Electronic Supplementary Information

Graphene quantum dots implanted supramolecular carbon nitrides with robust

photocatalytic activity against recalcitrant contaminants

Table S1 BET surface area (S_{BET}) and pore volume (V_P) of BCN, SCN and AGSCN.

Sample	S_{BET} (m² g⁻¹)	V_p (cm³ g⁻¹)
BCN	11	0.07
SCN	39	0.21
AGSCN$_{0.1}$	60	0.36
AGSCN$_{0.2}$	75	0.42
AGSCN$_{0.3}$	93	0.49
AGSCN$_{0.5}$	87	0.50

Table S2 Carbon and nitrogen bonding compositions of SCN and AGSCN based on XPS analysis[a].

Samples	C 1s (%)			N 1s (%)		
	N−C=N	C−NH$_x$	C−C	C−N=C	N−(C)$_3$	−NH$_x$
SCN	59.6	2.5	37.9	78.4	12.9	8.7
AGSCN$_{0.3}$	59.1	3.1	37.8	76.9	13.8	9.3
AGSCN$_{0.5}$	55.7	6.7	37.6	74.0	15.9	10.1

[a] The values in table are obtained by calculating the percentage of the peak area of the selected chemical bond to the total peak area of the corresponding element from XPS results.

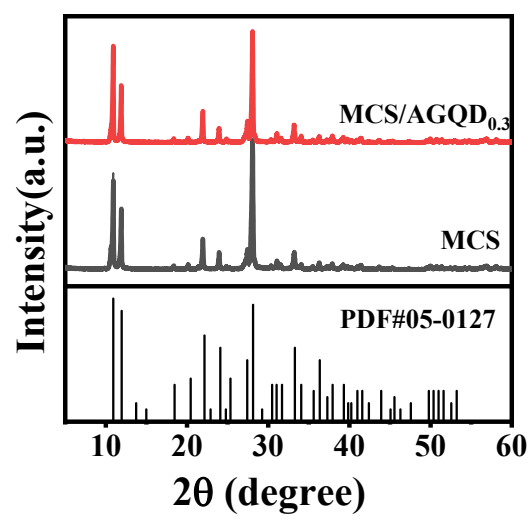**Fig. S1** XRD patterns of MCS and MCS/AGQD$_{0.3}$.

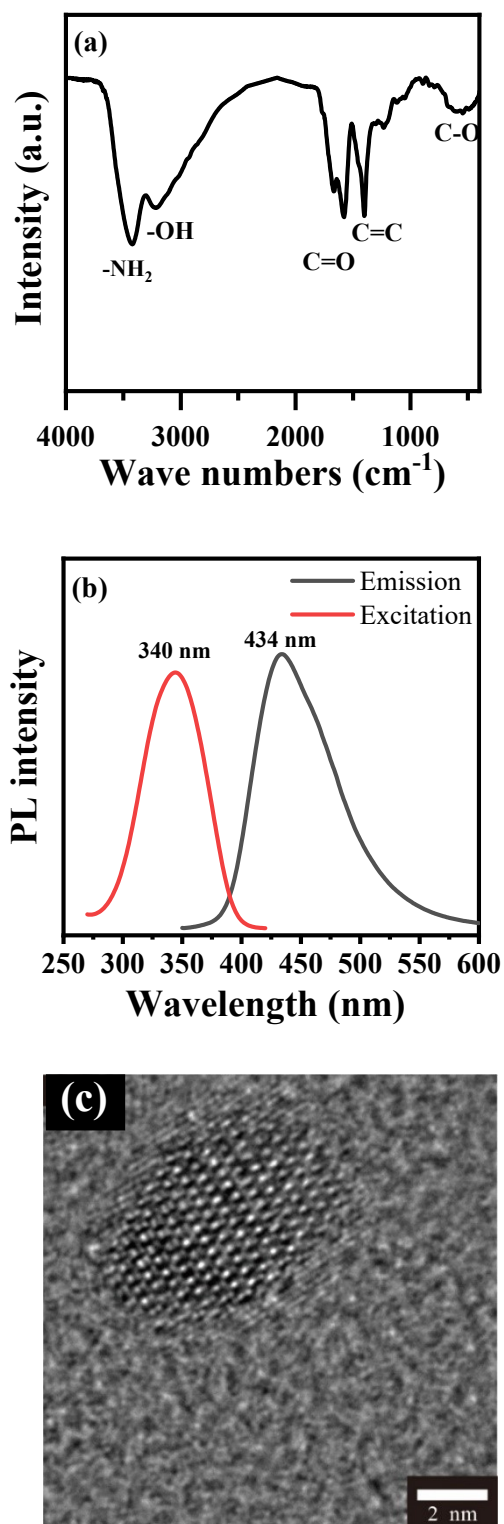**Fig. S2** FT-IR spectra (a), PL (b) and HRTEM (c) of AGQDs.
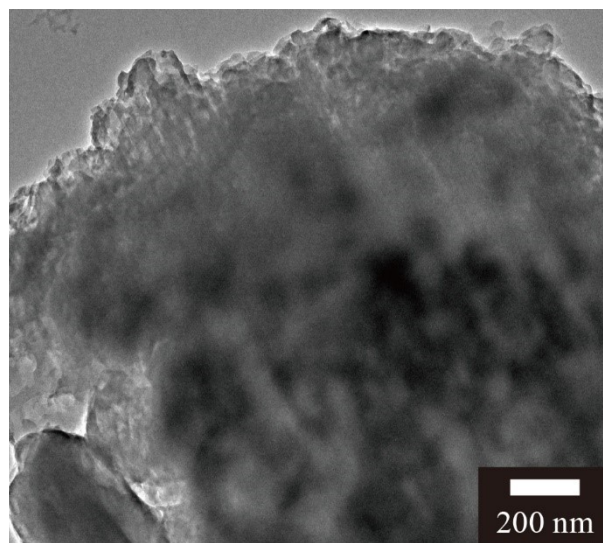
Fig. S3 TEM image of BCN.

Fig. S4 Nitrogen gas adsorption/desorption isotherms (a) and BJH pore size distribution curves (b) of BCN, SCN and AGSCN.
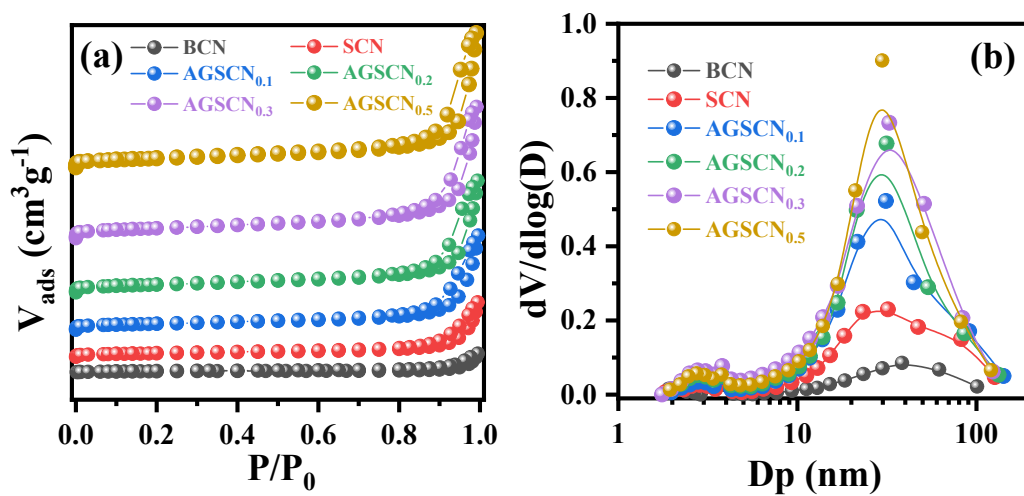
Fig. S5 LC-MS analysis results of visible-light photocatalytic degradation of ATN over the AGSCN$_{0.3}$ for 0 min (a), 10 min (b), 60 min (c) and 240 min (d).
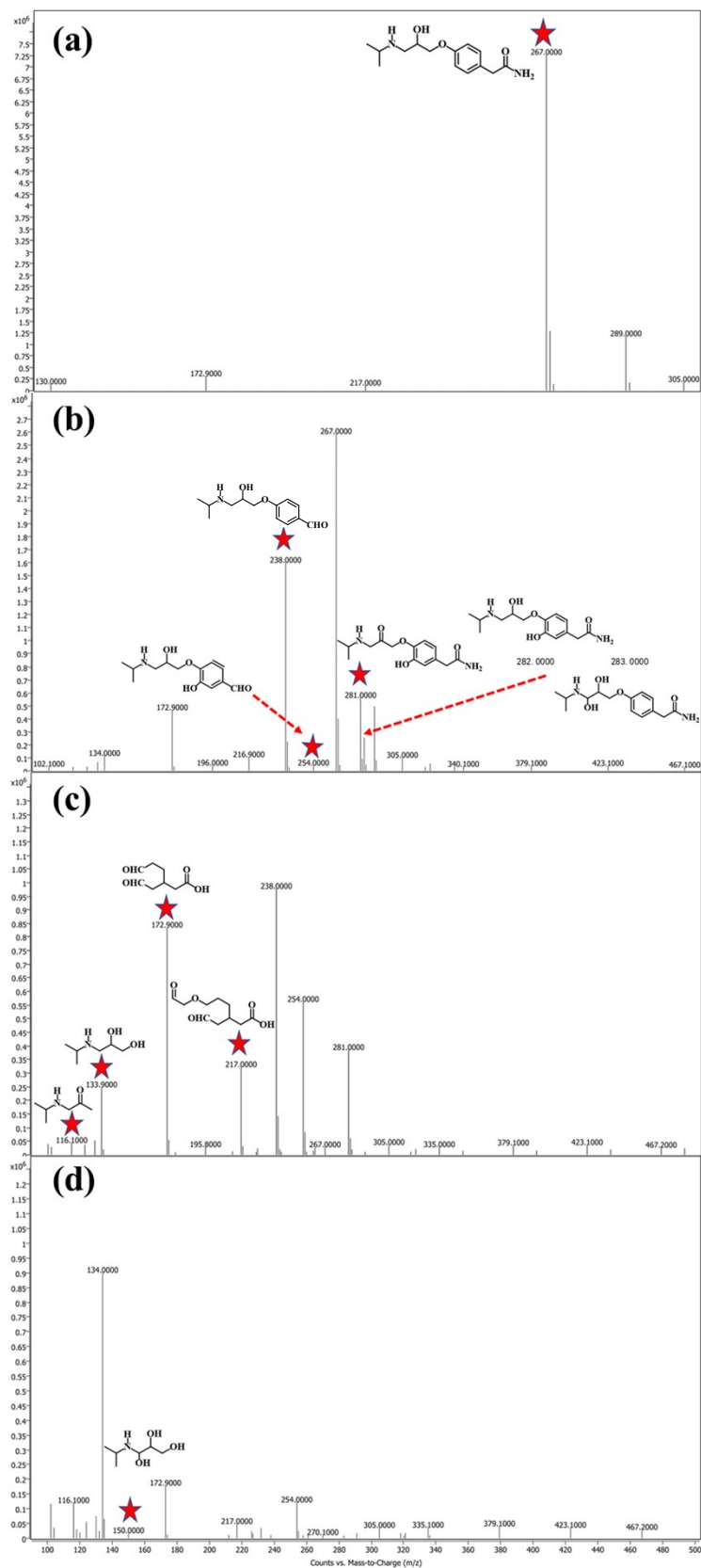
Fig. S6 Ion chromatographic effluent curve for ATN photocatalytic degradation products over visible-light irradiating AGSCN$_{0.3}$.