

Sequential Ionic Layer Adsorption and Reaction (SILAR) deposition of Bi₄Ti₃O₁₂ on TiO₂: an enhanced and stable photocatalytic system for water purification

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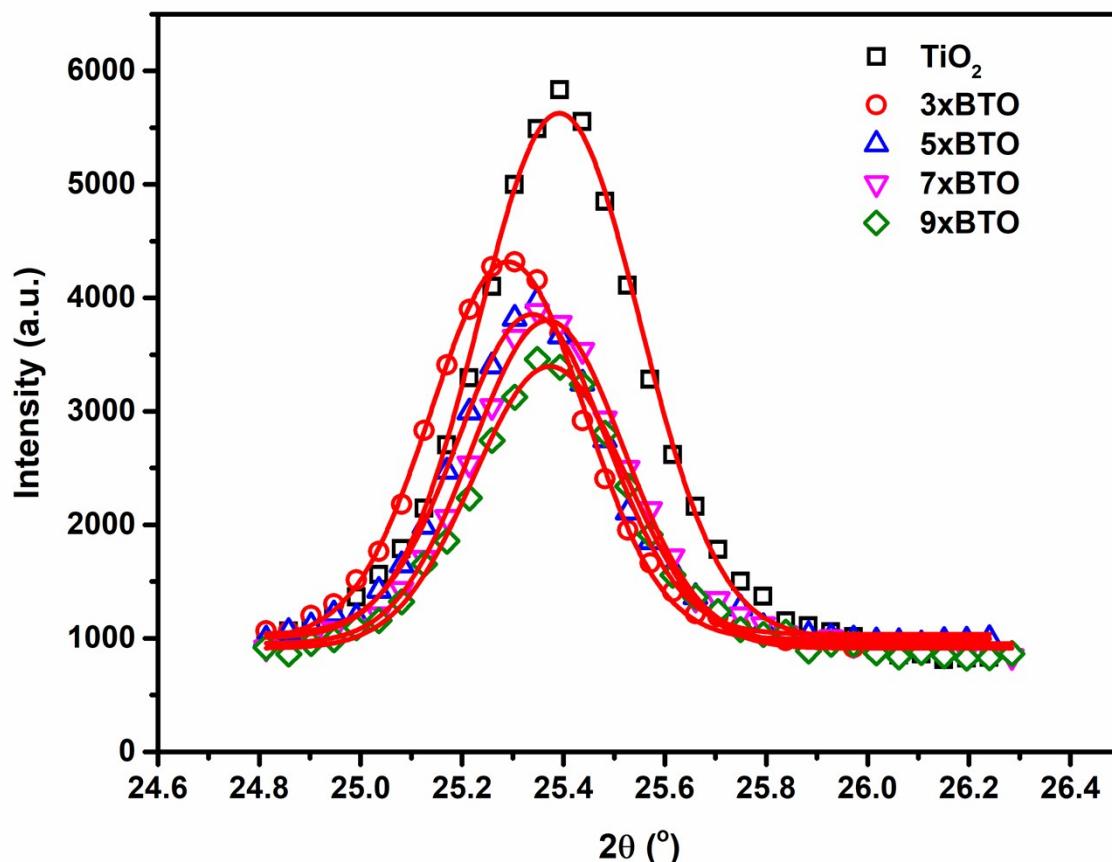


Figure S1. Fitted anatase [101] peak

Table S1 – Anatase [101] Peak Areas	
Sample	Area (a.u.)
TiO ₂	1836
3xBTO	1260
5xBTO	1036
7xBTO	1065
9xBTO	940

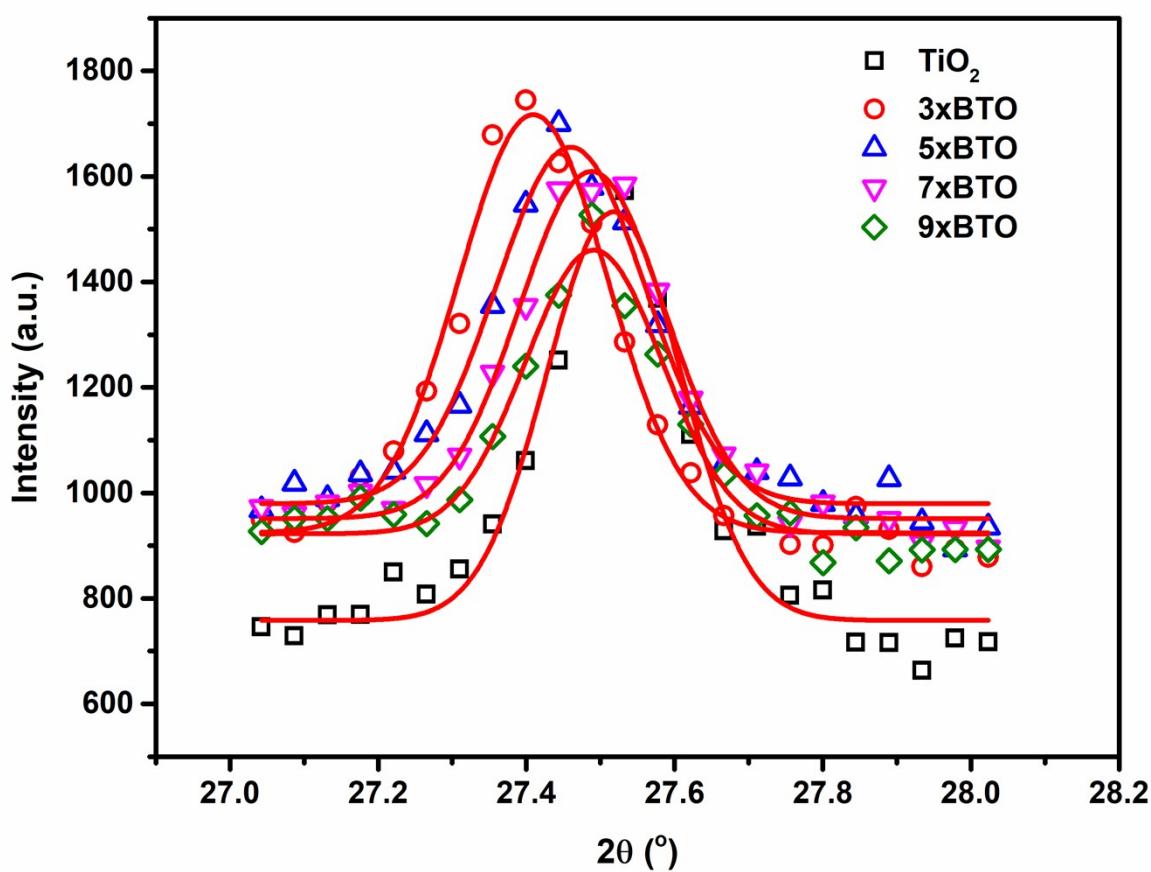


Figure S2. Fitted rutile [110] peak

Table S2 – Rutile [110] Peak Areas

Sample	Area (a.u.)
TiO ₂	176
3xBTO	199
5xBTO	171
7xBTO	161
9xBTO	124

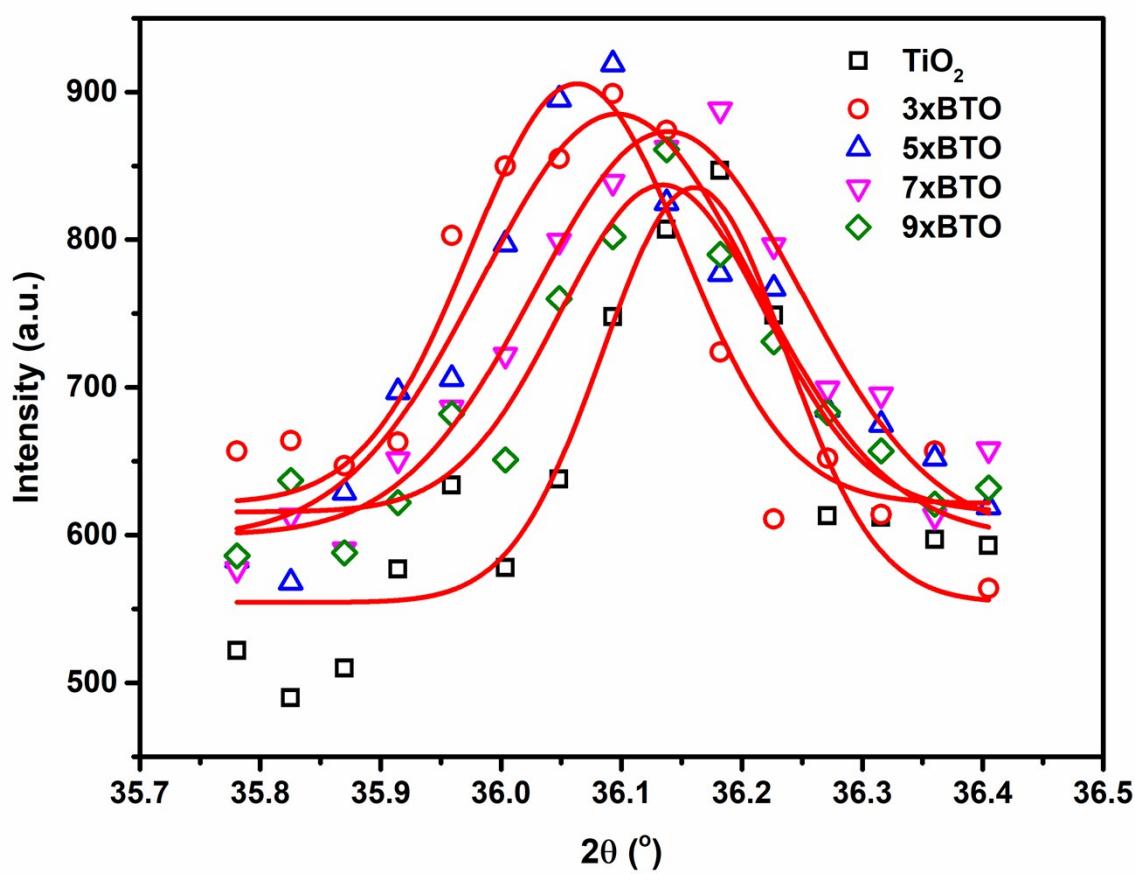


Figure S3. Fitted rutile [101] peak

Table S3 – Rutile [101] Peak Areas

Sample	Area (a.u.)
TiO ₂	53
3xBTO	62
5xBTO	81
7xBTO	75
9xBTO	47

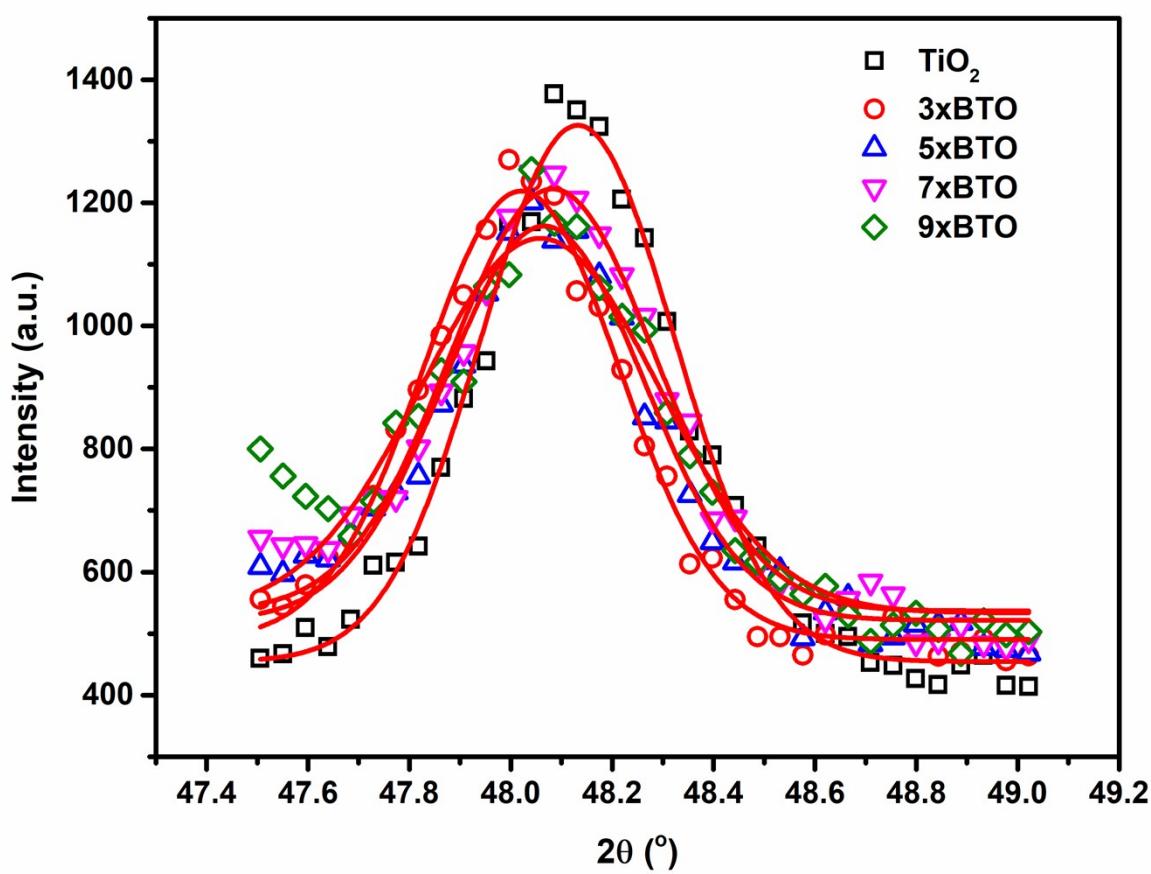


Figure S4. Fitted anatase [200] peak

Table S4 – Anatase [200] Peak Areas	
Sample	Area (a.u.)
TiO ₂	415
3xBTO	352
5xBTO	316
7xBTO	346
9xBTO	355

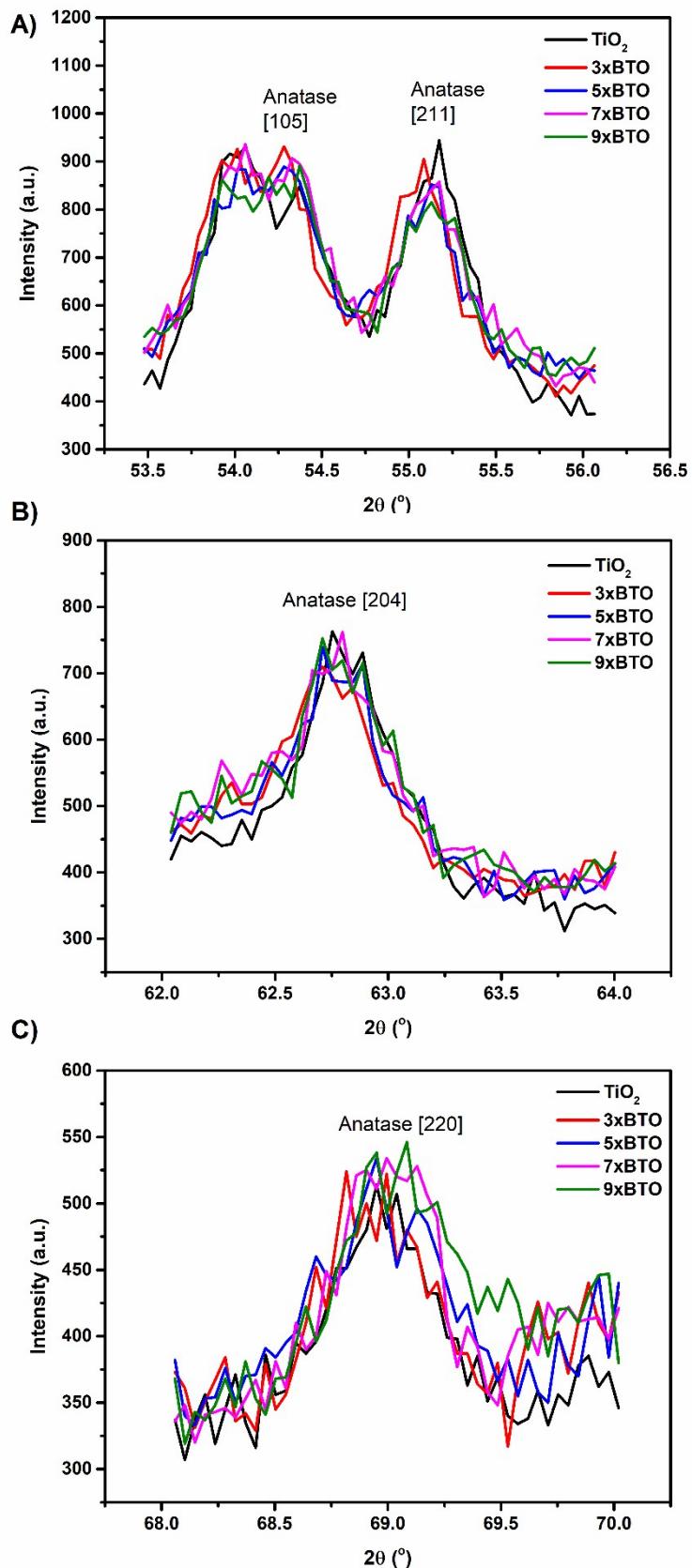


Figure S5 XRD traces of the remaining TiO₂ peaks showing no change in intensity

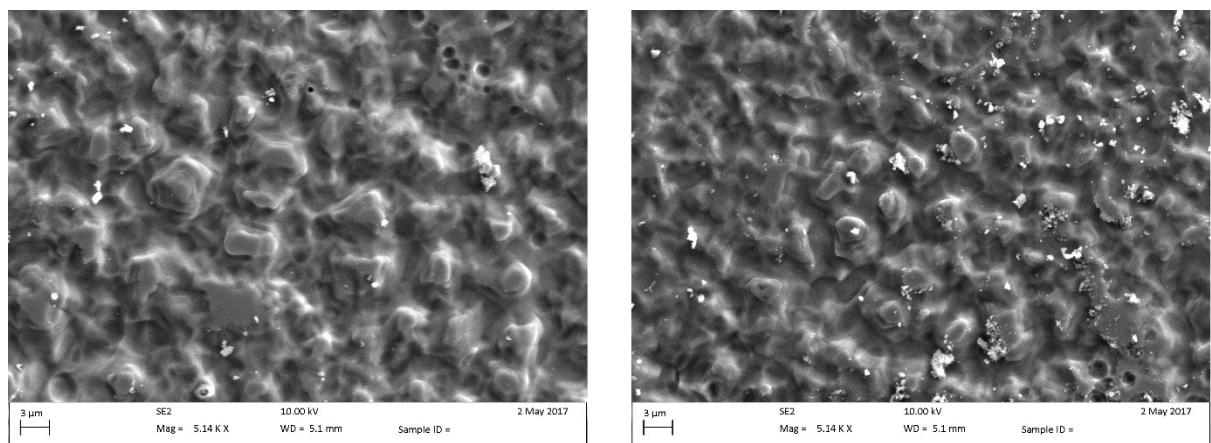


Figure S6. SEM images of the etched glass surface

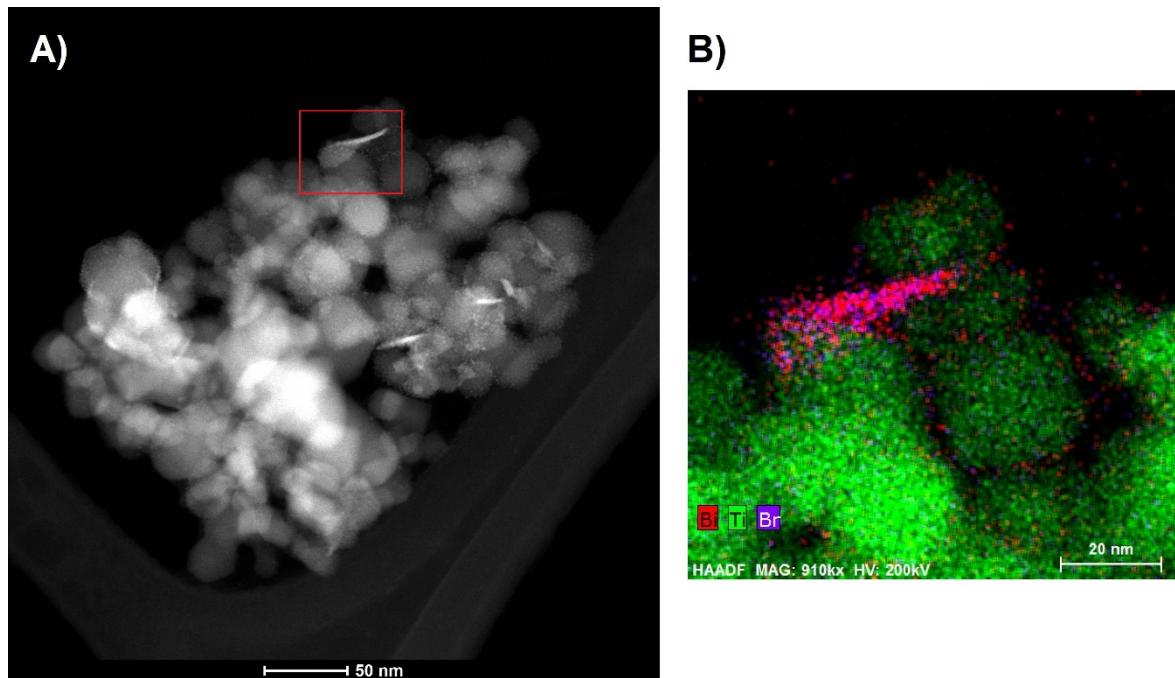


Figure S7. A) Dark Field TEM image of the BiOBr-TiO₂ precursor. B) Elemental map of the area indicated in red, showing concentration of Bi, Ti and Br in the material.

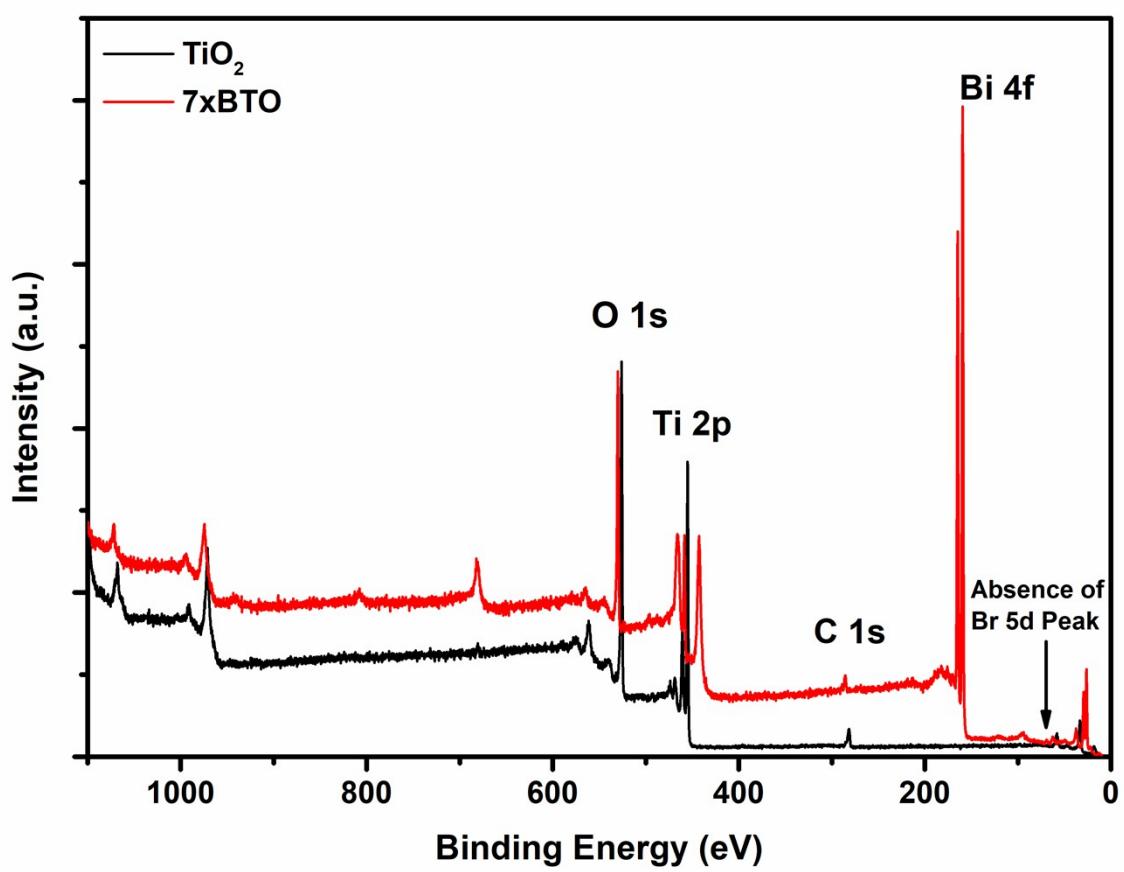


Figure S8. Survey XPS scans of 7xBTO and pristine TiO_2

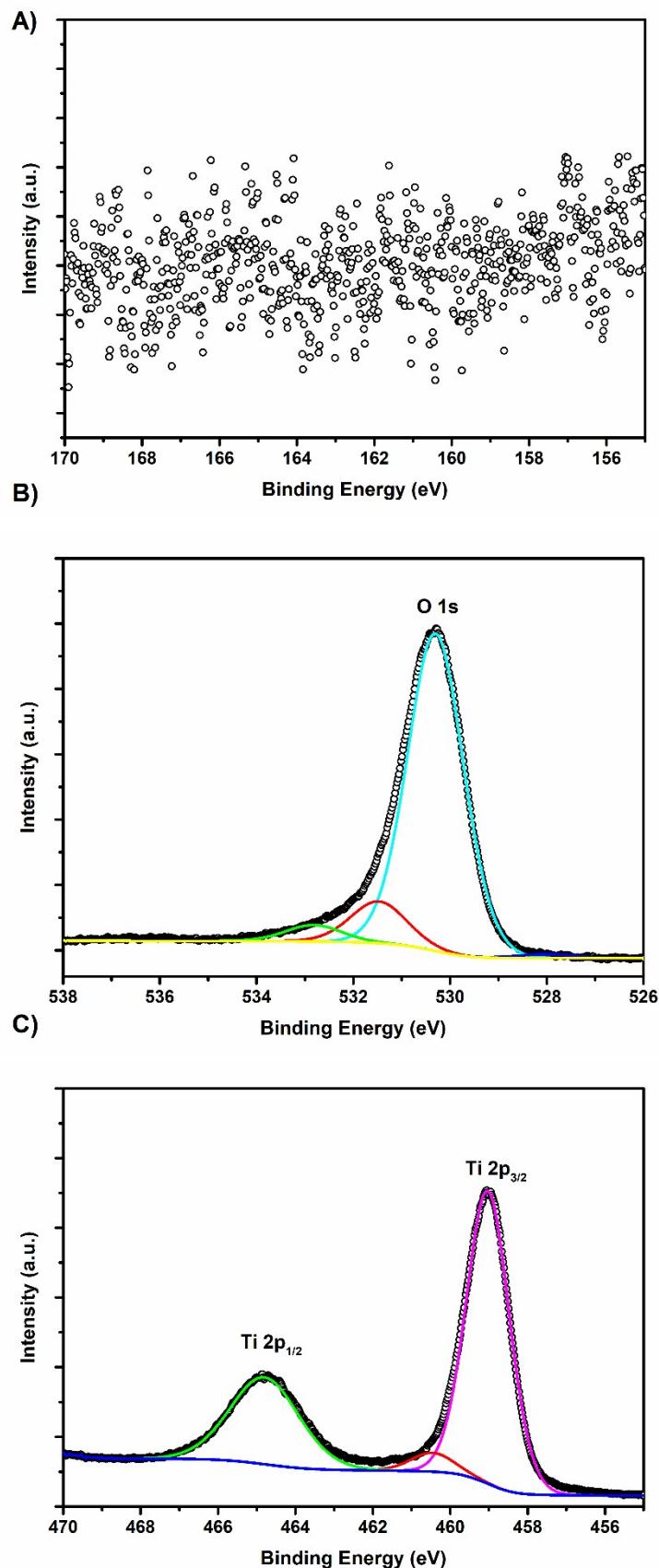


Figure S9. XPS scans of the unmodified TiO_2 A) Bi 4f region B) O1s region
C) Ti 2p region

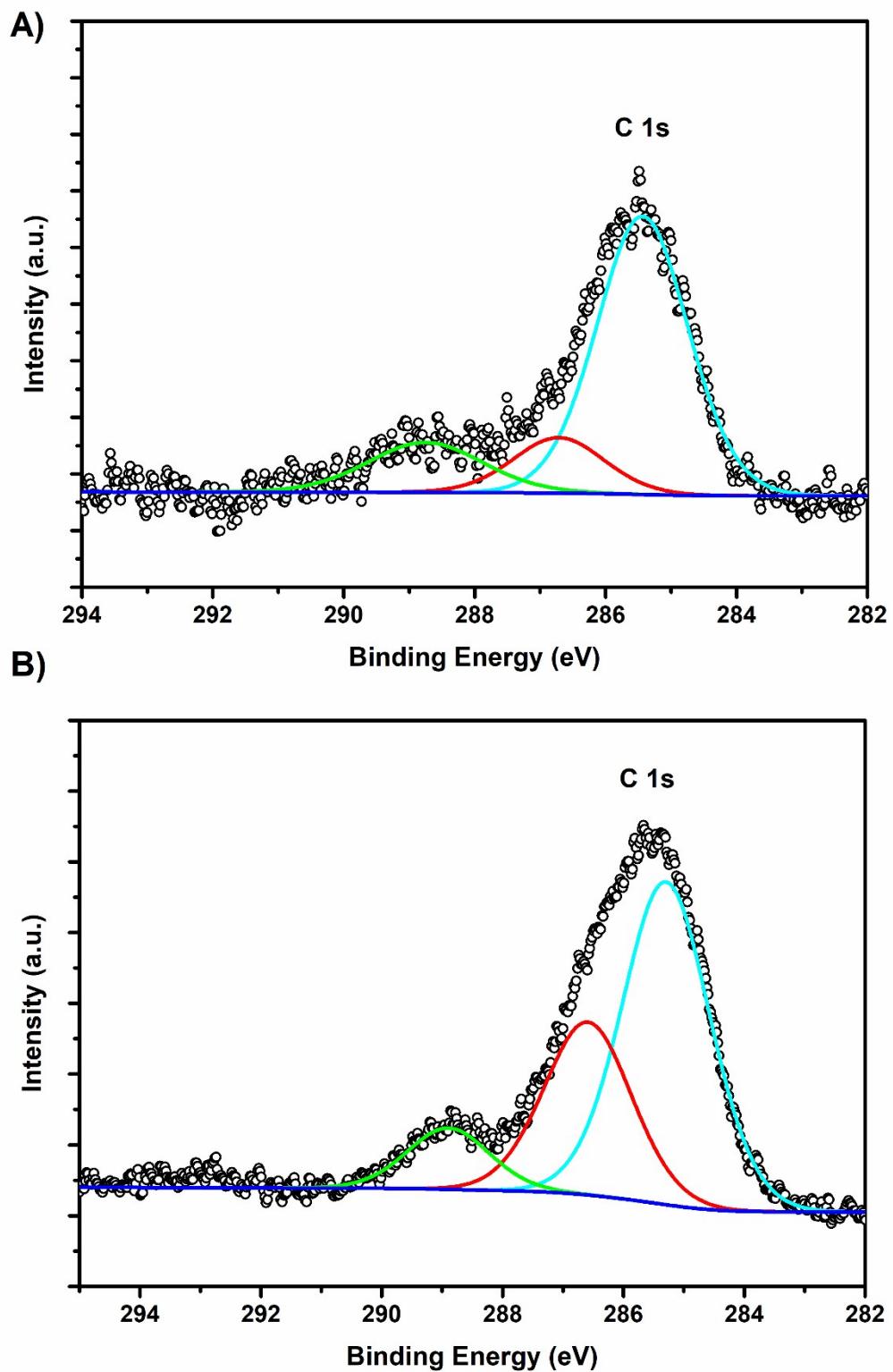


Figure S10. XPS scans of the C1s region used for calibration for the A) 7xBTO and B) Pristine TiO_2 samples

Model Pollutant

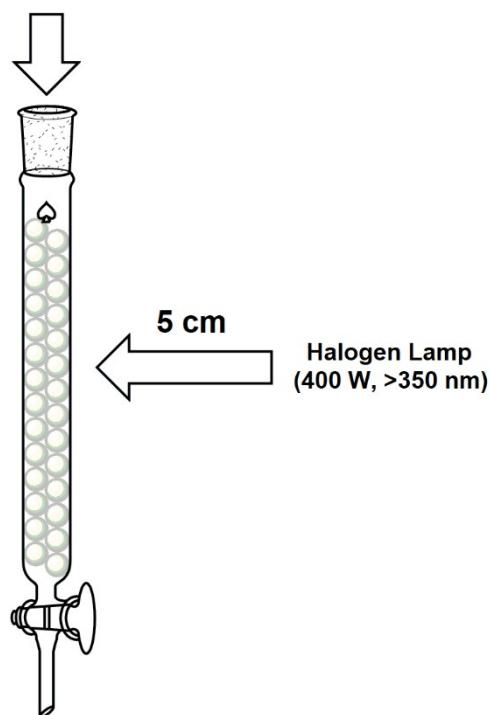


Figure S11. Schematic of the set up used for photocatalytic testing

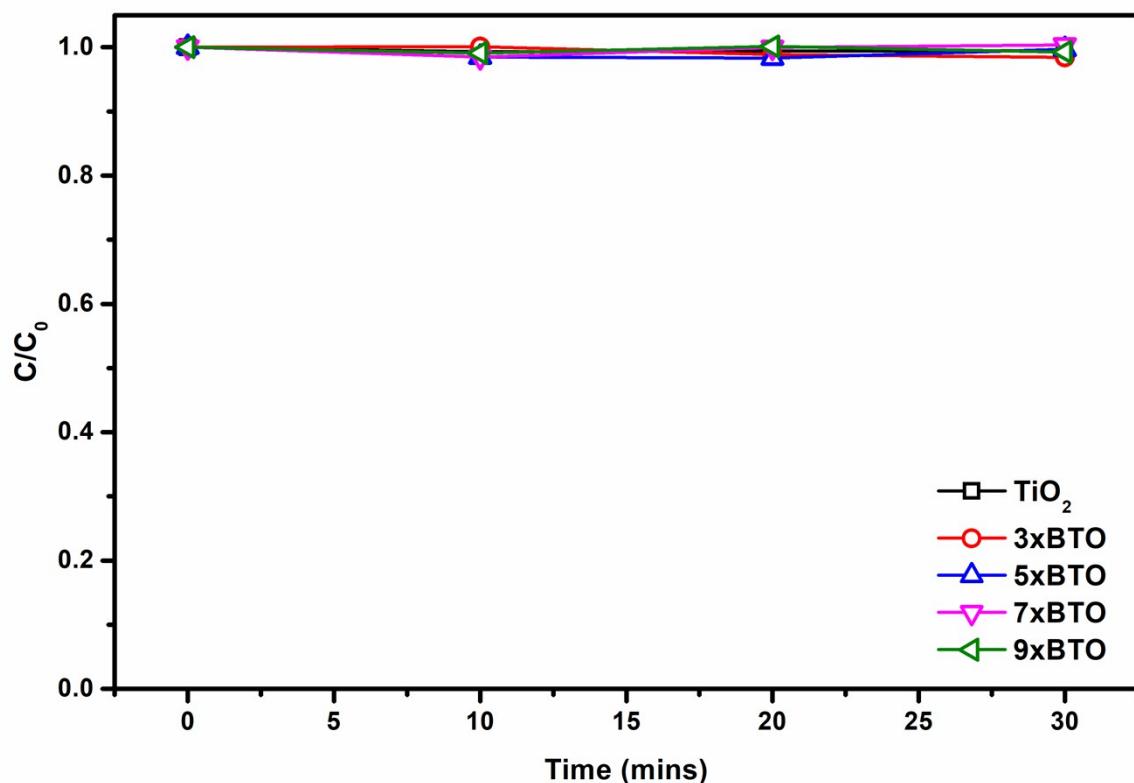


Figure S12. Dark adsorption test of 4CP on the prepared photocatalyst beads