

Supporting Information

Surface passivated Cu conductors for high temperature sulfurous environment

Zheng Li,^a Jian Yu,^b Saurabh Khuje,^a Aaron Sheng,^a Marieross Navarro,^a Cheng-Gang Zhuang,^c and Shenqiang Ren^{a,d,e,*}

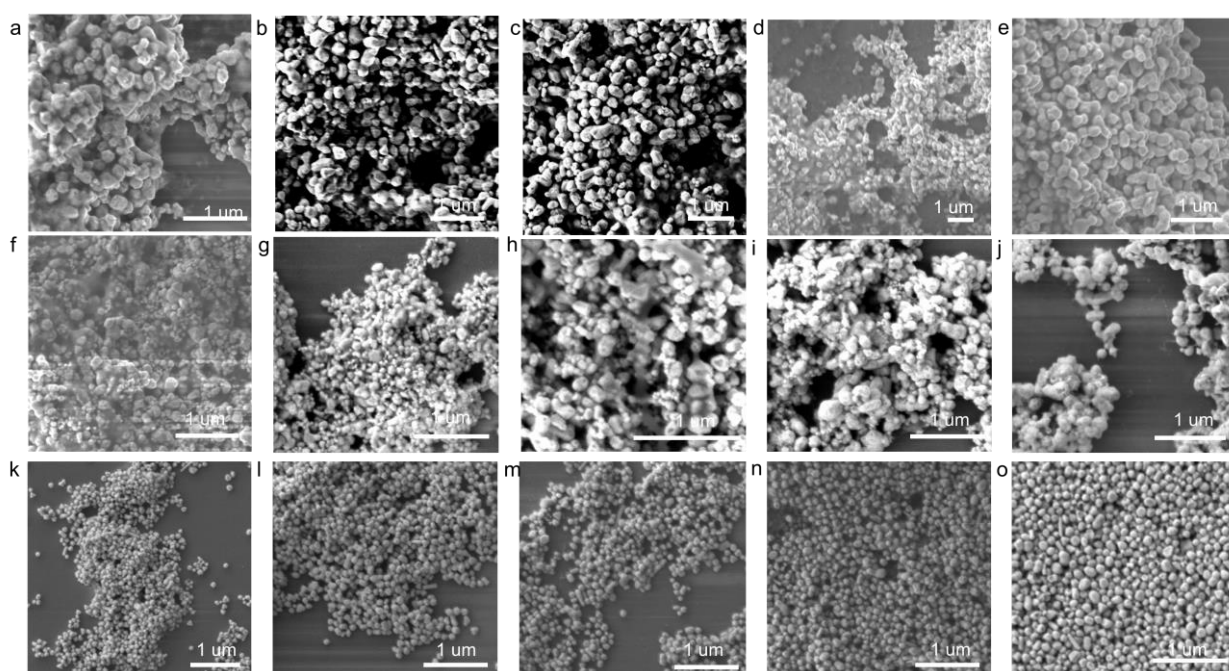


Figure S1 SEM of Cu NPs derived from different PVP concentration and reaction time: (a) 2 mM and 10 min; (b) 2 mM and 25 min; (c) 2 mM and 40 min; (d) 2 mM and 55 min; (e) 2 mM and 70 min; (f) 3mM and 10 min; (g) 3mM and 25 min; (h) 3 mM and 40 min; (i) 3mM and 55 min(j) 3mM and 70 min; (k) 4 mM and 10 min; (l) 4 mM and 25 min; (m) 4 mM and 40 min; (n) 4 mM and 55 min; and (o) 2 mM and 70 min.

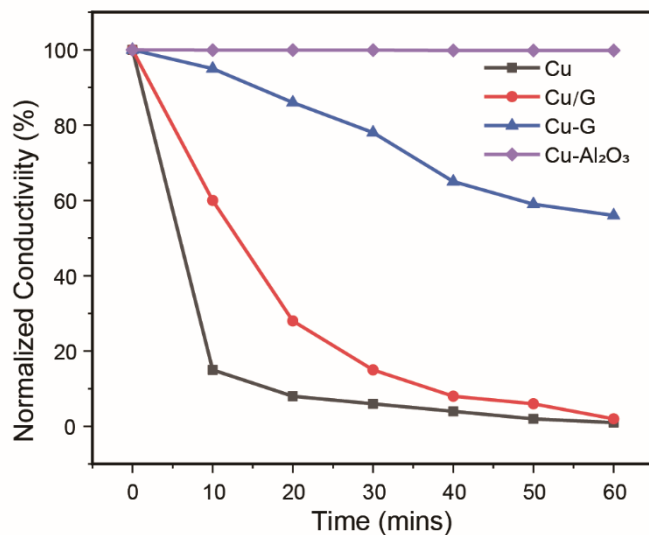


Figure S2 The conductivity changes of Cu-based conductors (Cu, Cu/G, Cu-G and Cu-Al₂O₃) at 35°C sulphurous atmosphere.

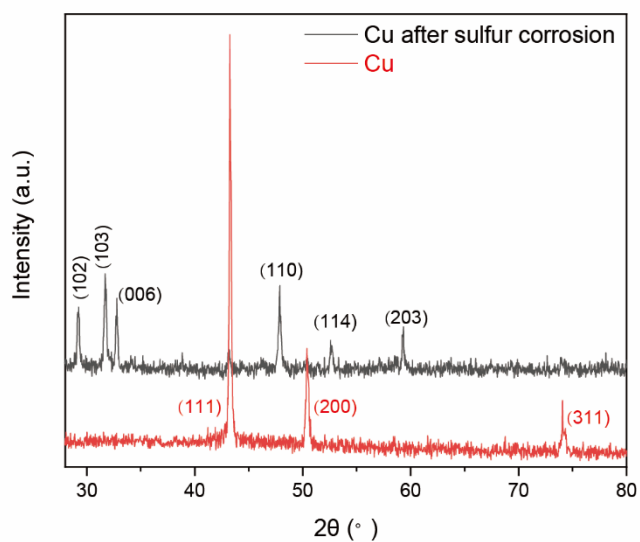


Figure S3 XRD of Cu conductors before and after sulfur corrosion.

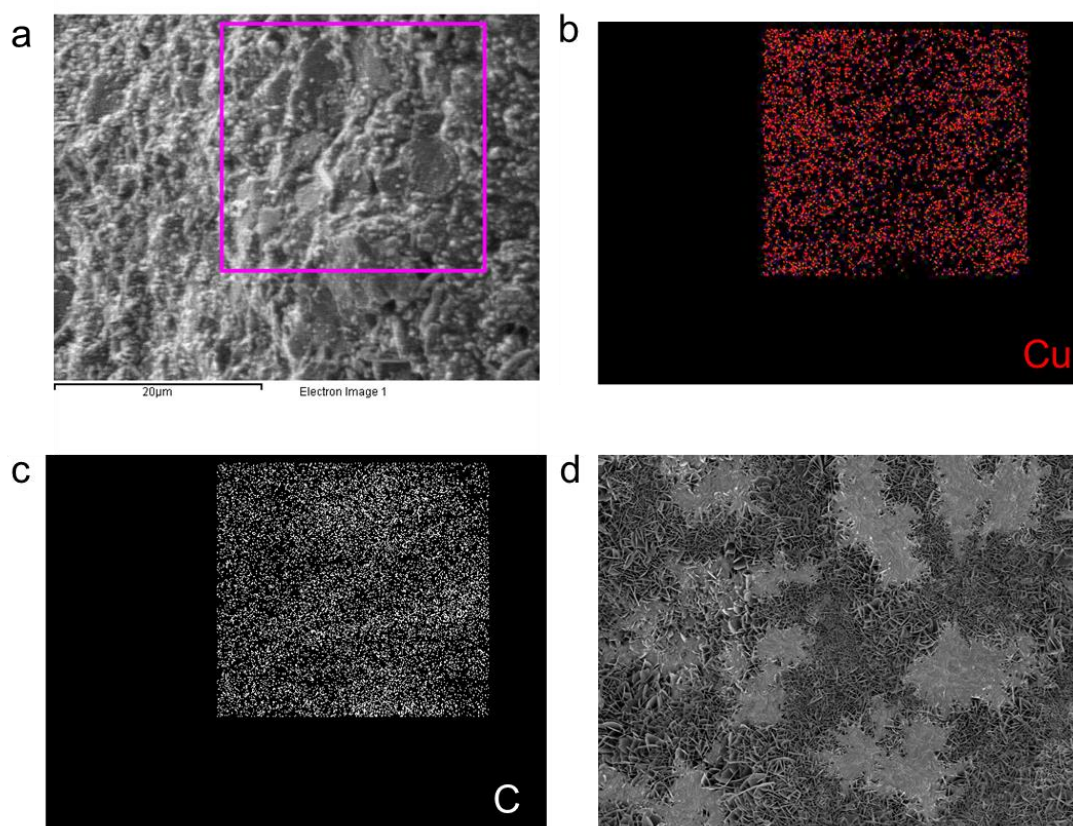


Figure S4 (a) SEM of Cu/G conductors, (b-c) EDS of Cu/G conductors, and (d) SEM of Cu/G conductors after sulfur corrosion.

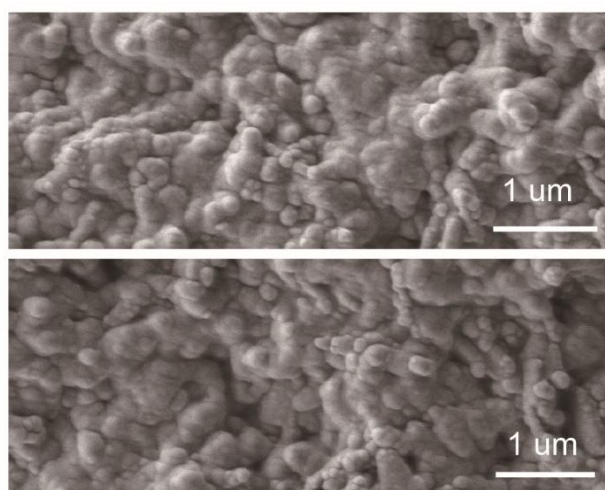


Figure S5 SEM of Cu-Al₂O₃ conductors before (top) and after (bottom) sulfur corrosion.