

Supplementary Materials

Direct Synthesis of CuP_2 and Cu_3P and Their Performance as Electrocatalysts for Hydrogen Evolution, Oxygen Evolution, and Oxygen Reduction Reactions

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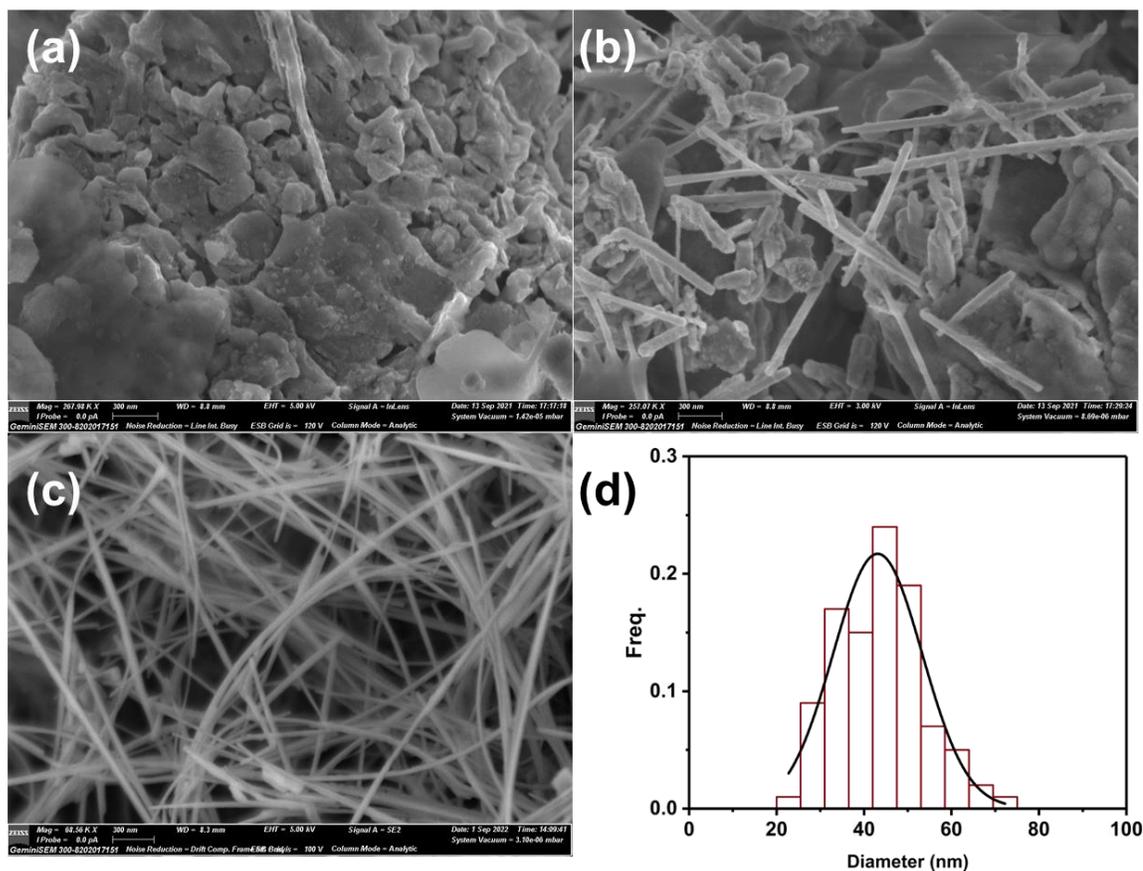


Figure S1. SEM results of morphology differences by increasing TOPO/ODE ratio at the same temperature for CuP_2 synthesis, specifically, 10% for (a), 30% for (b) and 50% for (c). (d) Corresponding diameter distribution histogram of CuP_2 of (c).

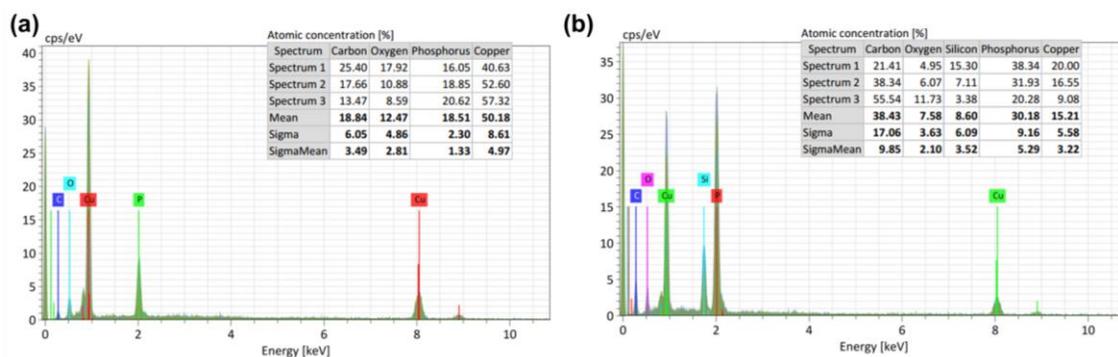


Figure S2. Typical EDS results for (a) Cu₃P and (b) CuP₂.

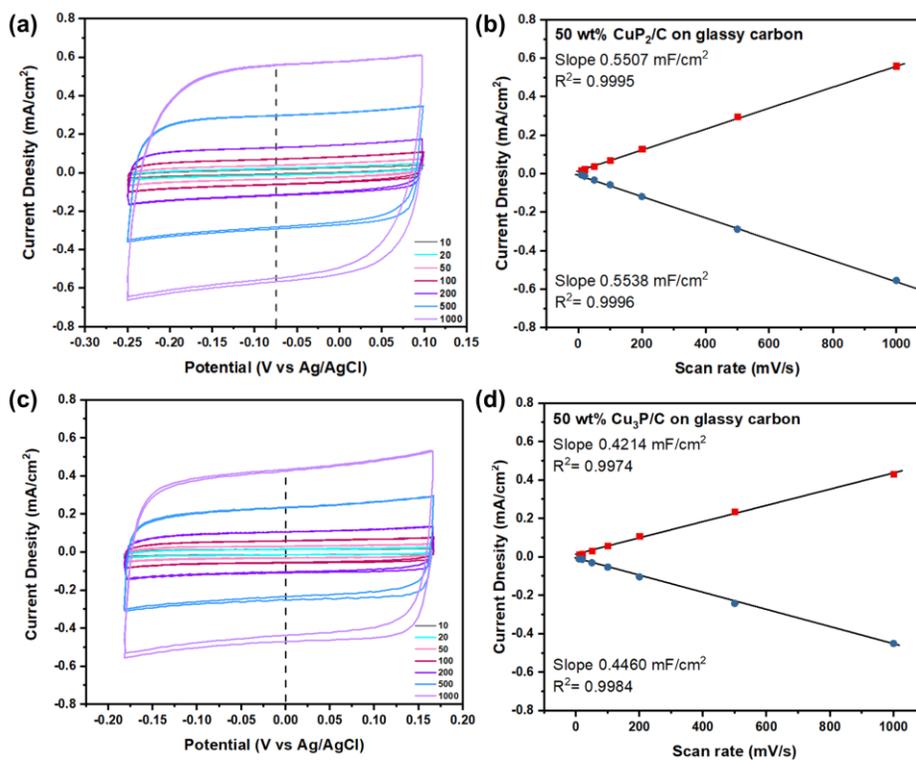


Figure S3. ECSA comparison of (a, b) 50 wt % CuP₂/C and (b) 50 wt % Cu₃P/C on glassy carbon in 0.1 M NaOH.

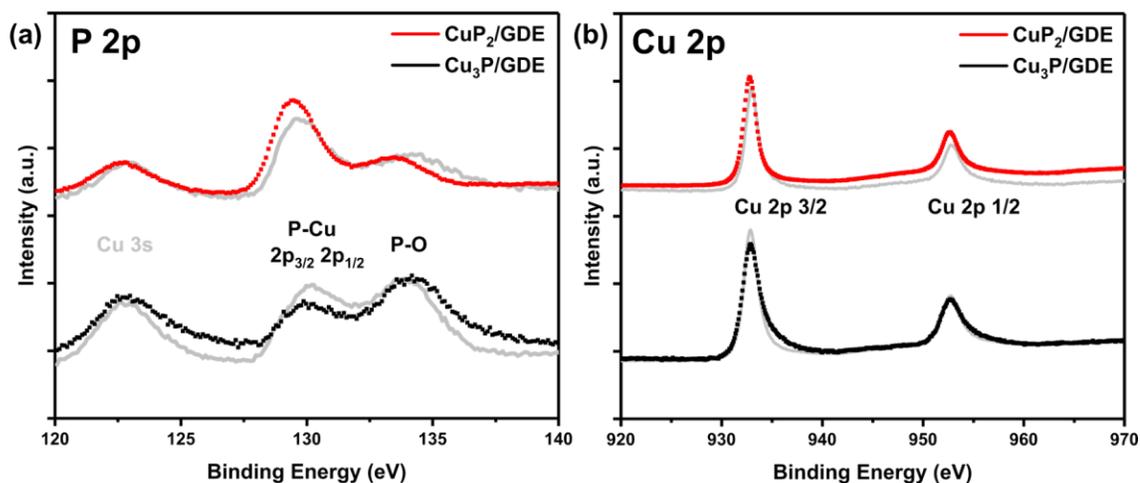


Figure S4. XPS results for CuP_2 and Cu_3P on gas diffusion electrode after scanned between 0.4 and 0.8 V vs. RHE for 1000 cycles, the results for pristine materials were shown in grey for easier comparison.

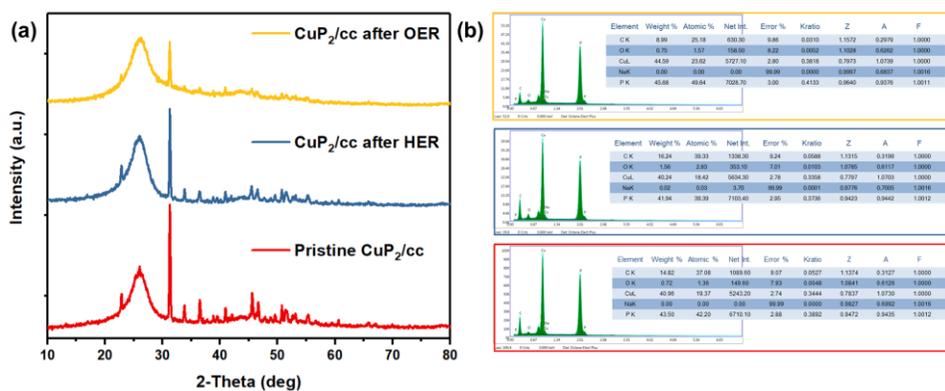


Figure S5. (a) XRD and (b) EDS results for CuP_2 on carbon cloth (cc) before HER, after HER and after ORR.