

Supporting material

# Characterization, Concentration, and Speciation of Metal Elements in Copper Slag: Implications for Secondary Metal Recovery

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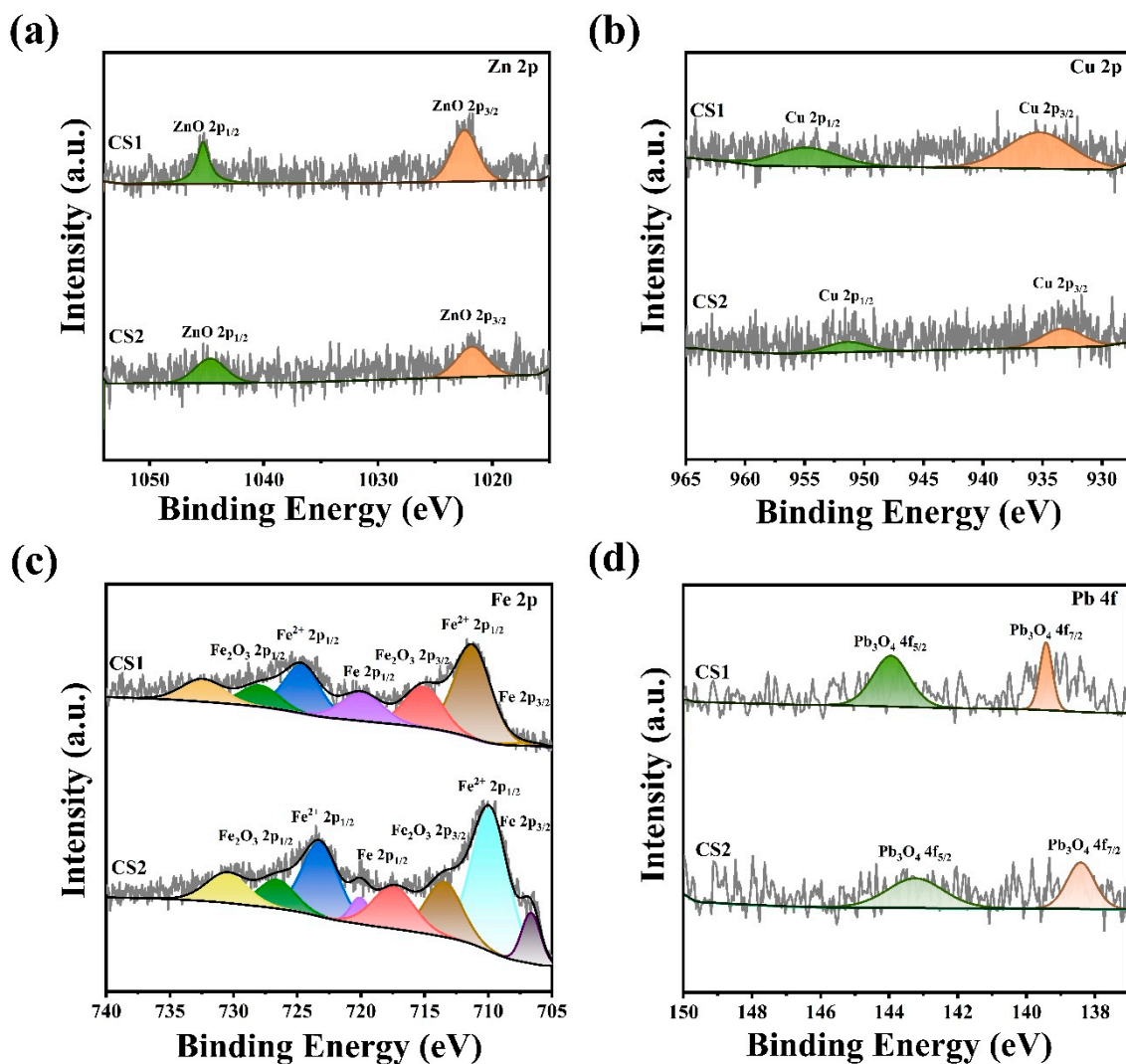


Figure S1. Fine scan XPS spectra of copper slag samples at the etching time of 0 s :

(a) Zn 2p, (b) Cu 2p, (c) Fe 2p, and (d) Pb 4f. The gray line shows the experimental values. The black line shows the fitted values of CS1 and CS2.

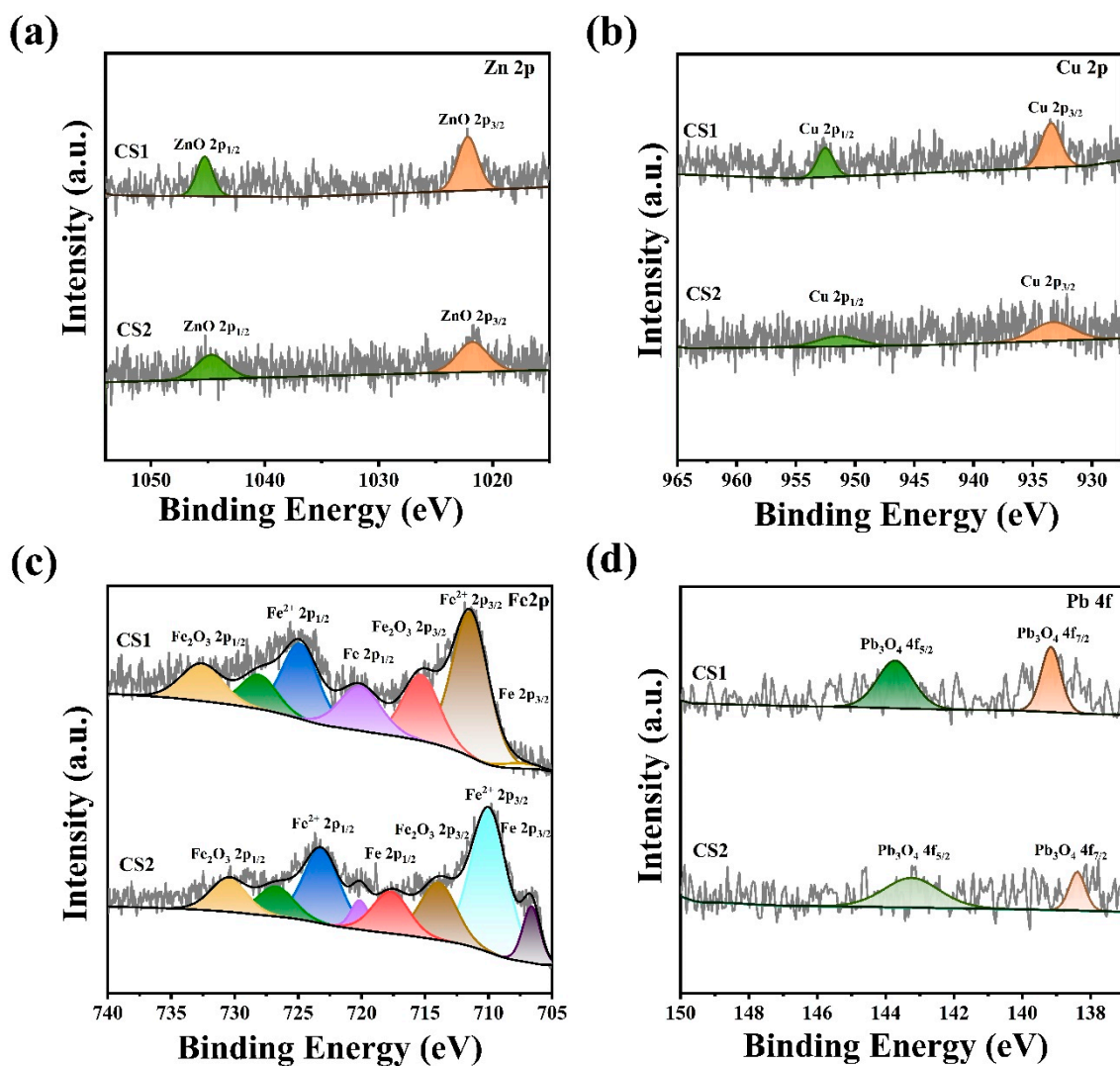


Figure S2. Fine scan XPS spectra of copper slag samples at the etching time of 100 s :

(a) Zn 2p, (b) Cu 2p, (c) Fe 2p, and (d) Pb 4f. The gray line shows the experimental values. The black line shows the fitted values of CS1 and CS2.

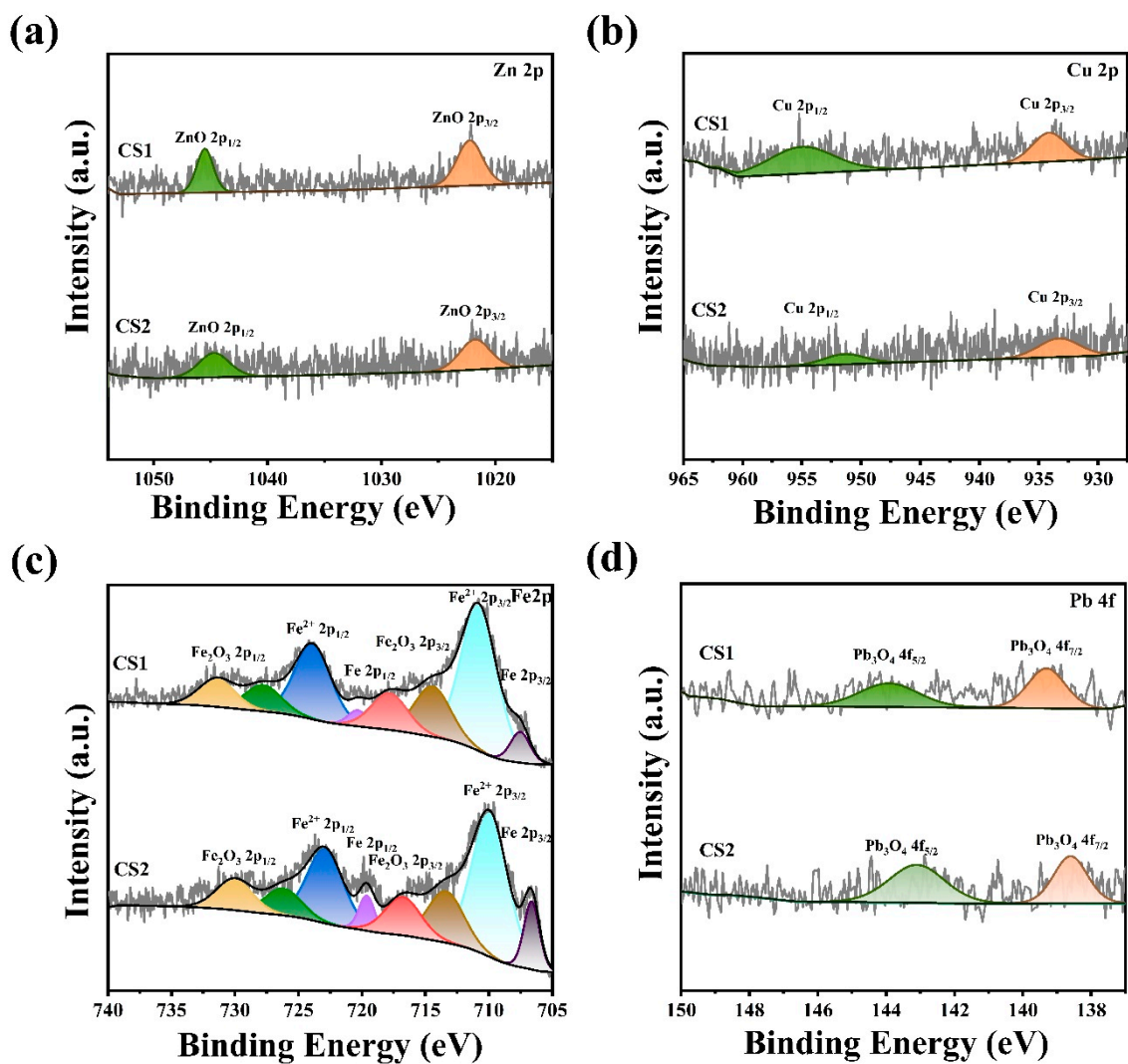


Figure S3. Fine scan XPS spectra of copper slag samples at the etching time of 200 s :

(a) Zn 2p, (b) Cu 2p, (c) Fe 2p, and (d) Pb 4f. The gray line shows the experimental values. The black line shows the fitted values of CS1 and CS2.