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Supporting Information

The performance and mechanism for the catalytic oxidation of dibromomethane (CH_2Br_2) over Co_3O_4/TiO_2 catalysts

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The internal diffusion effect was checked by changing the particle size of the catalyst and the results were shown in Fig. S2. The data obtained in the experiments showed that the catalytic reaction was operated without diffusional limitation under 10% conversion of DBM (< 220 ℃). And the kinetic studies were carried out in the temperature range of 180−210 ℃ over CoTi-5 in the form of 250-425 μm.

Figure captions

Fig. S1 SEM images of (a) CoTi-1, (b) CoTi-2.5, (c) CoTi-5, (d) CoTi-10 and (e) CoTi-25.

Fig. S2 The effect of catalyst particle size for DBM oxidation over CoTi-5.

Fig. S3 DBM conversion over CoTi-5 as a function of time at 300 ℃.

Fig. S1

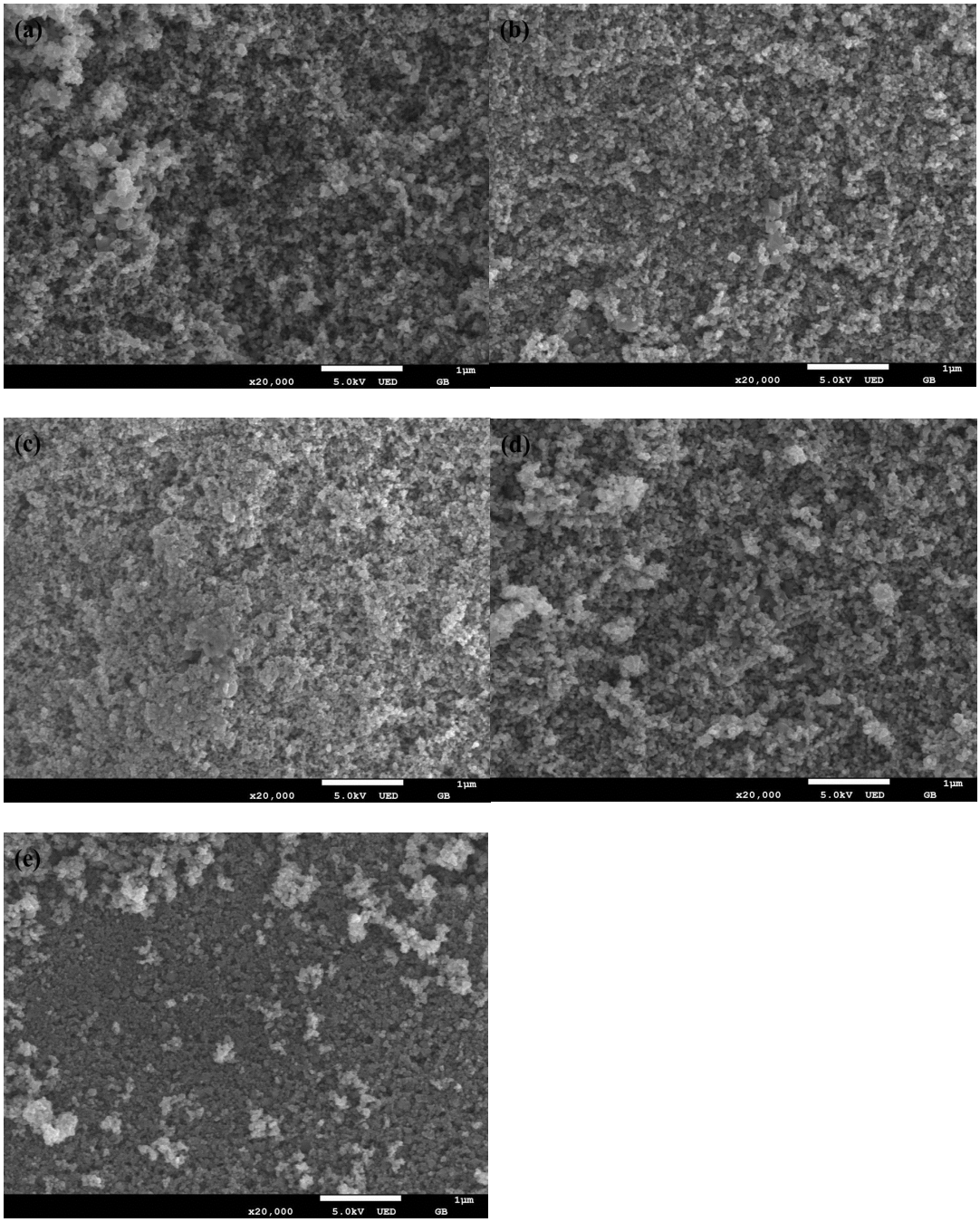

(a)
x20,000 5.0kV UED GB 1μm
(b)
x20,000 5.0kV UED GB 1μm
(c)
x20,000 5.0kV UED GB 1μm
(d)
x20,000 5.0kV UED GB 1μm
(e)
x20,000 5.0kV UED GB 1μm

Fig. S2

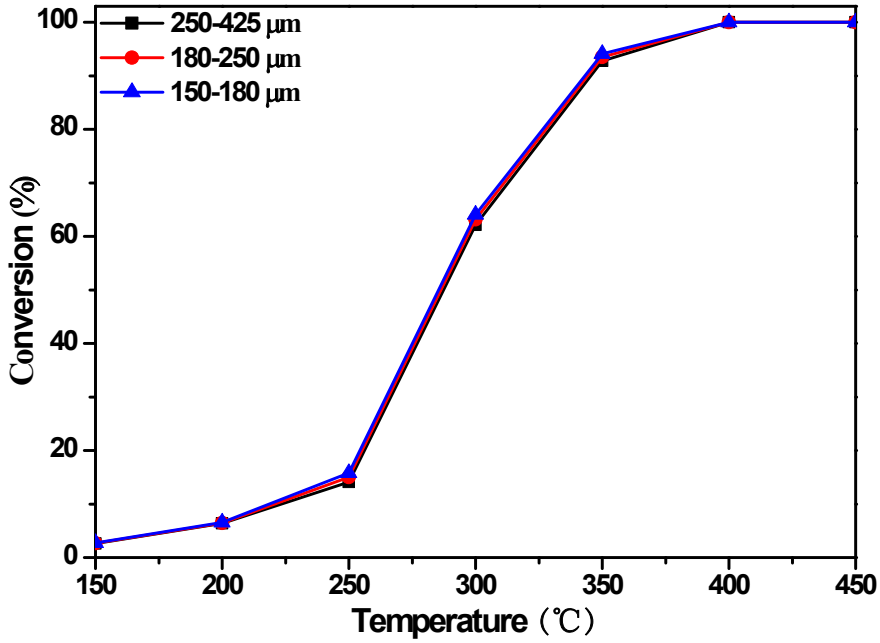
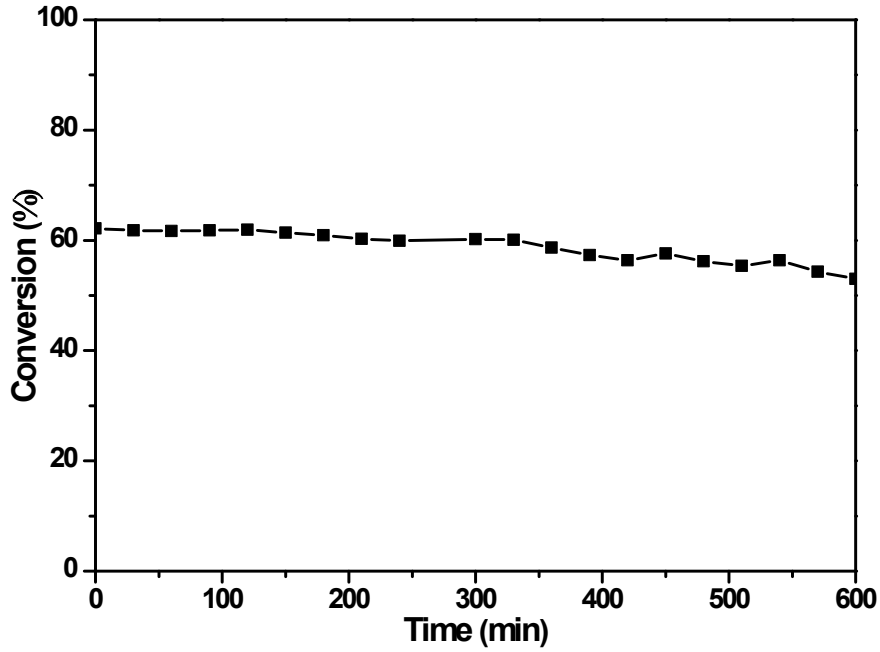

250-425 μm
180-250 μm
150-180 μm
Conversion (%)
Temperature (℃)
0
20
40
60
80
100
150
200
250
300
350
400
450

Fig. S3


Conversion (%)
Time (min)
0
20
40
60
80
100
0
100
200
300
400
500
600