Supporting Information

Assessment of Electrocatalytic Activity through the Lens of Three Surface Area Normalization Techniques

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Figure S1 SEM image of pristine CFP at lower magnification.



Figure S2 TGA and DSC curves of pristine CFP.



Figure S3 Electrochemical current of CFP electrodes for HER (a) and OER (b).



Figure S4 Electrochemical impedance spectra for CFP electrodes.

Samples	C=O		С–О		O=C-O		Percentages
	Position	Area	Position	Area	Position	Area	C=O
	(eV)		(eV)	Inca	(eV)		0.0
CFP	531.48	2549.92	533.06	4431.25	534.84	786.43	32.8%
CFP-400	531.36	5766.88	533.41	7272.16	535.73	1387.43	40.0%

Volume absorbed (cm³ g⁻¹) $\widehat{\odot}$ (C) 180 Volume absorbed (cm³ g⁻¹) $\tilde{\otimes}$ 5 16 Volume absorbed ($cm^3 g^{-1}$) 160 CFP-250 CFP CFP-300 4 140 12 A CONTRACTOR OF STREET, STREET 120 3 100 8 2 80 60 4 40 0 20 0.2 0.4 0.6 0.8 Relative pressure (P/P₀) 0.0 0.2 0.4 0.6 1.0 0.0 0.2 0.4 0.6 0.8 1.0 0.0 1.0 0.8 Relative pressure (P/P₀) Relative pressure (P/P₀) (e) Volume absorbed (cm³ g⁻¹) B160 120 CFP-400 CFP-350 100 80 60 40 20 0.0 0.2 0.4 0.6 0.8 1.0 0.0 0.2 0.4 0.6 0.8 1.0 Relative pressure (P/P_o) Relative pressure (P/P₀)

Figure S5 Nitrogen adsorption-desorption isotherms for CFP electrodes.

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Table S1 Deconvolution results for XPS C 1s spectra of CFP electrodes.



Figure S6 CV curves with different scan rates: (a) pristine CFP, (b) CFP-250, (c) CFP-300, (d) CFP-350, and (e) CFP-400. (f) Current density as a function of scan rate from CV curves.



Figure S7 Chronopotentiometry durability measurements (without *iR*-correction) of CFP and CFP-400 for OER at a constant current density of 10 mA cm⁻².



Figure S8 SEM images before and after long-term OER testing: (a, b) CFP and (c, d) CFP-400.