Electronic Supplementary Information File

SnS_2 decorated biochar: a robust platform for the photocatalysis and electrochemical sensing of pollutants

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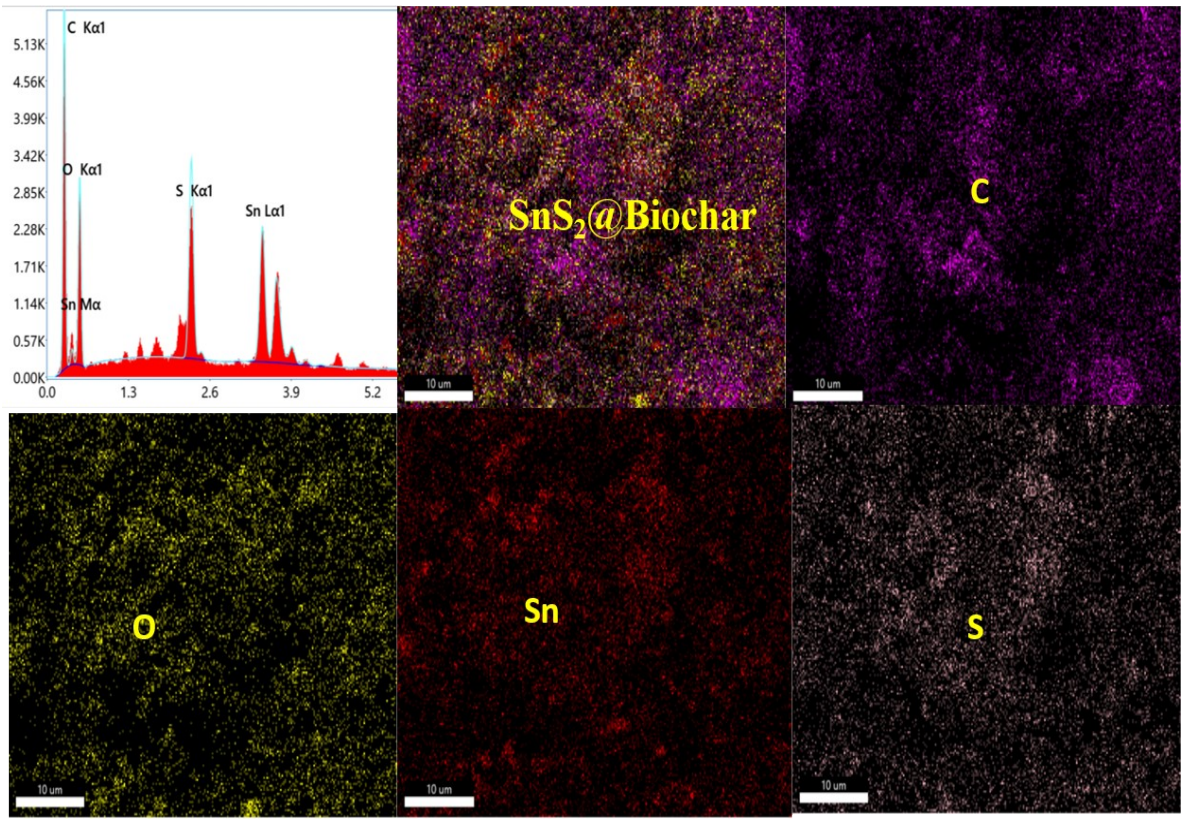

Fig.S1 EDX spectra and elemental mapping of SnS_2@BC

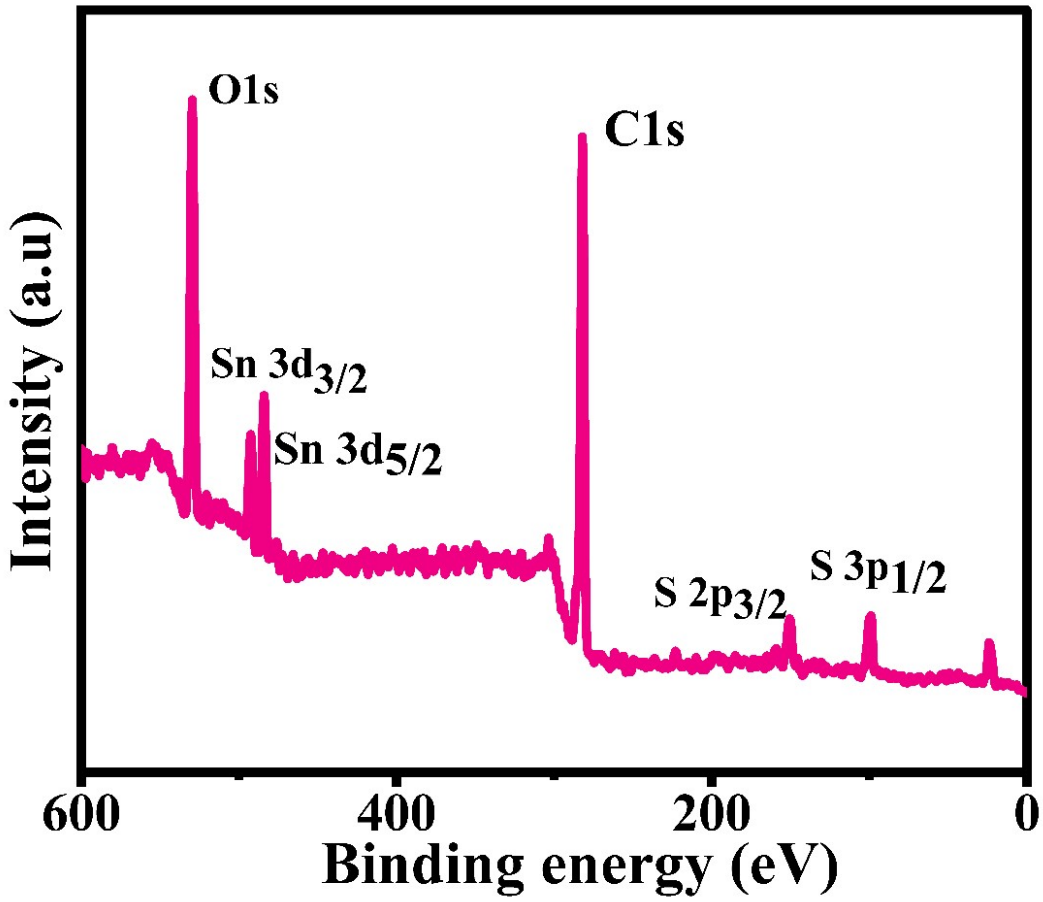

Fig.S2 XPS surface scan of SnS_2@BC

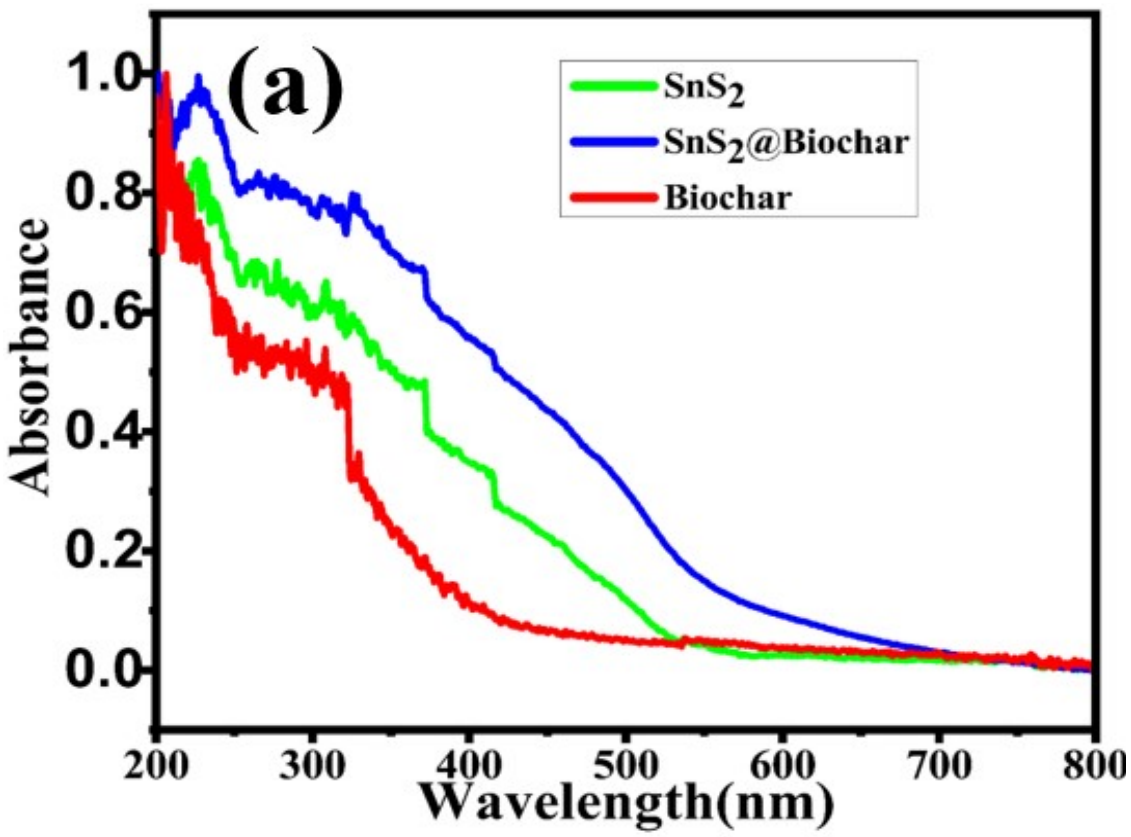

Fig.S3 Absorption trace of SnS_2,Biochar and SnS_2@BC

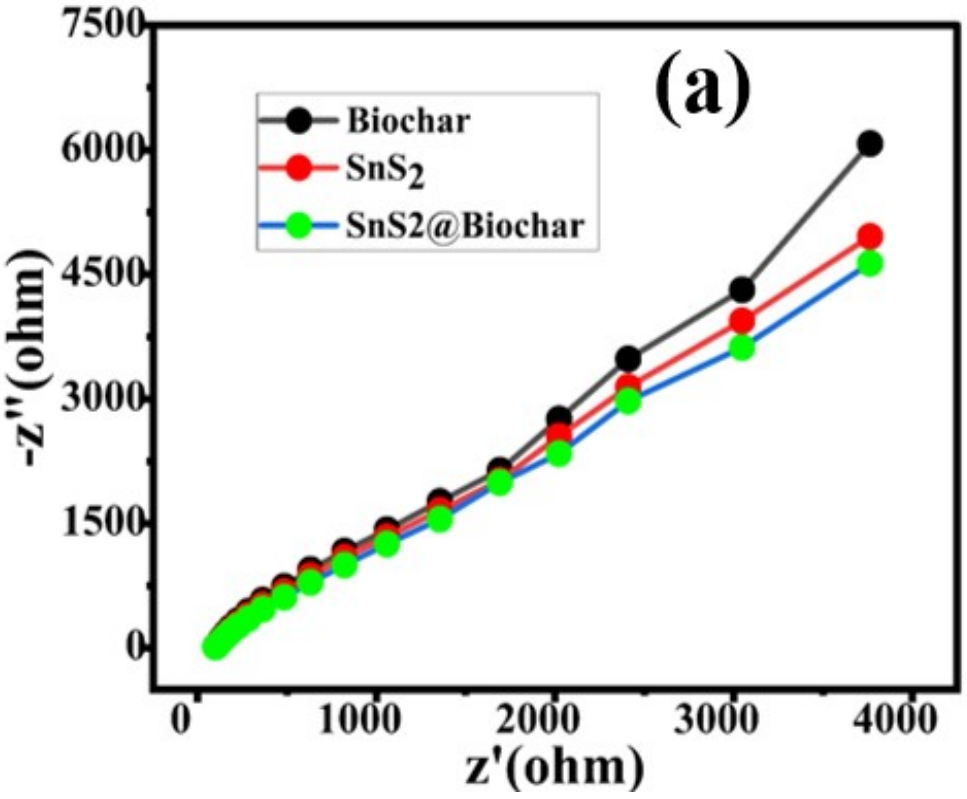

Fig.S4 Nyquist plot for biochar, SnS_2, SnS_2@BC

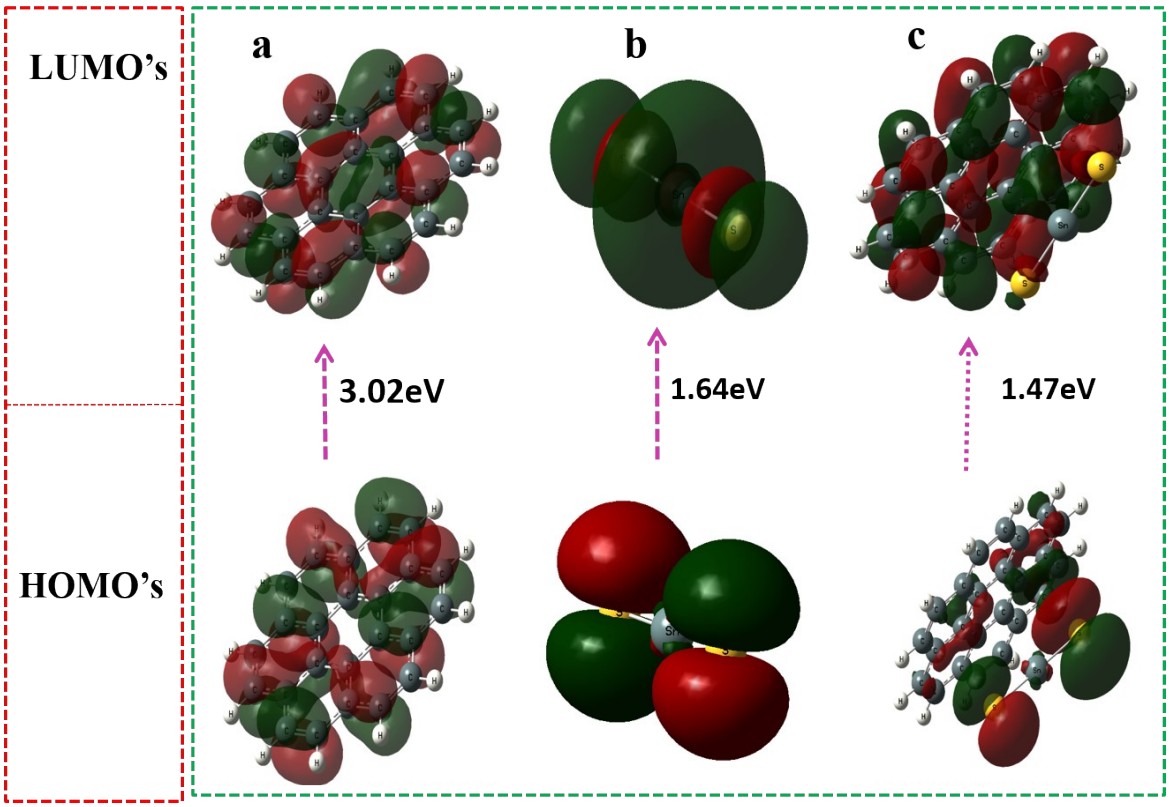

Fig.S5 HOMO-LUMO energy gap for biochar, SnS_2, SnS_2@BC

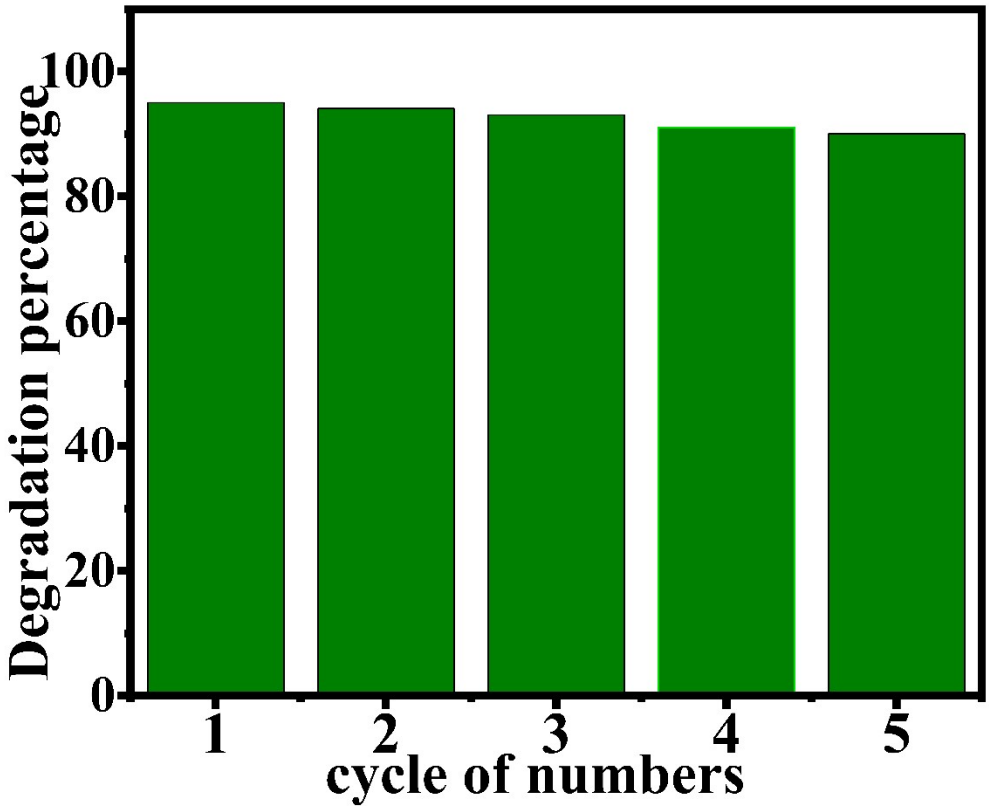

Fig.S6 Recycled photodegradation of MB over SnS_2@BC photocatalyst under the optimized conditions.

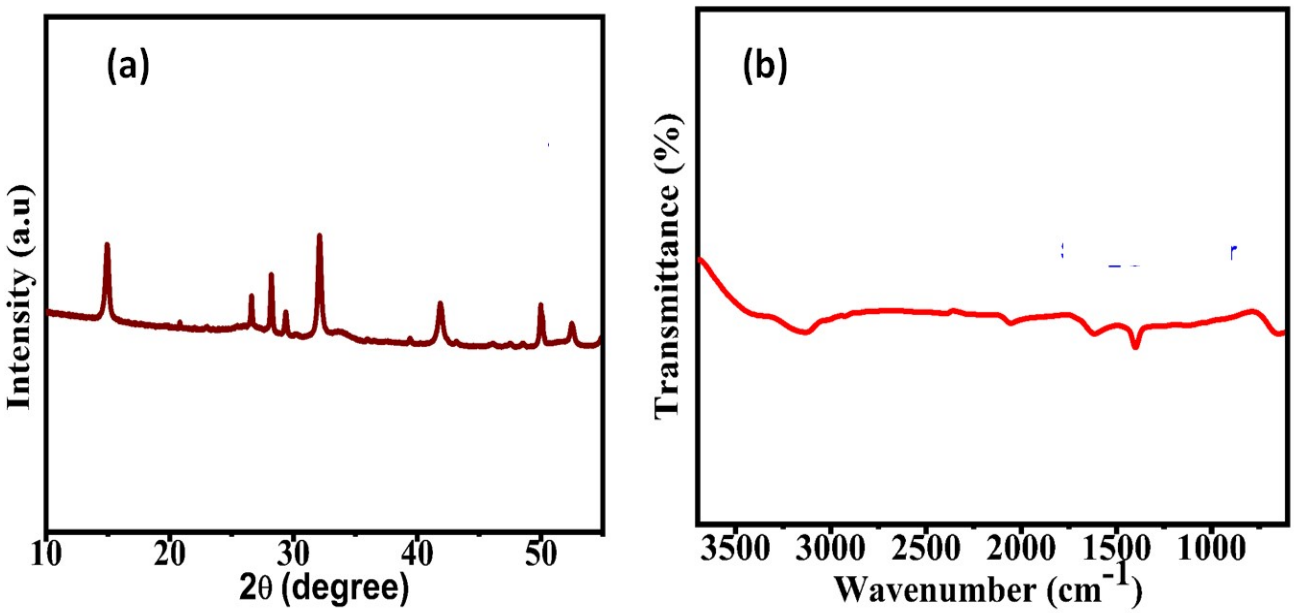

Fig. S7 (a)XRD spectra of SnS_2@BC(b) FTIR spectra of SnS_2@BC

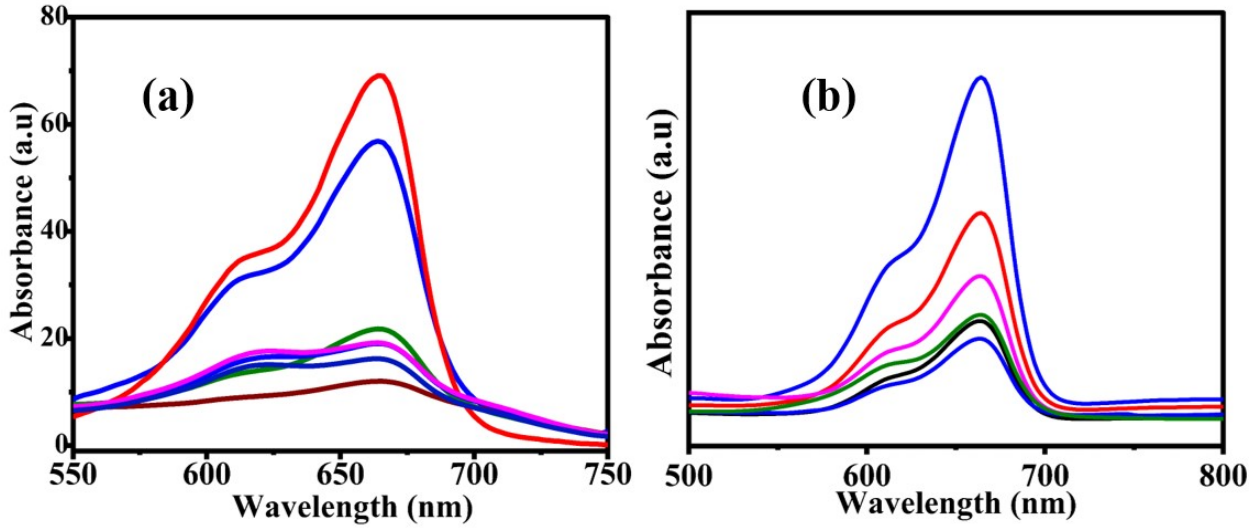

Fig.S8: (a) Degradation of MB in distilled water (b) degradation of MB in tap water

Table S1: Recovery factor in the detection of Pb^{2+} and Hg^{2+}

Dal water	**Pb^{2+} (Real)**	**Before Spiking (Unspiked)**	**After Spiking (Spiked)**	**Recovery factor(%)**
	0.14 mA	0.205 mA	0.337 mA	94.2
Dal water	Hg^{2+} (Real)	Before Spiking (Unspiked)	After Spiking (Spiked)	Recovery factor(%)
	0.015 mA	0.075 mA	0.089 mA	93.3