

**Supplementary Material for “Pulsed Laser Deposition of Delafossite Oxide Thin Films on
YSZ (001) Substrates as Solar Water Splitting Photocathodes”**

Chenyu Zhou¹, Atiya Banerjee¹, Esteban Luis Fornero², Zhaoyi Xi^{1,3}, Xiao Tong,¹ Eli Stavitski⁴,
Xiaohui Qu¹, Sara E. Mason¹, Dario J. Stacchiola¹, Mingzhao Liu¹

¹Center for Functional Nanomaterials, Brookhaven National Laboratory, Upton, New York 11973,
United States

²Instituto de Desarrollo Tecnológico para la Industria Química, UNL-CONICET, Güemes 3450,
3000 Santa Fe, Argentina

³Department of Materials Science and Chemical Engineering, Stony Brook University, Stony
Brook, New York 11794, United States

⁴National Synchrotron Light Source II, Brookhaven National Laboratory, Upton, New York
11973, United States

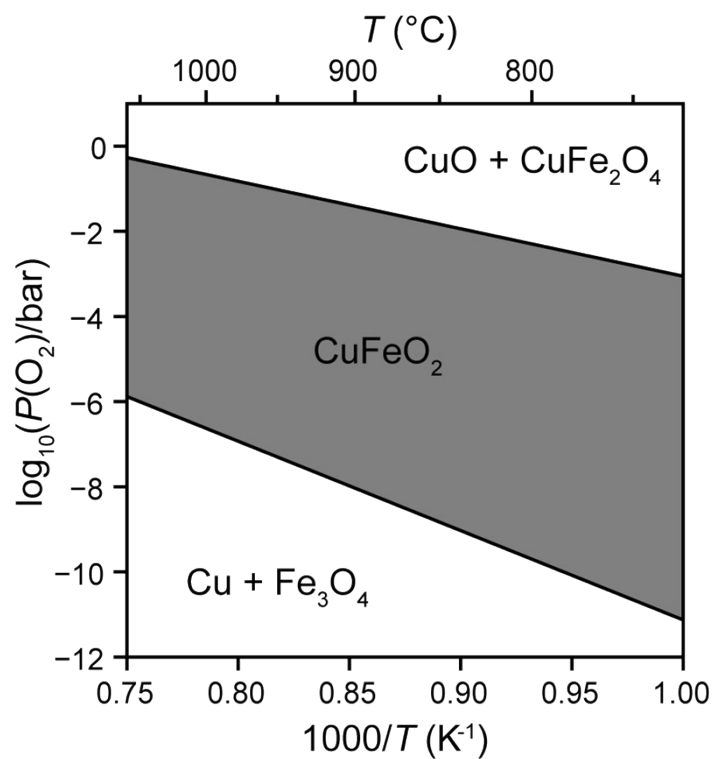


Figure S1. Ellingham diagram of the Cu-Fe-O system, recreated using thermodynamics data obtained from Ref. ¹.

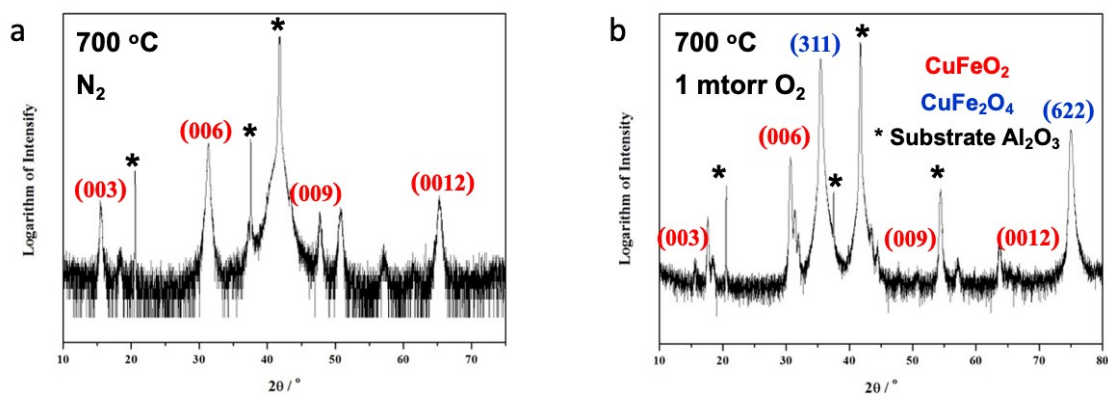


Figure S2. XRD patterns of $\text{CuFeO}_2/\text{Al}_2\text{O}_3$ (0001) thin films deposited at $700\text{ }^\circ\text{C}$ in (a) nitrogen and (b) oxygen atmospheres.

References

1. Stöcker, T.; Moos, R., *Materials* 2018, **11**, 1888.