Electronic Supplementary Information

Mineralization of anionic dyes over visible light responsive Cd(x)Zn(y)S-Nb_2O_5 heterostructured photocatalysts

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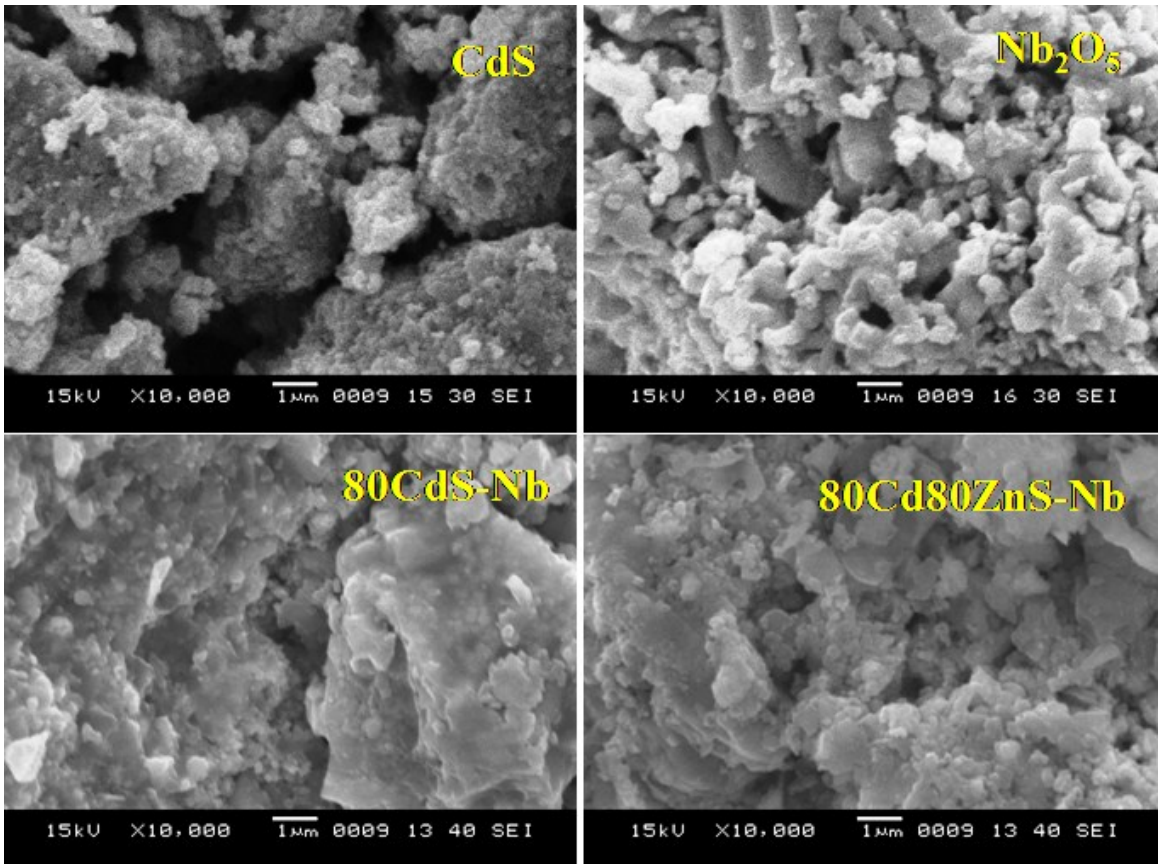


Fig. S1. SEM images of CdS, Nb_2O_5, 80CdS-Nb and 80Cd80ZnS-Nb.

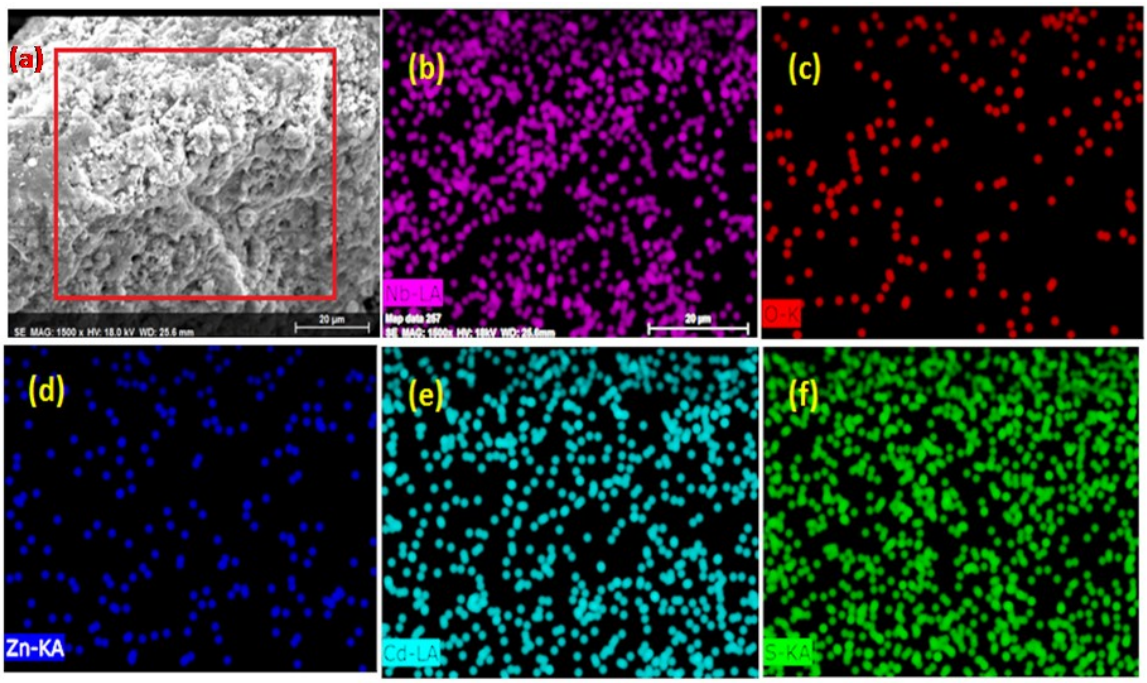


Fig: S2. (a) SEM image and EDS mapping of (b) Nb, (c) O, (d) Zn, (e) Cd and (f) S in 80Cd80ZnS-Nb composite.

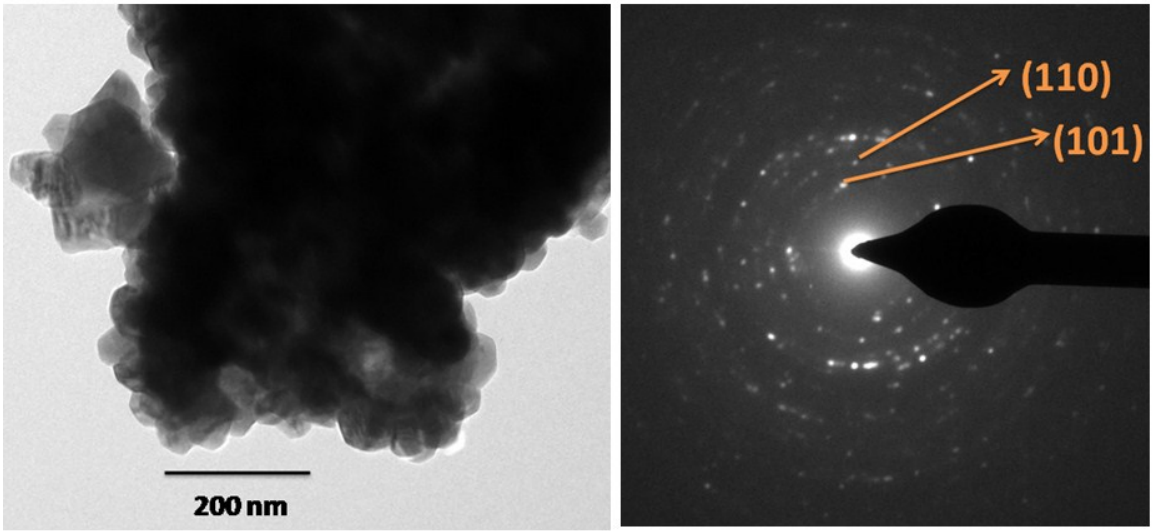


Fig. S3. TEM image and SAED pattern of CdS.

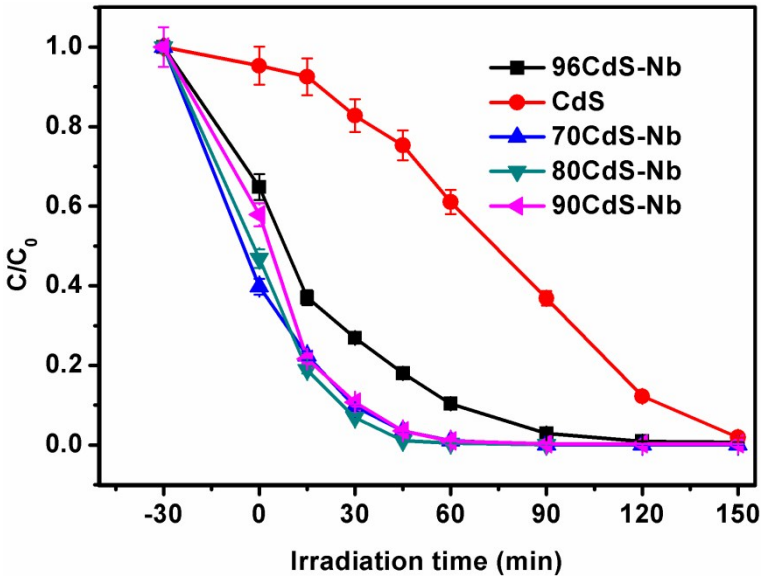


Fig.S4 Effect of CdS loading on Nb_2O_5 (weight %) for photocatalytic degradation of AV 7 (Conc. 50 ppm).

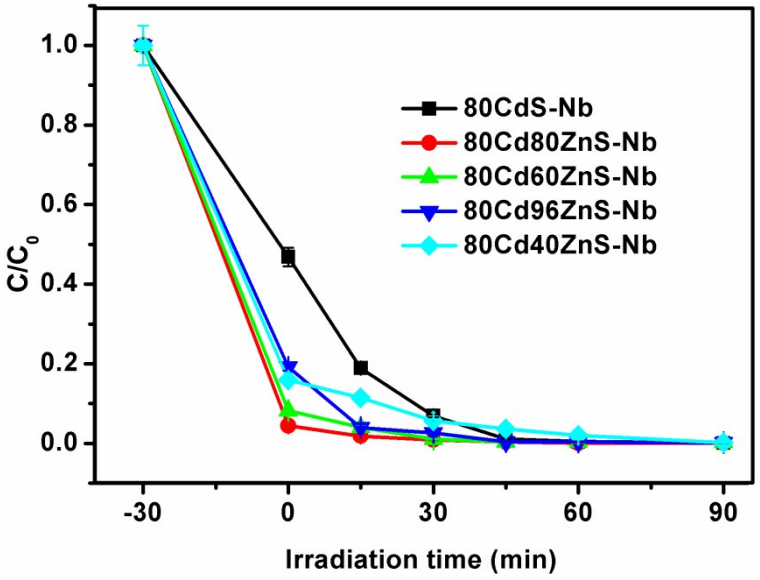


Fig. S5 Effect of Zn doping (weight %) in 80CdS-Nb for photocatalytic degradation of AV 7 (Conc. 50 ppm).

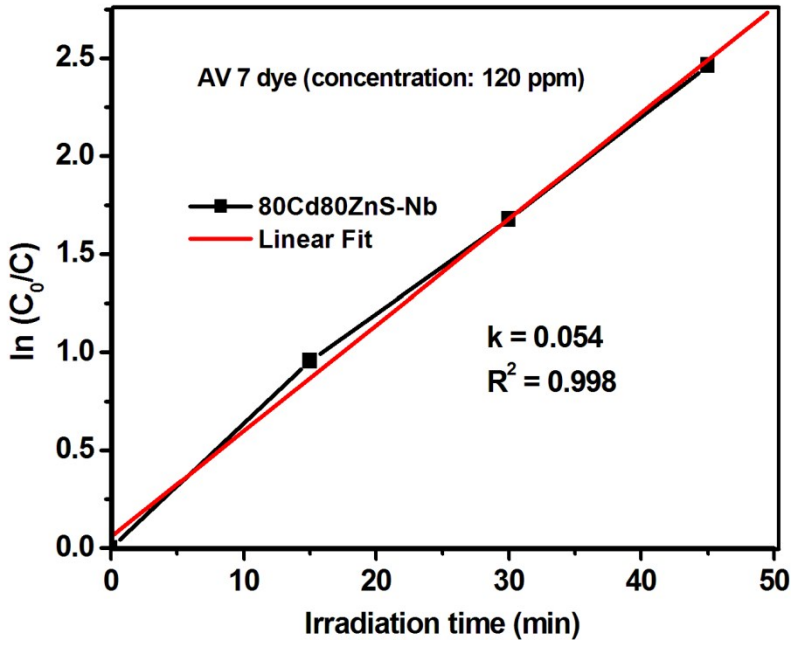
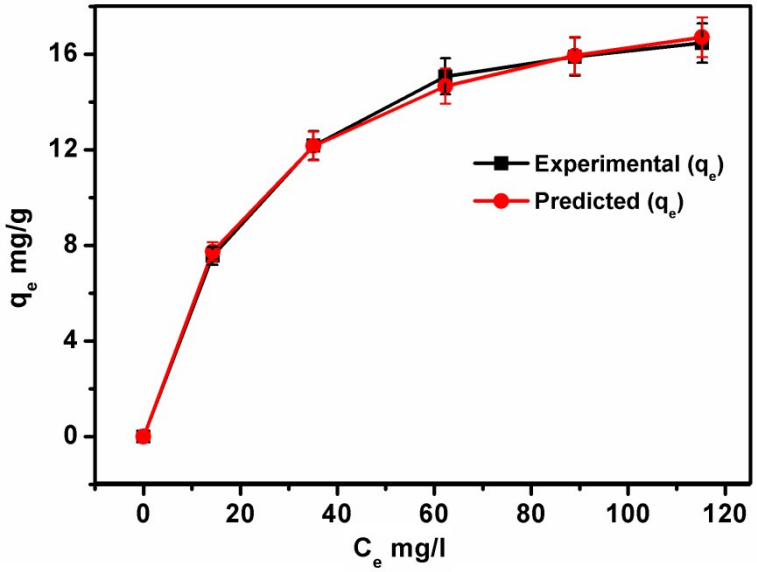
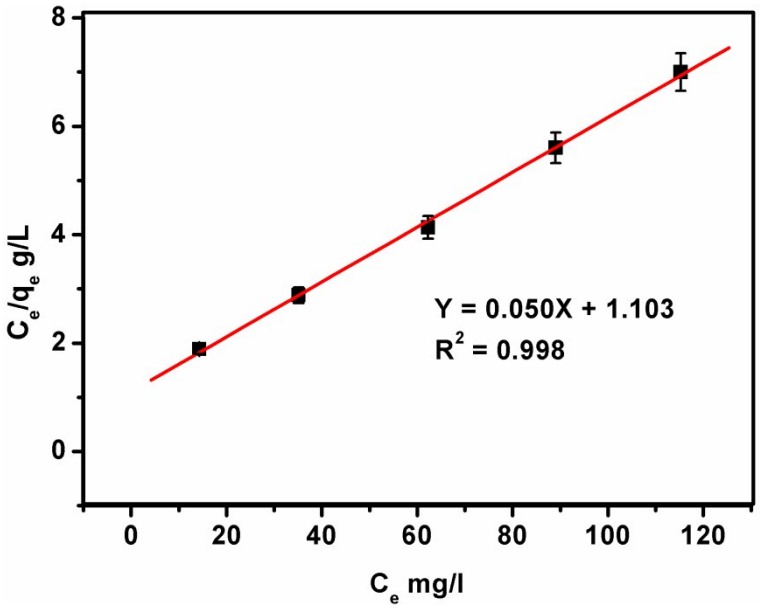


Fig.S6 Plot of $\ln(C_0/C)$ as a function of irradiation time (min) for photocatalysis of AV 7 (120 ppm) solution containing 80Cd80ZnS-Nb.



(A)



(B)

Fig.S7. Adsorption isotherm (A) and the corresponding Langmuir plots (B) of AV 7 on 80Cd80ZnS-Nb samples.

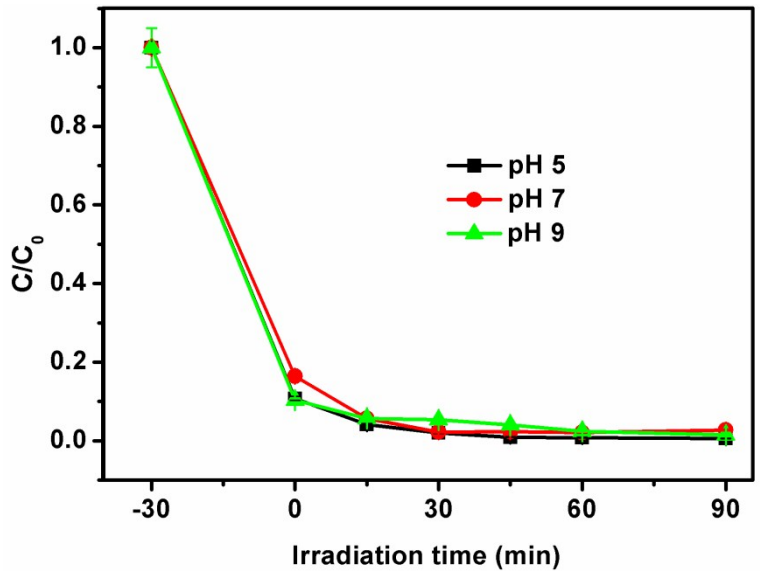


Fig.S8 Effect of pH on the photocatalytic degradation of AV 7 (120 ppm) by 80Cd80ZnS-Nb.

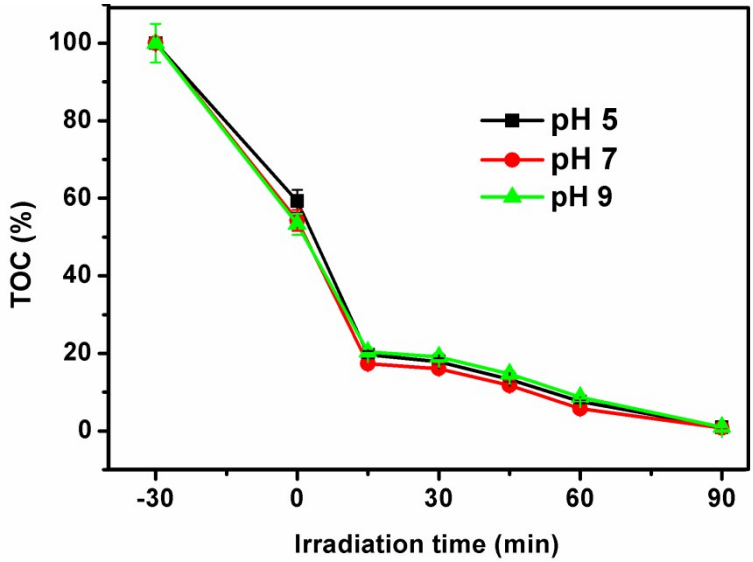


Fig.S9 Total organic carbon (TOC %) at different pH during photocatalytic degradation reaction of AV 7 by 80Cd80ZnS-Nb.

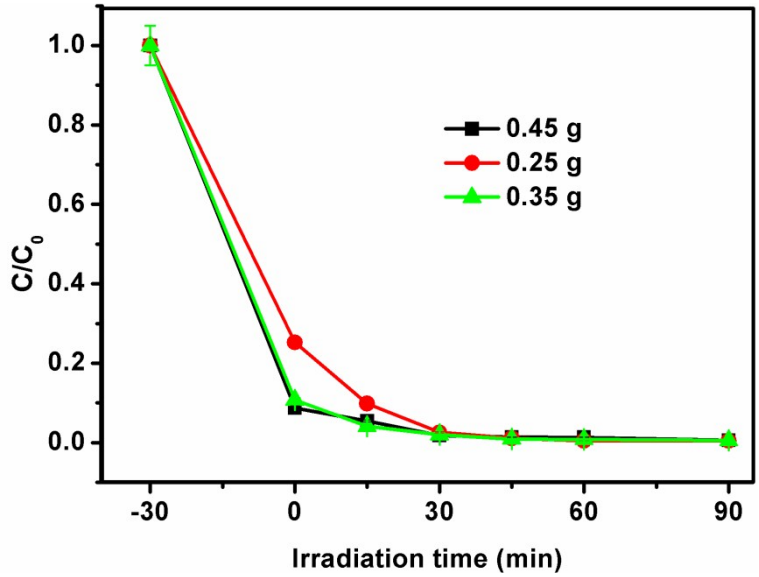


Fig.S10 Effect of catalysts loading on the photocatalytic degradation of AV 7 (120 ppm) by 80Cd80ZnS-Nb.

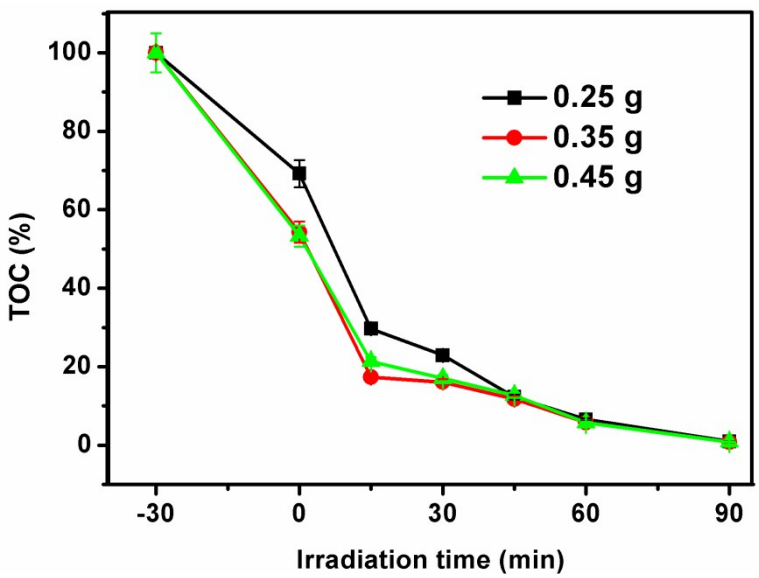


Fig.S11 Total organic carbon (TOC %) at different amount of loading during photocatalytic degradation reaction of AV 7 by 80Cd80ZnS-Nb.

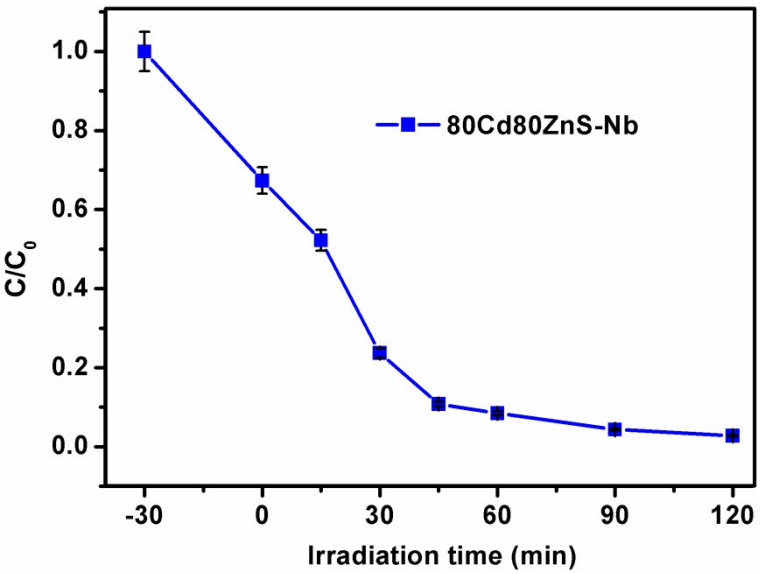


Fig.S12 Photocatalytic performances of 80Cd80ZnS-Nb for 200 ppm AV 7 dye.

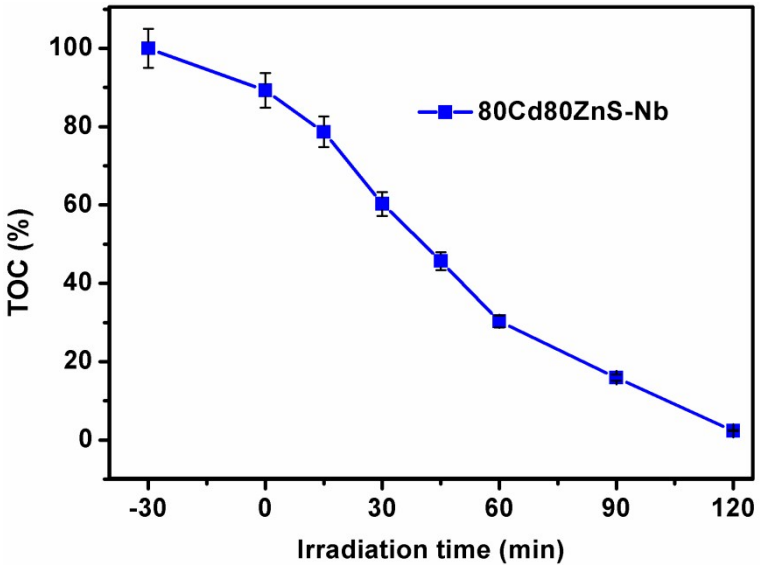


Fig.S13 Total organic carbon (TOC %) during photocatalytic degradation reaction of AV 7 (200 ppm) by 80Cd80ZnS-Nb.