Electronic Supplementary Material (ESI) for RSC Advances.

Catalytic performance of supported g-C_3N_4 on MCM-41 in organic dyes degradation with peroxymonosulfate

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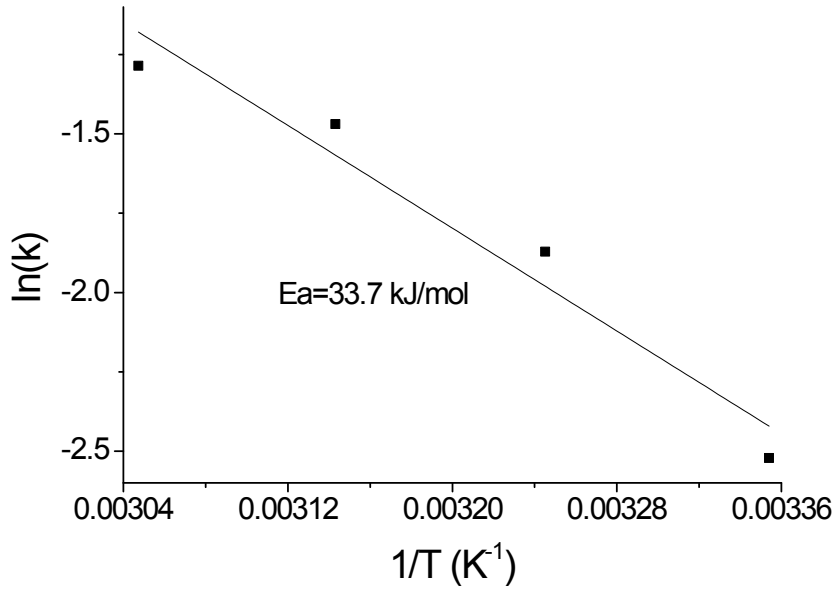

Fig.S1 Arrhenius plot of log k_{obs} for AO7 decolorization with the g-C_3N_4/MCM-41+PMS system. (Conditions: g-C_3N_4/MCM-41 1.0 g/L, PMS 0.188 g/L, AO7 50 mg/L.)

Table S1

Sample	g-C_3N_4 content	BET area (m^2/g)	Total pore Volume (cm^3/g)	Average pore diameter (nm)
MCM-41	0	1077	1.08	2.81
g-C_3N_4/MCM-41	35.3 %	324	0.367	2.18
g-C_3N_4/MCM-41	43.4 %	298	0.329	2.09
g-C_3N_4/MCM-41	60.2 %	56	0.128	2.08
g-C_3N_4	100%	14	0.106	33.5

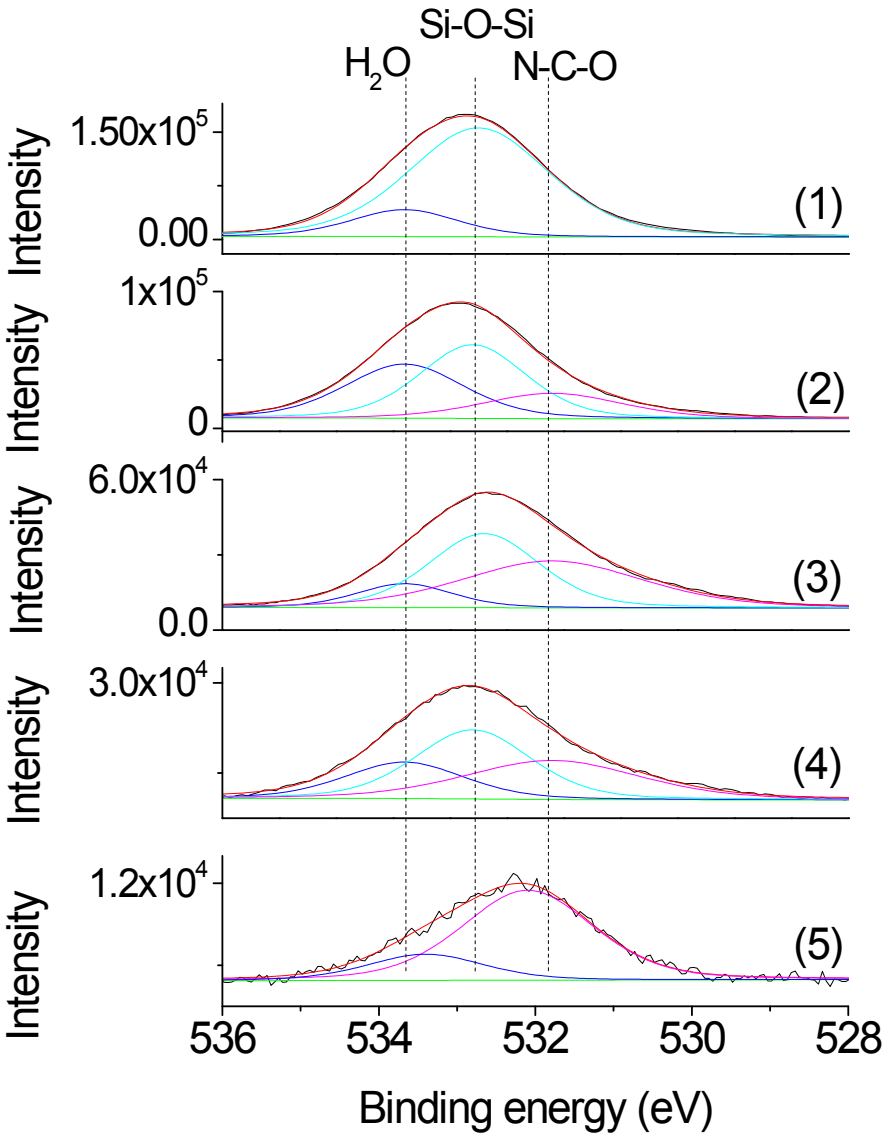

Fig.S2 O1s XPS peaks of g-C_3N_4/MCM-41 with different g-C_3N_4 loadings: (1) MCM-41, (2) g-C_3N_4/MCM-41(35.3%), (3) g-C_3N_4/MCM-41(43.4%), (4) g-C_3N_4/MCM-41 (60.2%) and (5) g-C_3N_4.

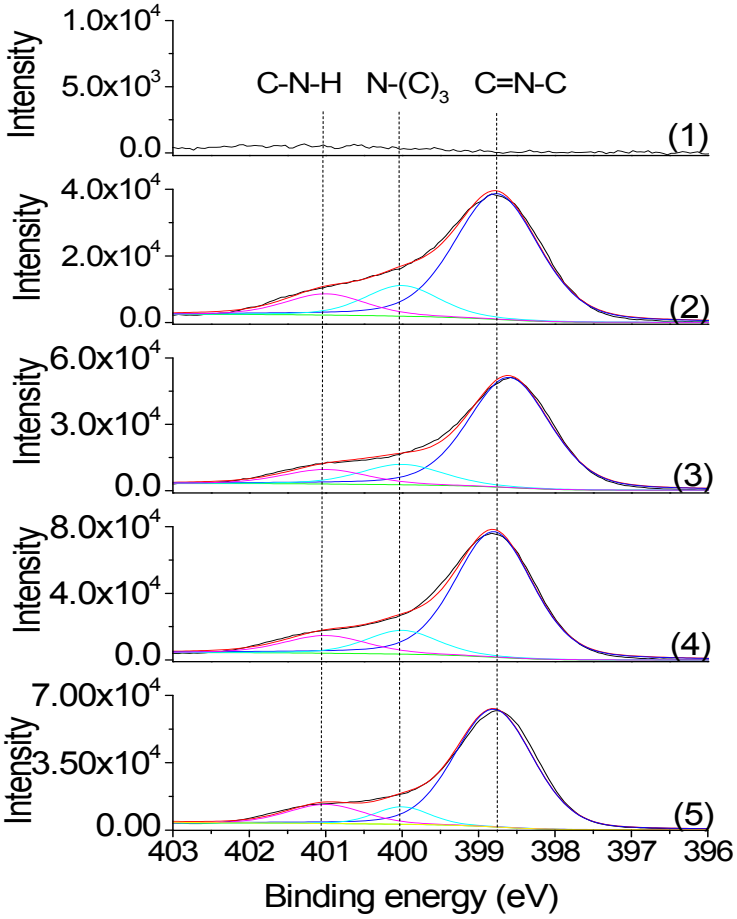

Fig.S3 N1s XPS peaks of g-C_3N_4/MCM-41 with different g-C_3N_4 loadings: (1) MCM-41, (2) g-C_3N_4/MCM-41(35.3%), (3) g-C_3N_4/MCM-41(43.4%), (4) g-C_3N_4/MCM-41 (60.2%) and (5) g-C_3N_4.

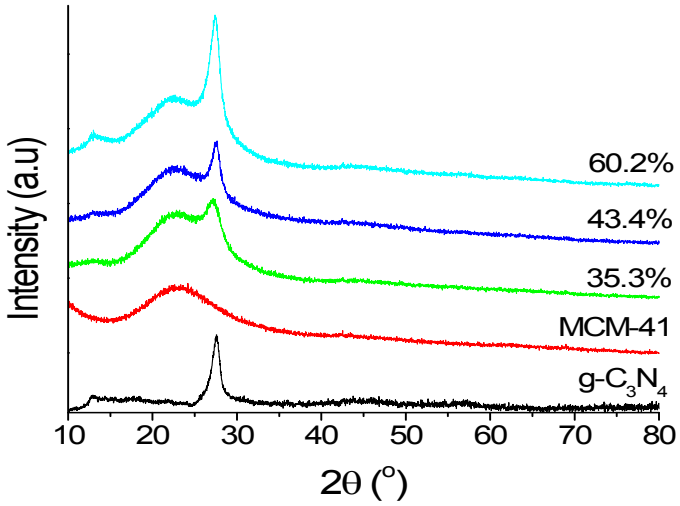

Fig.S4 XRD patterns of g-C_3N_4/MCM-41 catalysts with different loadings

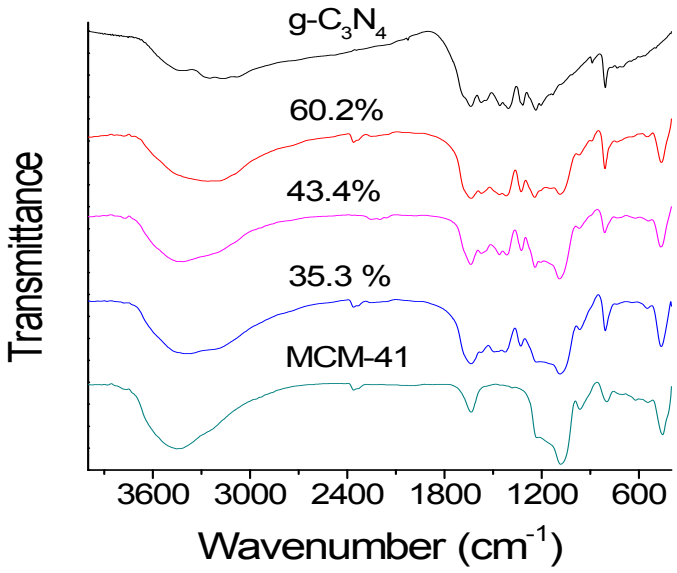

Fig.S5 FT-IR spectra of g-C_3N_4/MCM-41 catalysts with different loadings

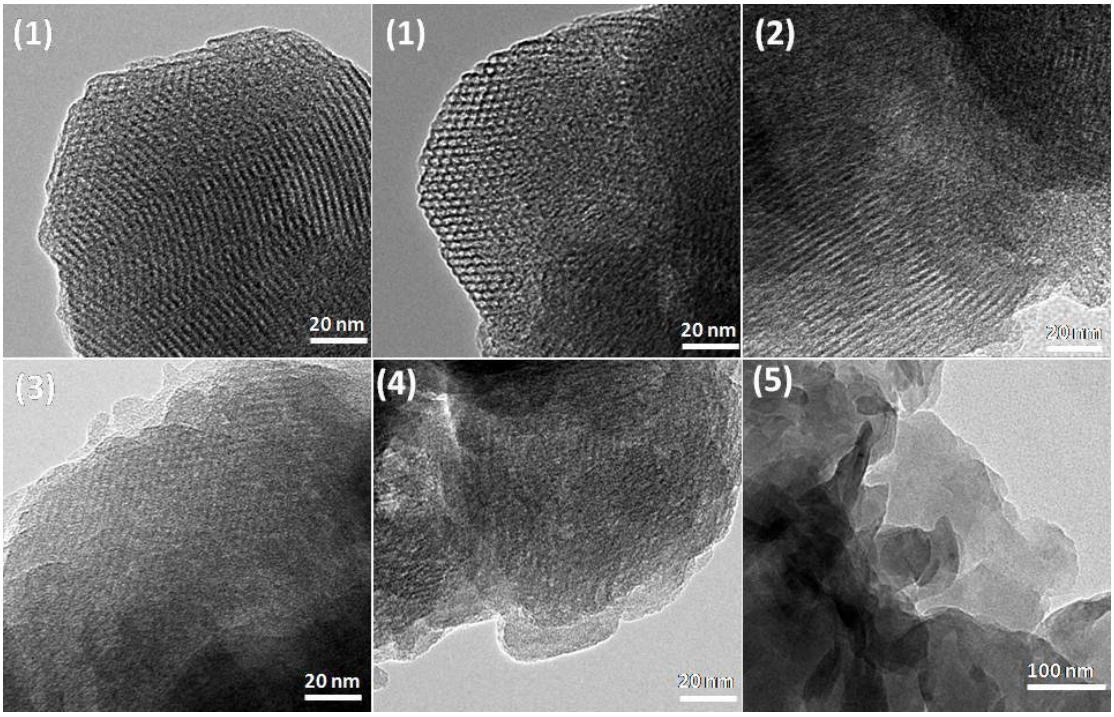

Fig.S6 HRTEM images of (1) MCM-41, (2) g-C_3N_4/MCM-41(35.3%), (3) g-C_3N_4/MCM-41 (43.4%), (4) g-C_3N_4/MCM-41 (60.2%) and (5) g-C_3N_4.

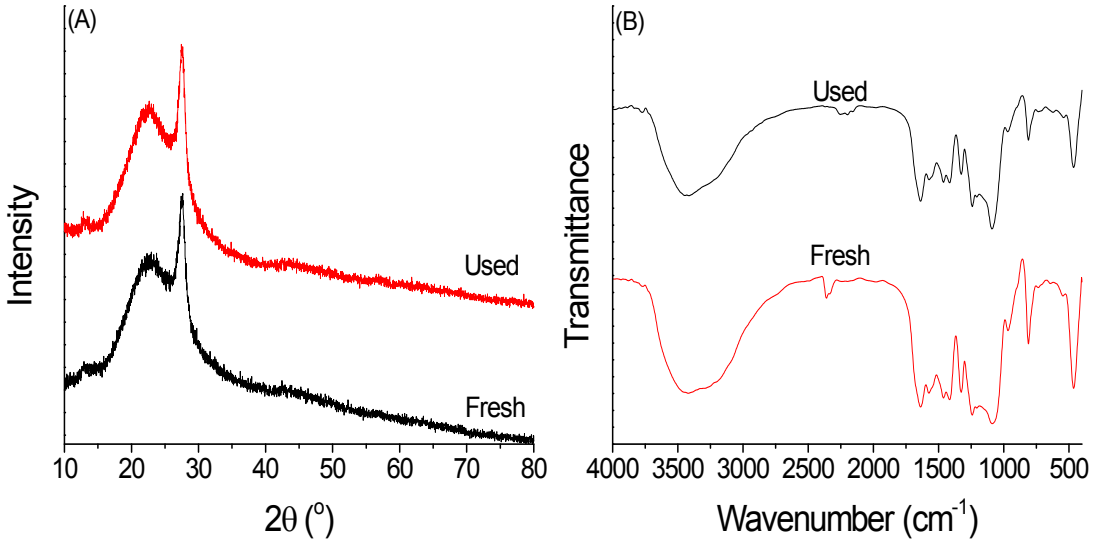

Fig.S7 XRD (A) and FT-IR (B) spectra of fresh and used g-C_3N_4/MCM-41 catalyst