

### Electronic Supplementary Information

Core/shell structured covalently bonded TiO<sub>2</sub>/poly(3,4-ethylenedioxythiophene) dispersions and their electrorheological responses: Effect of anisotropy

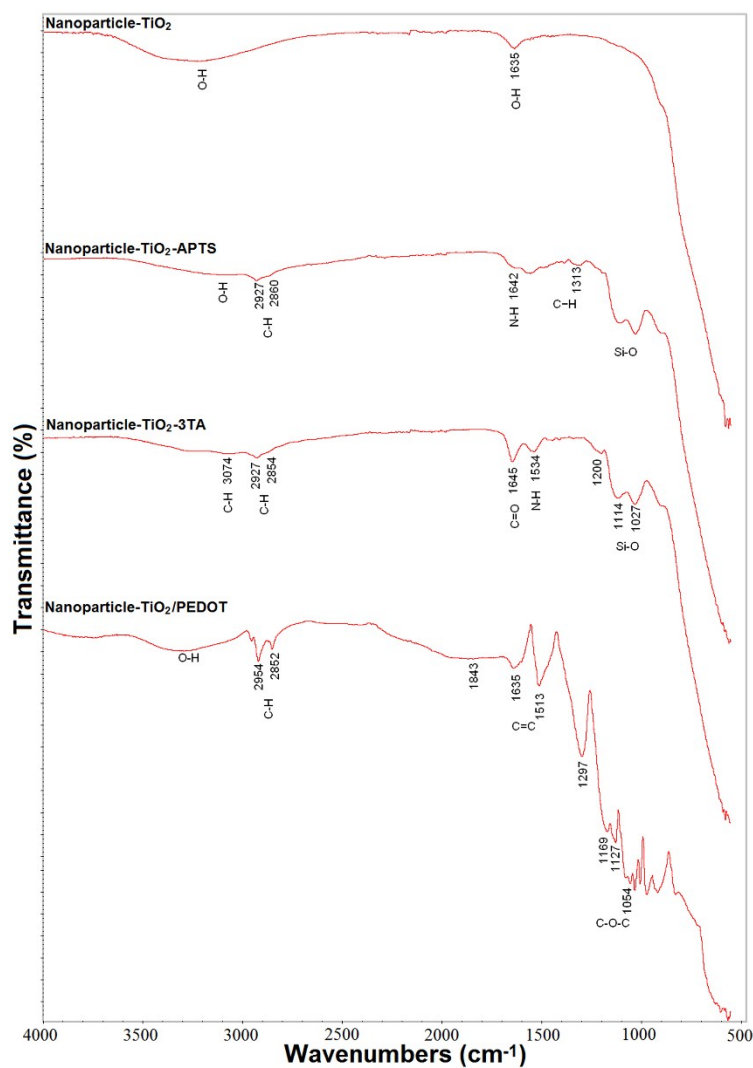
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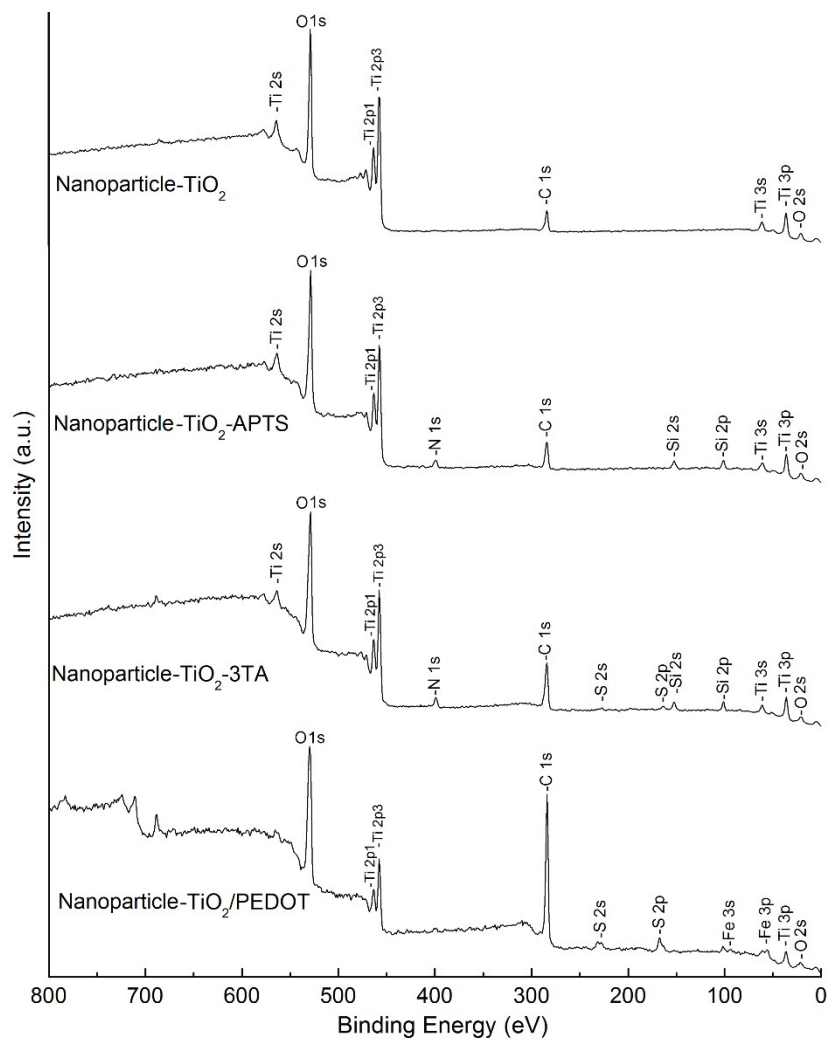
<sup>b</sup>National Nanotechnology Research Center-UNAM, Bilkent University, Ankara 06800, Turkey

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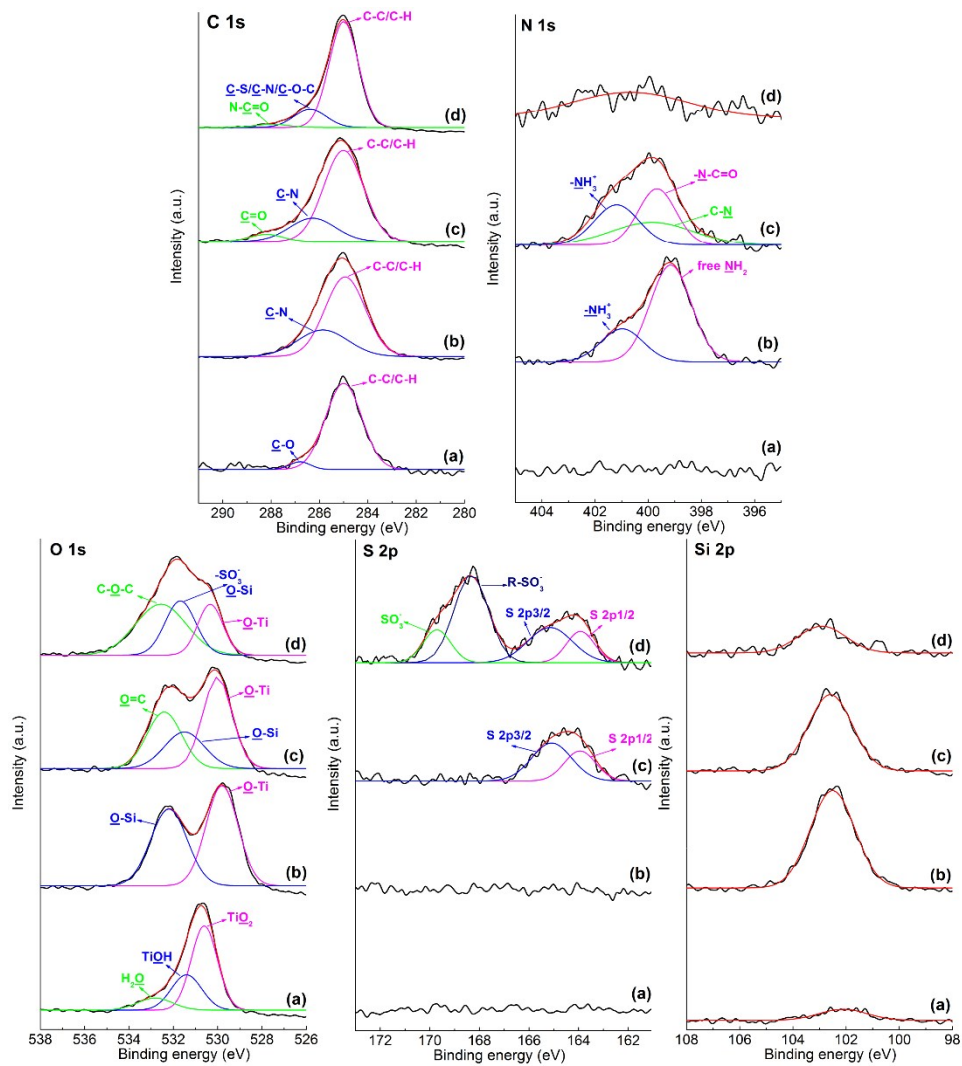
Phone: +90-312-2021123. Fax: +90-312-2122279



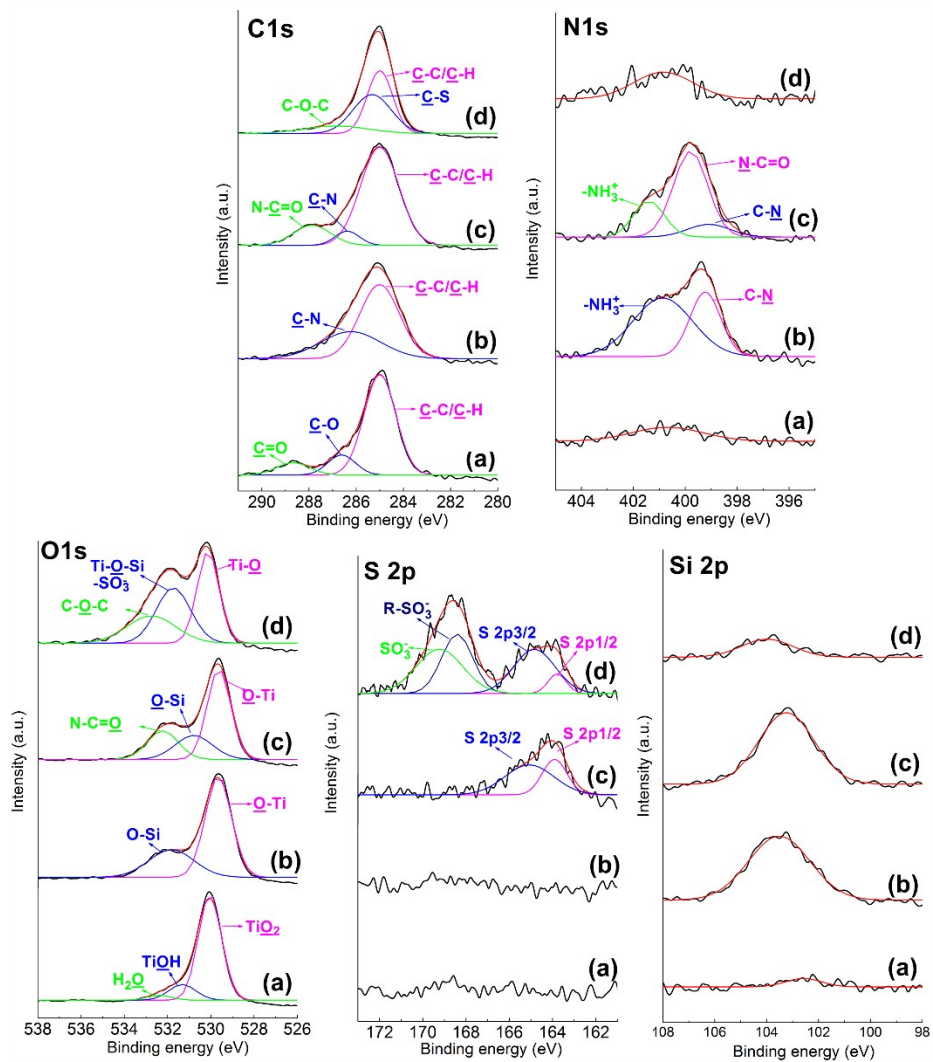
**Fig. S1** ATR-FTIR spectra of nanoparticle-TiO<sub>2</sub>, nanoparticle-TiO<sub>2</sub>-APTS, nanoparticle-TiO<sub>2</sub>-3TA and nanoparticle-TiO<sub>2</sub>/PEDOT.



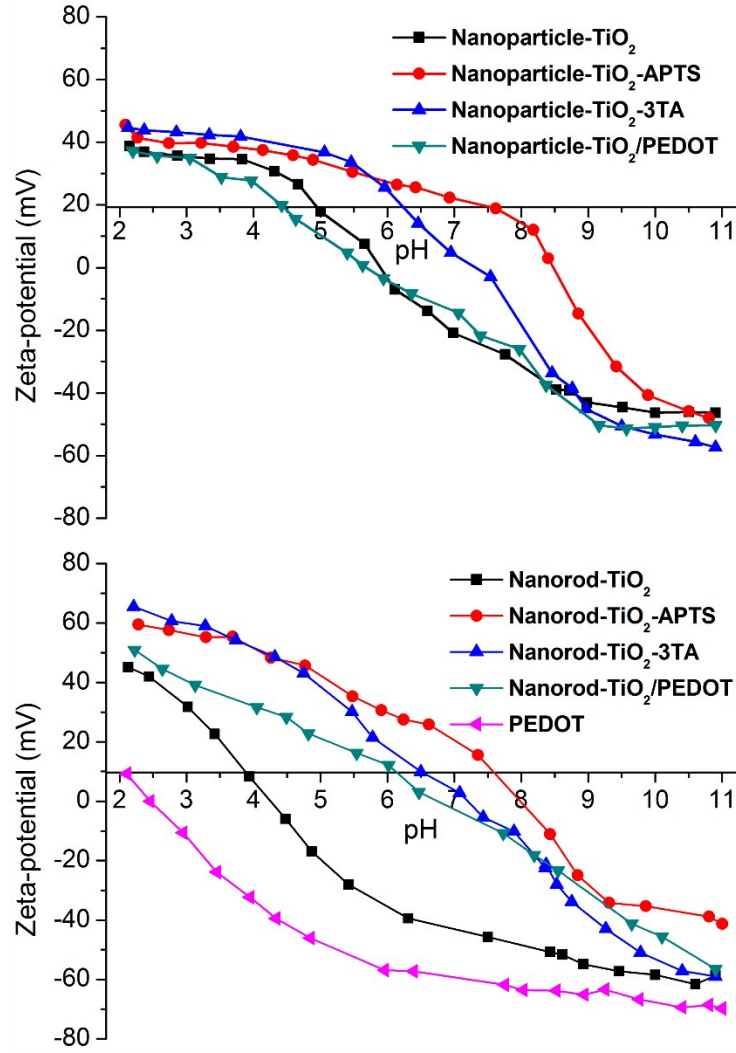
**Fig. S2** XPS survey-scan of nanoparticle-TiO<sub>2</sub>, nanoparticle-TiO<sub>2</sub>-APTS, nanoparticle-TiO<sub>2</sub>-3TA and nanoparticle-TiO<sub>2</sub>/PEDOT.



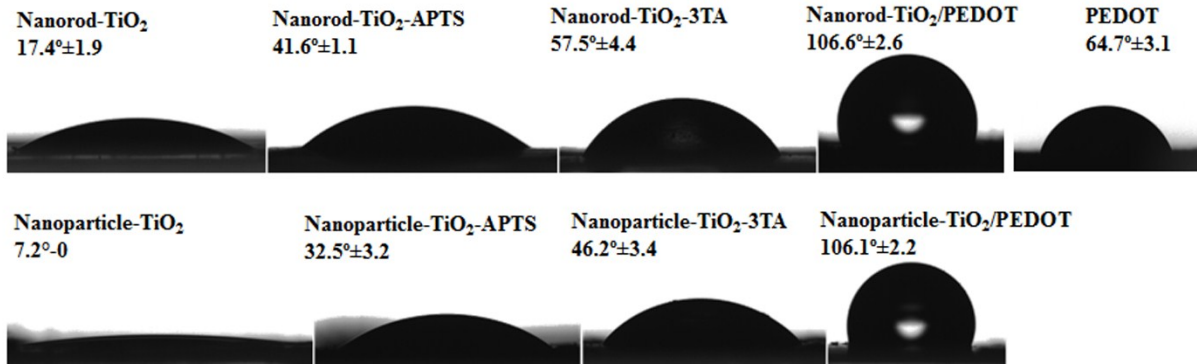
**Fig. S3** C 1s, O 1s, N 1s, Si 2p and S 2p core-level spectra of nanorod-TiO<sub>2</sub> (curve a), nanorod-TiO<sub>2</sub>-APTS (curve b), nanorod-TiO<sub>2</sub>-3TA (curve c) and nanorod-TiO<sub>2</sub>/PEDOT (curve d).



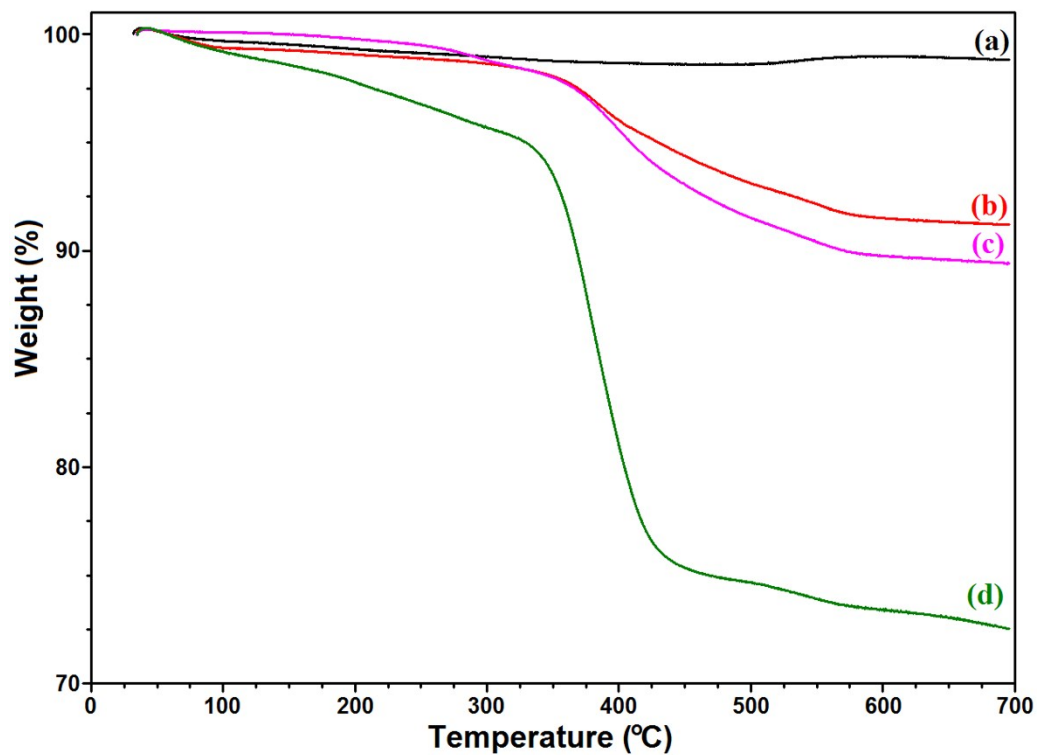
**Fig. S4** C 1s, O 1s, N 1s, Si 2p and S 2p core-level spectra of nanoparticle-TiO<sub>2</sub> (curve a), nanoparticle-TiO<sub>2</sub>-APTS (curve b), nanoparticle-TiO<sub>2</sub>-3TA (curve c) and nanoparticle-TiO<sub>2</sub>/PEDOT (curve d).



**Fig. S5** Change in  $\zeta$ -potential of the samples with pH.



**Fig. S6** CA images and  $\theta$  values of the samples.



**Fig. S7** TGA curves of nanoparticle-TiO<sub>2</sub> (a), nanoparticle-TiO<sub>2</sub>-APTS (b), nanoparticle-TiO<sub>2</sub>-3TA (c) and nanoparticle-TiO<sub>2</sub>/PEDOT (d).