Electronic Supplementary Information (ESI)

Hollow and porous titanium nitride nanotubes as high performance catalyst support for oxygen reduction reaction

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Figure S1.

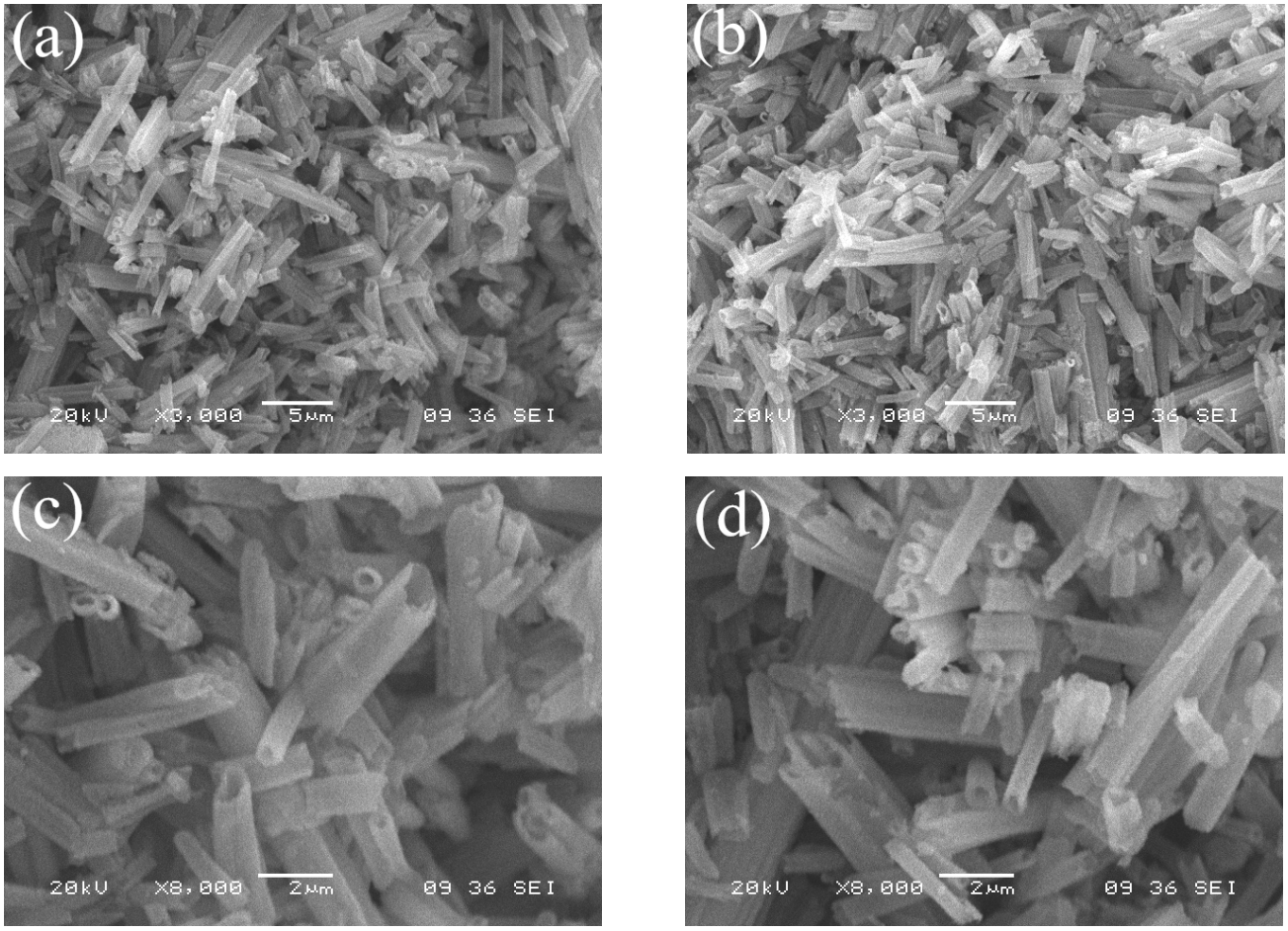

Figure S1. (a) and (c) SEM images of TiO_2 NTs. (b) and (d) SEM images of TiN NTs.

Figure S2.

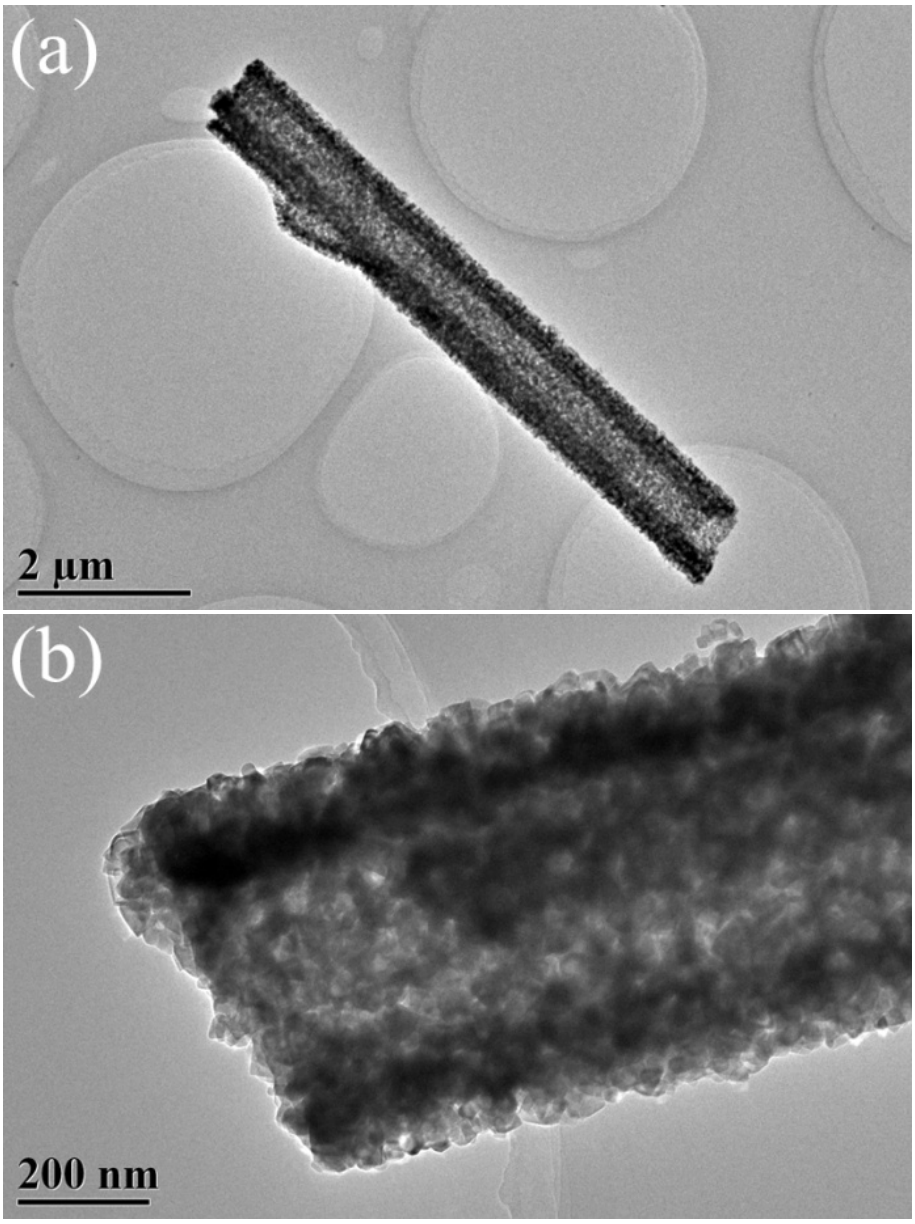

Figure S2. (a) TEM and (b) enlarged TEM images of TiO_2 NTs

Figure S3.

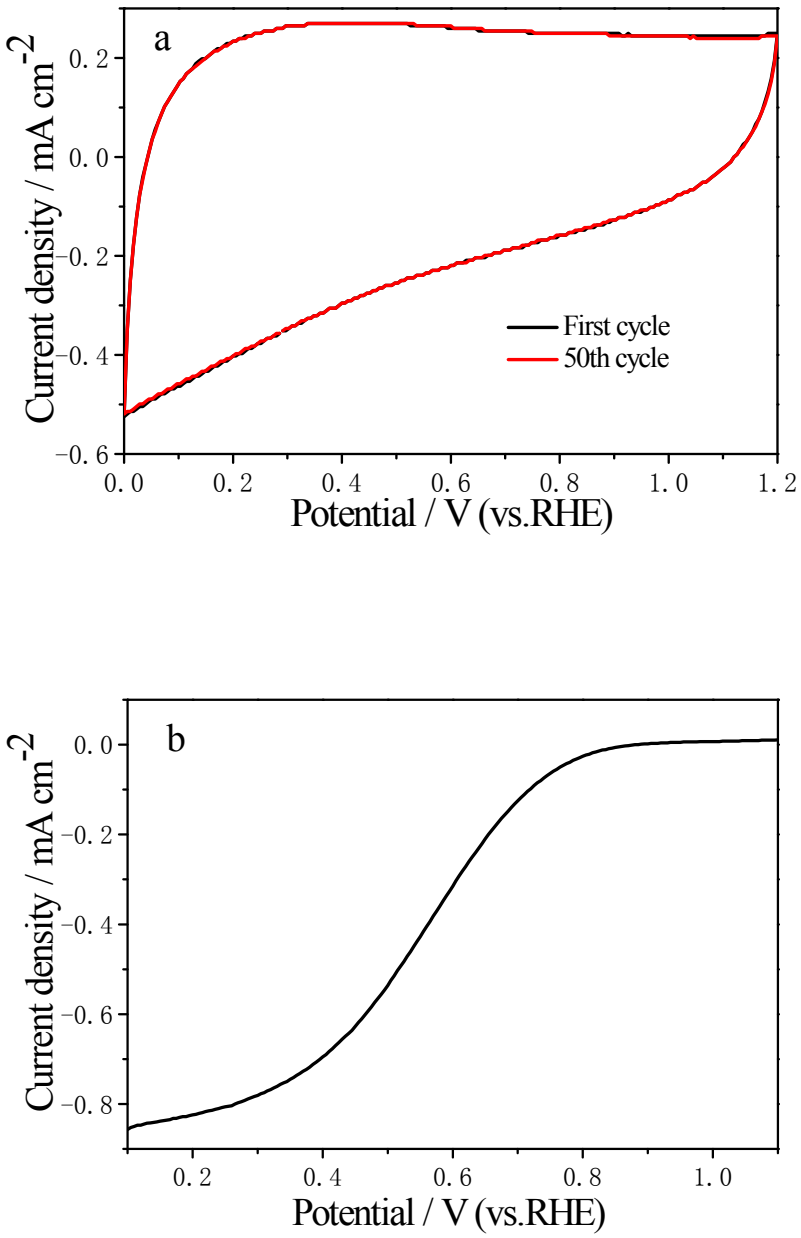

Figure S3. (a) CVs of TiN NTs in N_2 saturated 0.5M H_2SO_4 solution at a scan rate of 50 mV/s. (b) The polarization curves of pure TiN NTs in a 0.1 M $HClO_4$ solution saturated with oxygen, using a RDE at 1600 rpm at a scan rate of 10 mV/s.

Figure S4.

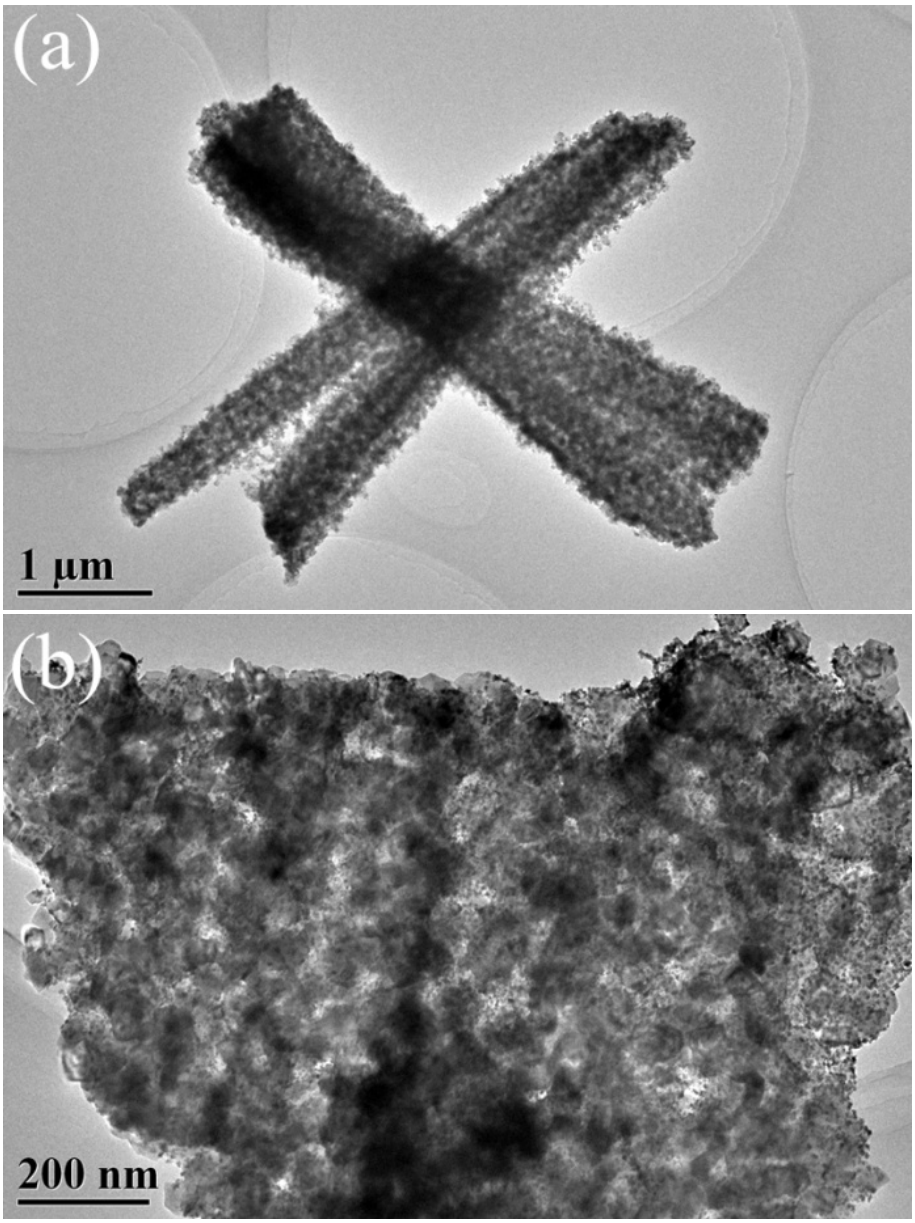

Figure S4. (a) TEM and (b) magnified TEM images of Pt/TiN NTs after the ADT test.

Figure S5.

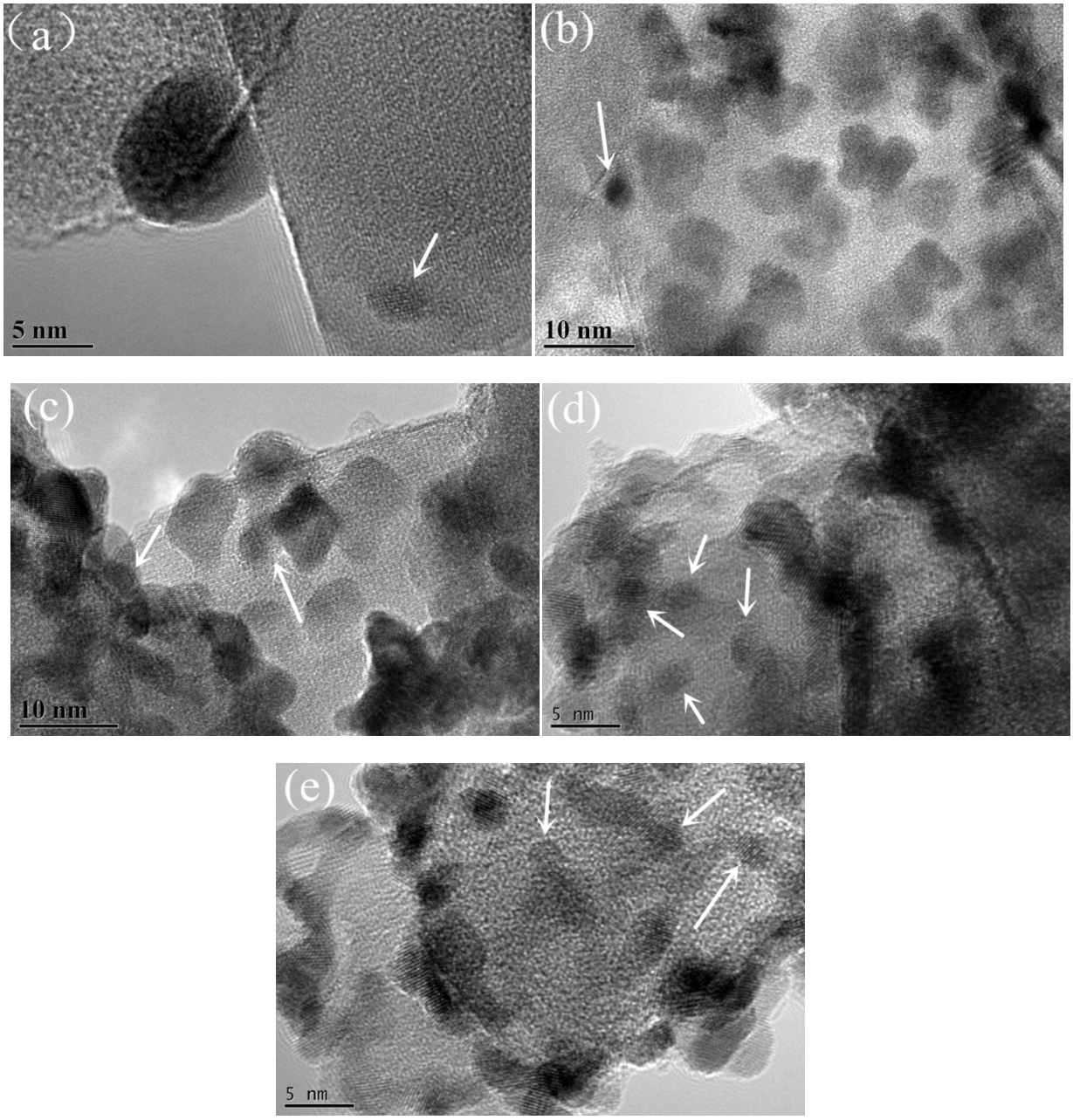

Figure S5. TEM images of the small Pt particles (pointed by arrows) alongside the bigger ones observed on the Pt/TiN NTs, from collected the Pt/TiN NTs catalyst after the ADT test, captured in different regions from the same TEM sample.