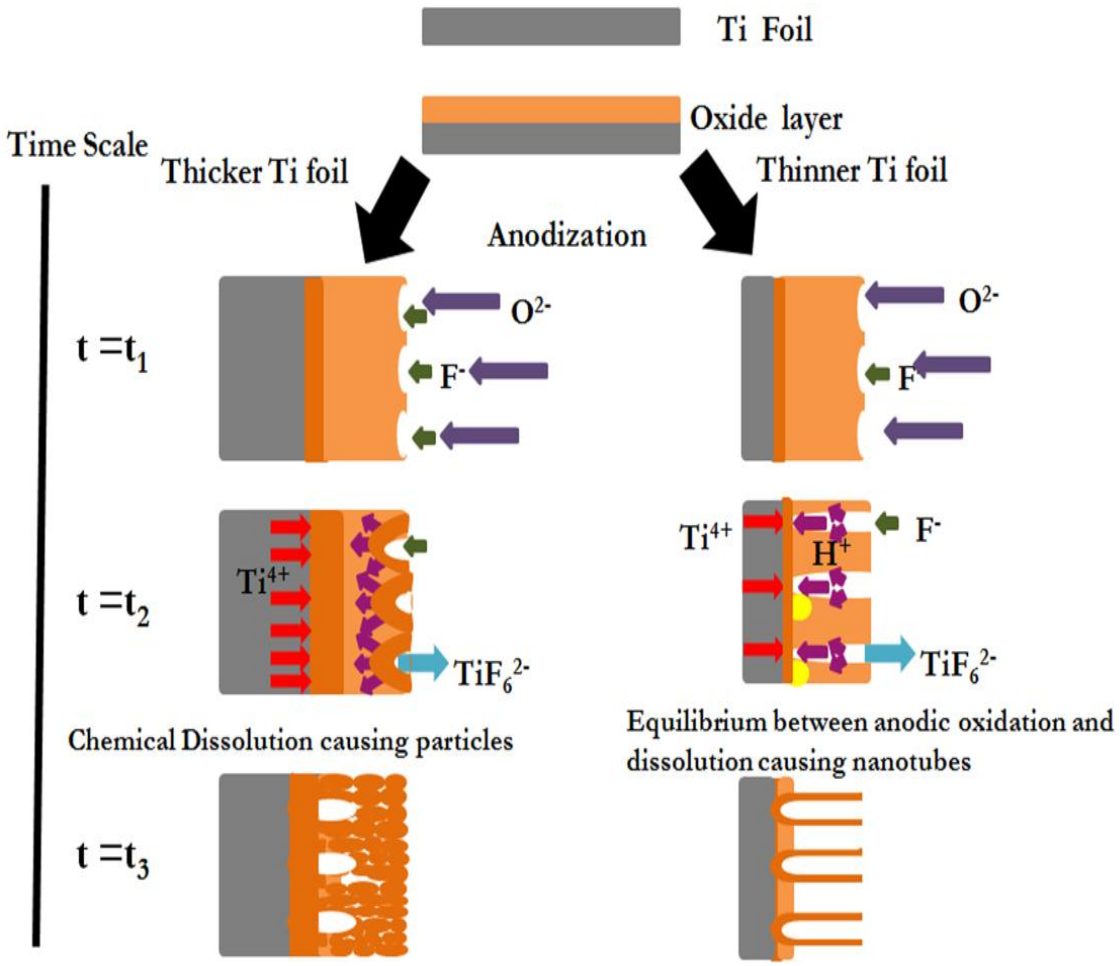
Electronic Supplementary Material (ESI) for RSC Advances

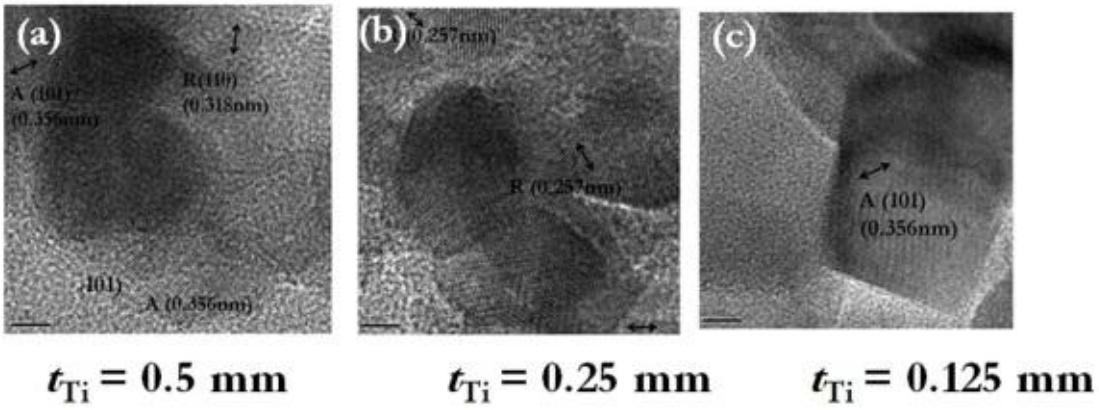
Effects of titanium foil thickness on TiO_2 nanostructures synthesized by anodization

Rajeshkumar S. Hyam[a] and Dukhyun Choi[a,*]

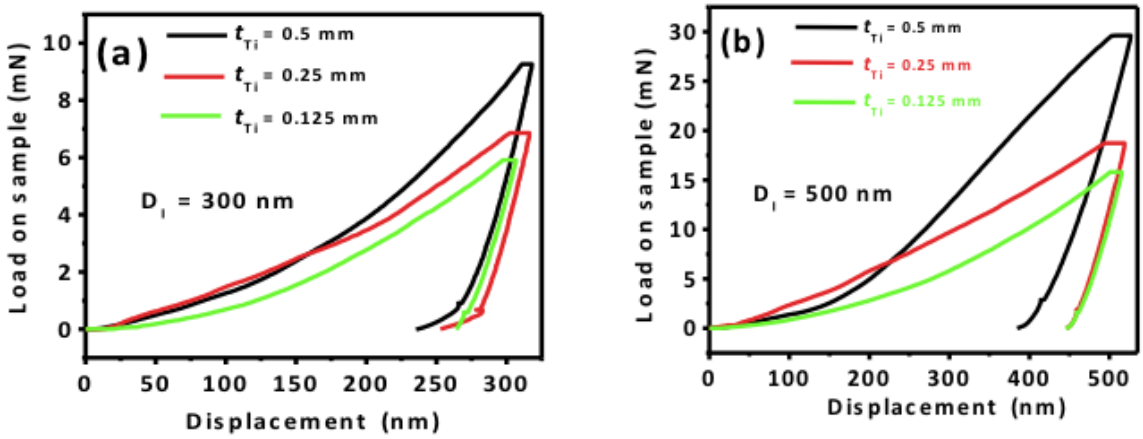
ESI1 Growth and movement of barrier layer w.r.t time. The arrows in the schematic depicts, Ti^{4+} →, H^+ ●, TiF_6^{2-} →, O^{2-} →, F^- →, Applied force due to applied electric field →.



ESI2 FE-TEM Diffraction line images of TiO_2 nanostructures synthesized on varied thickness of Ti foil (t_{Ti} = 0.5 mm, t_{Ti} = 0.25 mm and t_{Ti} = 0.125 mm)



ESI3 Nanoindentation data to study barrier layer properties on different Ti foils thickness (t_{Ti} = 0.5mm, t_{Ti} = 0.25mm and t_{Ti} = 0.125mm) at (a) 300nm and (b) 500nm indentation depth (DI)



ESI4 Nanoindentation (indentation modulus data) to study barrier layer properties on different Ti foils thickness (t_{Ti} = 0.5mm, t_{Ti} = 0.25mm and t_{Ti} = 0.125mm) at nanoindentation depth (D_I) of 300nm and 500nm.