

Supporting Information

Effect of Combination Sequence of Precursors on the Structural and Catalytic

Properties of Ti-SBA-15

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Table S1. Textural properties of 560°C calcined xTi-Si-2 and xSi-Ti-2 samples obtained from nitrogen physisorption isotherms.

Entry	Materials	S_{BET} (m ² /g)	V_{Total} (cm ³ /g)	D_p ^[a] (nm)	W_t ^[b] (nm)
1	SBA-15	801	0.97	5.8	4.6
2	2Ti-Si-2	858	1.1	5.9	4.5
3	4Ti-Si-2	874	1.1	5.9	4.5
4	5Ti-Si-2	813	1.0	5.9	4.5
5	8Ti-Si-2	824	1.0	5.9	4.7
6	12.5Ti-Si-2	810	1.0	5.9	5.1
9	2Si-Ti-2	796	0.98	6.0	4.7
10	4Si-Ti-2	837	1.0	6.0	5.0
11	5Si-Ti-2	799	1.0	6.0	5.0
12	8Si-Ti-2	870	1.1	6.1	4.5
13	12.5Si-Ti-2	896	1.1	6.1	4.3

^[a] Pore diameter determined from peak position of BJH desorption PSD profile;

^[b] Peak width at half maximum height of the BJH desorption PSD profile.

Table S2. Textural properties of 560°C calcined xTi-Si-1.5 and xSi-Ti-1.5 samples

Materials	S_{BET} (m ² /g)	V_{Total} (cm ³ /g)	D_p ^[a] (nm)	W_t ^[b] (nm)
1Ti-Si-1	927	1.08	6.2	4.5
2Ti-Si-1	986	1.16	6.2	4.4
4Ti-Si-1	923	1.12	6.4	4.2
5Ti-Si-1	932	1.13	6.4	4.2
8Ti-Si-1	867	1.05	6.4	4.6
10Ti-Si-1	864	1.00	6.2	4.3
1Ti-Si-1.5	900	1.07	6.1	4.5
2Ti-Si-1.5	911	1.09	6.1	4.5
4Ti-Si-1.5	915	1.11	6.1	4.9
5Ti-Si-1.5	930	1.11	6.1	4.6
8Ti-Si-1.5	835	1.02	6.2	4.5
10Ti-Si-1.5	884	1.05	6.3	4.4

^[a] Pore diameter determined from peak position of BJH desorption PSD profile;

^[b] Peak width at half maximum height of the BJH desorption PSD profile.

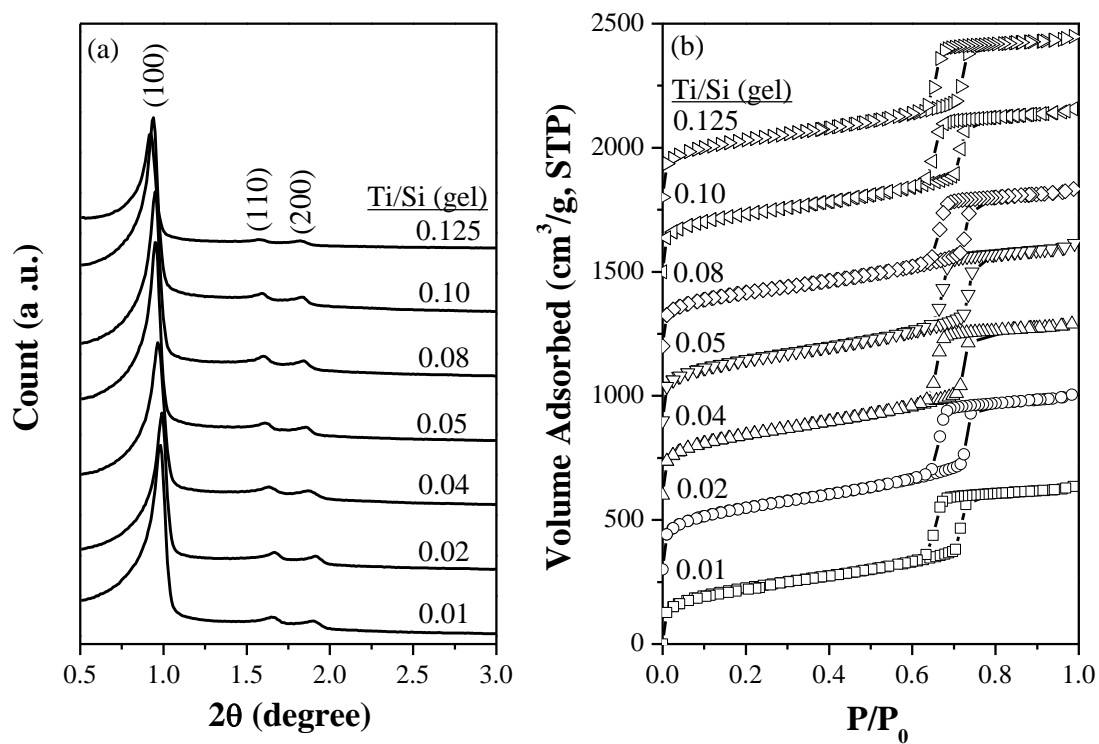


Fig. S1. (a) small-angle XRD and (b) N_2 adsorption-desorption isotherms of calcined $x\text{TiSi-2}$ samples. The displacements of the isotherms are shown by the points at $P/P_0 = 0$.

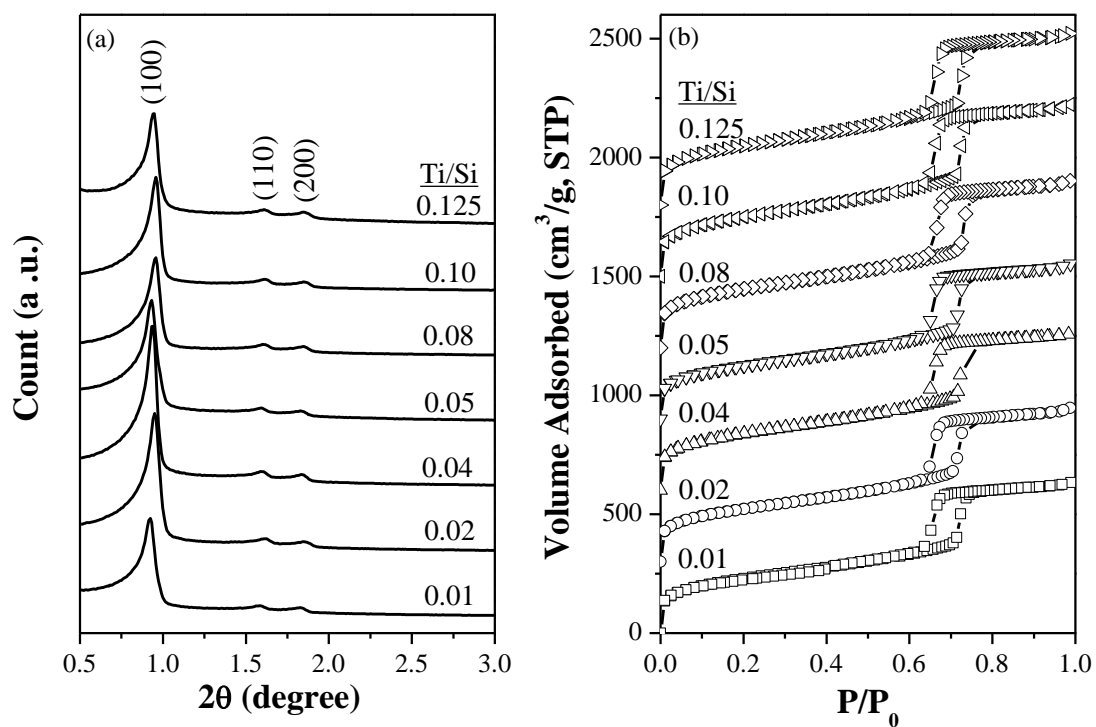


Fig. S2. (a) small-angle XRD and (b) N₂ adsorption-desorption isotherms of calcined xSiTi-2 samples. The displacements of the isotherms are shown by the points at $P/P_0 = 0$.

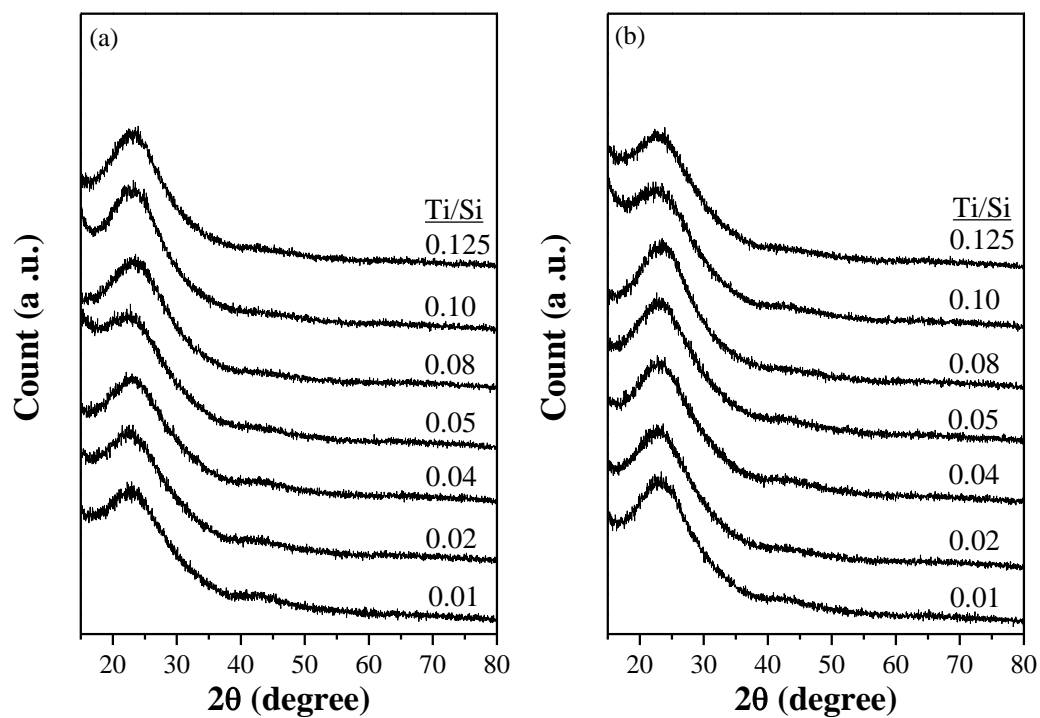


Fig. S3. Wide-angle XRD patterns of calcined samples: (a) xTiSi and (b) xSiTi.

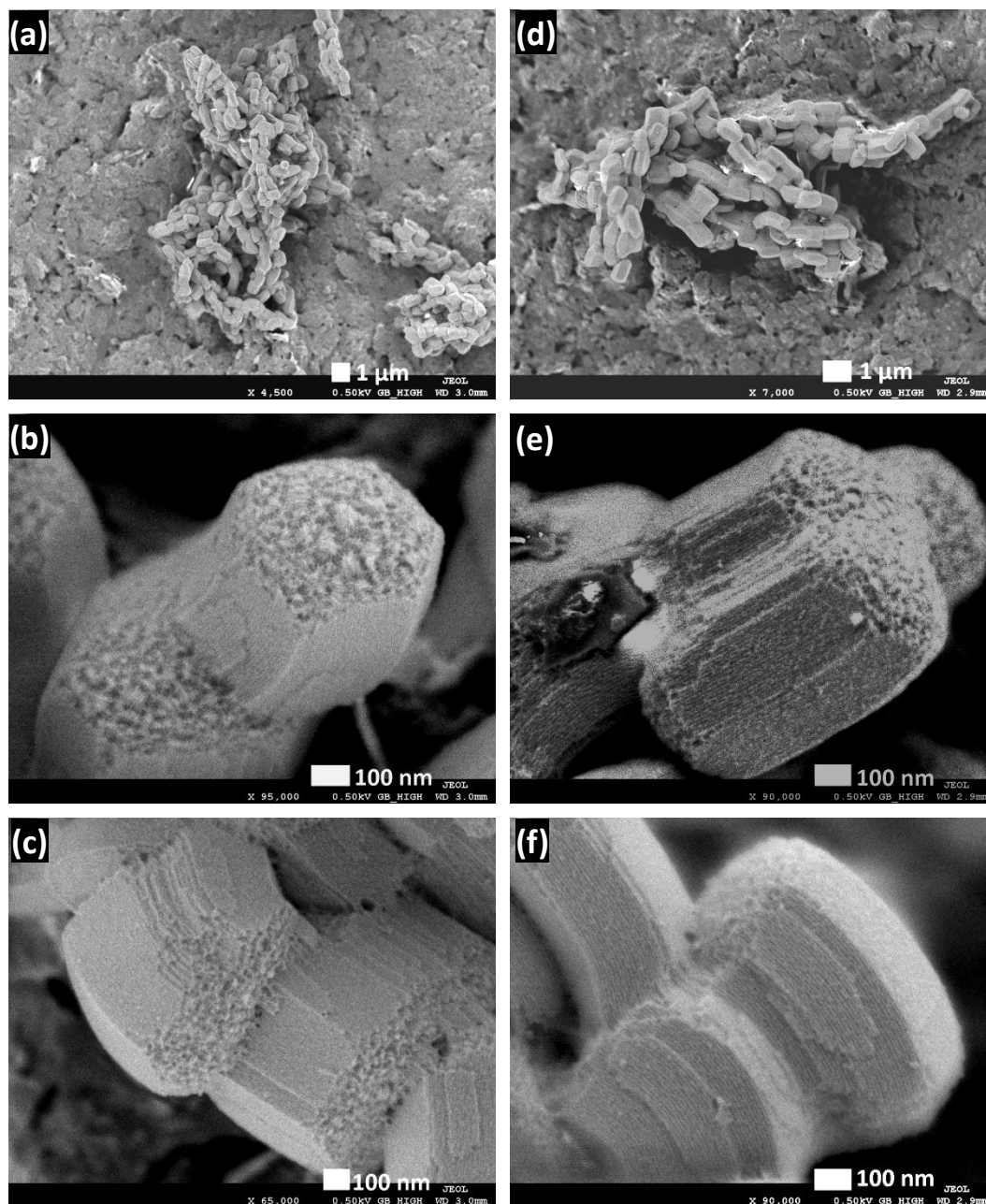


Fig. S4. HRSEM photos of calcined samples: (a-c) 12.5Ti-Si-2 and (d-f) 12.5Si-Ti-2.

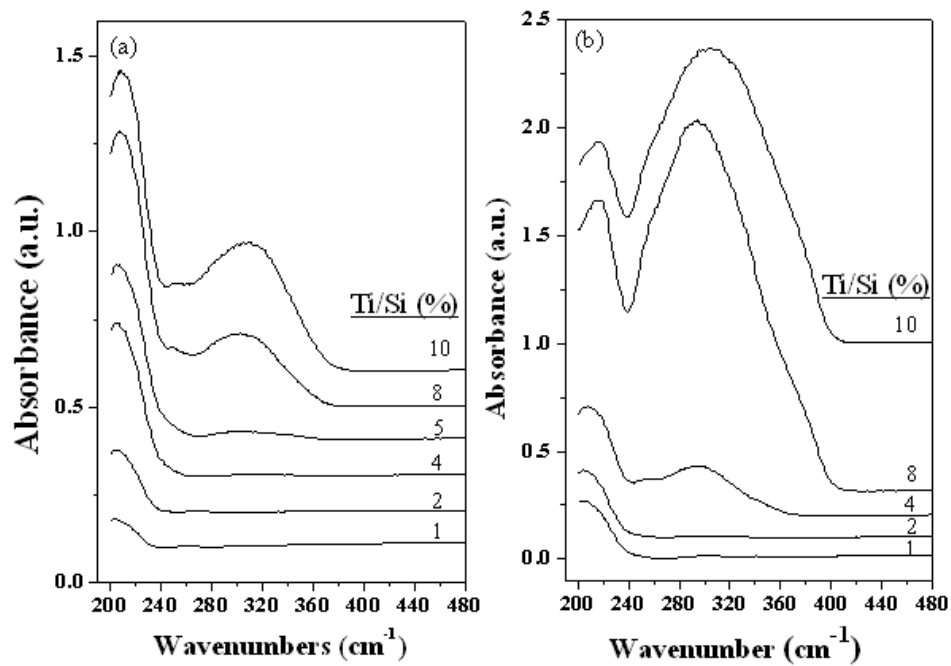


Fig. S5. DR UV-Vis spectra of 560°C calcined samples prepared at relatively higher pH values: (a) xTiSi-1.5 and (b) xTiSi-1