

## Supplemental Information

### Core-shell structure of polyaniline coated protonic titanate nanobelt composites for both Cr(VI) and humic acid removal

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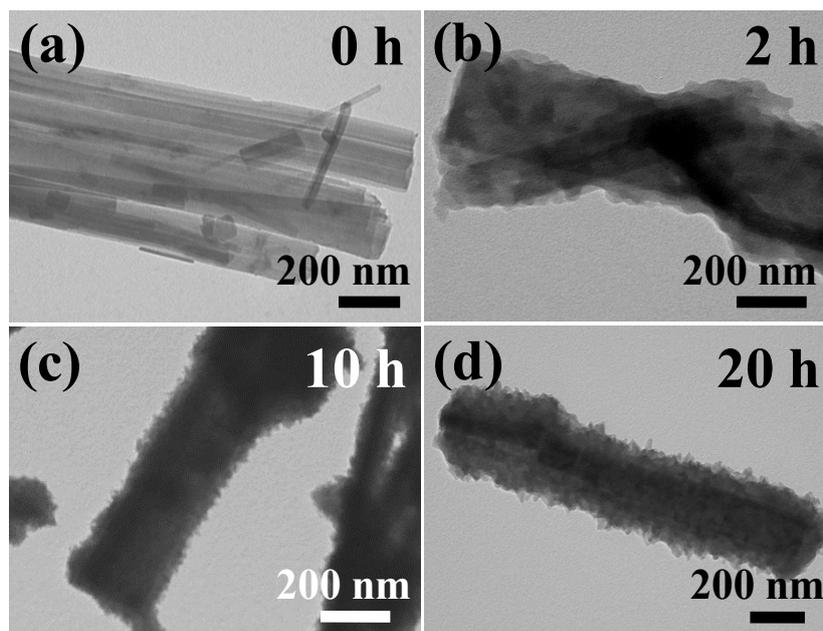
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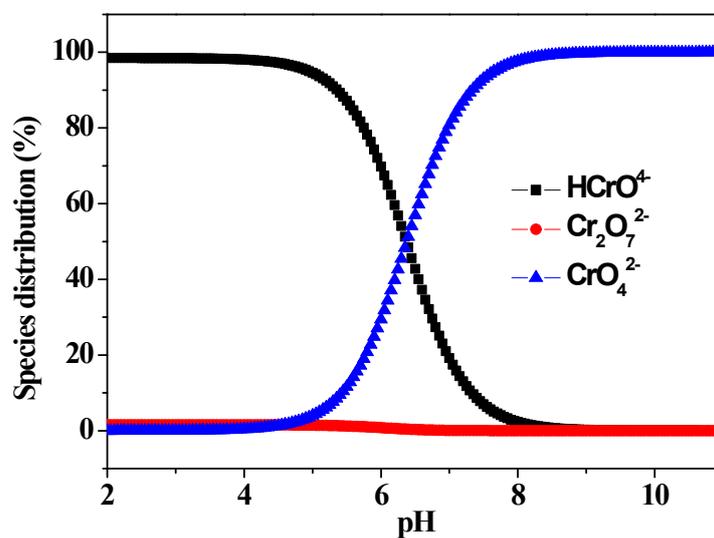
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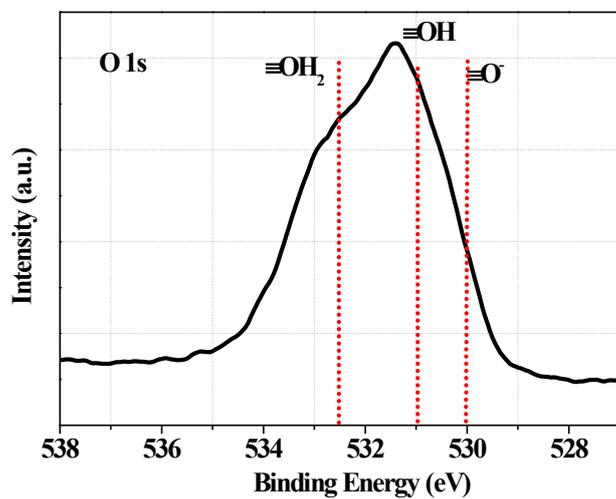
**Fig. S1** TEM images of PANI/H-TNB composites synthesized at different polymerization time: (a) 0 h, (b) 2 h, (c) 10 h, and (d) 20 h.



**Fig. S2** Relative proportion of Cr(VI) species as a function of pH.

The PANI/H-TNB composites were synthesized at different polymerization time. At the early stages, the H-TNB exhibited smooth and clean surface. During the 2 h of polymerization, the nucleation process began and PANI was coating on the surface of

H-TNB. When the polymerization time was extended to 10 h, the PANI nanofibers are aligned on the surfaces of nanobelts. On further prolonging the reaction time to 20 h, the desirous core-shell composites were formed.



**Fig. S3** High-resolution XPS O 1s spectrum of PANI/H-TNB composites after Cr(VI) adsorption.