

Improvement of performance of Au-Cu/AC catalyst using thiol for acetylene hydrochlorination reaction

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Results

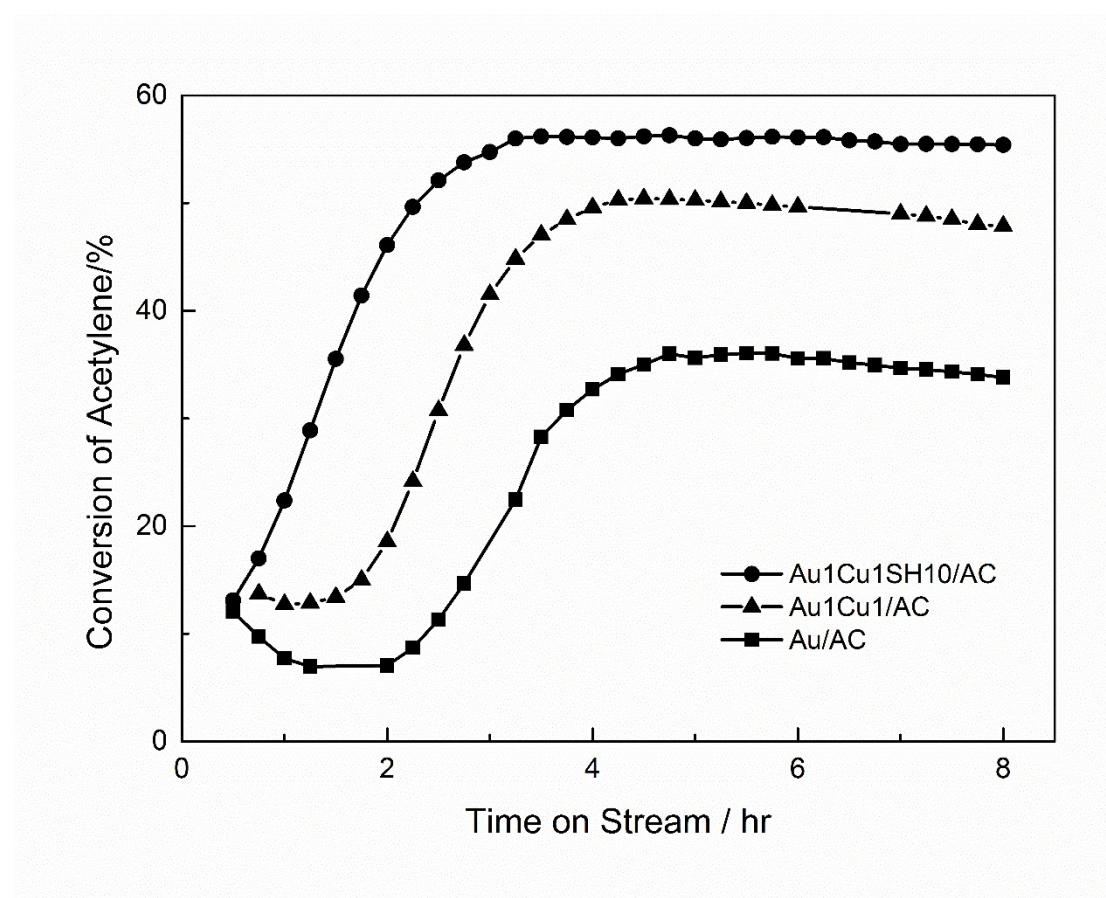


Fig. S1 Catalytic activity of Au/AC, Au1Cu1/AC and Au1Cu1SH10/AC catalysts.

Reaction conditions: Temp=180 °C; GHSV(C₂H₂)=1200 h⁻¹; V_{HCl}/V_{C₂H₂}=1.13.

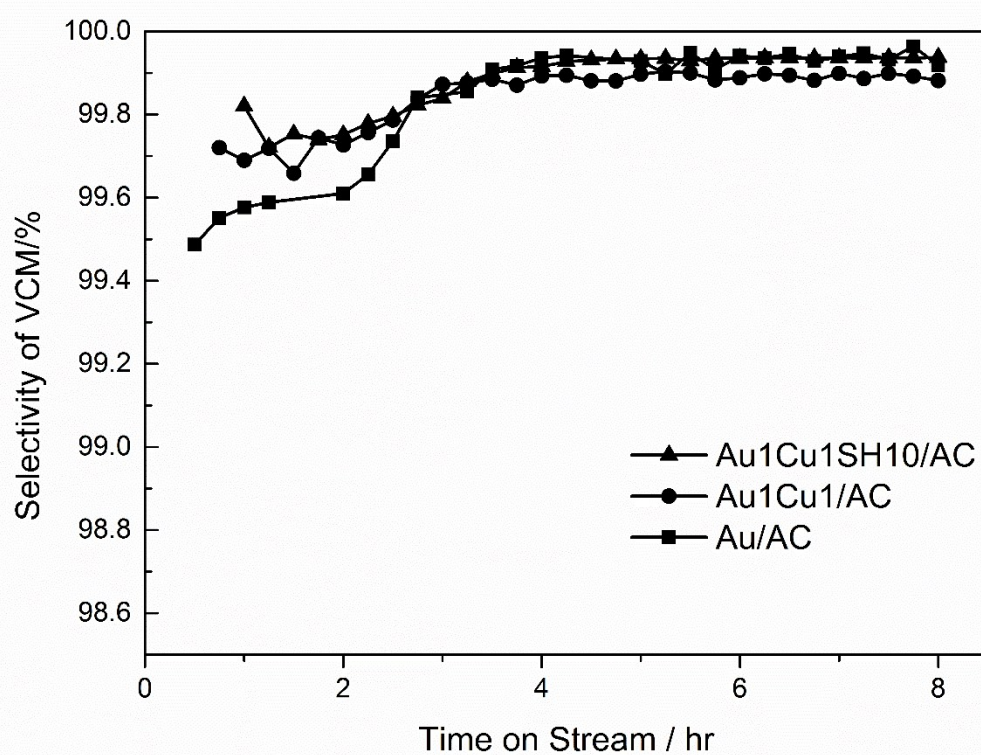


Fig. S2 Selectivity of Au/AC, Au1Cu1/AC and Au1Cu1SH10/AC catalysts.

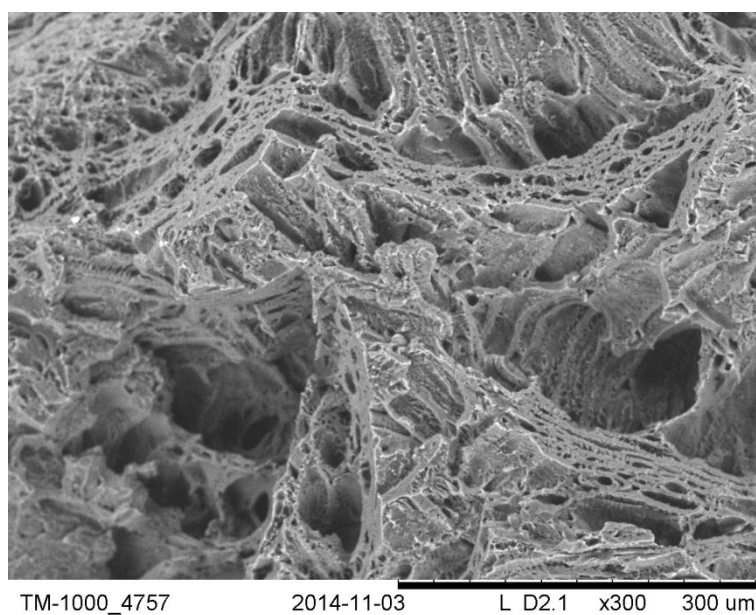


Fig. S3 Morphology of activated carbon.

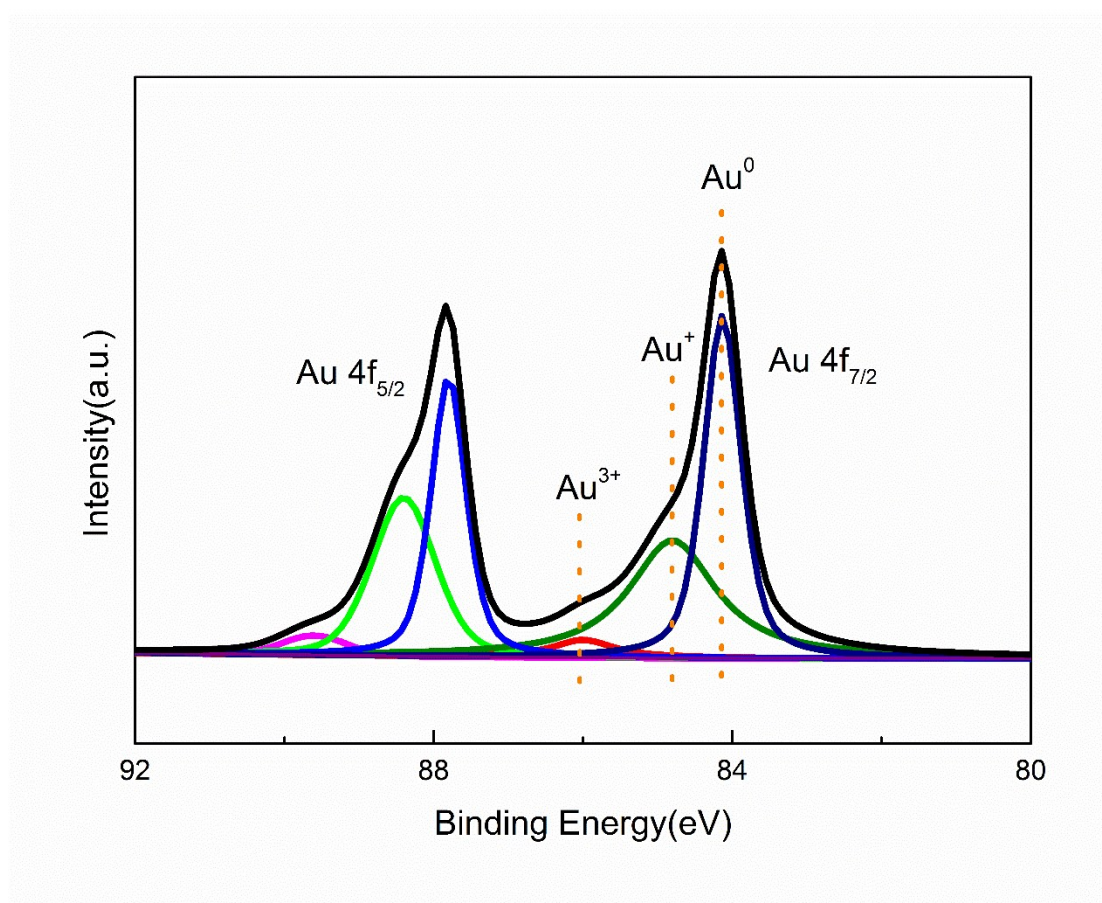


Fig. S4 XPS Au4f spectrums of Au/AC fresh catalyst.

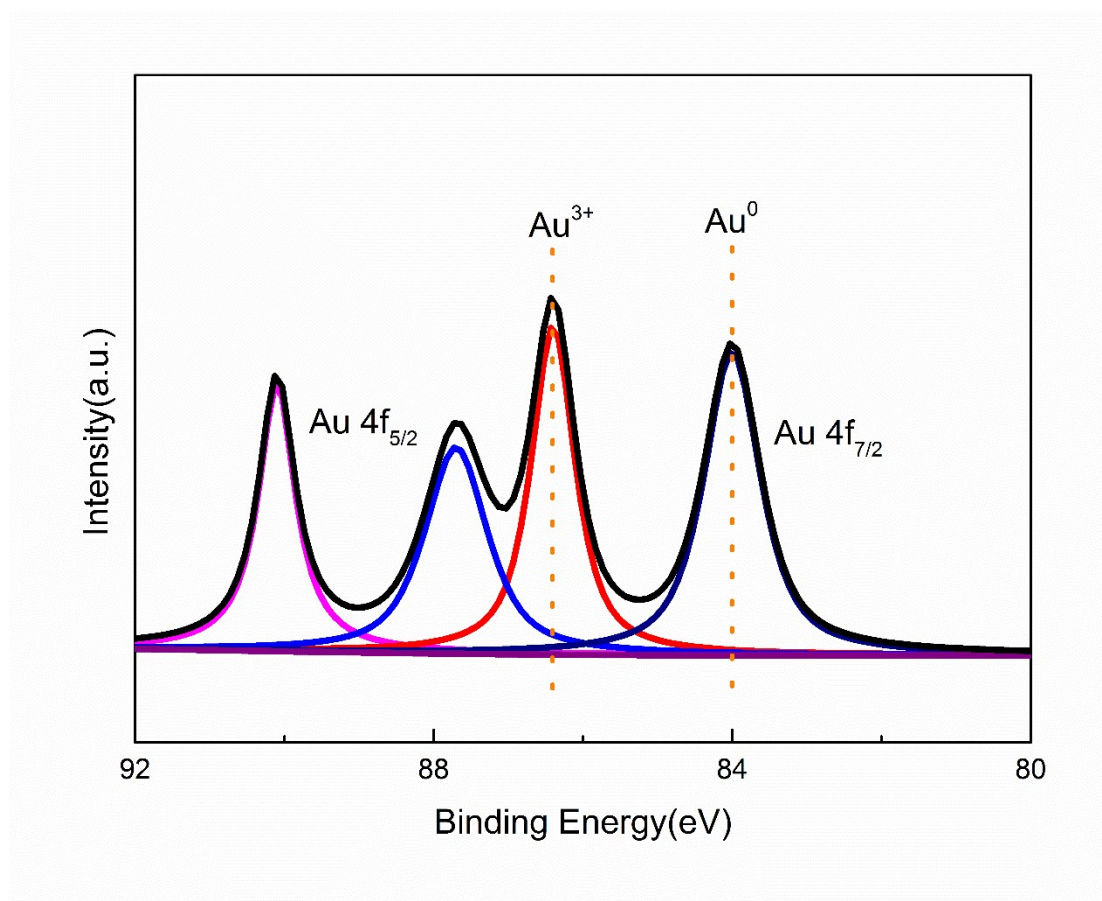


Fig. S5 XPS Au4f spectrums of Au/AC used catalyst.

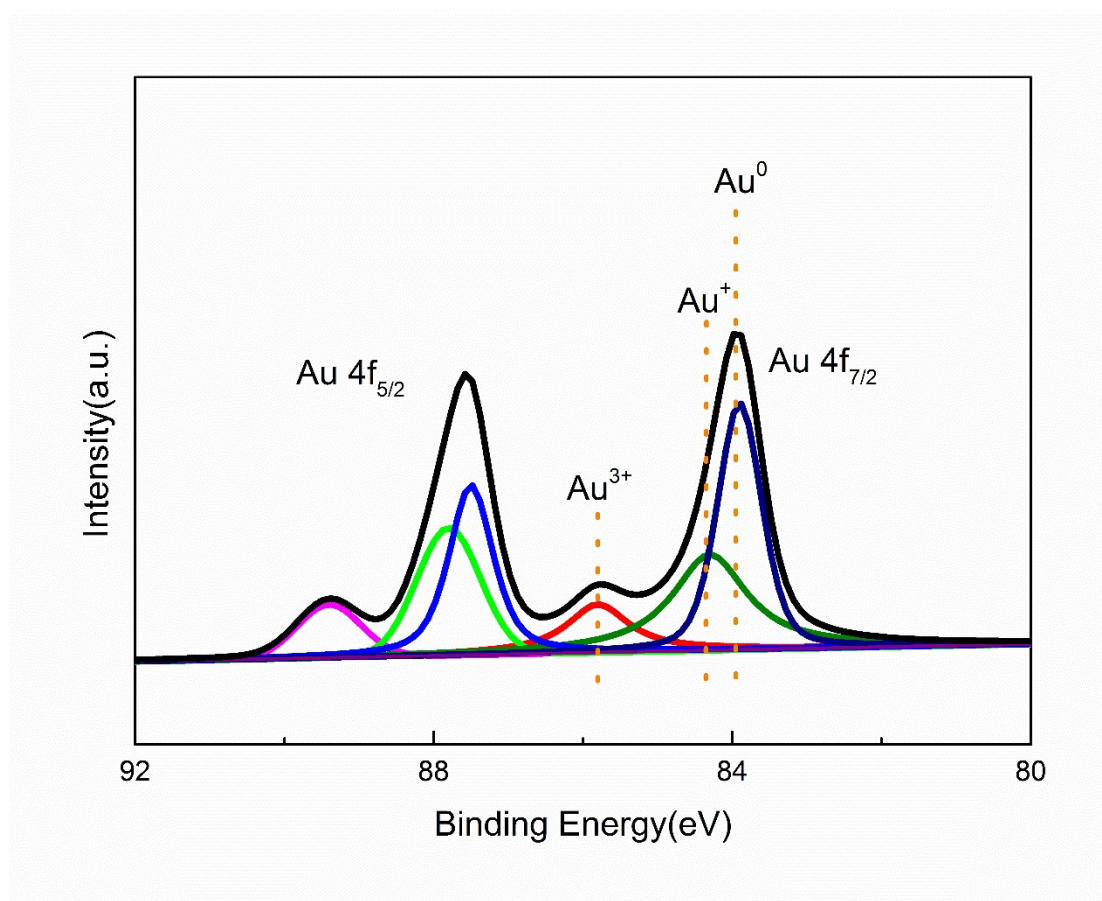


Fig. S6 XPS Au4f spectrums of Au₁Cu₁/AC fresh catalyst.

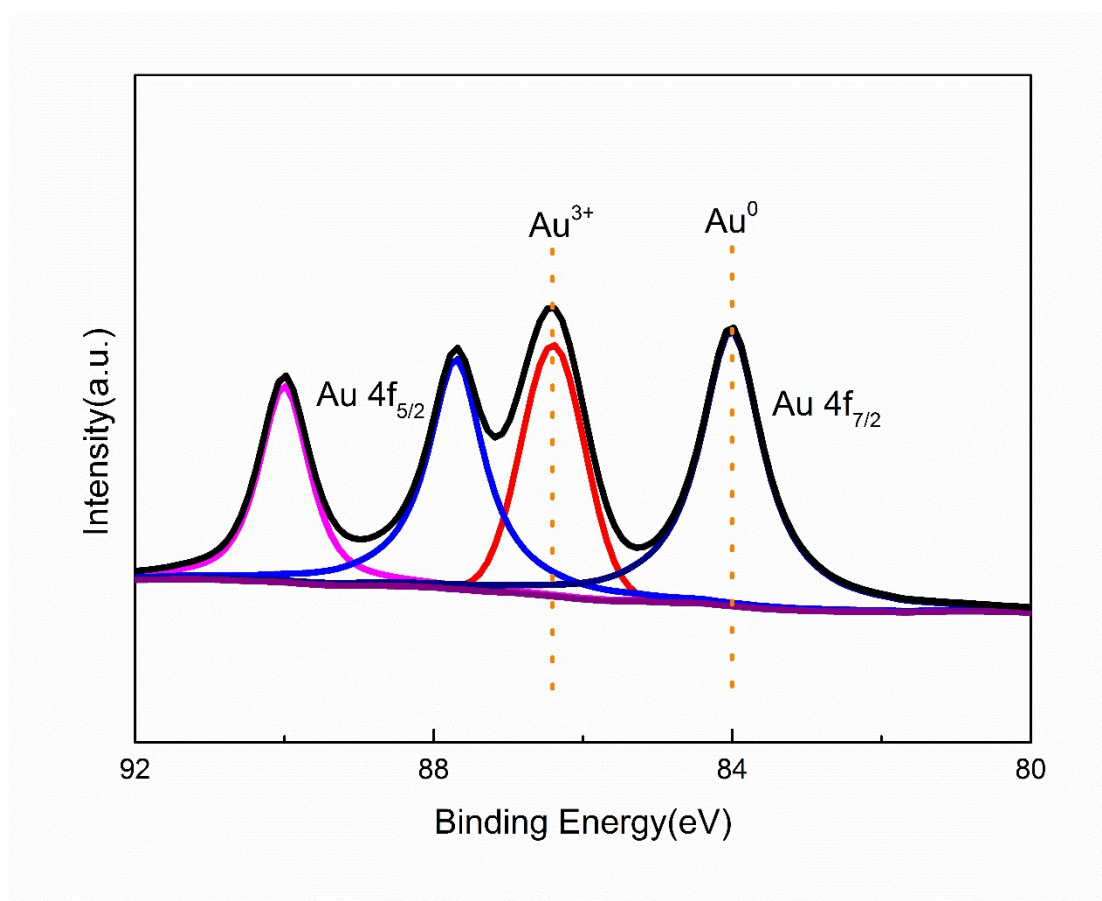


Fig. S7 XPS Au4f spectrums of Au₁Cu₁/AC used catalyst.

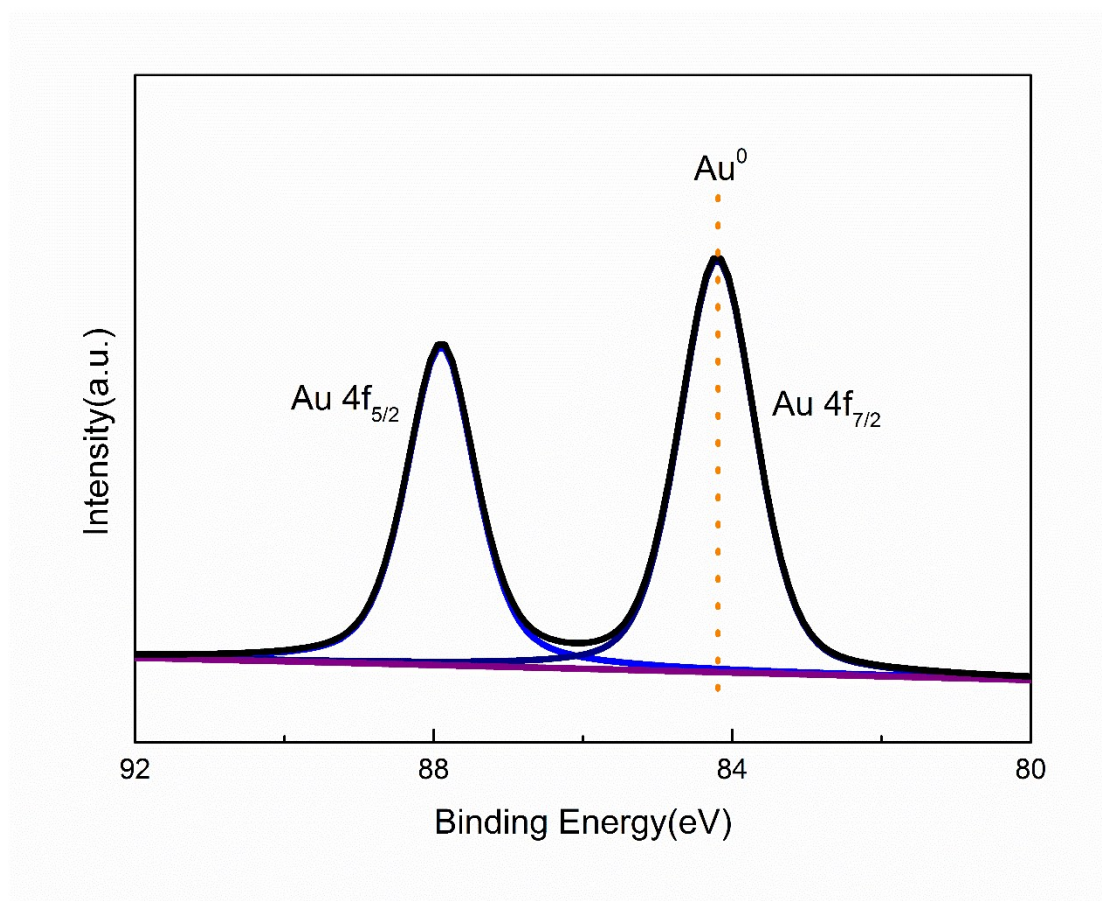


Fig. S8 XPS Au4f spectrums of Au₁Cu₁SH₁₀/AC fresh catalyst.

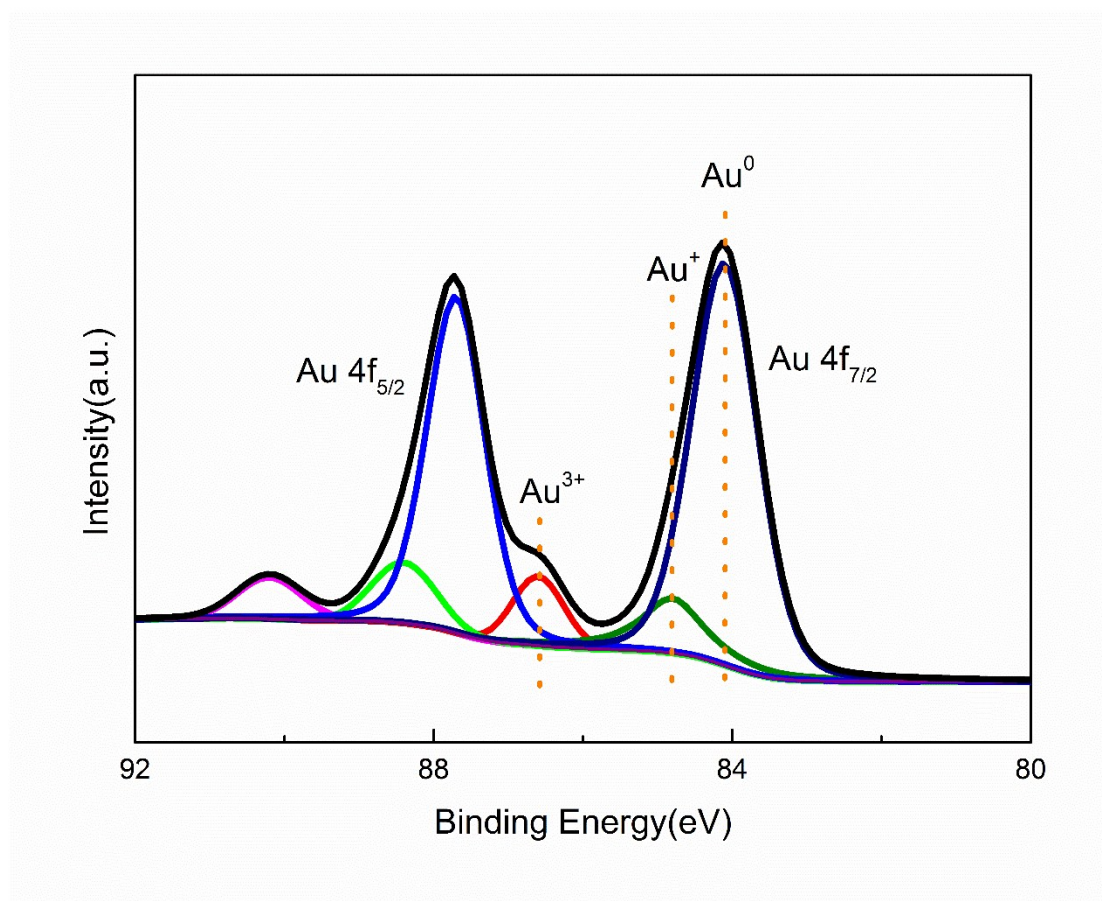


Fig. S9 XPS Au4f spectrums of Au₁Cu₁SH₁₀/AC used catalyst.

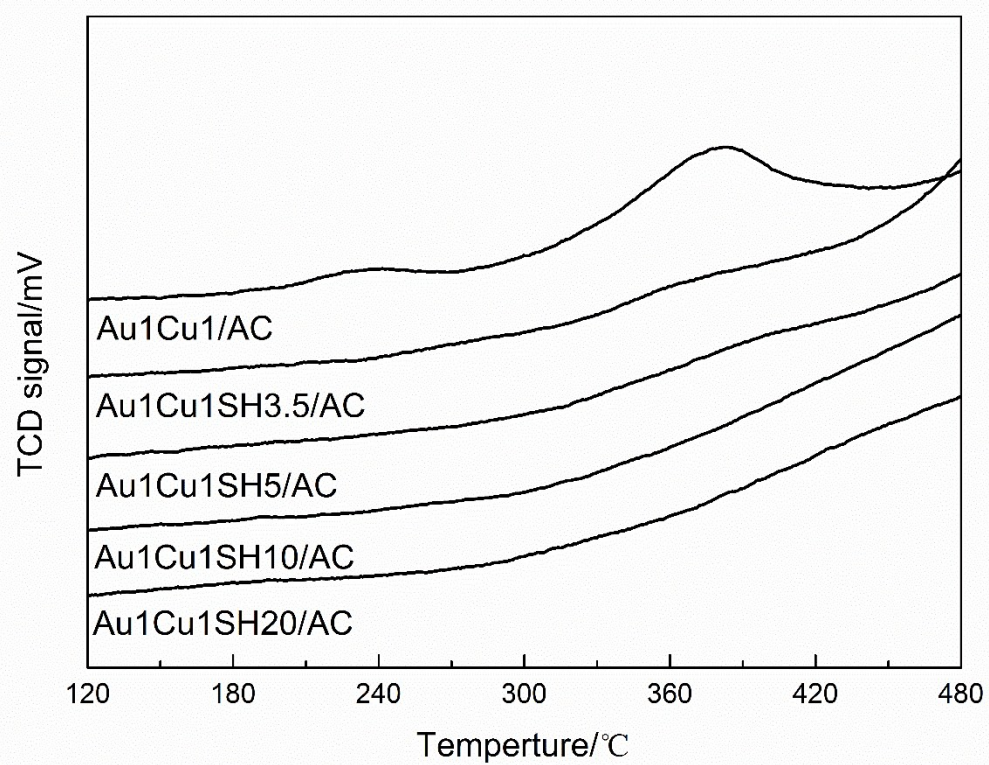


Fig. S10 H₂-TPR profiles of Au₁Cu₁SH_y/AC series fresh catalysts.

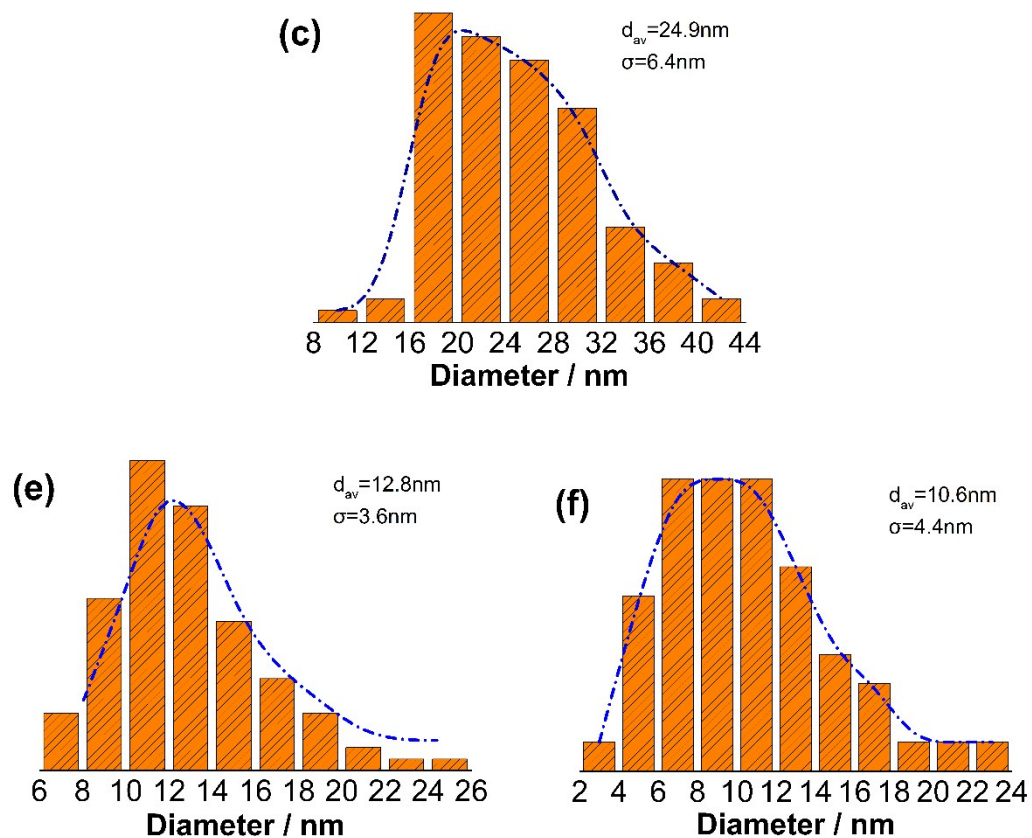


Fig. S11 Particle size distribution of (c)Au₁Cu₁/AC-fresh, (e)Au₁Cu₁SH₁₀/AC-fresh and (f)Au₁Cu₁SH₁₀/AC-used.