

Supplementary information

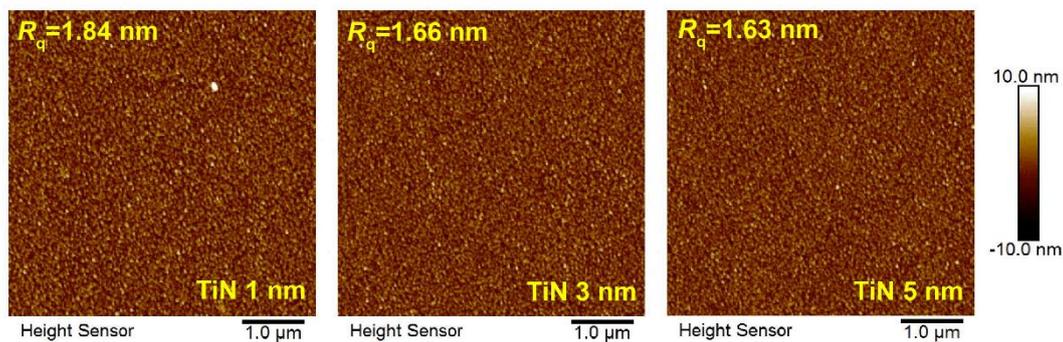


Figure S1. Atomic force microscope (AFM) images of the Cr/Al/Cr/TiN anodes with different thicknesses of TiN.

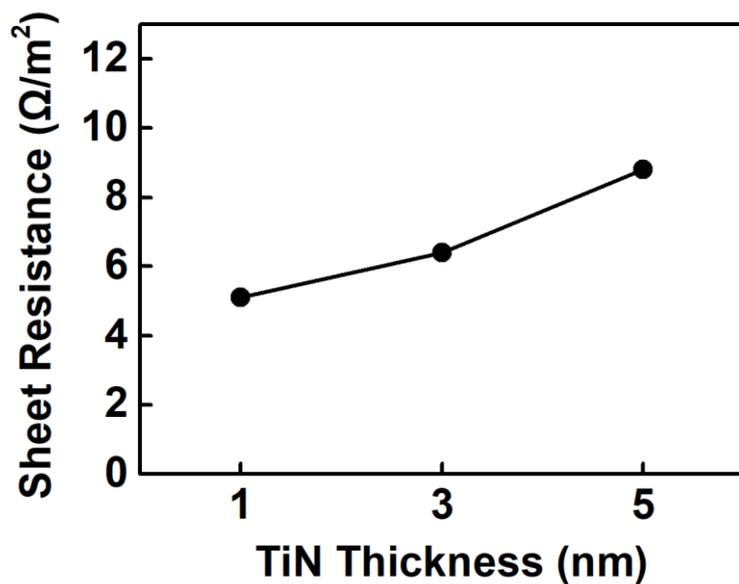


Figure S2. Atomic force microscope (AFM) images of the Cr/Al/Cr/TiN anodes with different thicknesses of TiN.

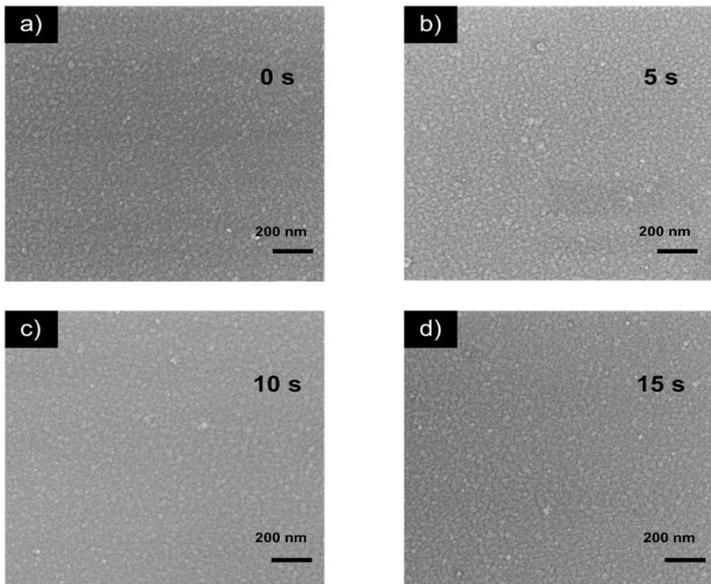


Figure S3. SEM images of the Cr/Al/Cr/TiN anode under the ultrasonic treatment for a different time.

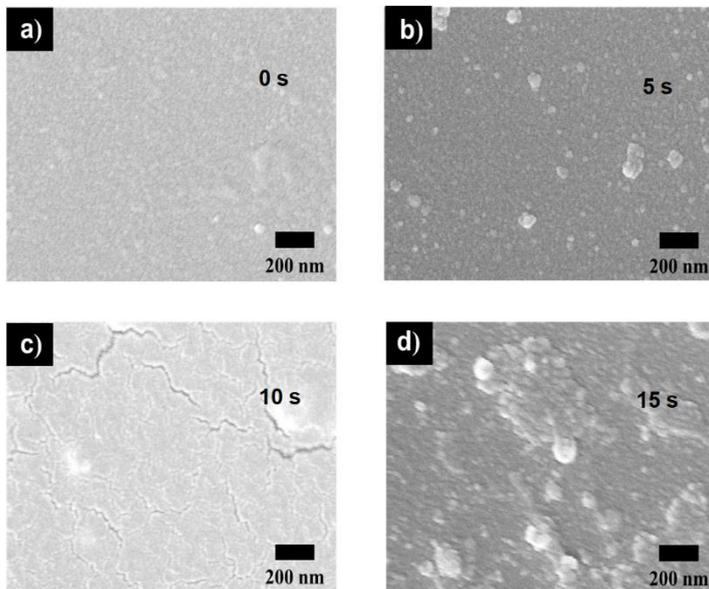


Figure S4. SEM images of the Cr/Al/Cr/Mo anode under the ultrasonic treatment for a different time.

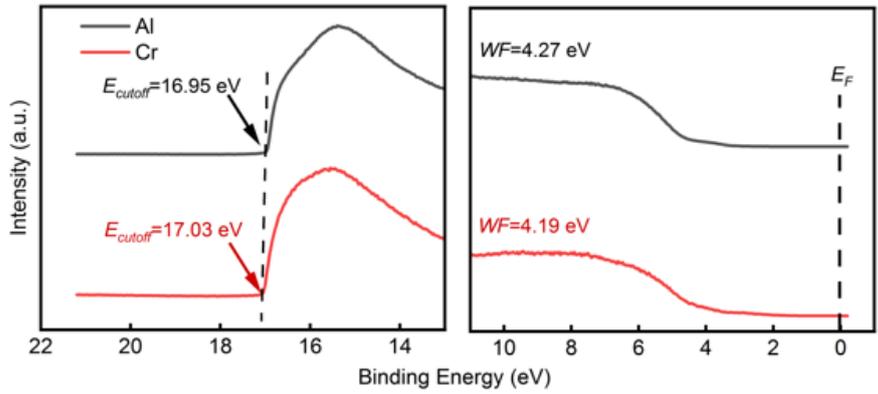


Figure S5. UPS spectra of the Al and Cr.

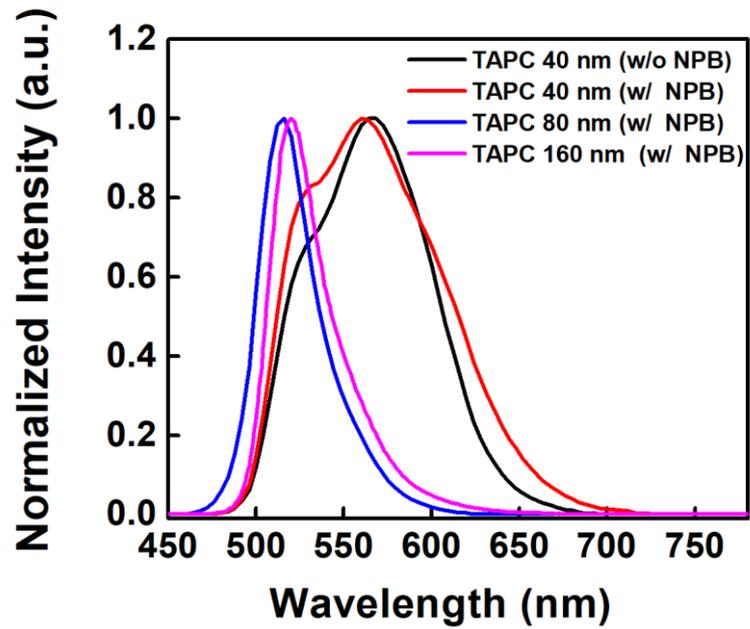


Figure S6. Electroluminescence spectra of Cr/Al/Cr/TiN-based TE-OLEDs using different TAPC thicknesses.