

Supporting Information

Galvanic Displacement-Derived CuOx-Pt/Cu for *Operando*-Activation and Enhanced HER in Acid

Pracheta Trivedi,^a Sandeep Yadav,^a Neha Clare Minj,^a Balakumaran Kamaraj,^a Sneha Mittal,^a Shivani Saraswat,^a Natarajan Subramanian,^{b*} and Anantharaj Sengeni^{a*}

^aLaboratory for Electrocatalysis and Energy, Department of Chemistry, Indian Institute of Technology, Kanpur 208 016, Uttar Pradesh, India

^bElectroplating and Electrometallurgy Division, CSIR-Central Electrochemical Research Institute (CECRI),

* Correspondence should be addressed to: snatarajan.cecra@csir.res.in and ananths@iitk.ac.in

Summary of Contents

S. No	Content	Quantity / Page Number(s)
1	Pages	5 (S1-S5)
2	Figures	4 (Figure S1 – Figure S4)
3	Tables	0

Table of Contents

S. No.	Item	Pages
1	Figure S1: SEM-based ED spectra	S2
2	Figure S2: TEM image with particle size distribution histogram	S3
3	Figure S3: TEM-based ED spectra	S4
4	Figure S4: SAED patterns	S5

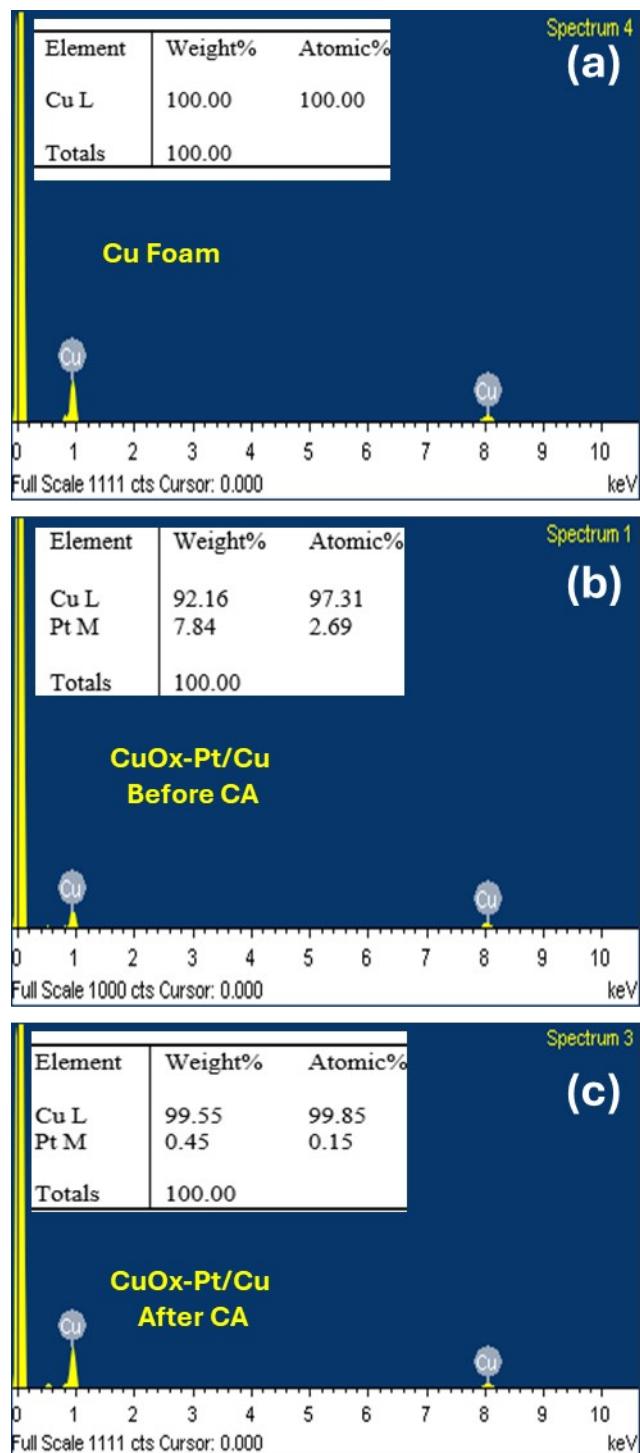


Figure S1: SEM-ED spectra of Cu foam (a) and CuO_x-Pt/Cu before (b) and after (c) CA.

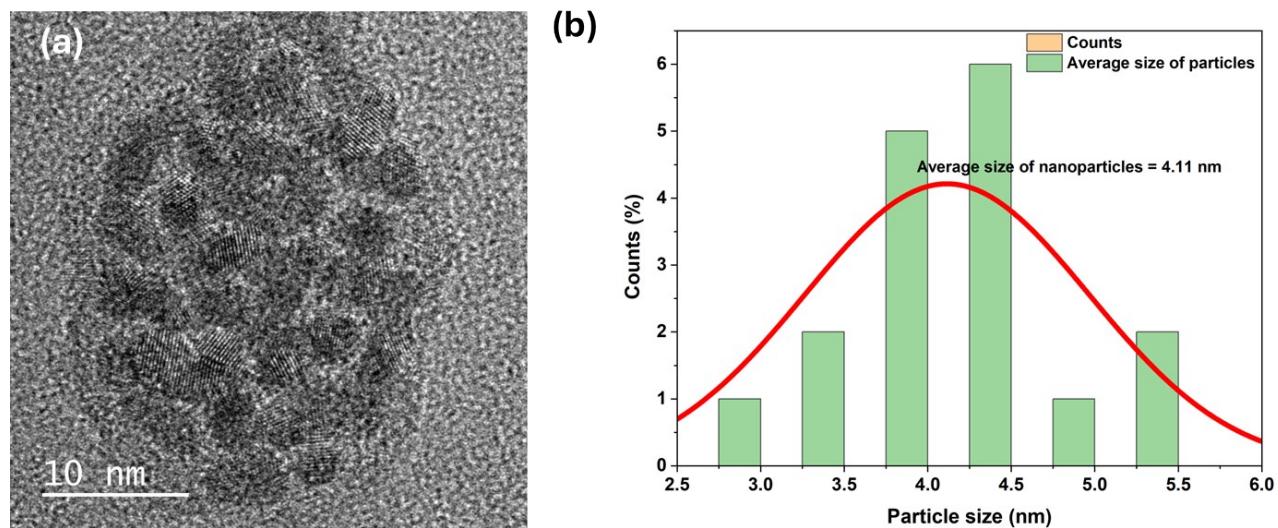


Figure S2: TEM image of the surface constituent of $\text{CuO}_x\text{-Pt/Cu}$ before CA (a) with its particle size distribution histogram (b) as measured using ImageJ.

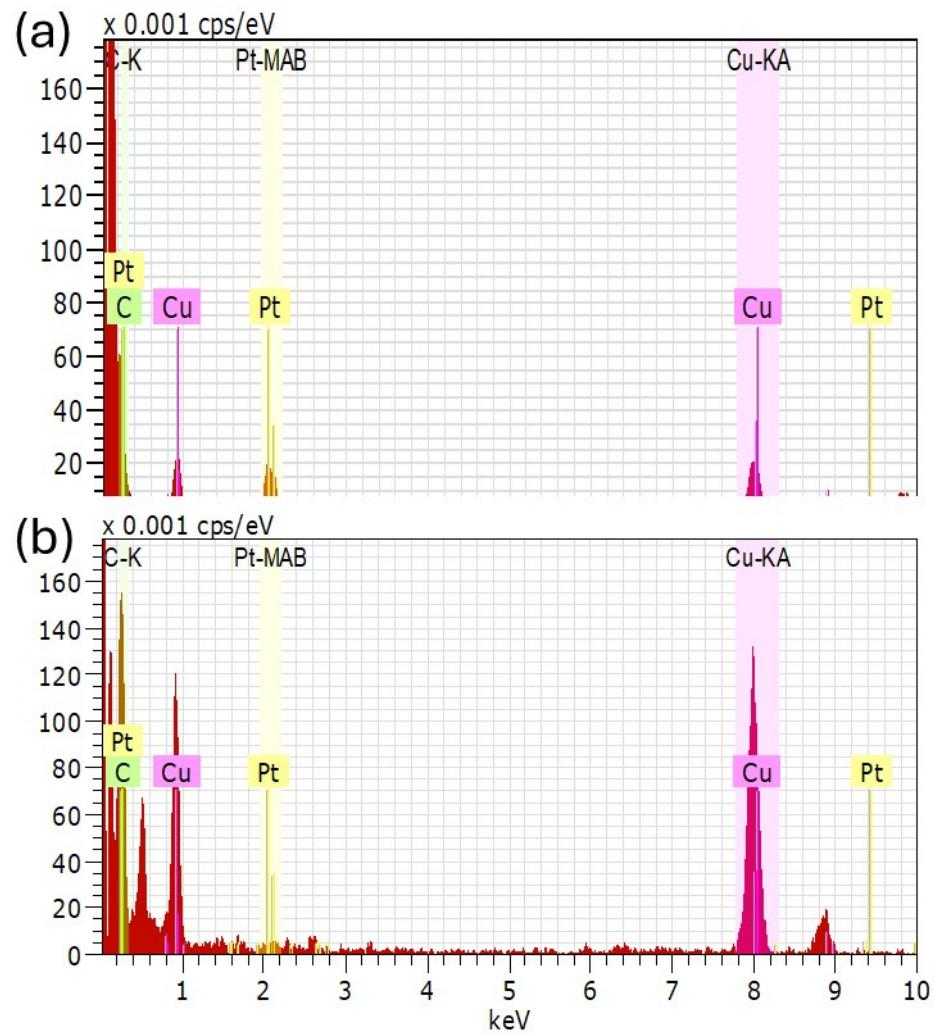


Figure S3: STEM-mode EDS spectra of the surface constituents of $\text{CuO}_x\text{-Pt/Cu}$ before CA (a) and after CA (b).

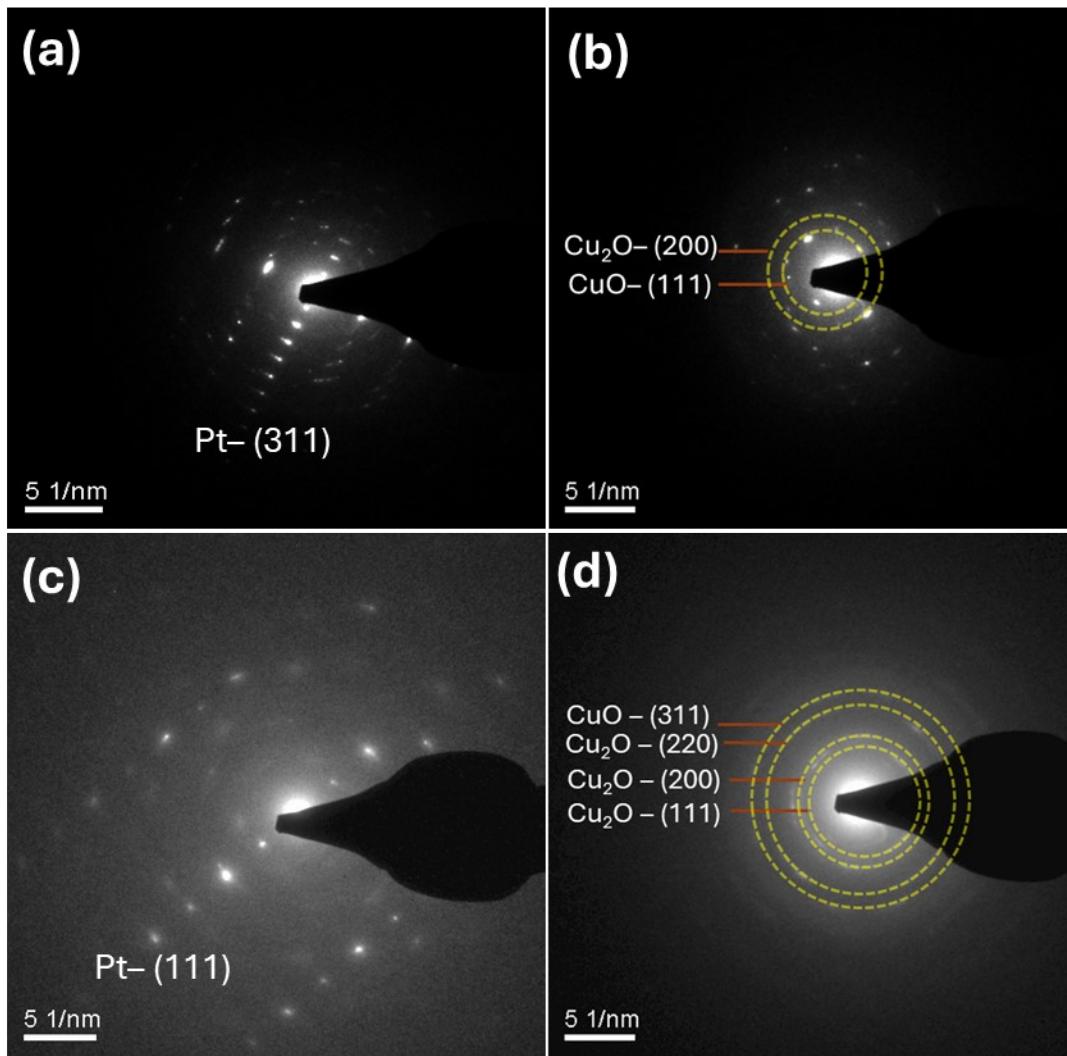


Figure S4: TEM-based SAED patterns of the surface constituents of CuO_x-Pt/Cu before CA (a-b) and after CA (c-d), in which (a) and (c) are of the Pt NPs and (b) and (d) are of CuO/Cu₂O nanosheets.