

New Journal of Chemistry

Title: Fabrication of morphologically various forms of g-C₃N₄ supported MoO₃
catalyst for the oxidative desulfurization of dibenzothiophene

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Manuscript number: NJ-ART-08-2020-004105.R1

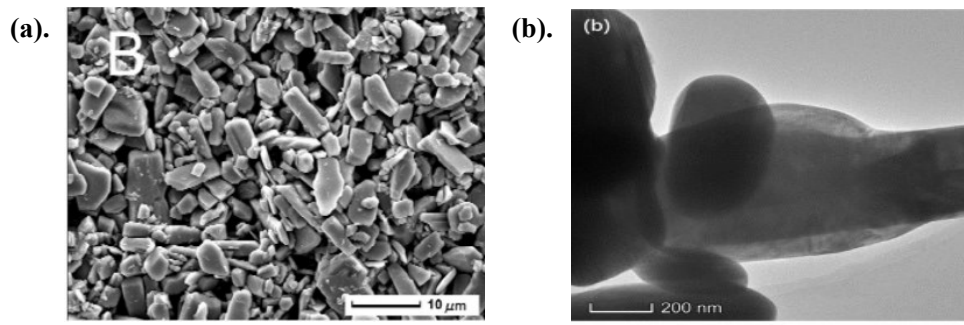


Fig. S1. (a). SEM of MoO_3 (Ref.38) and (b). TEM of MoO_3 (Ref.39)

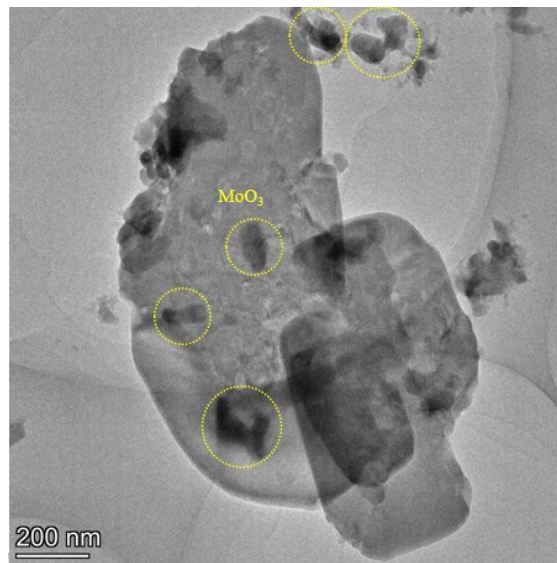


Fig. S2. Lower resolution of MoO_3/TCN composites.

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

Entry	Catalysts	Reaction conditions			Desulfurization performance	Ref.	
		Temperature (°C)	O/S	Load of catalyst (g /mL)			
1	MoO ₃ /TCN	60 °C	4	0.013	60	96 %	This work
2	C ₁₆ PW(O ₂) ₂ /PNIPAM	70 °C	12	0.010	120	99 %	Ref 55
3	MoO ₂ /g-C ₃ N ₄	60 °C	30	0.004	180	95 %	Ref 56
4	MoO ₃ /SiO ₂ -2 NN	60 °C	8	0.002	80	99 %	Ref 57
5	Na ₂ WO ₄ P _{2.5} /Al ₂ O ₃	70 °C	5	0.008	180	93 %	Ref 58

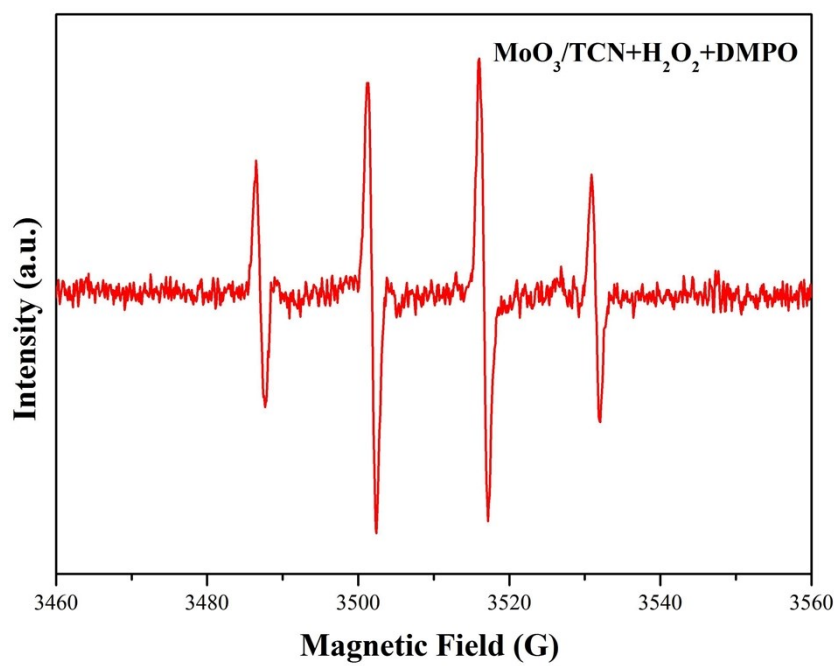


Fig. S3. ESR spectra of $\cdot\text{OH}$

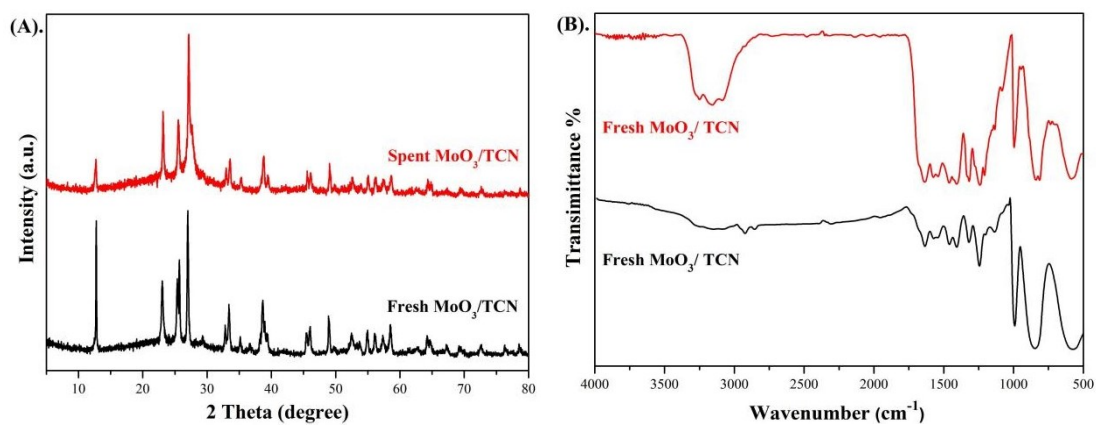


Fig.S4. (A) XRD patterns and (B) FT-IR of fresh and spent MoO₃/TCN

Table S2. Textural properties of g-C₃N₄ and MoO₃/g-C₃N₄

Samples	S _{BET} ^a (m ² /g)	V _t ^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.