

Alanine based coordinating ligands mediated hydrothermal synthesis of CuS nano/microstructures and morphology dependent photocatalysis

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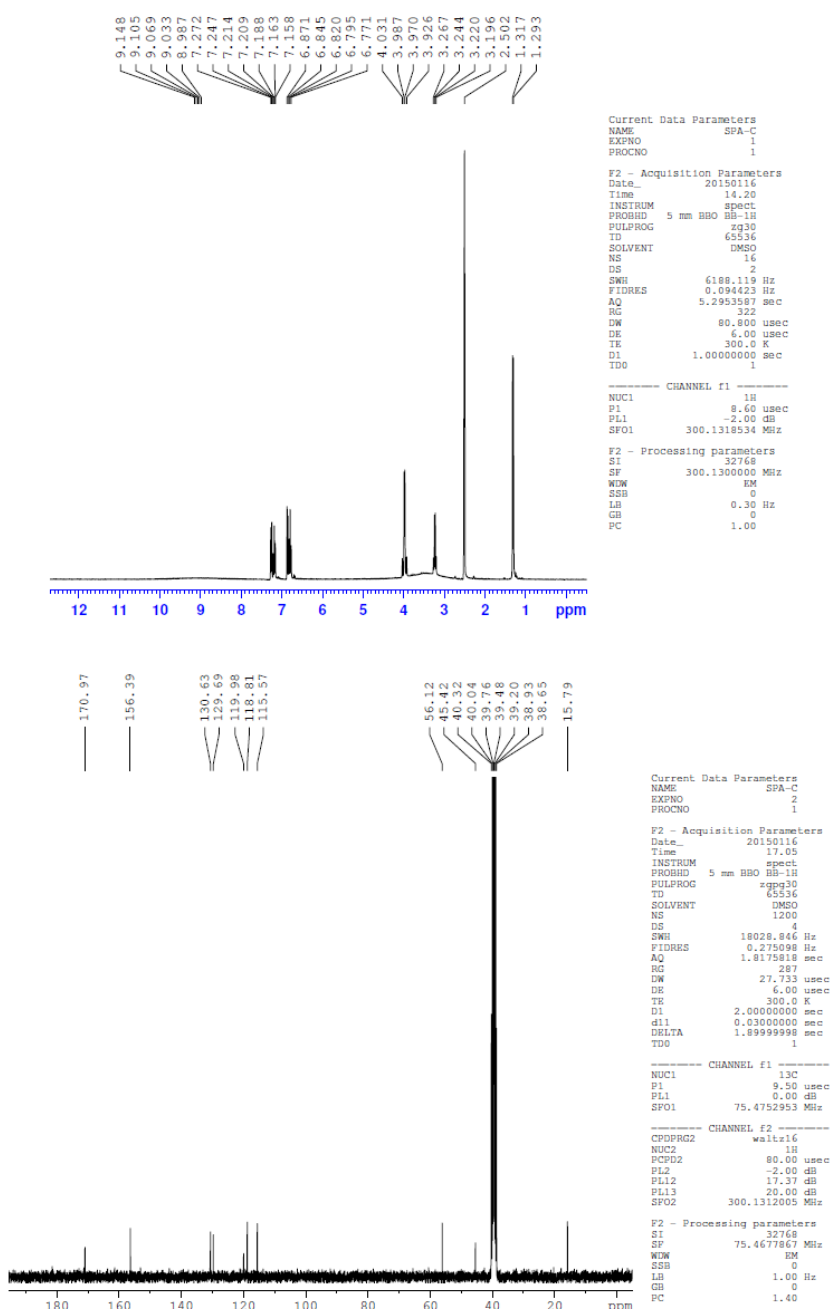


Figure S1. ¹H and ¹³C-NMR spectra of 2.

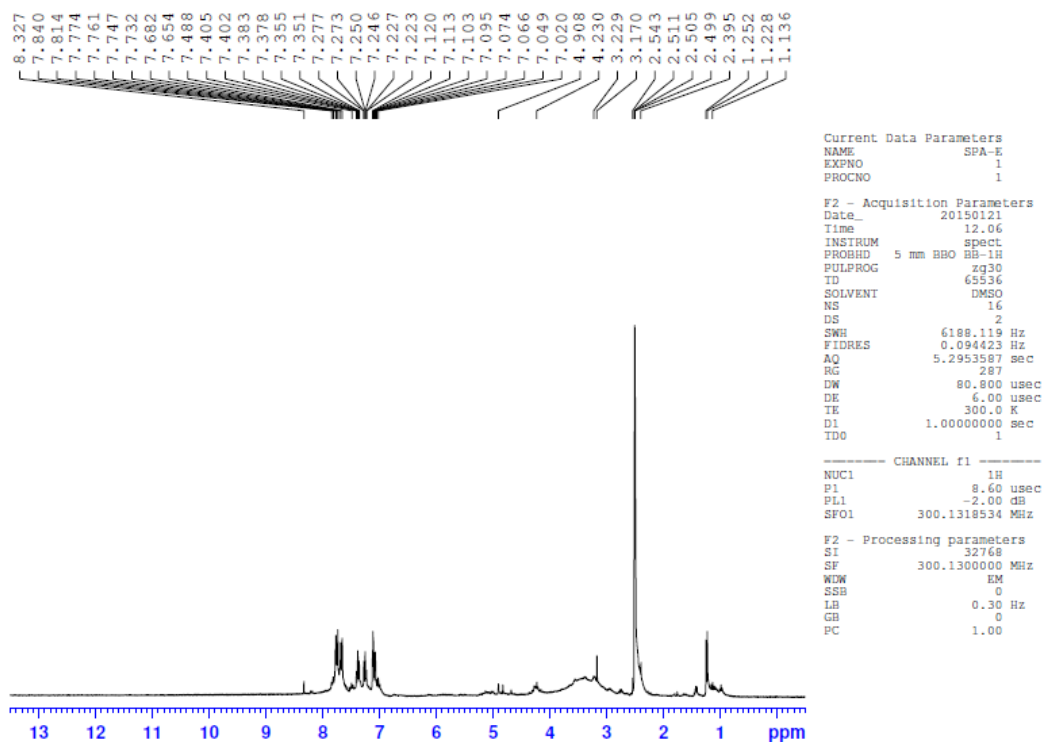
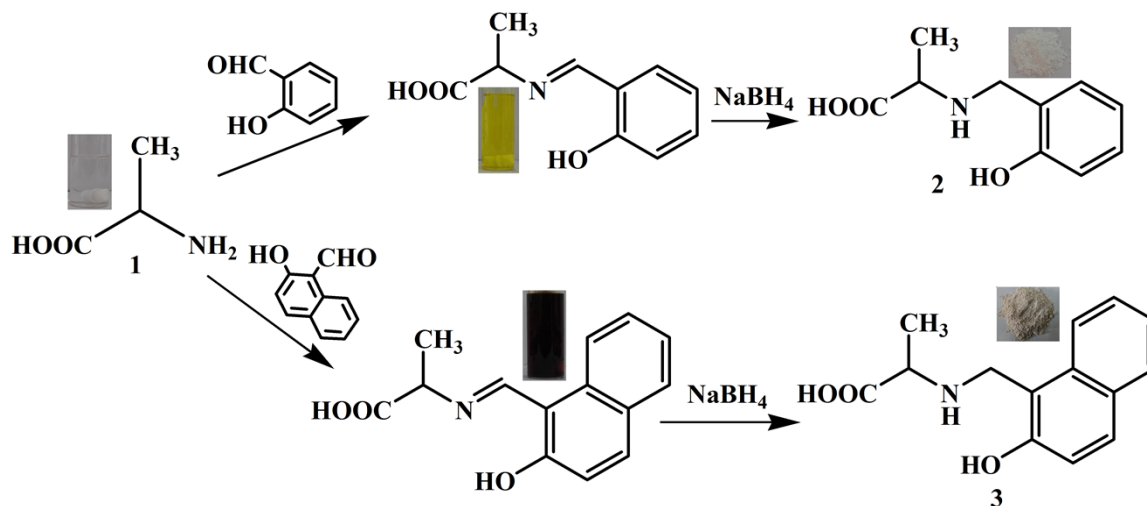
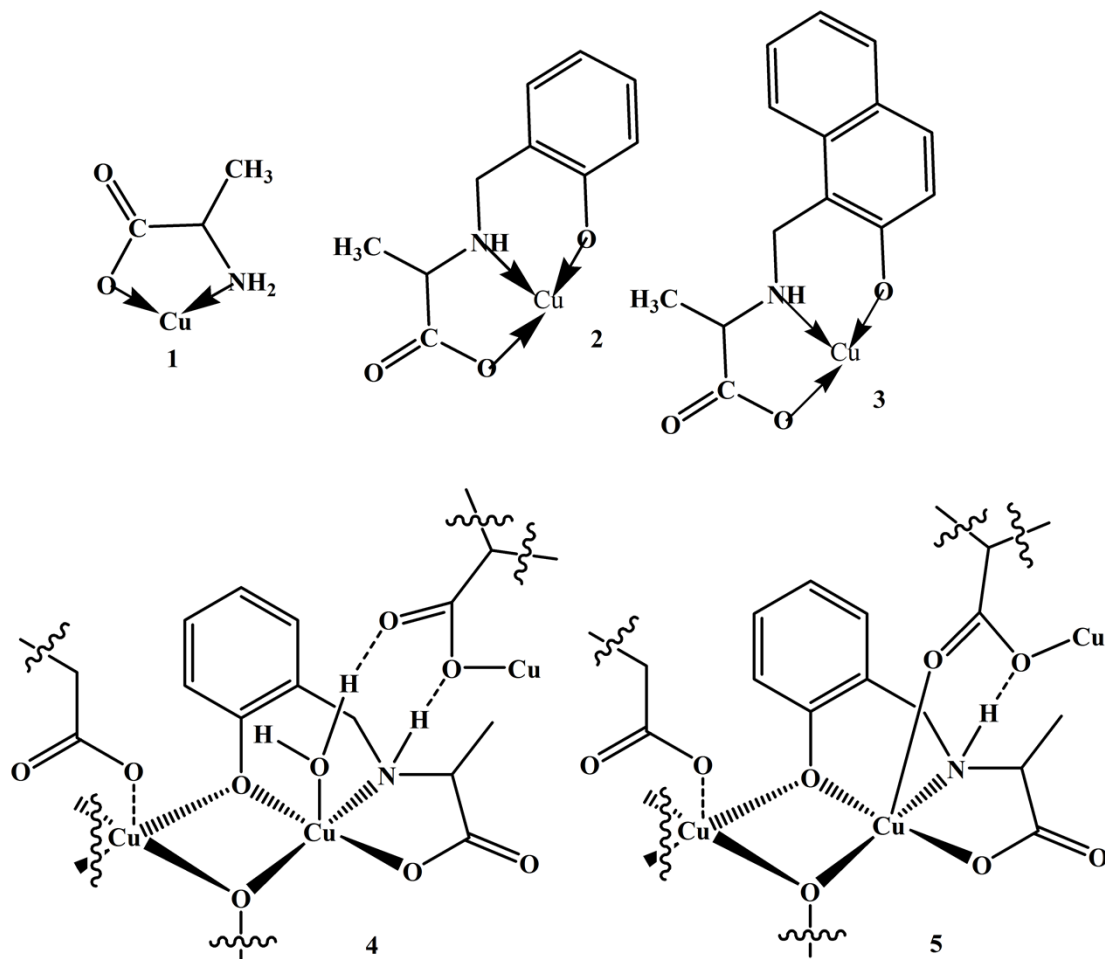


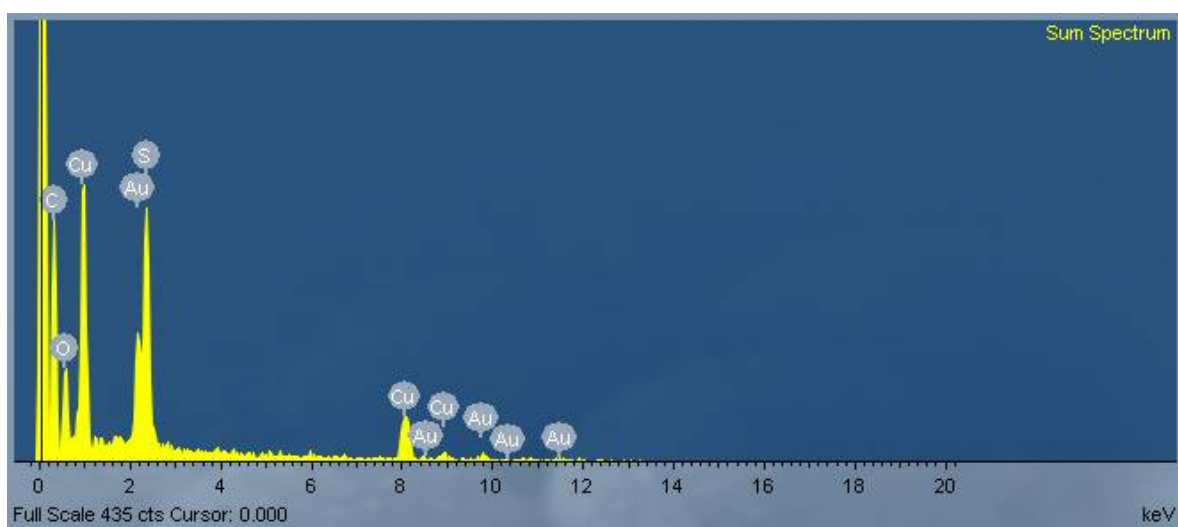
Figure S2. ^1H and ^{13}C -NMR spectra of 3.



Scheme S3. Synthesis of reduced Schiff base ligands (2 and 3) using alanine and different aldehyde. The solution colours in the course of reaction are given in the inset.



Scheme S4. Possible coordination mode of alanine and alanine based reduced Schiff base ligands (1-3) with Cu²⁺ metal ions. The coordination environment of Cu²⁺ in coordination polymer 4 and 5 (based on reference no. 23b single crystal structure analysis).



Scheme S5. EDS spectrum of 2-CuS with all peak compared with the data base.

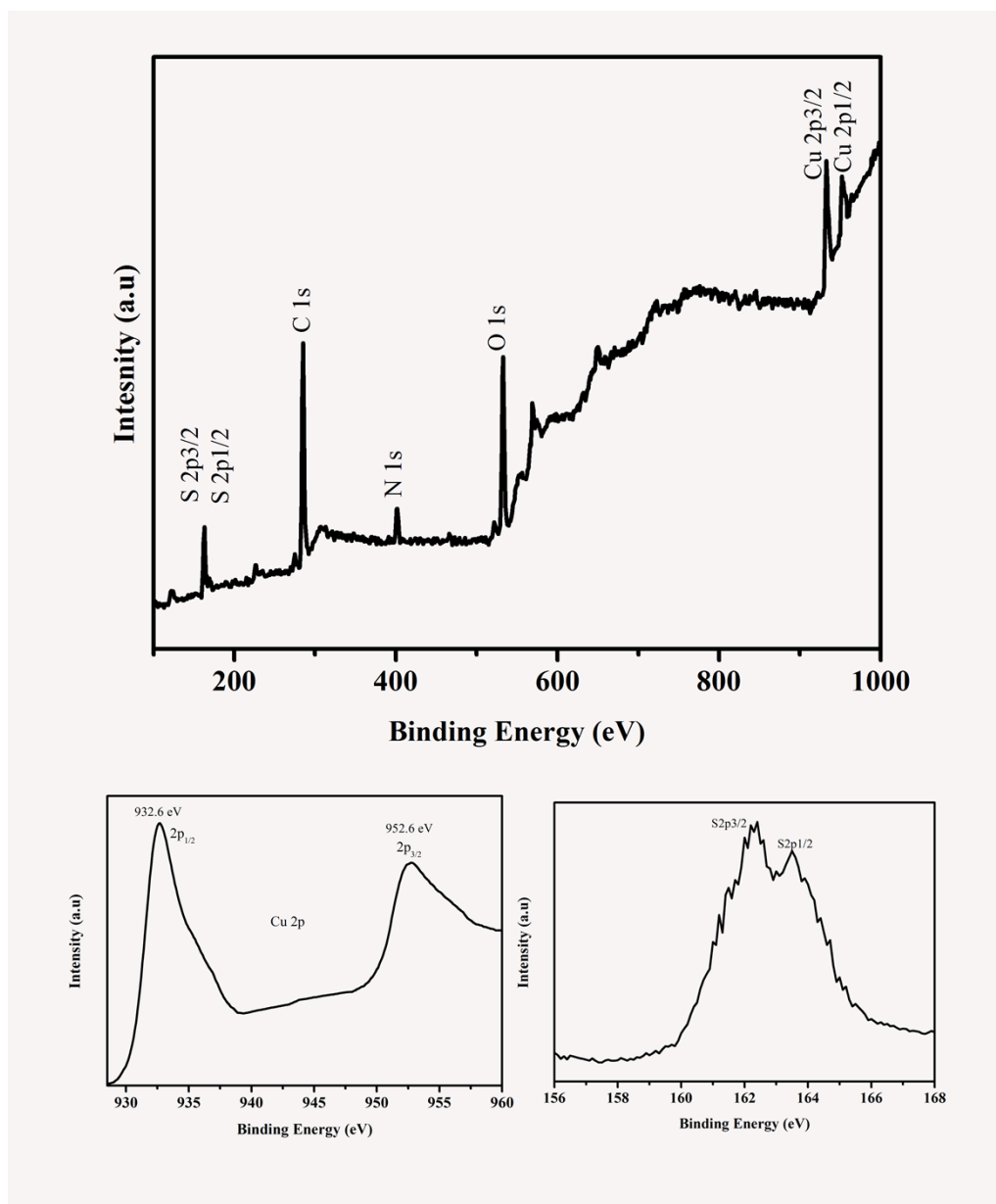


Figure S6. XPS spectra of the survey of 2-CuS, XPS spectra of close-up survey in the Cu2p and S2p region.

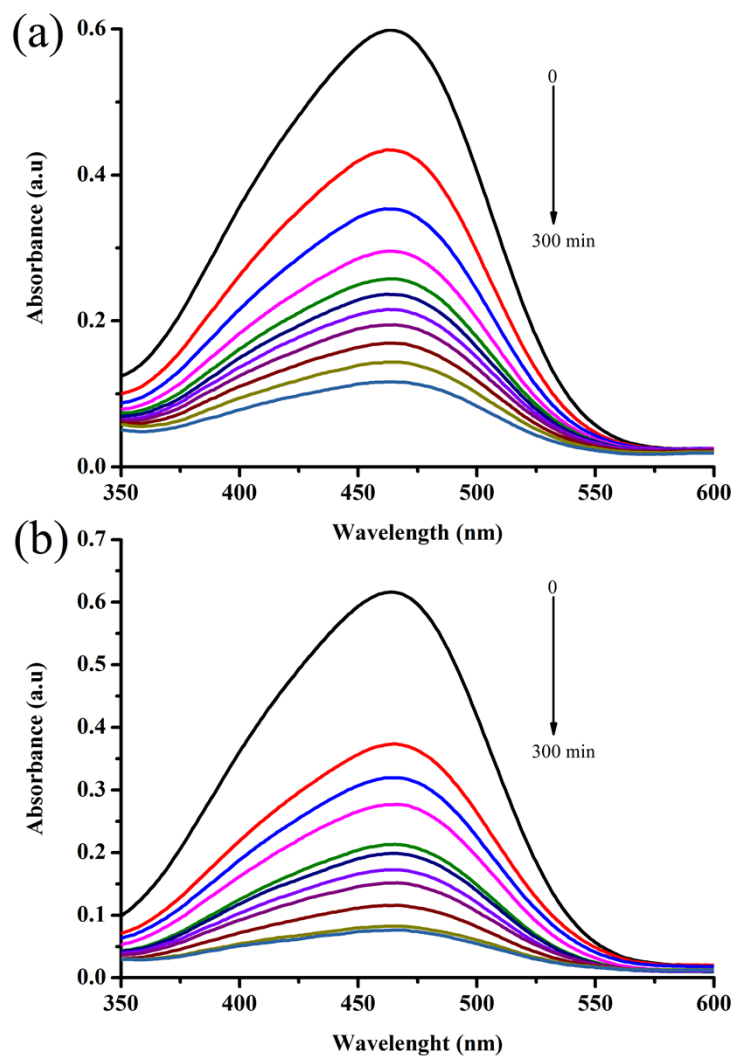


Figure S7. Photodegradation studies of MO with 2-CuS (a) without and (b) with H_2O_2 .

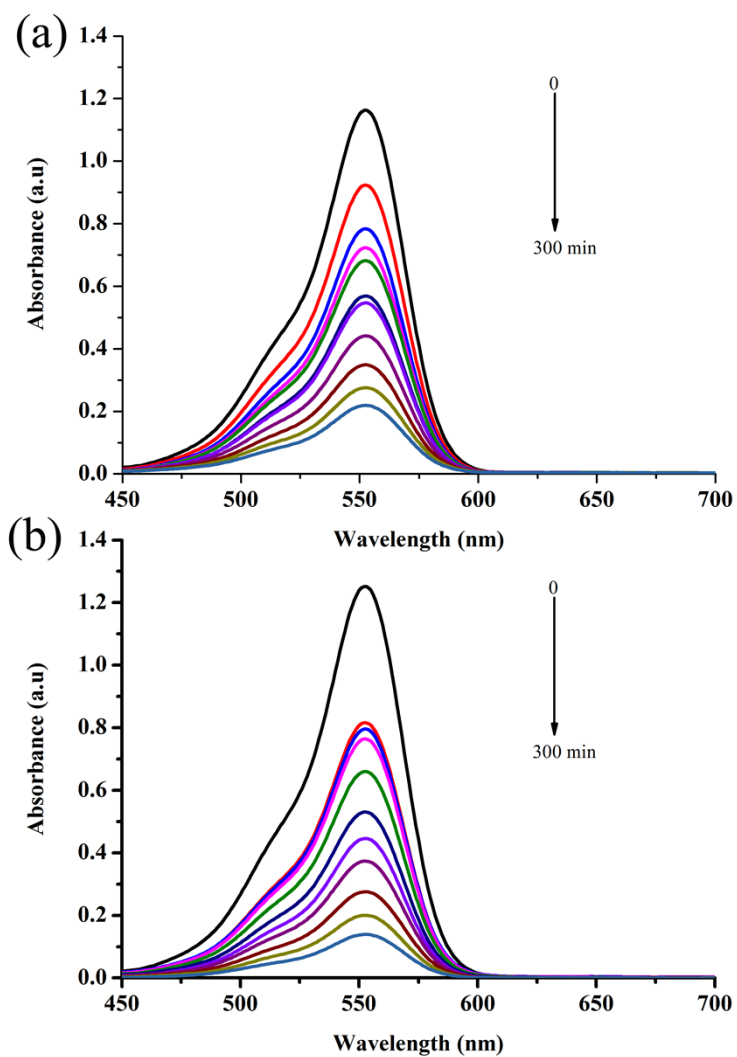


Figure S8. Photodegradation studies of RB with 2-CuS (a) without and (b) with H₂O₂.

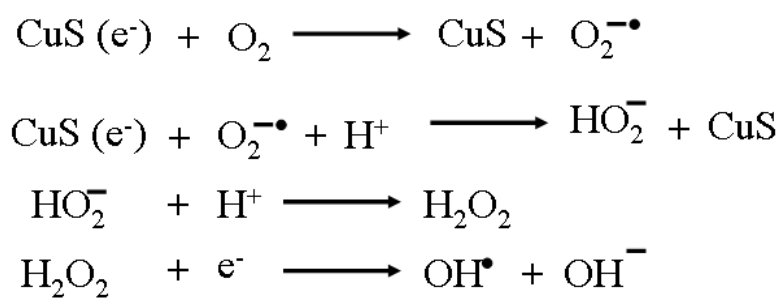


Figure S9. Mechanism of hydroxyl radical formation using CuS without H₂O₂.