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Title: Fabrication of morphologically various forms of g-C_3N_4 supported MoO_3 catalyst for the oxidative desulfurization of dibenzothiophene

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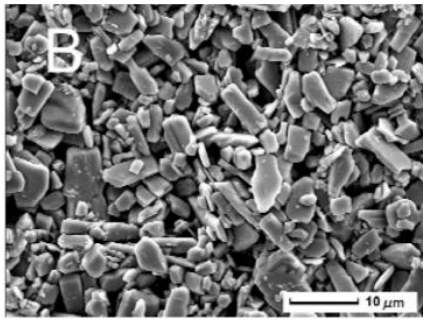
(a). 

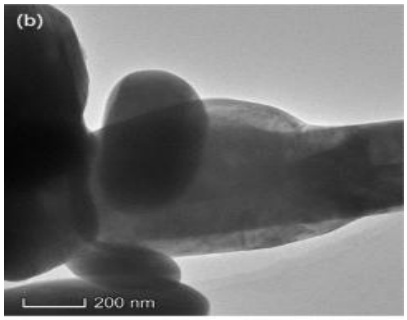
(b). 

Fig. S1. (a). SEM of MoO_3 (Ref.38) and (b). TEM of MoO_3 (Ref.39)

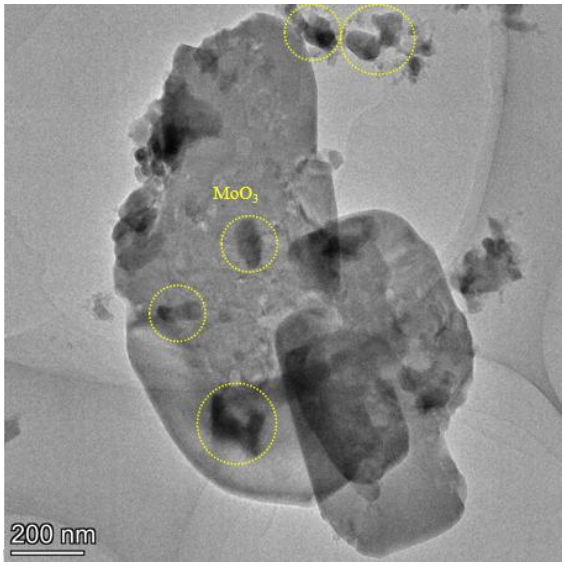


Fig. S2. Lower resolution of MoO_3/TCN composites.

Table S1. Compared with published works for catalysts used for oxidative desulfurization

Entry	Catalysts	Reaction conditions				Desulfurization performance	Ref.
		Temperature (℃)	O/S	Load of catalyst (g /mL)	Reaction time (min)		
1	MoO_3/TCN	60 ℃	4	0.013	60	96 %	This work
2	$C_{16}PW(O_2)_2$/PNIPAM	70 ℃	12	0.010	120	99 %	Ref 55
3	MoO_2/g-C_3N_4	60 ℃	30	0.004	180	95 %	Ref 56
4	MoO_3/SiO_2-2 NN	60 ℃	8	0.002	80	99 %	Ref 57
5	$Na_2WO_4P_{2.5}$/Al_2O_3	70 ℃	5	0.008	180	93 %	Ref 58

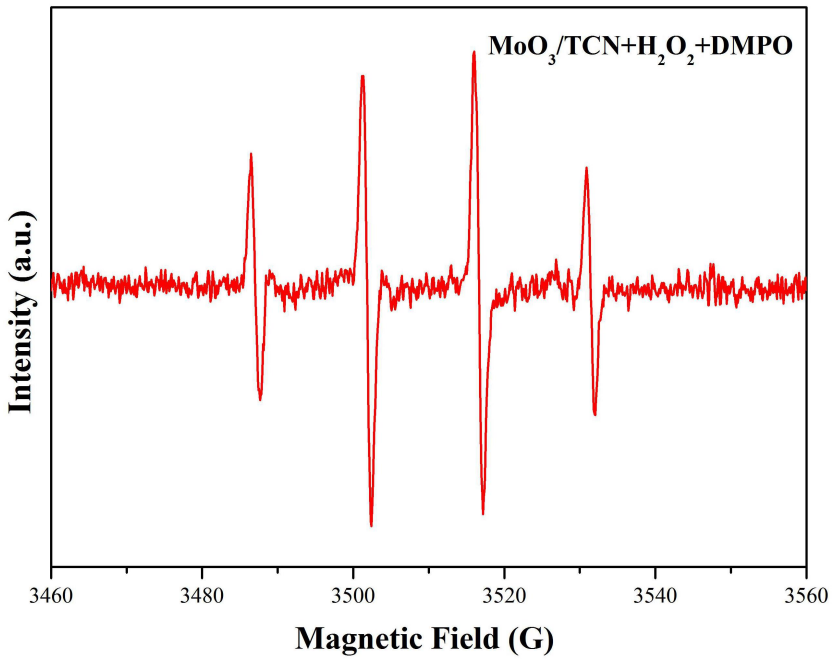


Fig. S3. ESR spectra of ·OH

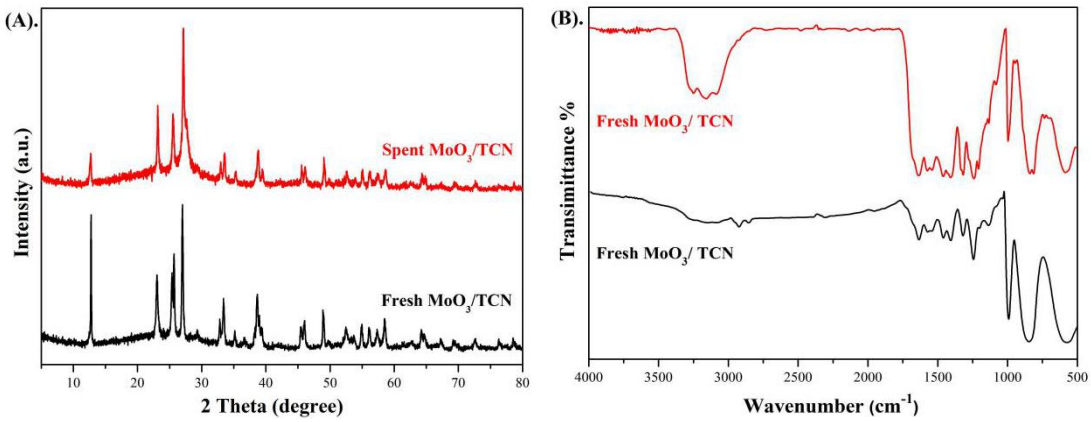


Fig.S4. (A) XRD patterns and (B) FT-IR of fresh and spent MoO_3/TCN

Table S2. Textural properties of g-C_3N_4 and MoO_3/g-C_3N_4

Samples	S_{BET} [a] （m^2/g）	Vt [b](cm^3/g)	D [c] (nm)
BCN	12.1	0.16	19.7
RCN	36.9	0.21	18.6
TCN	24.8	0.31	19.6
MoO_3/TCN (Fresh)	42.5	0.35	18.5
MoO_3/TCN (Spent)	53.7	0.49	19.1

[a] S_{BET}: BET specific surface area.

[b] V_t: total pore volume.

[c] D: diameter at the average of BJH pore size distribution curve.