

# Dictating CuO:Cu(OH)<sub>2</sub> Ratio and Microstructural Evolution by Varying the Temperature of Anodization of Cu for OER-Masking GOR!

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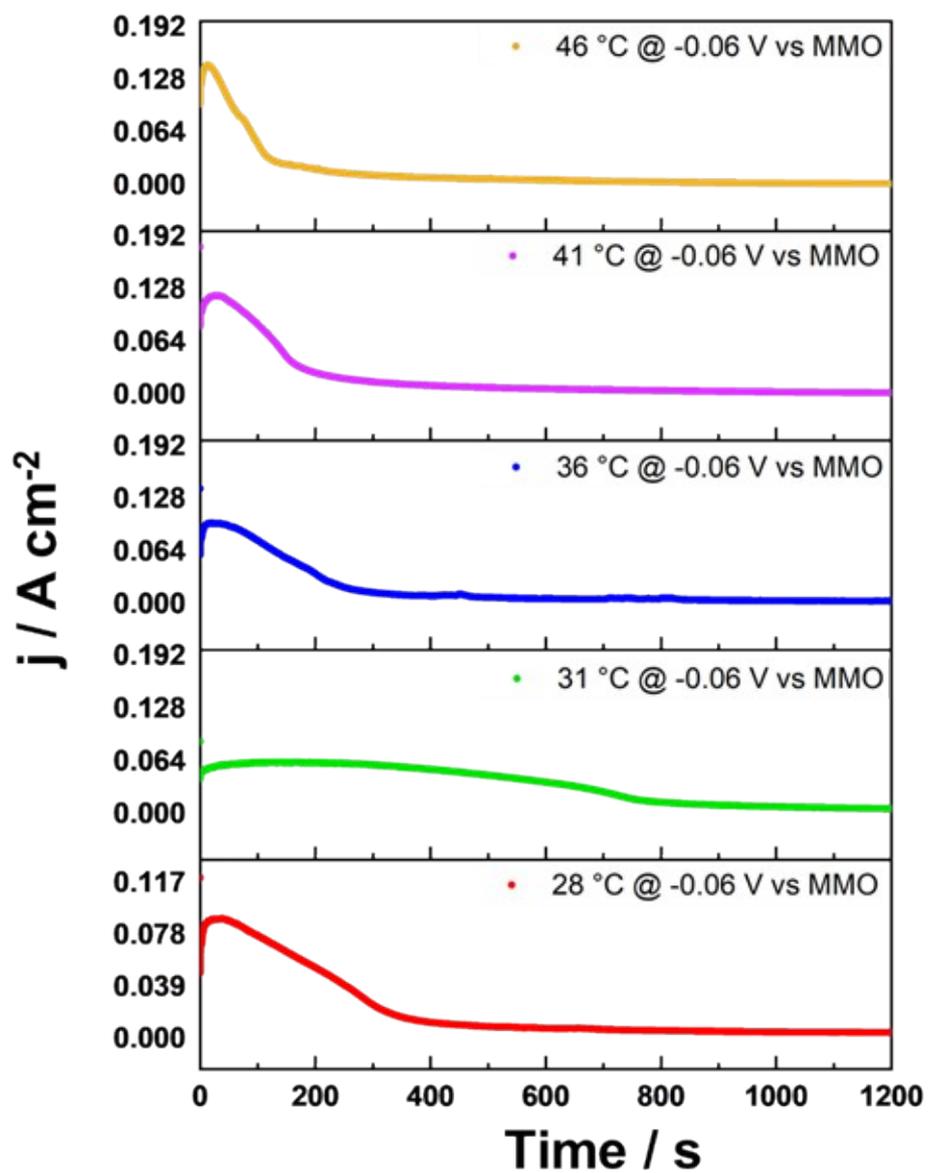
#These authors have contributed equally to this work.

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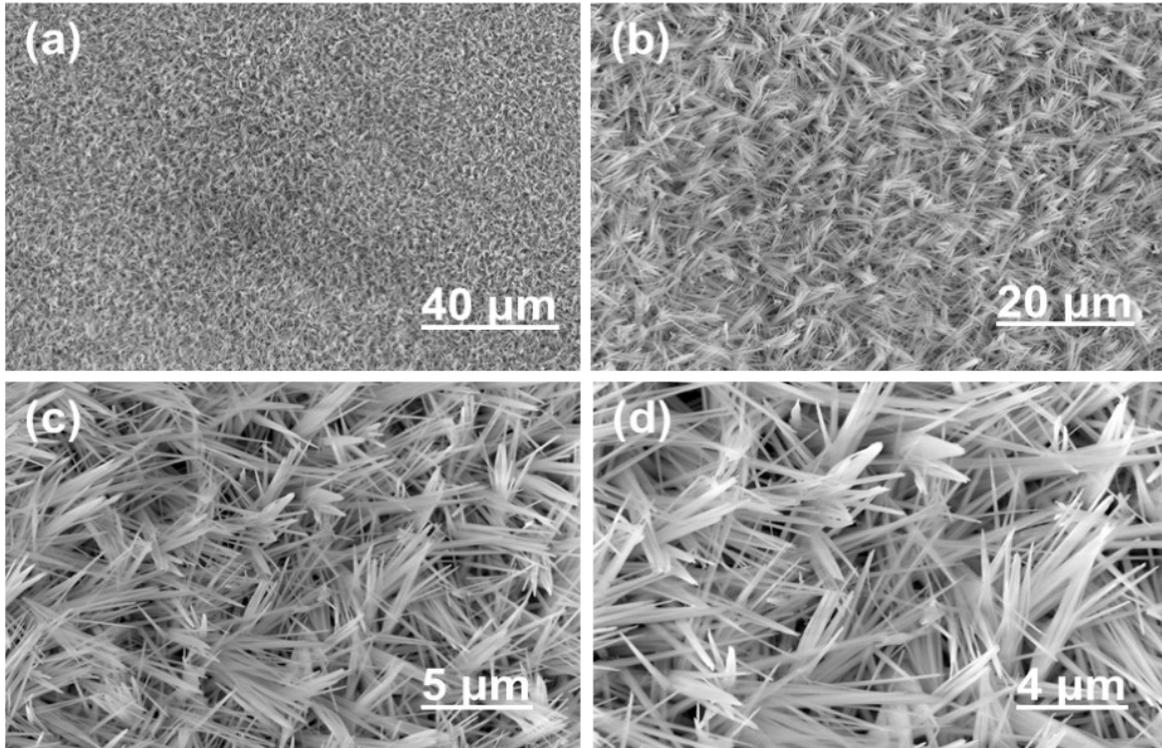
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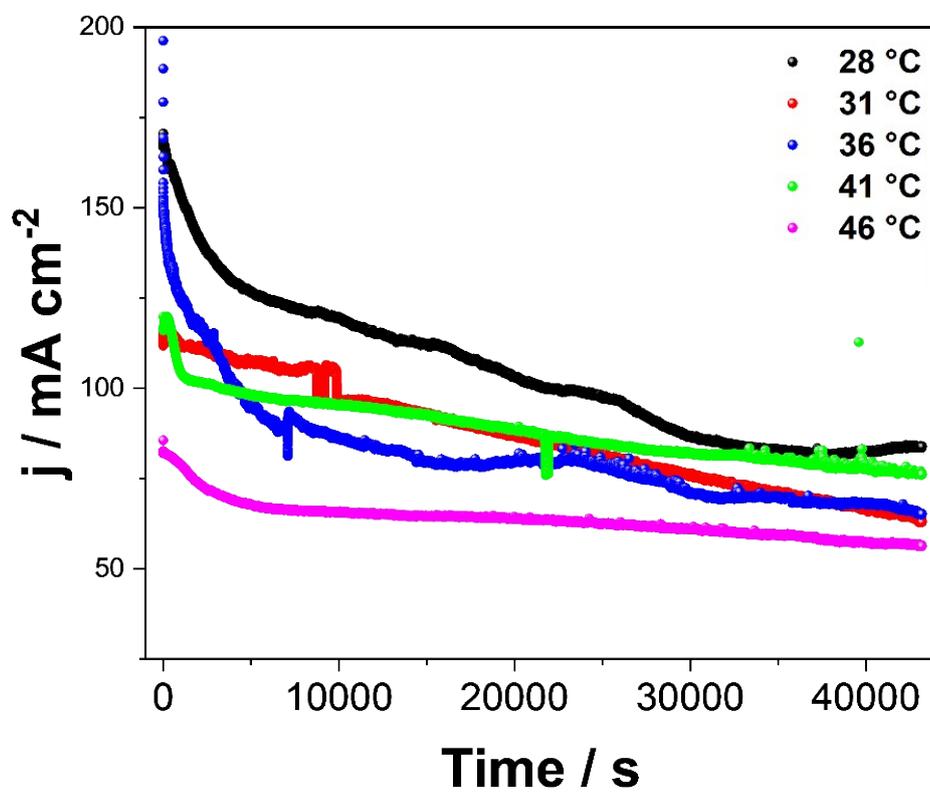
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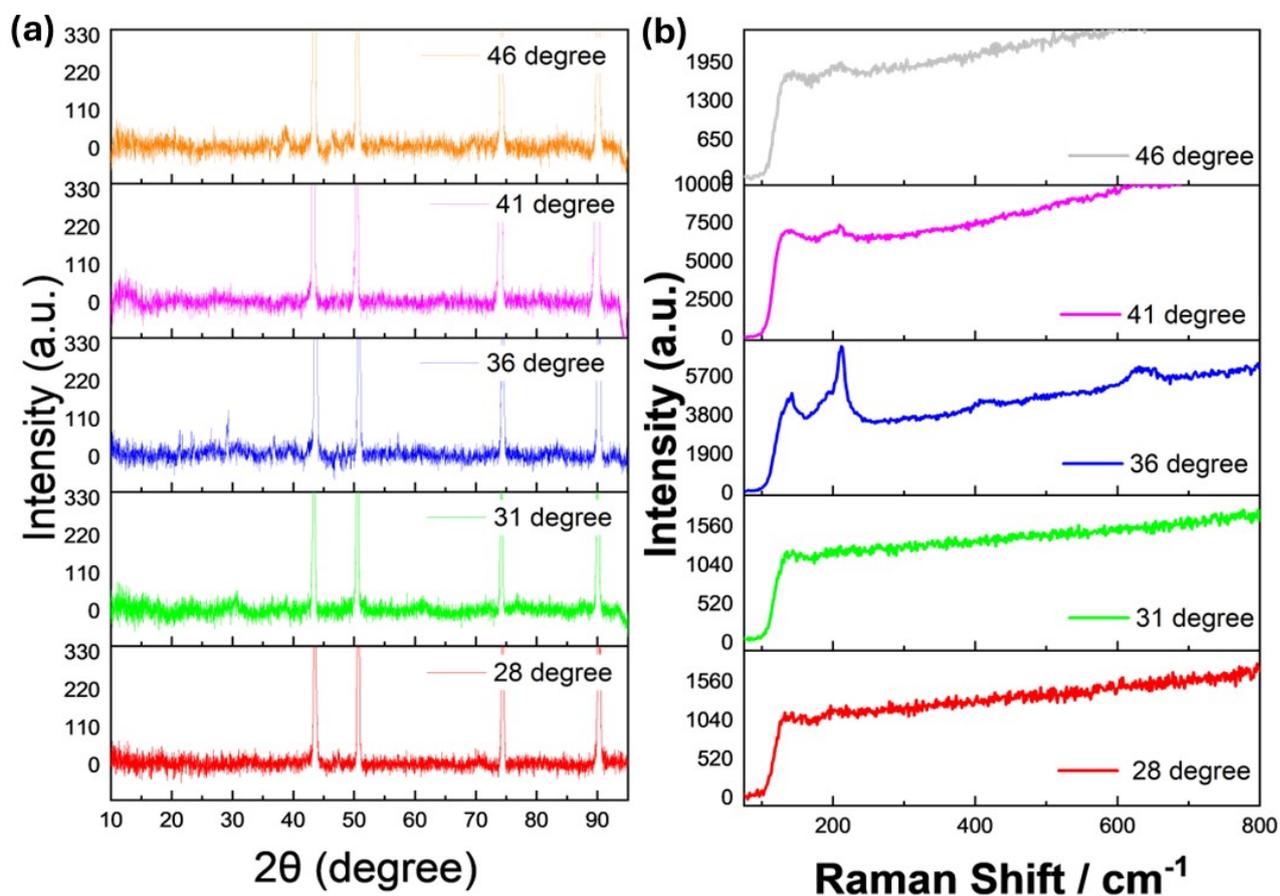
**Figure S1:** The current density-time curve of the temperature-dependent anodization of Cu foil in the 1.0 M KOH.



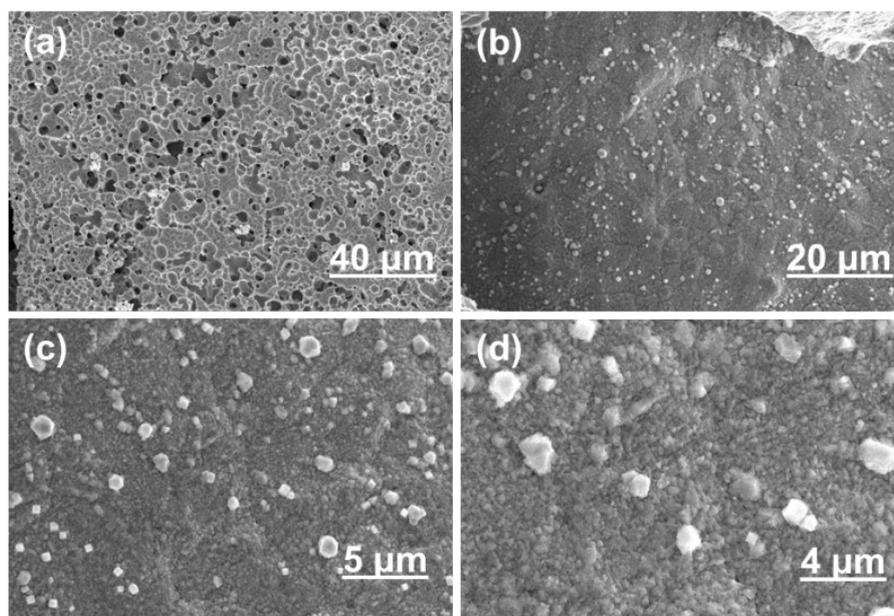
**Figure S2:** (a-d) FESEM images of anodized electrode at 28 °C after anodization.



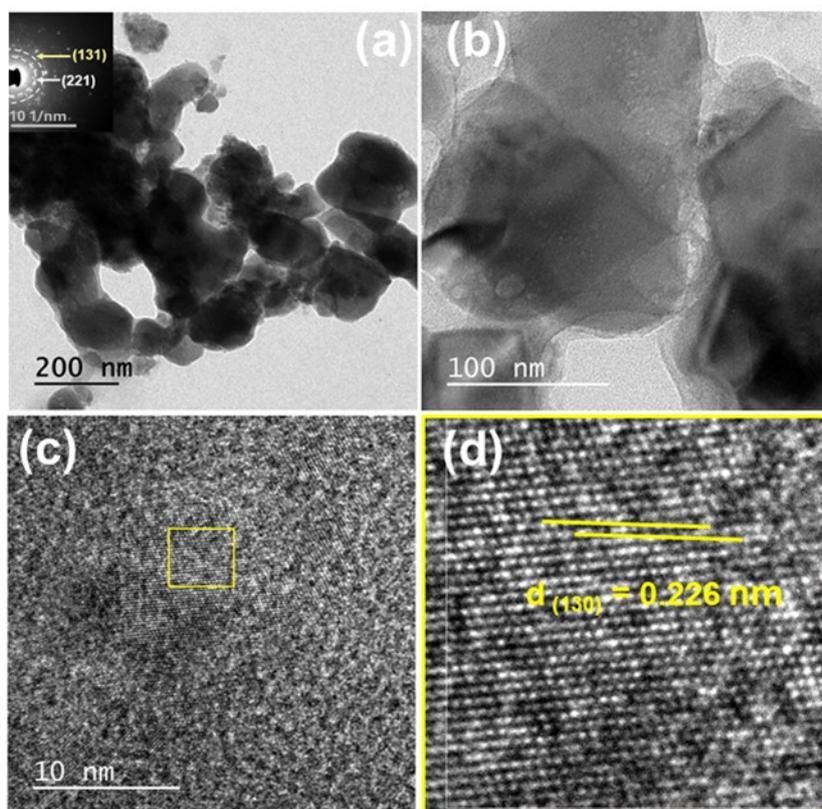
**Figure S3:** Temperature-dependent anodized electrode stability study using CA at a set potential of 0.5 V vs Hg/HgO for 0.15 M glucose concentration in 1 M KOH for 12 hours.



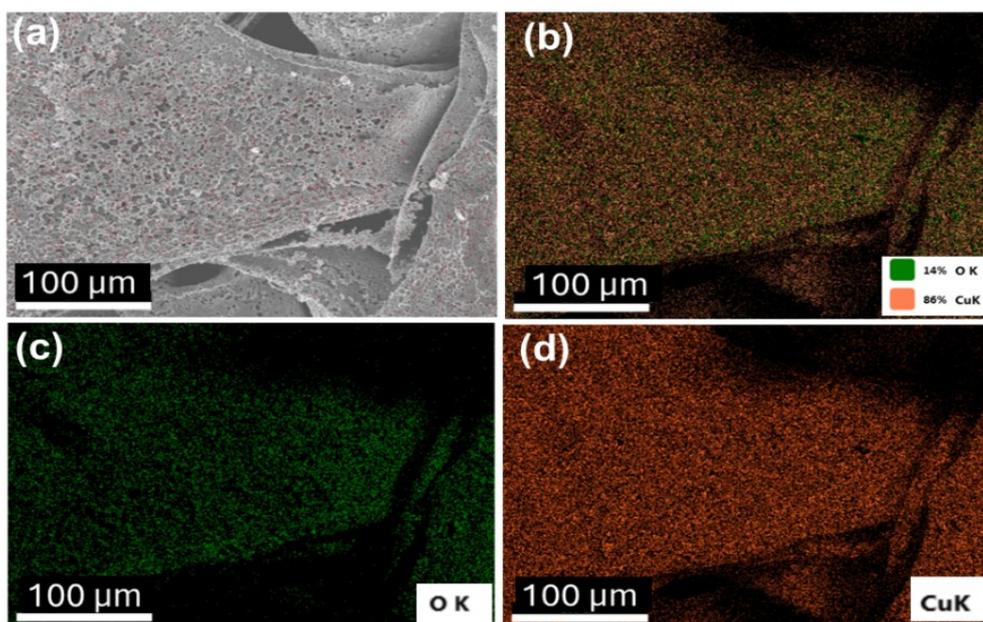
**Figure S4:** Post stability (a) XRD pattern, (b) Raman spectra for all temperature-dependent anodized electrodes.



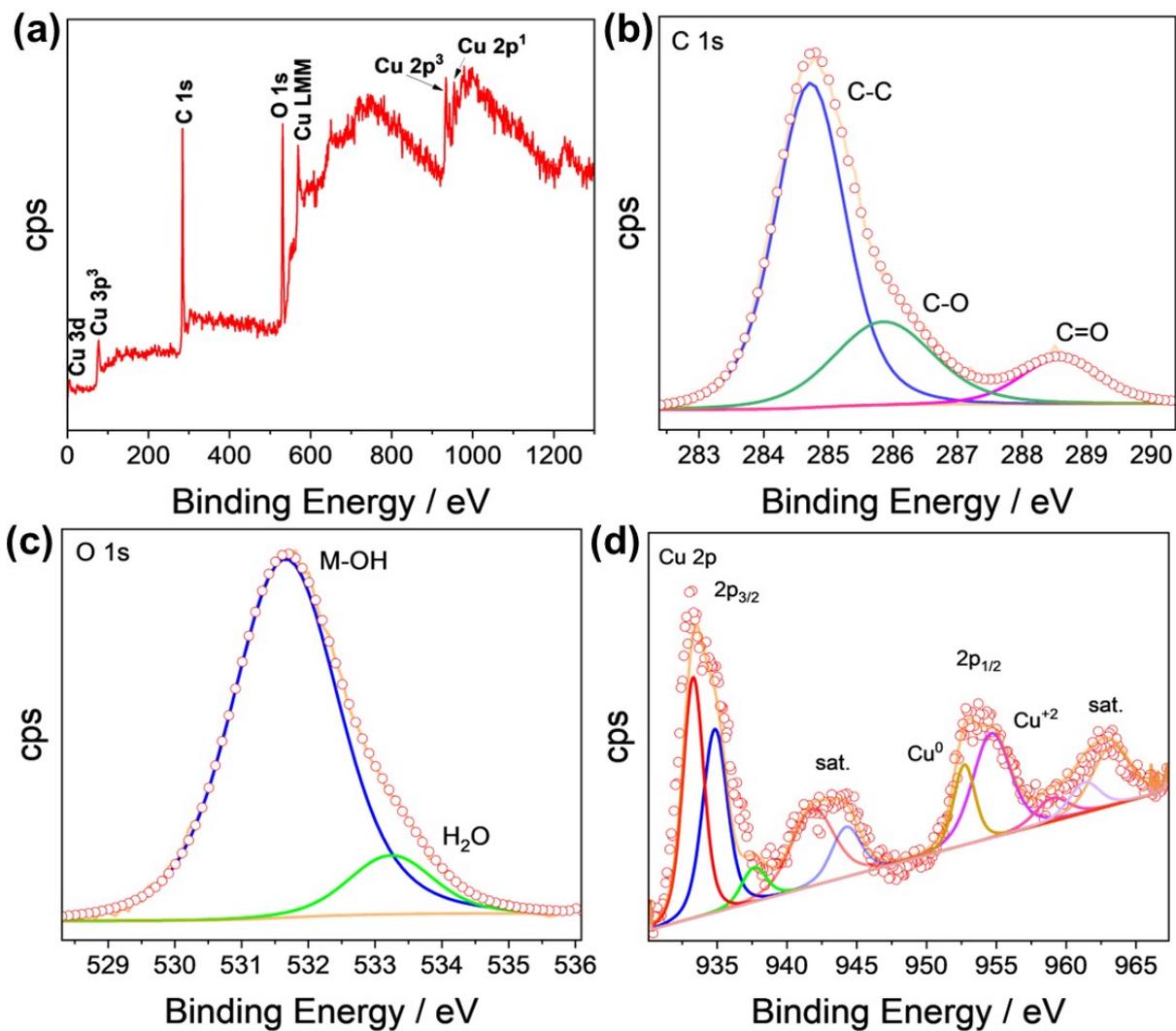
**Figure S5:** (a-d) FESEM images of anodized electrode at 28 °C after stability study.



**Figure S6:** Post stability TEM image of the same (a), inset of (b) shows SAED pattern of the same. The corresponding HRTEM images of anodized electrode at 28 °C (b-d).



**Figure S7:** Post stability FESEM image of anodized electrode at 28 °C (a), corresponding elemental colour maps of (b-d), where (b) is the merged maps of both O (c) and Cu (d).



**Figure S8:** Post stability XPS survey scan (a) of the electrode anodized at room temperature along with the narrow scans of C 1s (b), O 1s (c), Cu 2p (d) for electrode anodized at 28 °C.