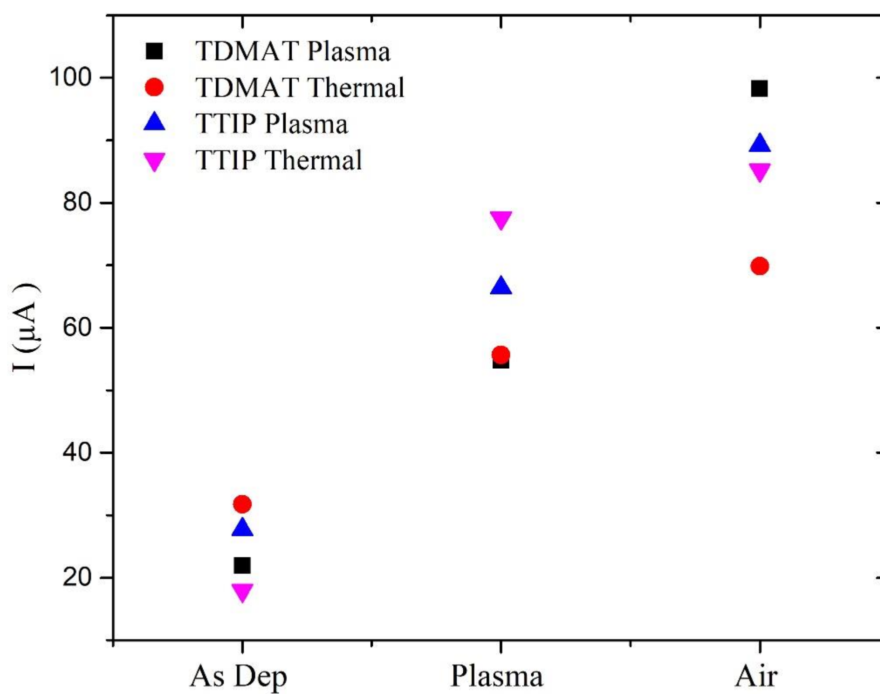

Figure 2: Voltammetry measured photocurrent vs 1.23 V RHE as a function of sample treatment stage.