

## Supporting information

### Tailoring the Crystalline and Amorphous Phase Ratios of TiO<sub>2</sub> through the use of Organic Additives during Hydrothermal Synthesis

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## Diffractograms

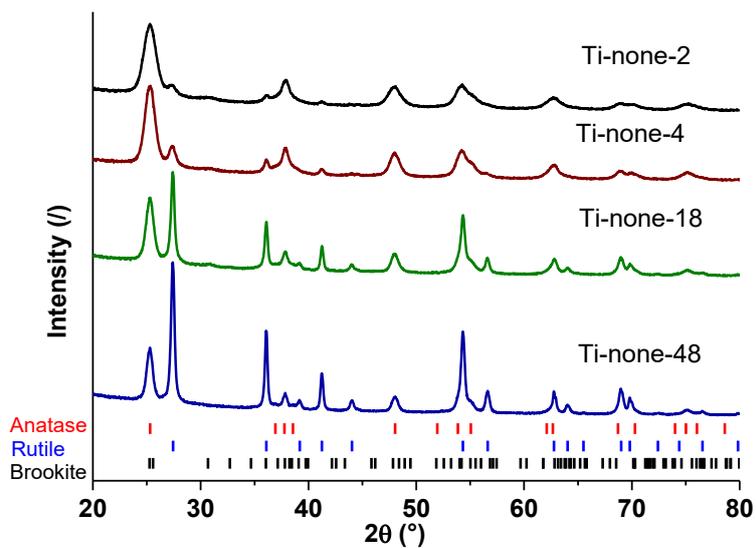


Figure S1. Diffractograms of the samples with no organic compound added.

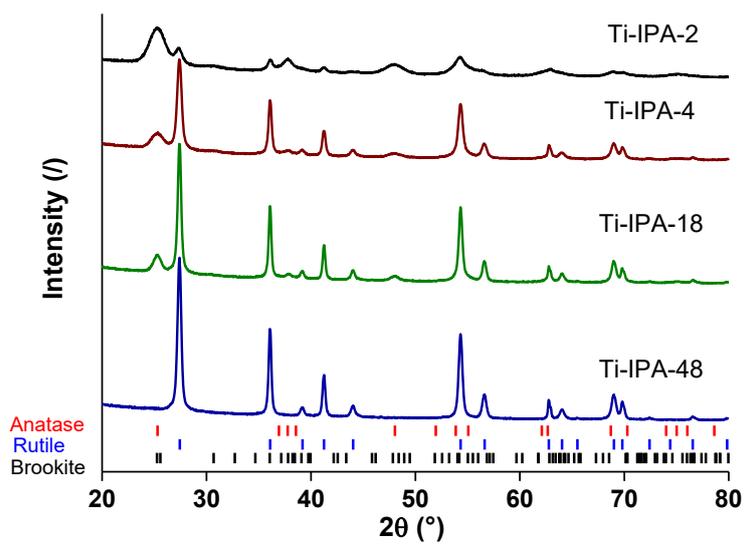


Figure S2. Diffractograms of the samples with IPA added during hydrothermal treatment.

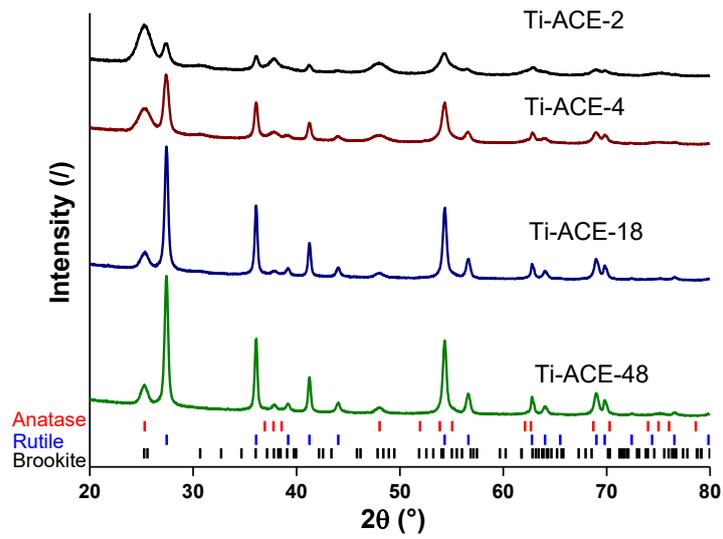


Figure S3. Diffractograms of the samples with ACE added during hydrothermal treatment.

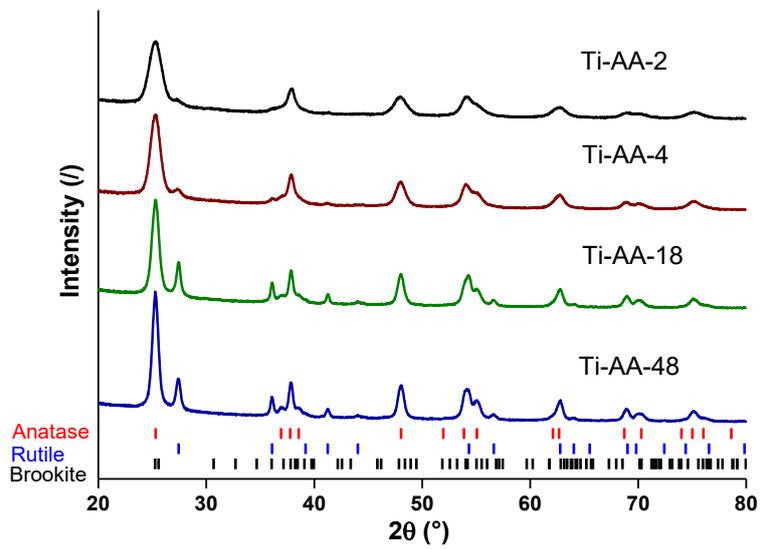


Figure S4. Diffractograms of the samples with AA added during hydrothermal treatment.

## TEM Micrographs and SAED analysis

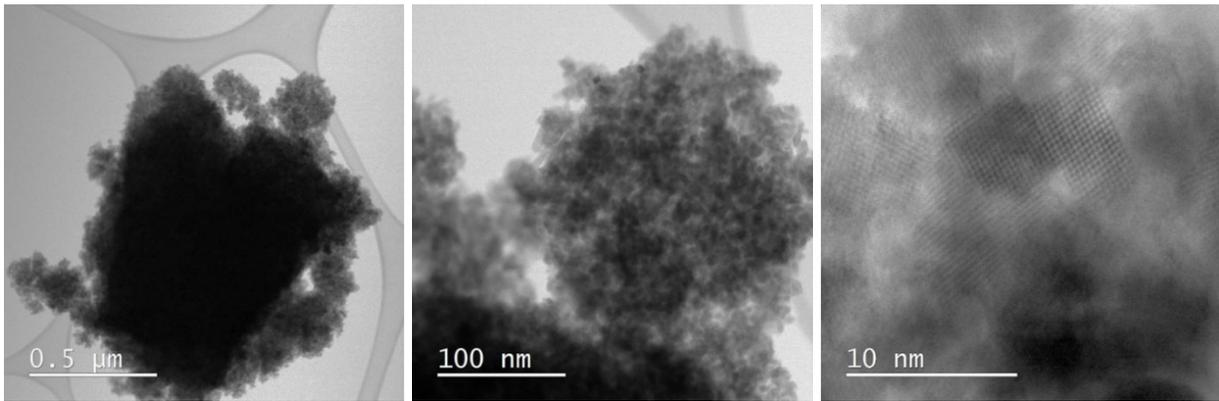


Figure S5. TEM images of sample T-none-2.

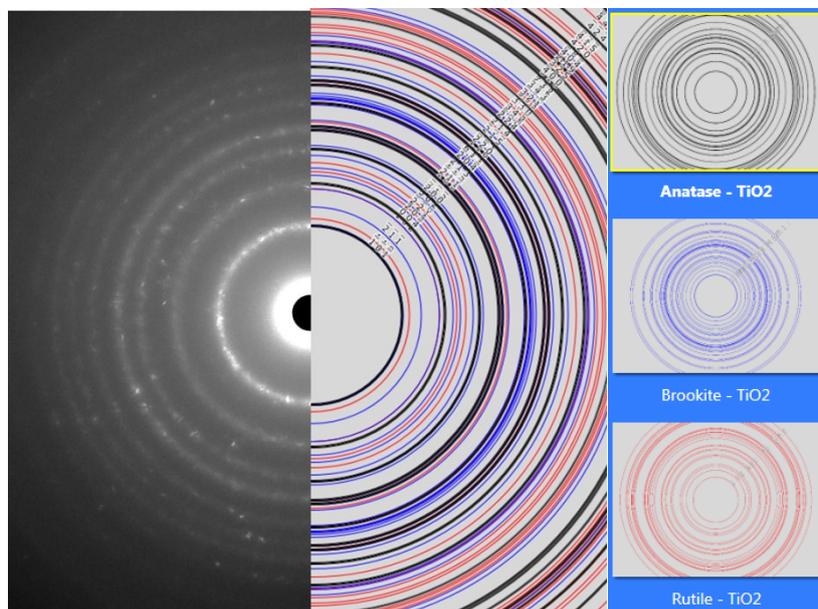


Figure S6. SAED patterns of sample T-none-2 showing that all three polymorphs are present in the sample.

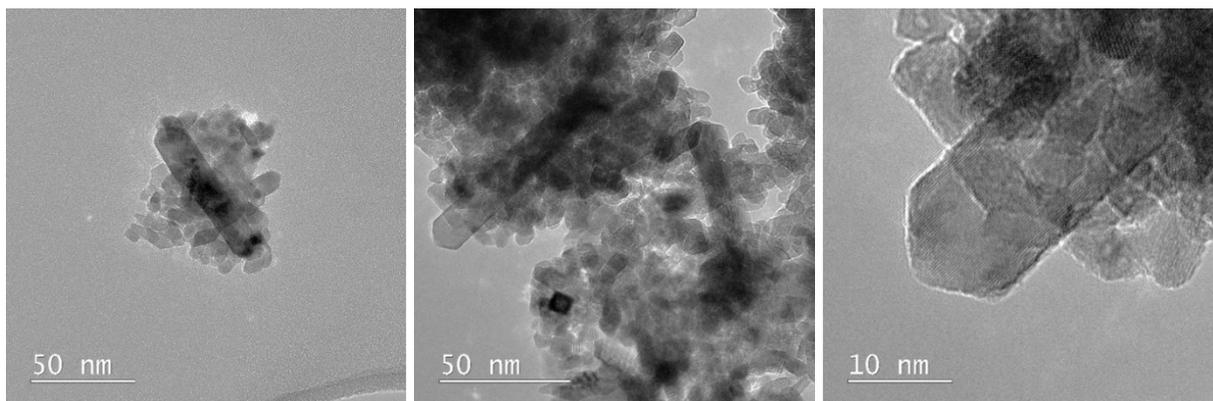


Figure S7. TEM images of sample T-nine-4. Rutile particles can be easily seen as being the larger elongated particles with a pyramid ending.

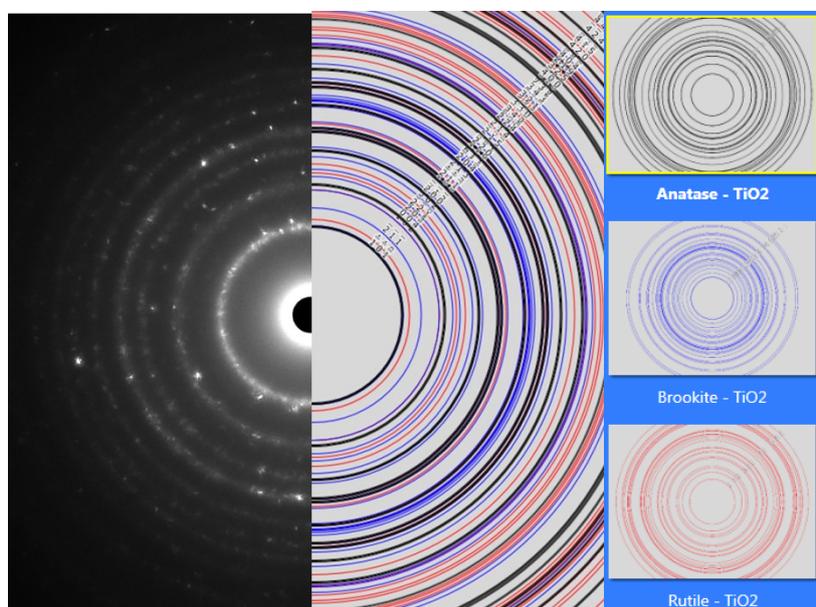


Figure S8. SAED patterns of sample T-nine-4 showing that all three polymorphs are present in the sample.

## Photocatalytic cycling

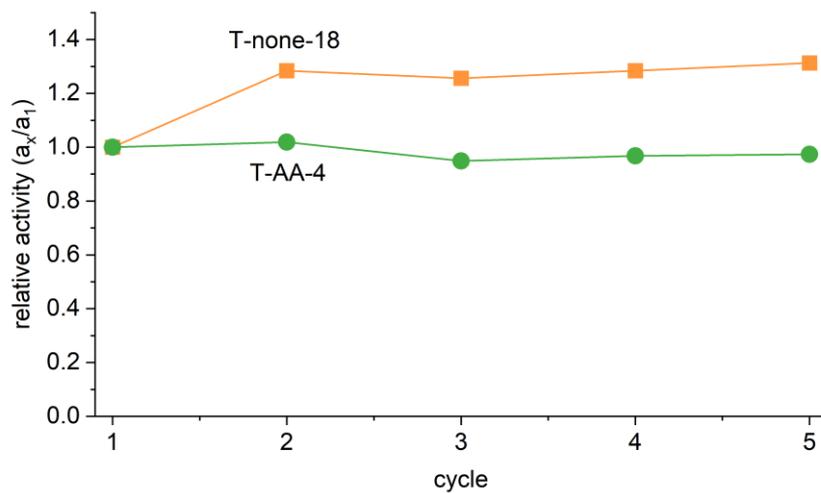


Figure S9. Cycling of photocatalytic conversion of isopropanol into acetone over two selected photocatalysts: T-none-18 and T-AA-4. The values of y-axis are relative values of activity in respect to the activity in the first cycle.

## Diffuse reflectance spectroscopy

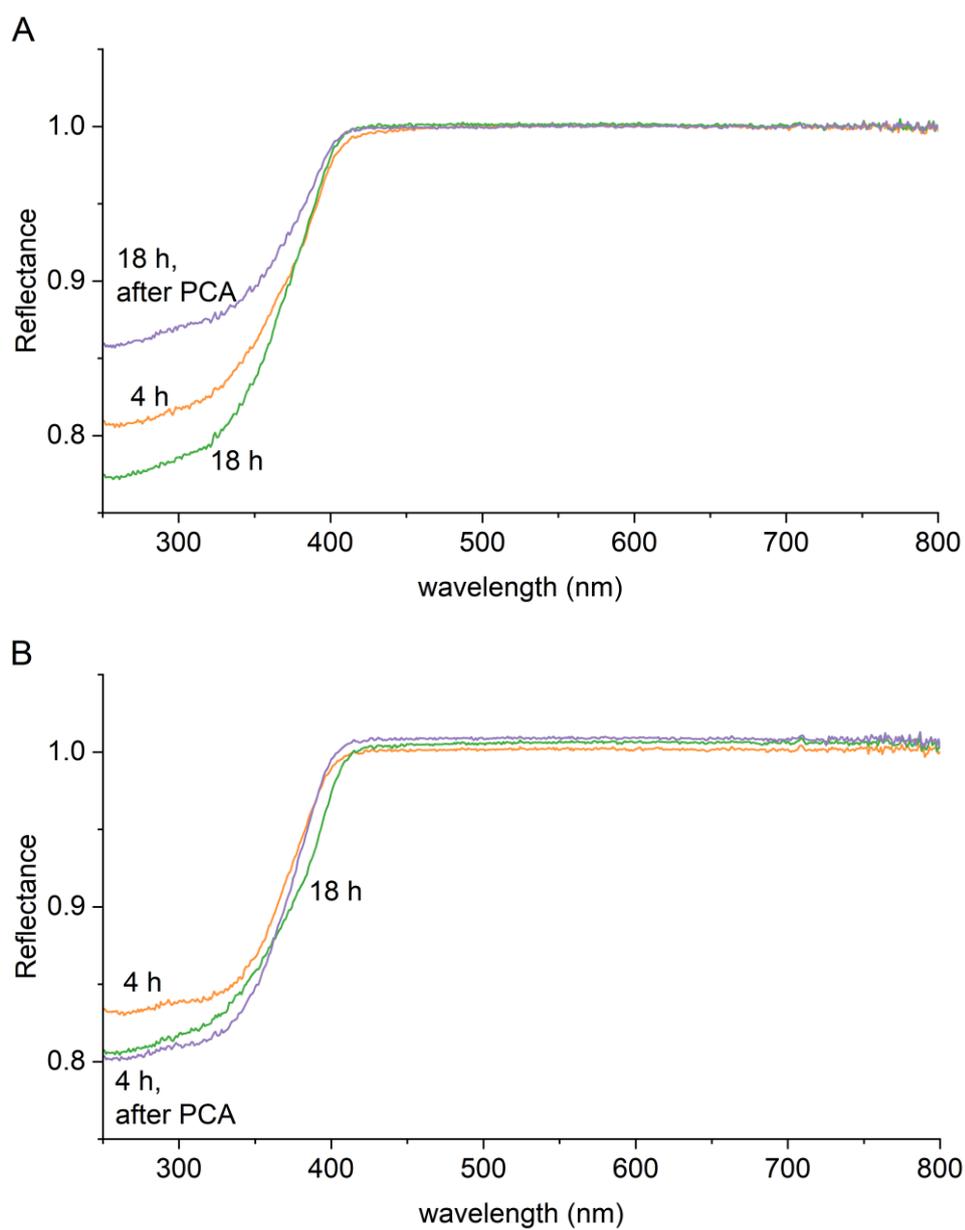


Figure S10. Diffuse reflectance of the pristine materials and of the materials after 5 cycles of photocatalytic measurements (after PCA) for the samples T-none (A) and T-AA (B).