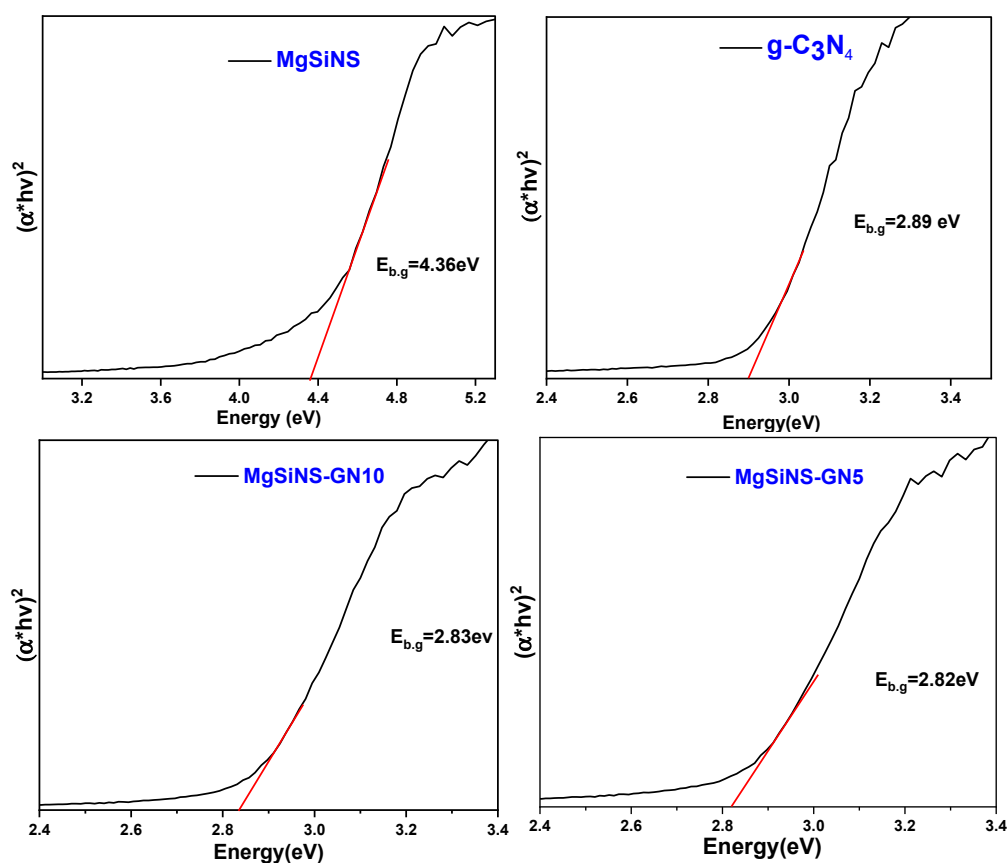


Electronic Supplementary Information

Visible light active magnesium silicate-graphitic carbon nitride nanocomposites for methylene blue degradation and Pb^{2+} adsorption

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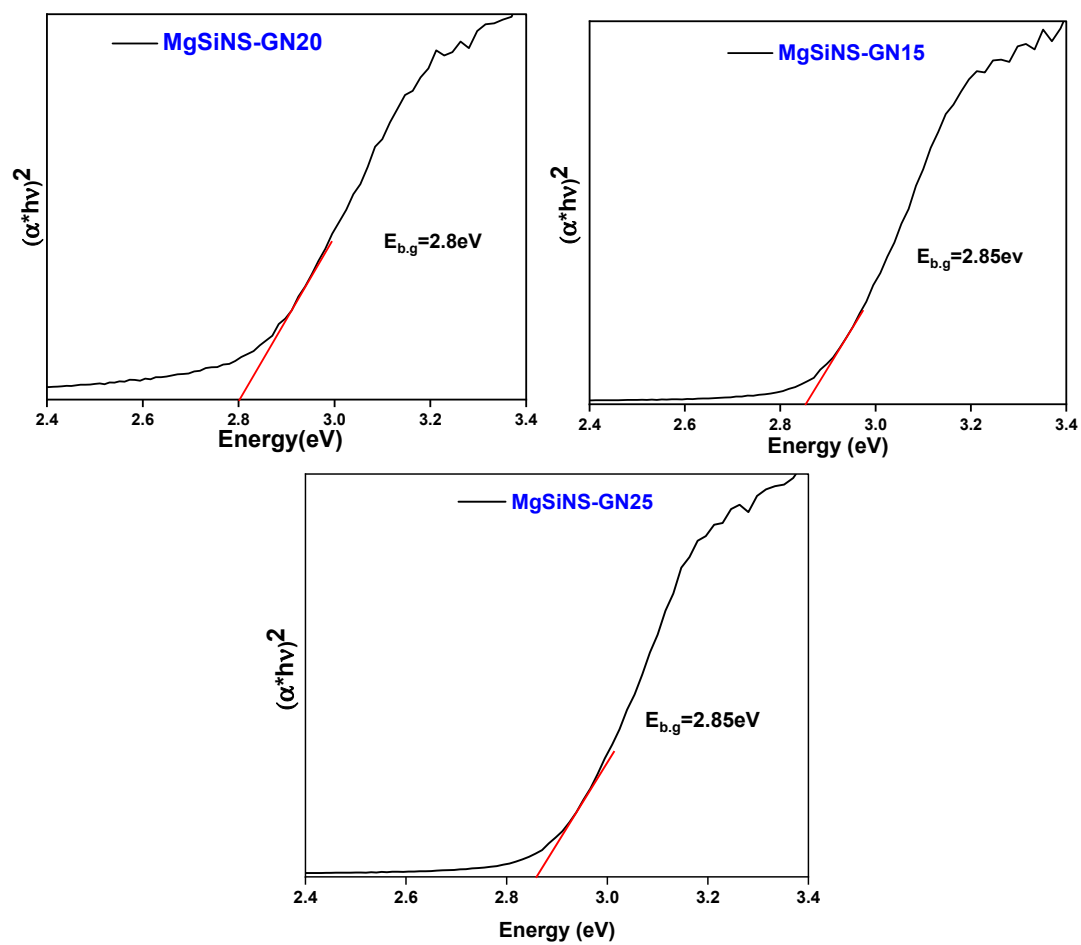


Figure S1: Tauc plots for all the synthesized materials

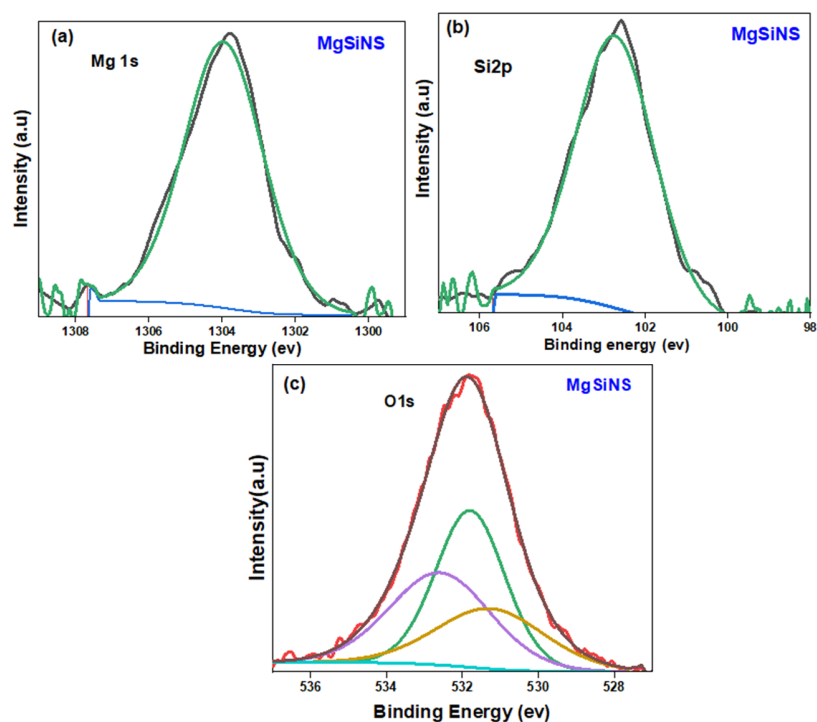


Figure S2: Deconvoluted XPS spectra for MgSiNS (a) $Mg1s$, (b) $Si2p$ and (c) $O1s$

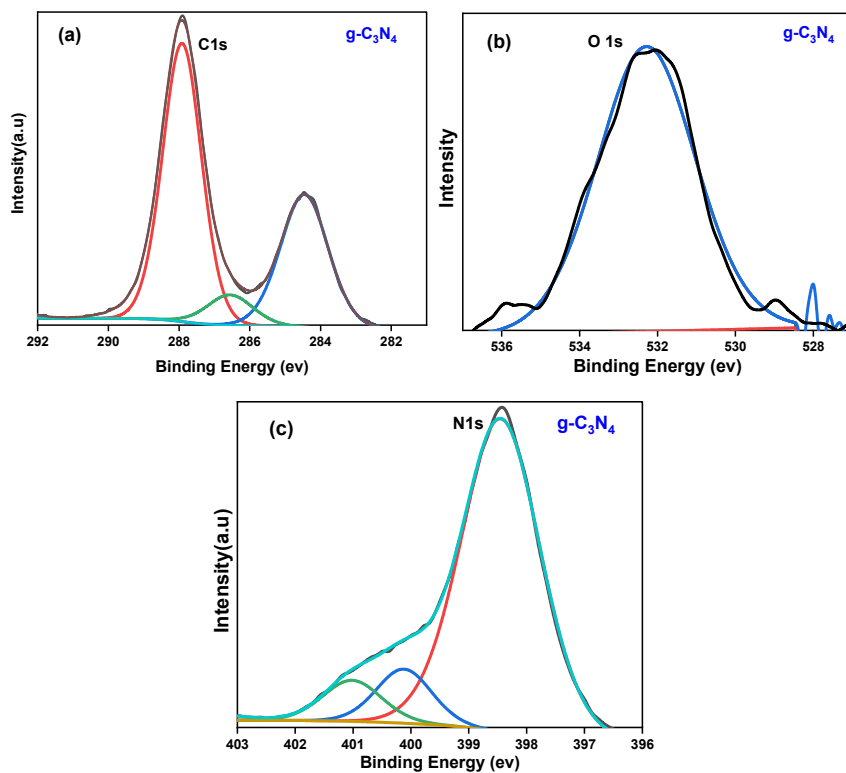


Figure S3: Deconvoluted XPS spectra for $g-C_3N_4$ (a) $C1s$ (b) $O1s$ and (c) $N1s$

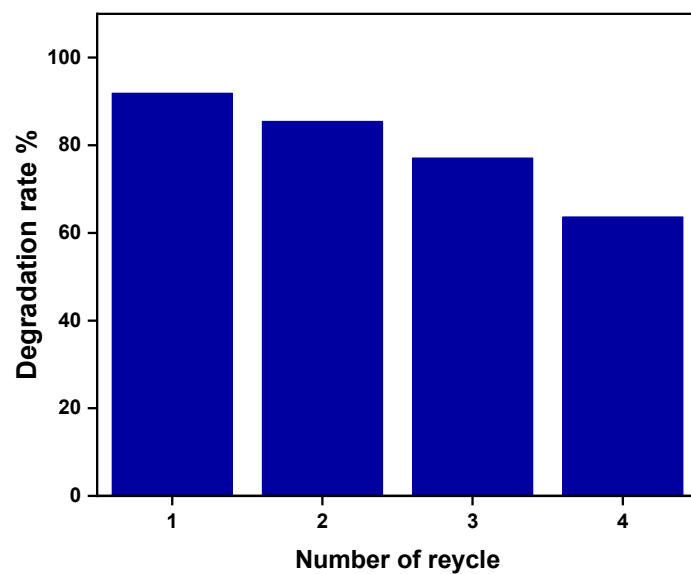


Figure S4: Recycling of MgSiNS-GN20 for photodegradation of MB

Table S1: Comparison of photocatalytic MB degradation performances of different catalysts

Photocatalyst	MB concentration (mg/L)	MB volume (mL)	Removal efficiency (%)	Catalyst mass (g)	Time (min)	Reference
HFC/SiO ₂ /C ₃ N ₄	10	20	94.6	0.05	60	[47]
AgCl/Ag ₃ PO ₄ /g-C ₃ N ₄	20	100	100	0.05	20	[48]
LaO ₃ /g-C ₃ N ₄	10	50	100	0.01	120	[49]
CeO ₂ /GCN	15	100	97	0.1	60	[50]
Fe ₃ O ₄ /ZnO	10	50	88.5	0.2	120	[51]
W-TiO ₂ -SiO ₂	40	500	99.9	0.3	120	[52]
g-C ₃ N ₄ /ZnO	10	50	73	0.05	90	[53]
Ni/g-C ₃ N ₄	30	10	94	0.01	60	[54]
FZSS@CN	20	100	95	0.02	60	[55]
WO ₃ /SiO ₂	5	10	91	0.01	120	[56]
MgSiNS-GN20	10	100	93	0.1	200	Our work