

## Synthesis of TiO<sub>2</sub>-(B) Nanobelts for Acetone Sensing

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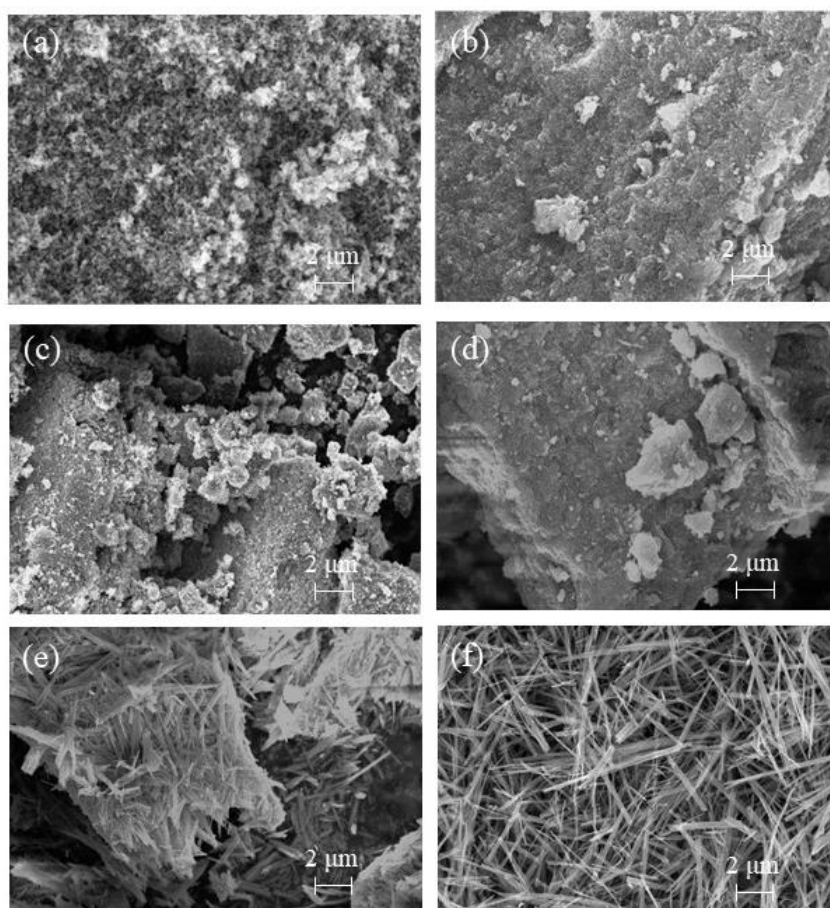


Figure S1. FE-SEM images of the obtained morphology at (a) starting anatase TiO<sub>2</sub> powder, (b) hydrothermal treatment at 120 °C, (c) hydrothermal treatment at 135 °C, (d) hydrothermal treatment at 125 °C, (e) hydrothermal treatment at 175 °C, (f) hydrothermal treatment at 200 °C.

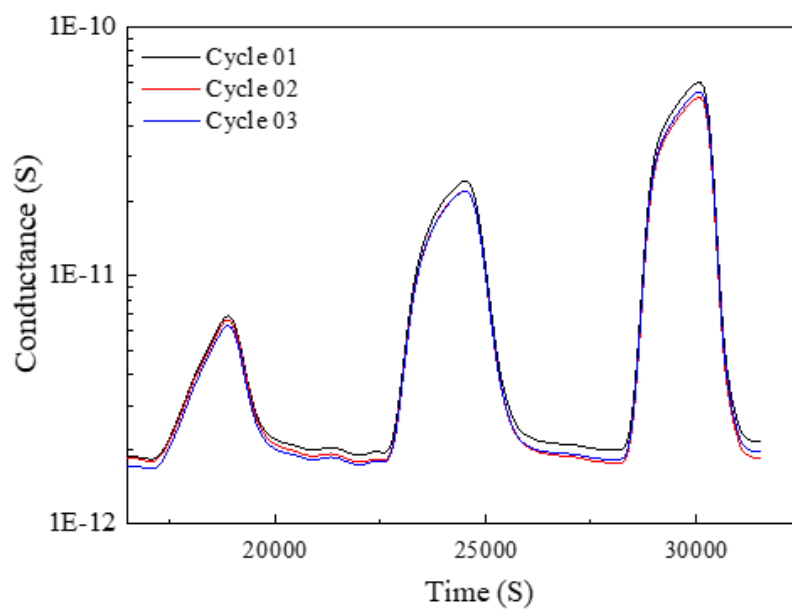


Figure S2. Reproducibility study of  $\text{TiO}_2\text{-B}$  nanobelts sensor toward 50 ppm  $\text{C}_3\text{H}_6\text{O}$  at 150 °C at 40 RH%.

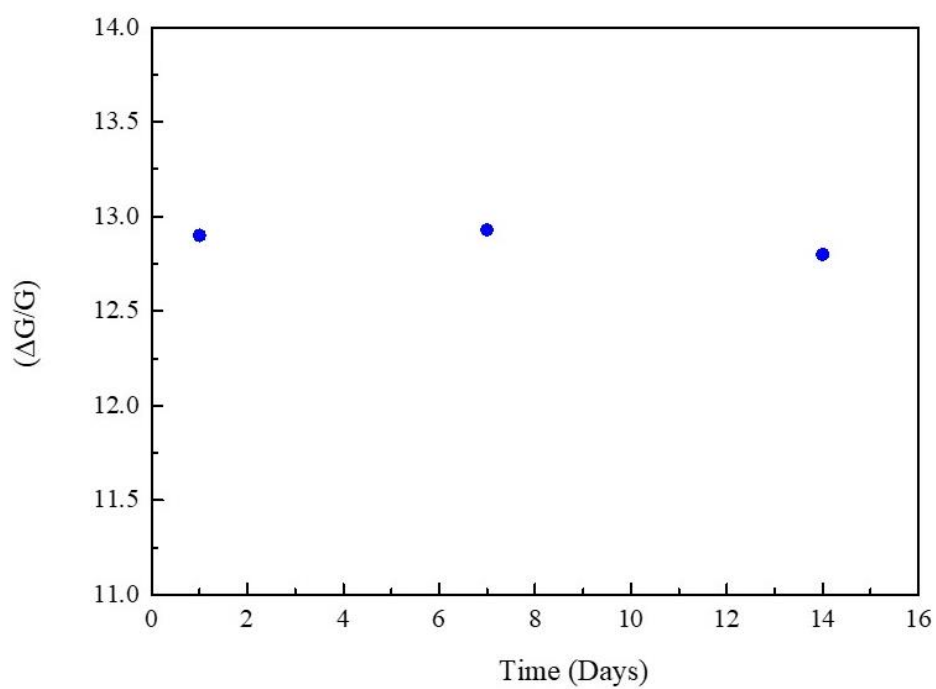


Figure S3. Stability study of  $\text{TiO}_2\text{-B}$  nanobelts sensor toward 50 ppm  $\text{C}_3\text{H}_6\text{O}$  at 150 °C in 40 RH% air for a tested two-week period.

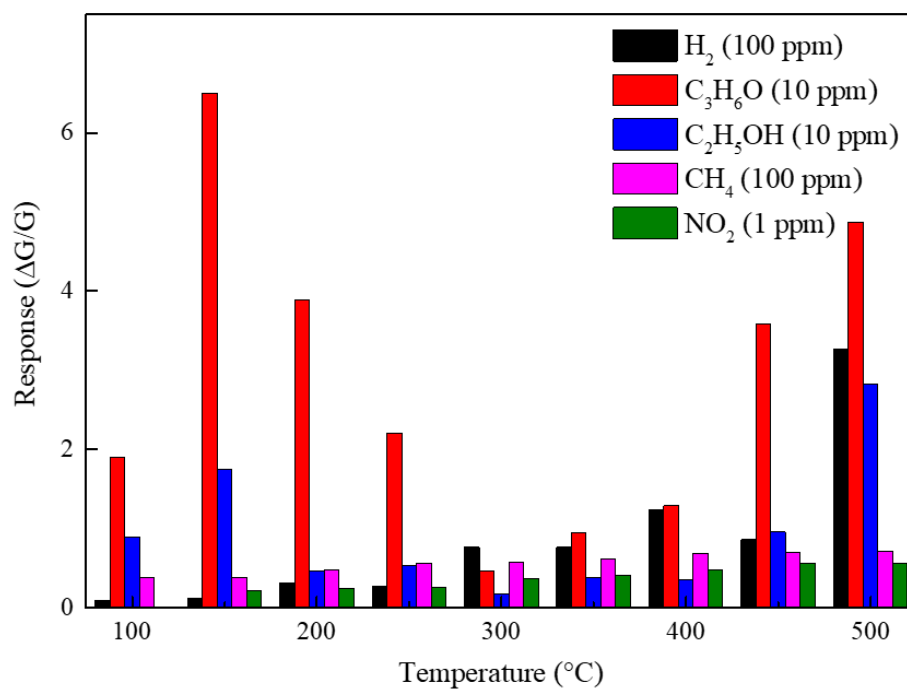


Figure S4. Response values of the sensor towards 500, 100, 10, 10, and 10 ppm of  $\text{CH}_4$ ,  $\text{H}_2$ ,  $\text{NO}_2$ ,  $\text{C}_2\text{H}_5\text{OH}$ , and  $\text{C}_3\text{H}_5\text{OH}$ .