Supporting Information

Sol–Gel Synthesis of 2-Dimensional TiO_2: Self-Assembly of Ti–Oxoalkoxy–Acetate Complexes by Carboxylate Ligand Directed Condensation

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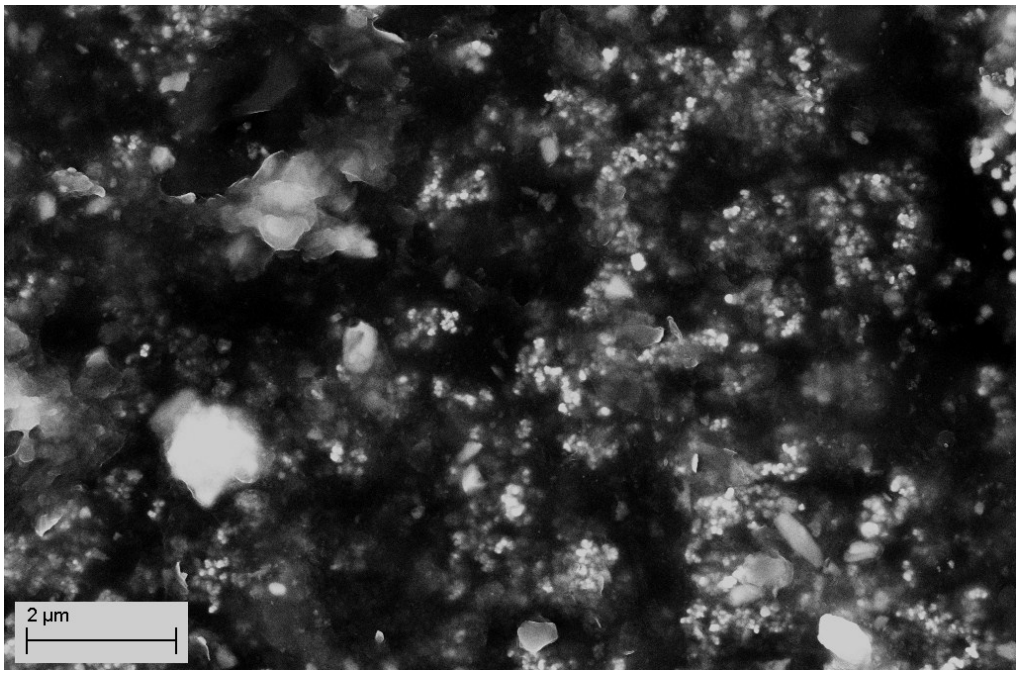

Fig. S1. SEM image of TiO_2-3.5_{400C}

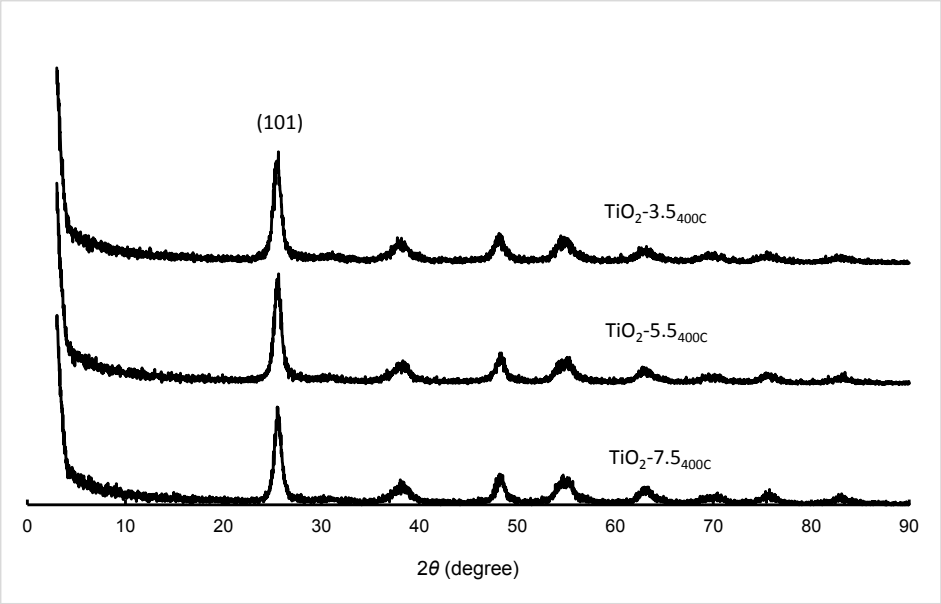

Fig. S2. Powder XRD patterns of TiO_2-3.5$_{400C}$, TiO_2-5.5$_{400C}$, and TiO_2-7.5$_{400C}$. The fwhm of the anatase (101) peak was used to estimate the crystallite size.

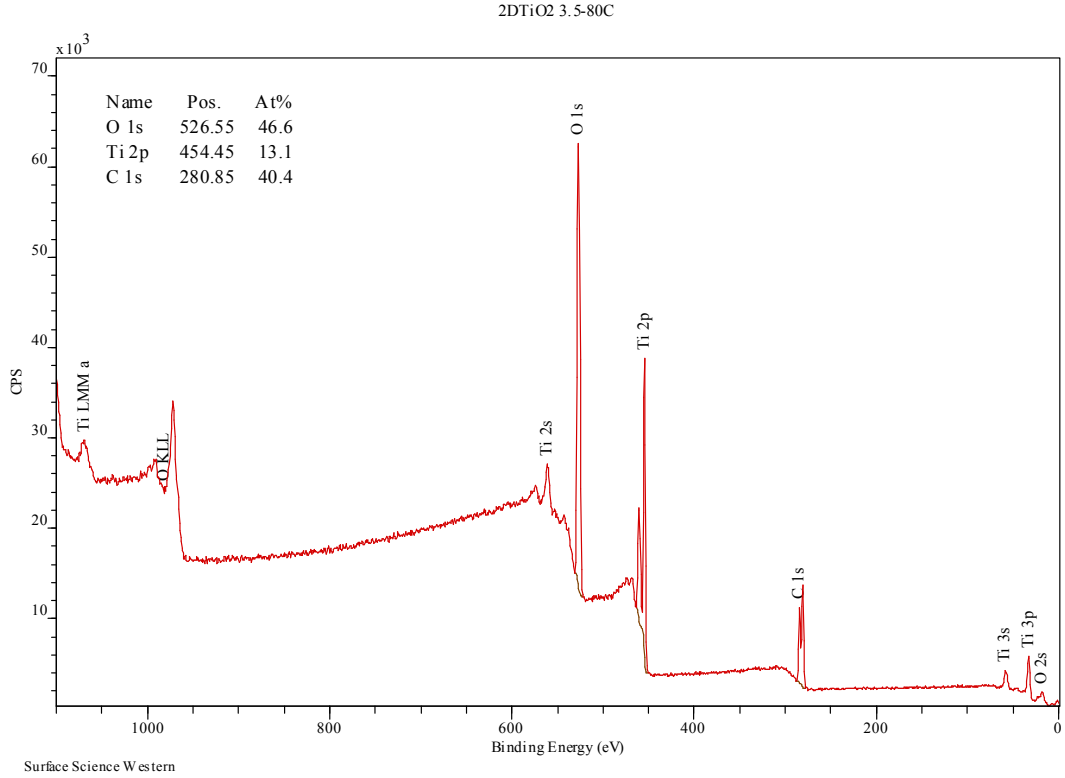

Fig. S3. XPS scan of TiO_2-3.5$_{80C}$.

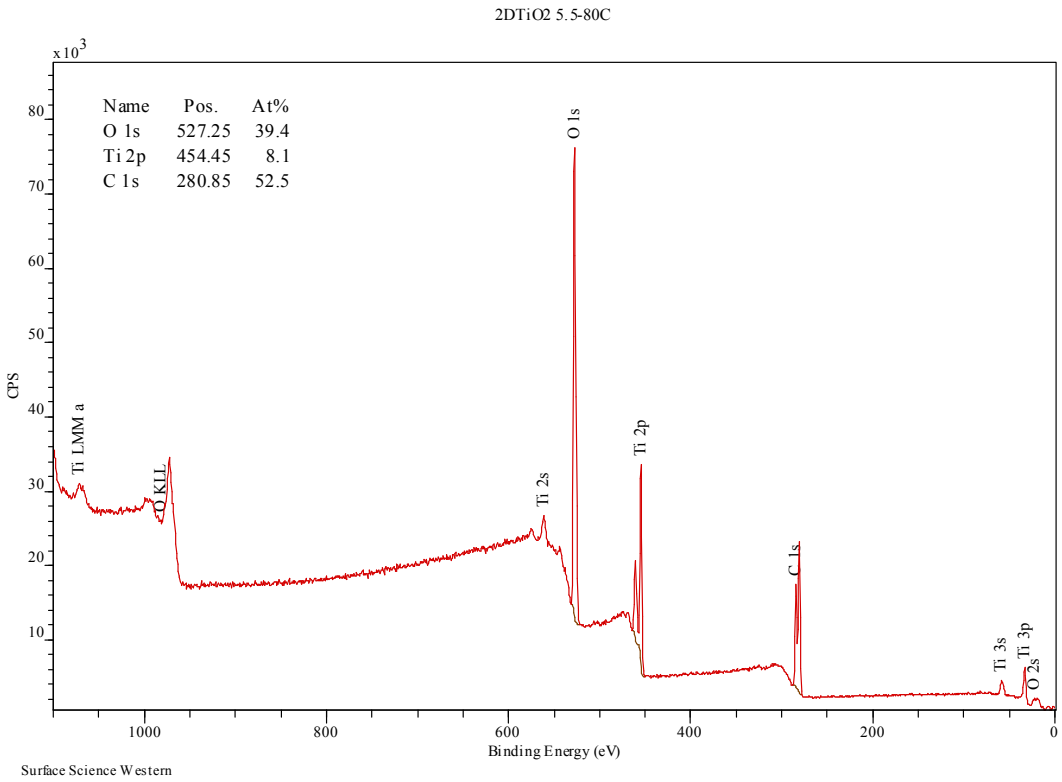

Fig. S4. XPS scan of TiO_2-5.5_{80C}.

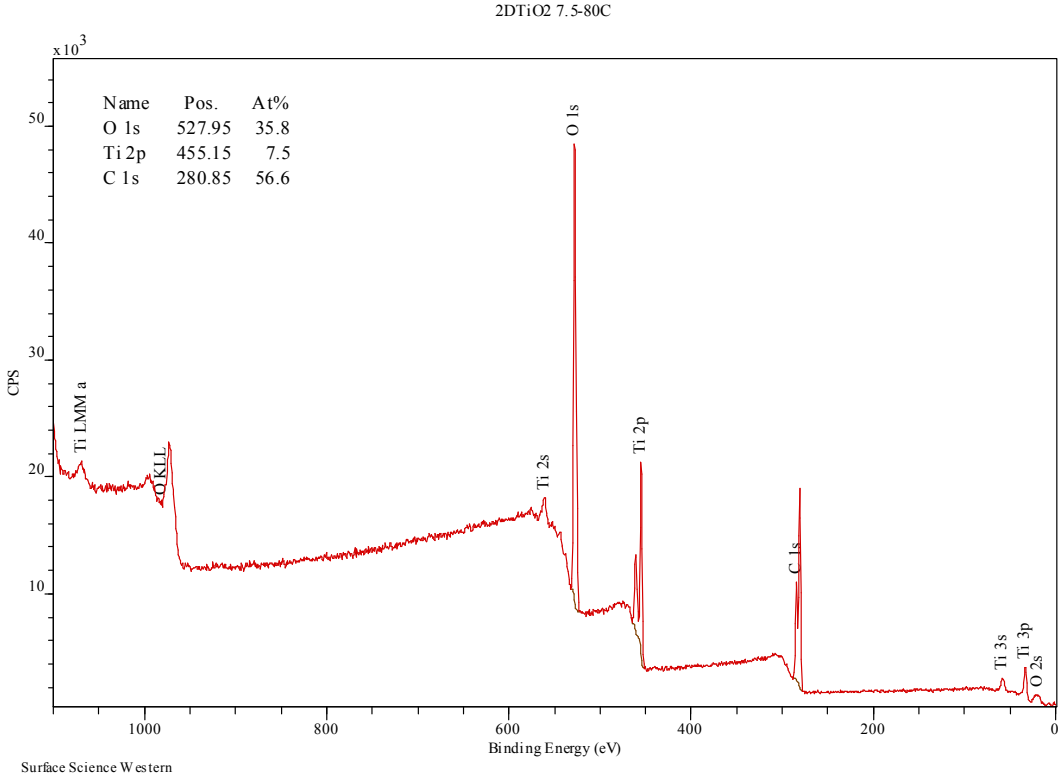

Fig. S5. XPS scan of TiO_2-7.5_{80C}.

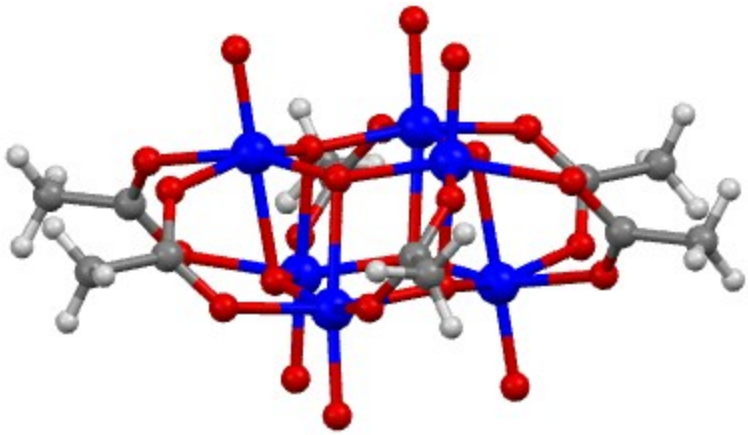

Fig. S6. The unit structure for $[Ti_6O_9(OAc)_6]_n$. Blue = Ti, red = red, grey = carbon, and white = hydrogen.

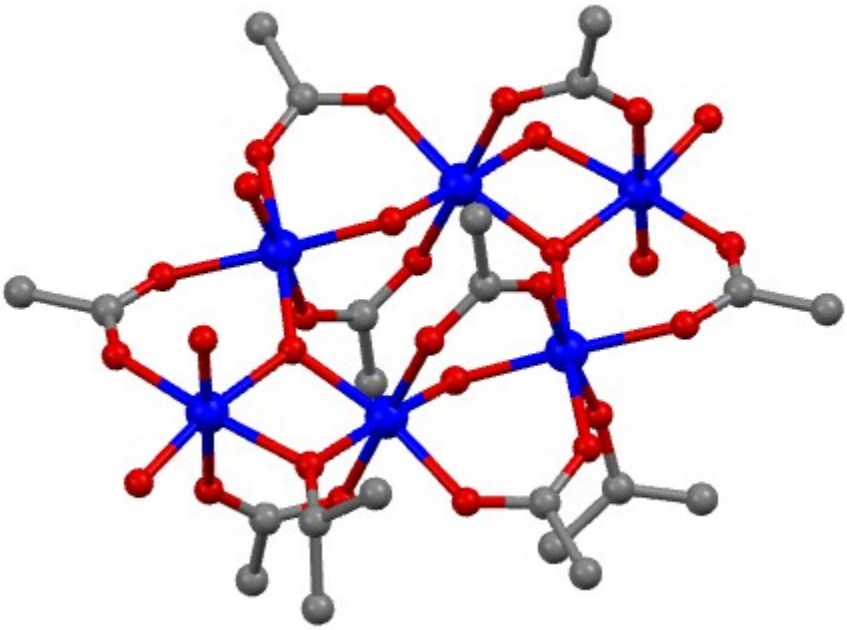

Fig. S7. The unit structure for $[Ti_6O_7(O^iPr)_2(OAc)_8]_n$. Blue = Ti, red = red, grey = carbon, and the hydrogen atoms are omitted for clarty.

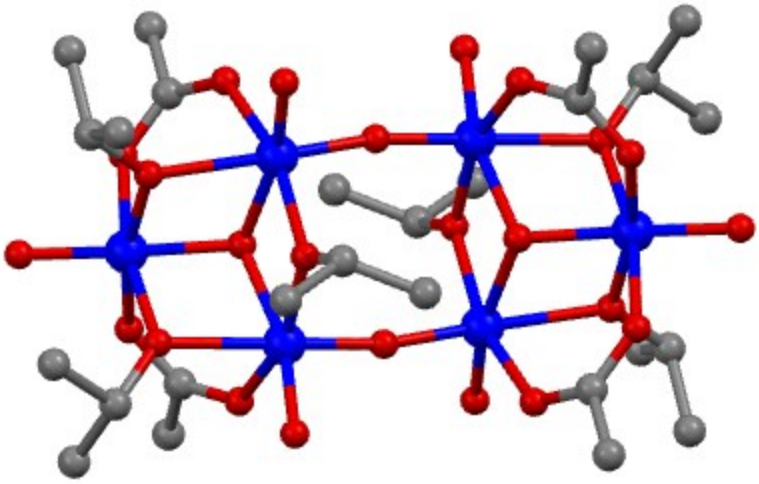

Fig. S8. The unit structure for $[Ti_6O_7(O^iPr)_2(OAc)_8]_n$. Blue = Ti, red = red, grey = carbon, and and the hydrogen atoms are omitted for clarty.

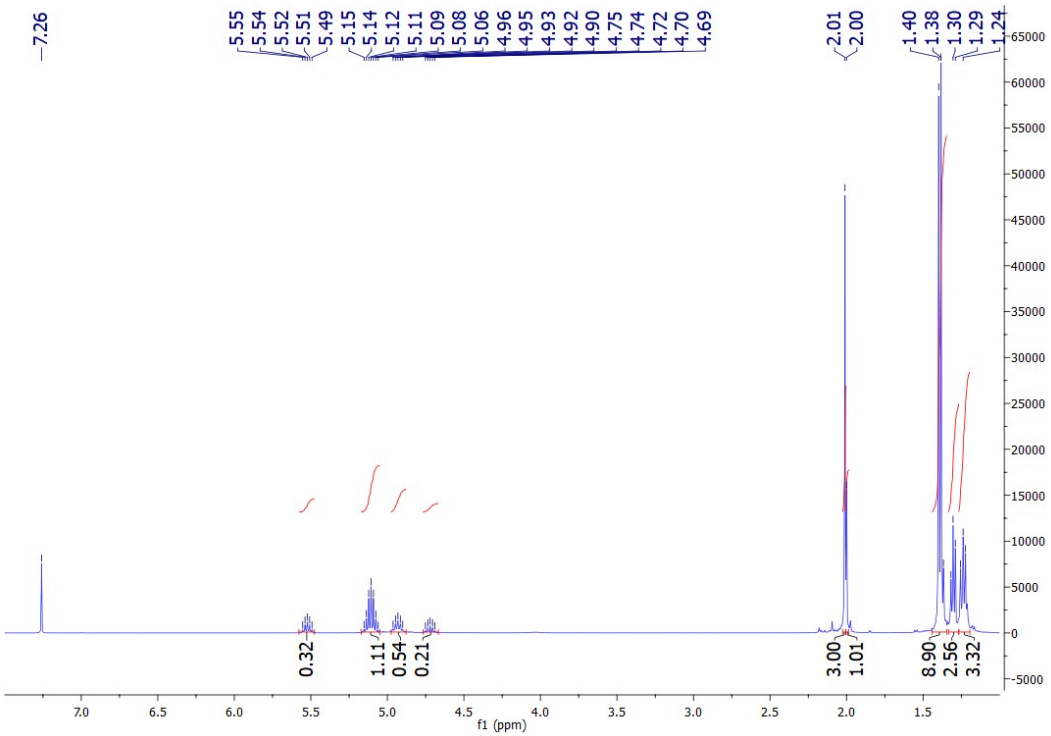

Fig. S9. ^{1}H-NMR spectrum of $Ti_6O_4(O^iPr)_8(OAc)_8$ with some impurity of $Ti_6O_4(O^iPr)_{12}(OAc)_4$.

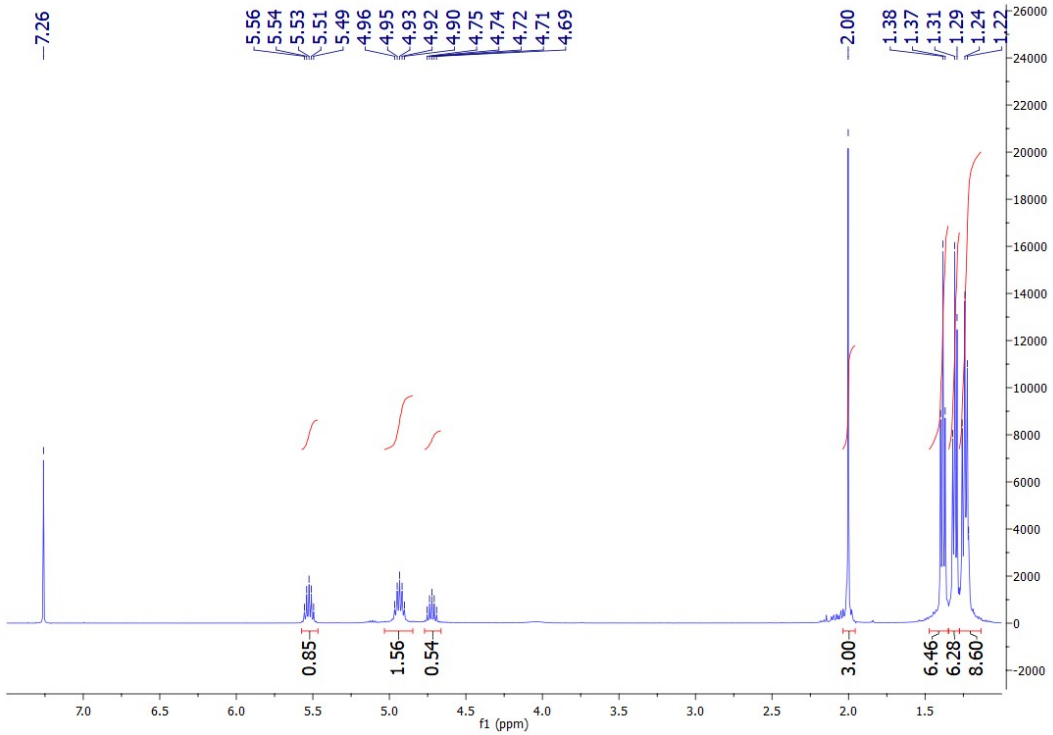

Fig. S10. ^{1}H-NMR spectrum of $Ti_6O_4(O^iPr)_{12}(OAc)_4$.