

## Supplementary Information

### Design novel morphologies of L-cysteine surface capped 2D covellite (CuS) nanoplates and study the effect of CuS morphologies on dye degradation rate under visible light

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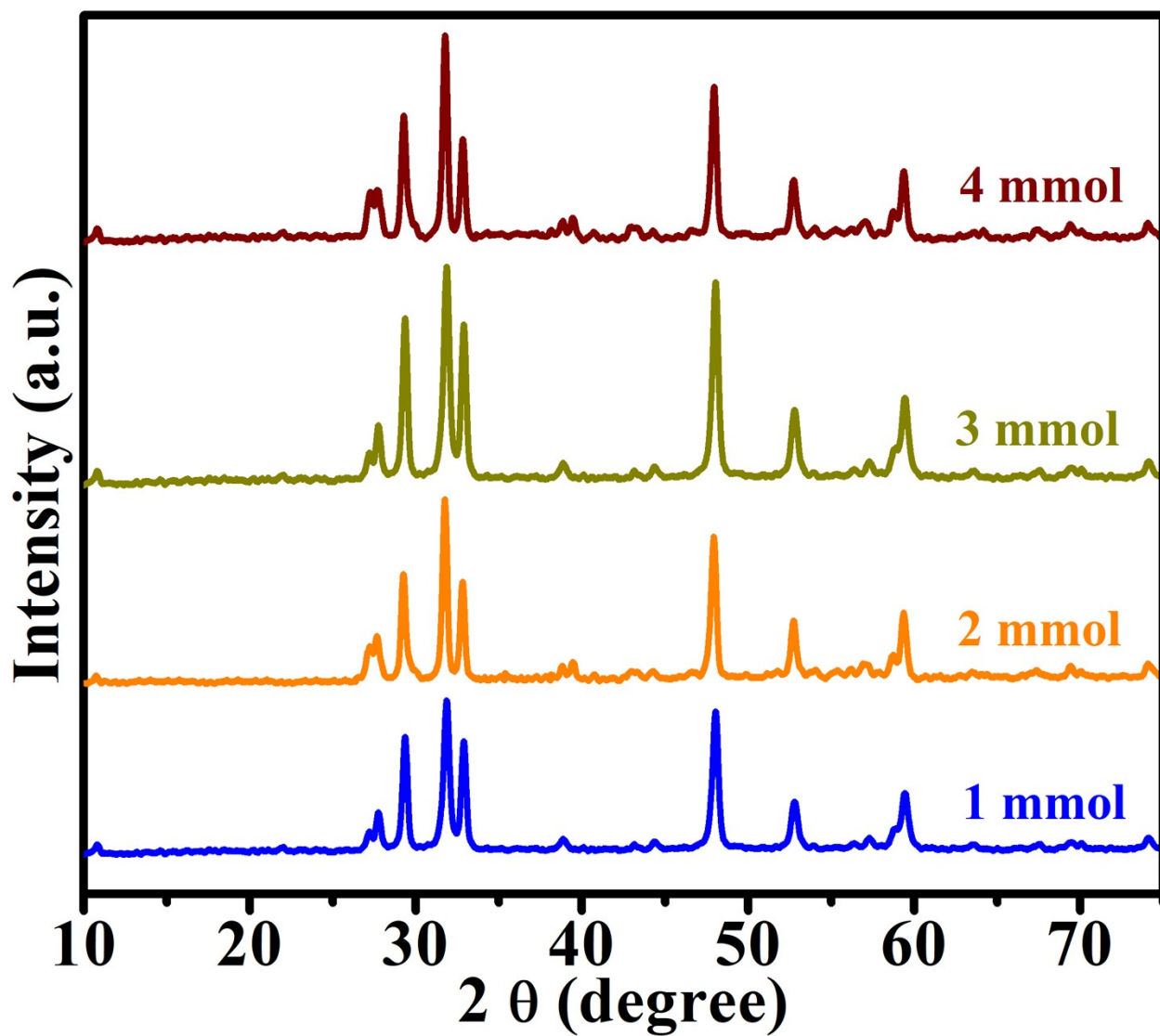
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**Fig. S1.** XRD pattern of CuS NPs at 180 °C at different concentrations of thiourea (a) 1 mmol (b) 2 mmol, (c) 3 mmol and (d) 4 mmol.

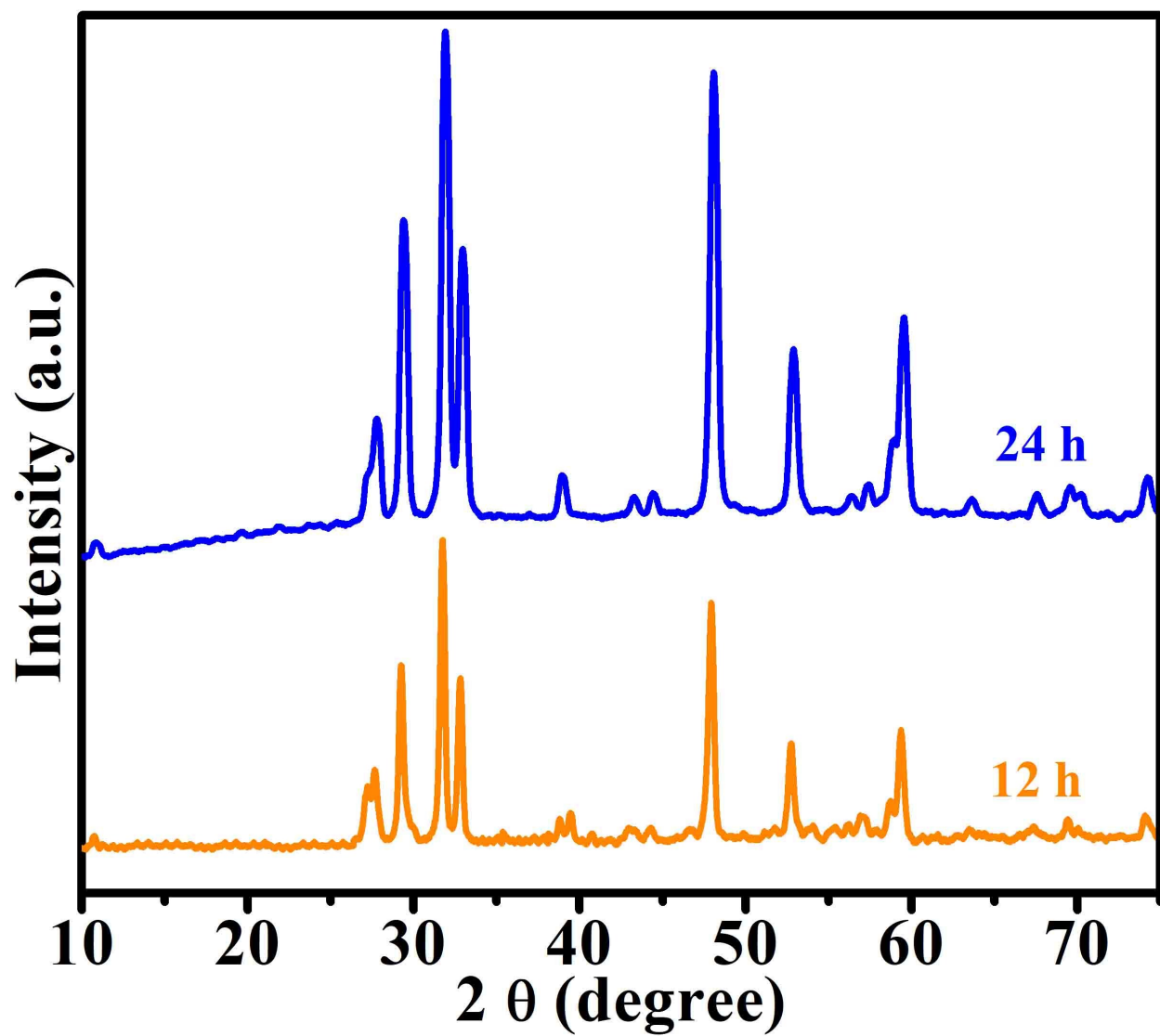


Fig. S2. XRD pattern of CuS NPs at 180 °C at molar concentrations of  $\text{CuCl}_2$  (5 mmol), thiourea (6 mmol), NaOH (8 mmol) with different reaction times (a) 12 h and (b) 24 h.