

Supplementary information

Growth of Nanostructured Cu₃Al Alloy Films by Magnetron Sputtering for Non-Enzymatic Glucose-Sensing Applications

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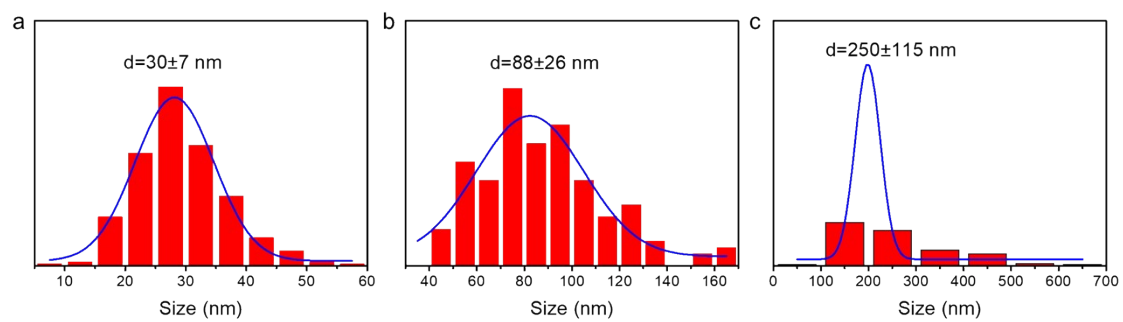


Figure S1. The statistical distribution of particle size of (a) Cu, (b) Al and (c) Cu-Al thin films obtained from the SEM image analysis.

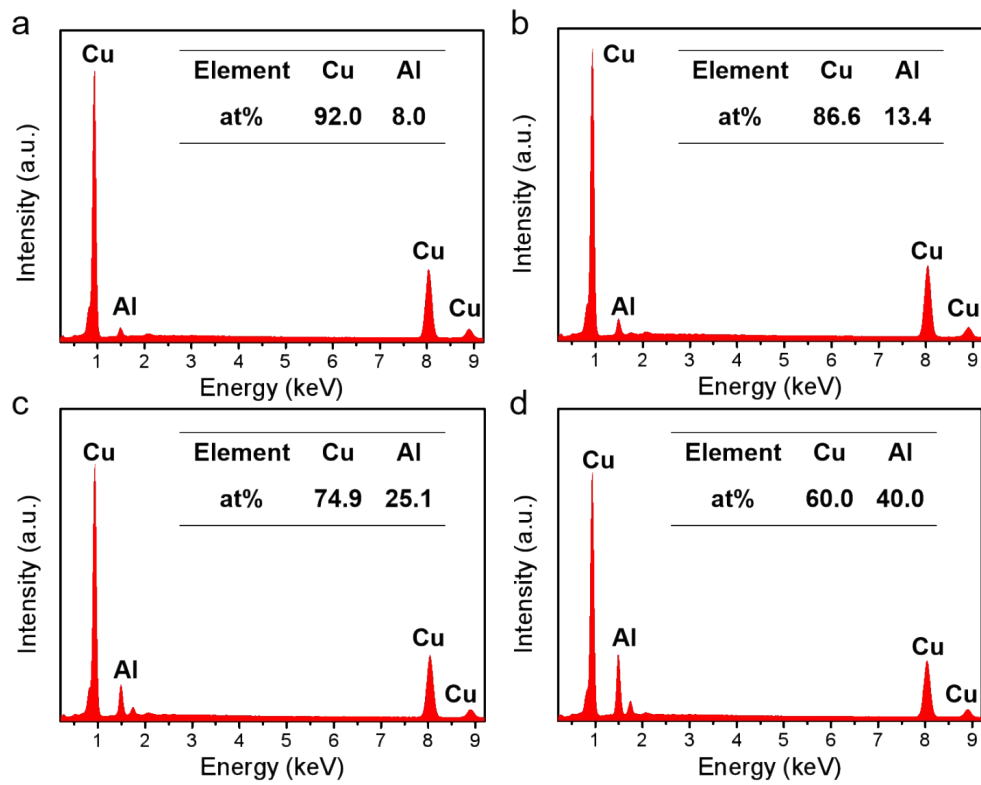


Figure S2. EDS spectra for the Cu-Al films under different process parameters.

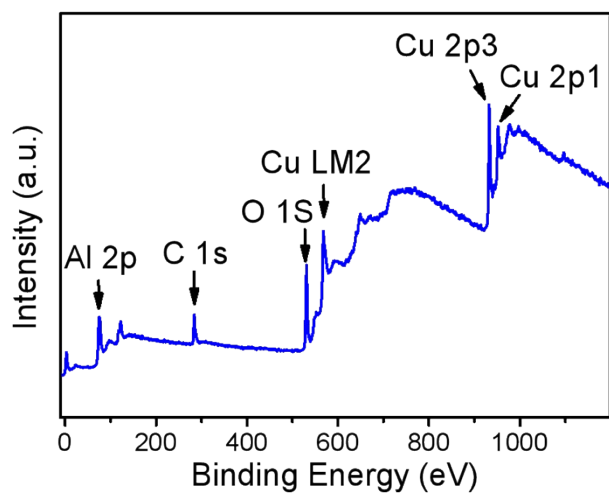


Figure S3. XPS spectra of Al 25% sample: full wide-scan.

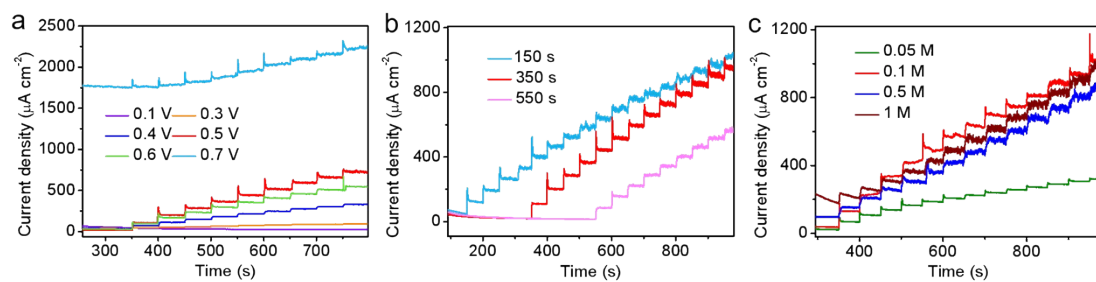


Figure S4. Amperometric response of Cu₃Al alloy to stepwise addition of 50 μM glucose in the NaOH solution with changing (a) applied-bias, (b) etching time, (c) NaOH concentration.

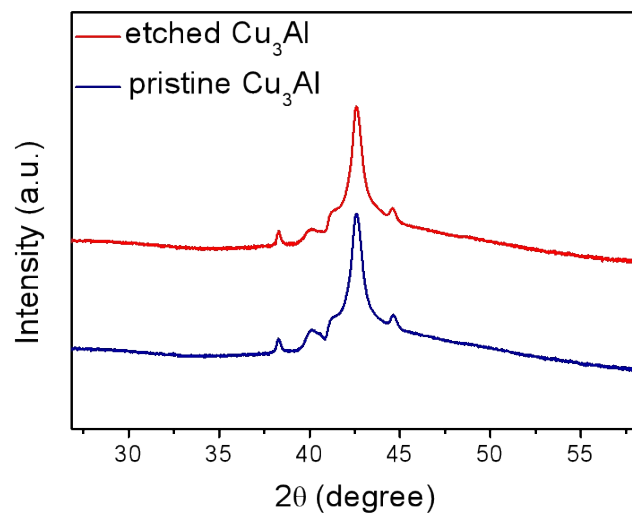


Figure S5. XRD pattern of Cu_3Al before and after etching in 0.1 M NaOH for 350 s.

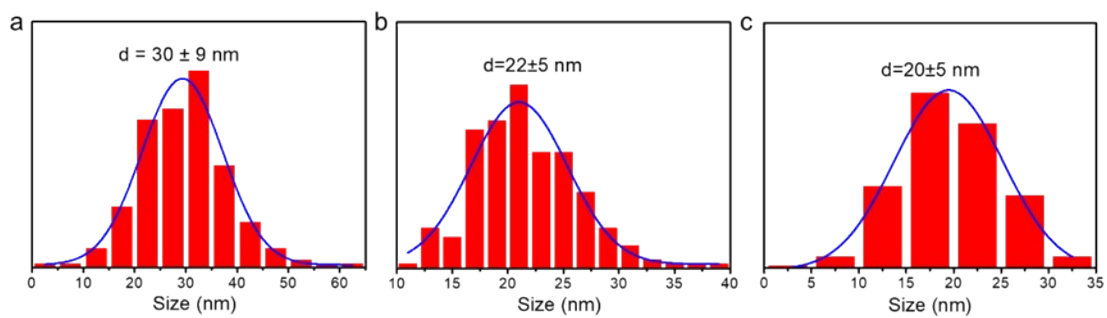


Figure S6. The statistical distribution of particle size of Cu₃Al alloy films after etching in 0.1 M NaOH solution for 150 s (a), 350 s (b) and 550 s (c) obtained from the SEM images.

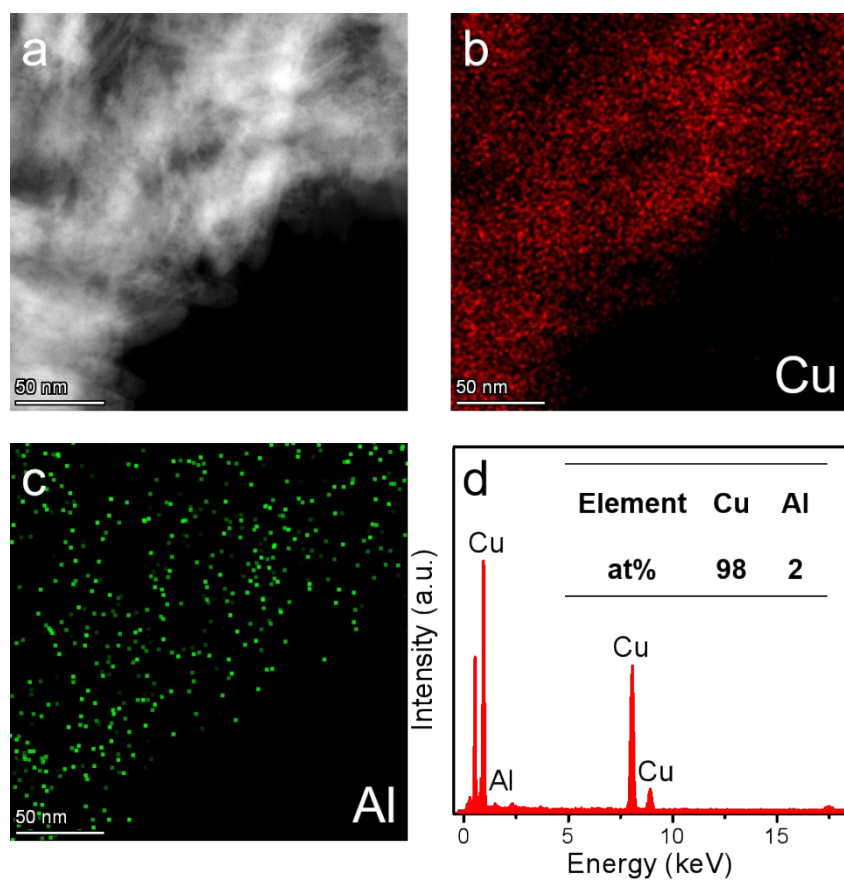


Figure S7. (a) TEM image, elemental mapping images of (b) Cu and (c) Al, and (d) EDS of Cu_3Al after etching in 1 M NaOH for 350 s.

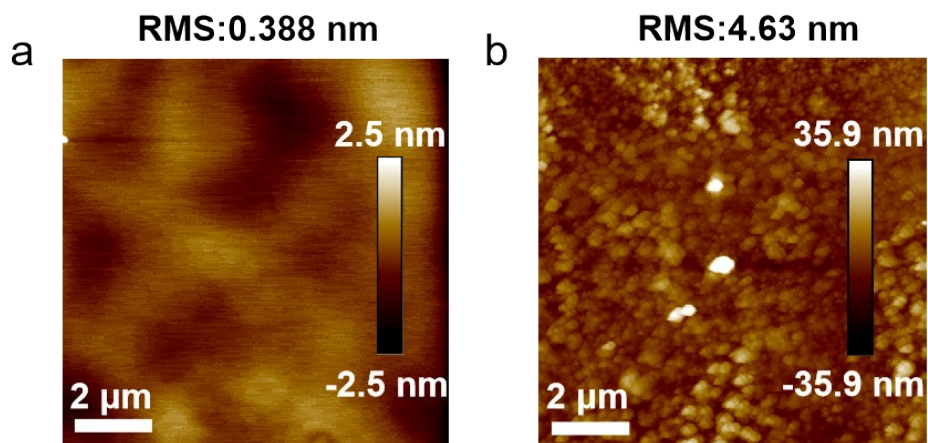


Figure S8. AFM images of Cu₃Al (a) before and (b) after etching in 0.1 M NaOH for 350 s.