

Figure S1. SEM images and the corresponding diameter distribution of nanofibers calcined at 650 °C for 3h: (a, b) CC, (c, d) CCF0.063, (e, f) CCF0.125 and (g, h) CCF0.25.

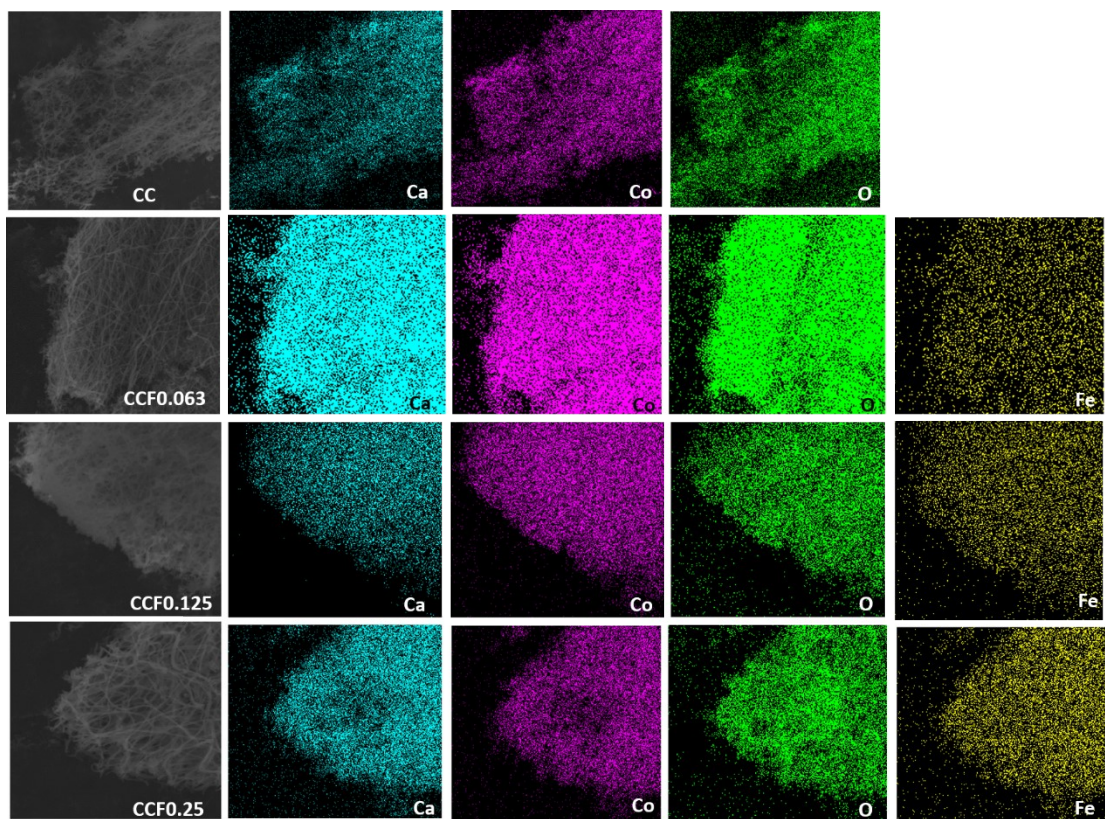


Figure S2. SEM images and corresponding EDX mapping of Ca, Co, Fe and O in CC, CCF0.063, CCF0.125 and CCF0.25.

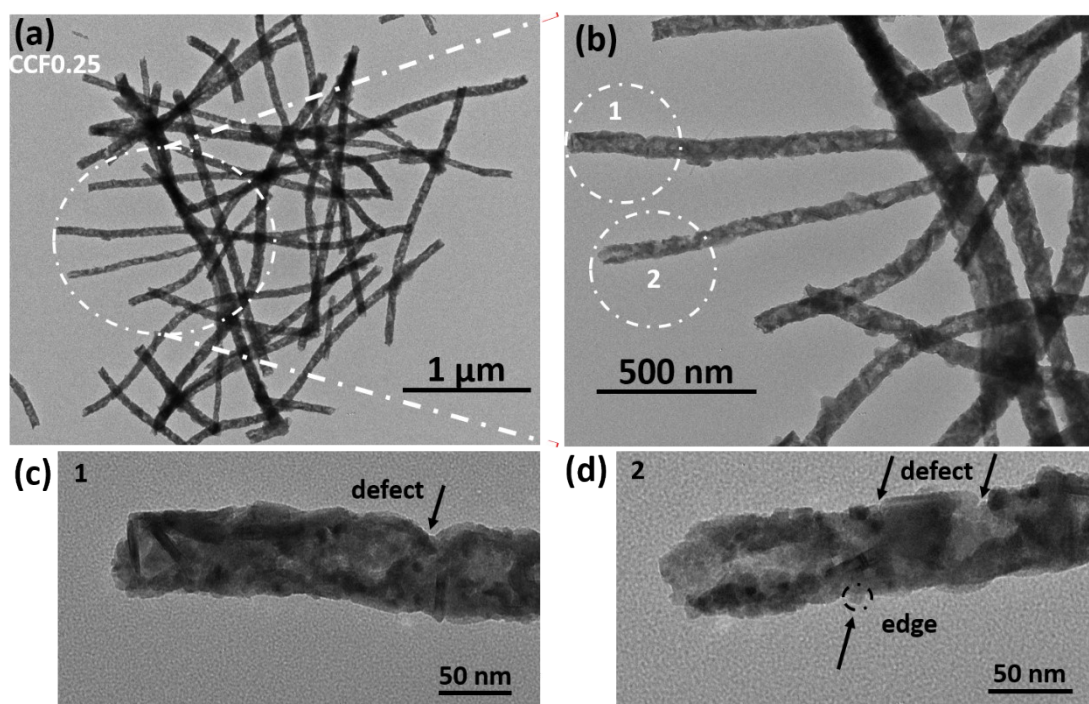


Figure S3. HRTEM image of CCF0.25, (b-d) are enlarged images of (a).

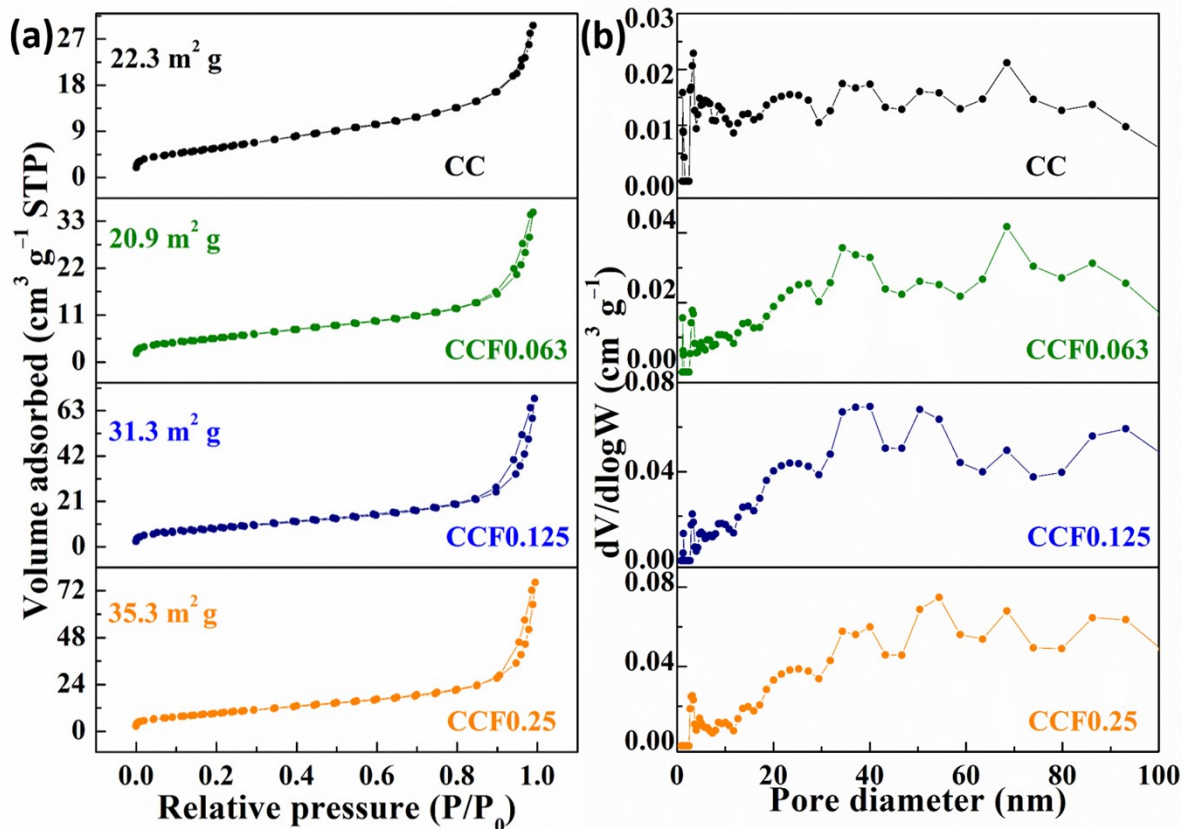


Figure S4. (a) N₂ adsorption and desorption isotherm and (b) the pore size distribution of CC, CCF0.063, CCF0.125 and CCF0.25.

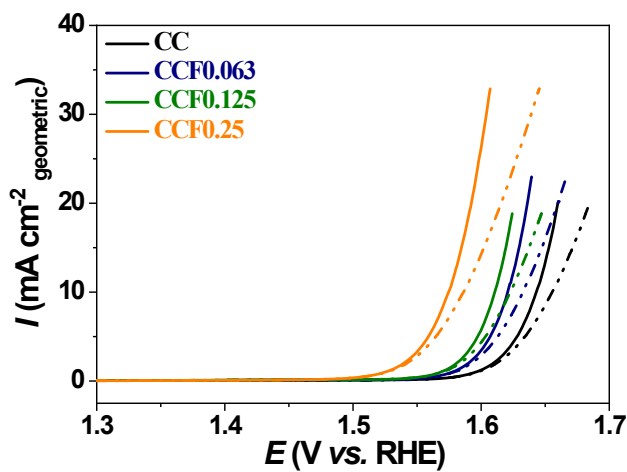


Figure S5. Original (dash dot dot lines) and iR -corrected (solid lines) OER LSV curves of CC, CCF0.063, CCF0.125 and CCF0.25 nanofibers.

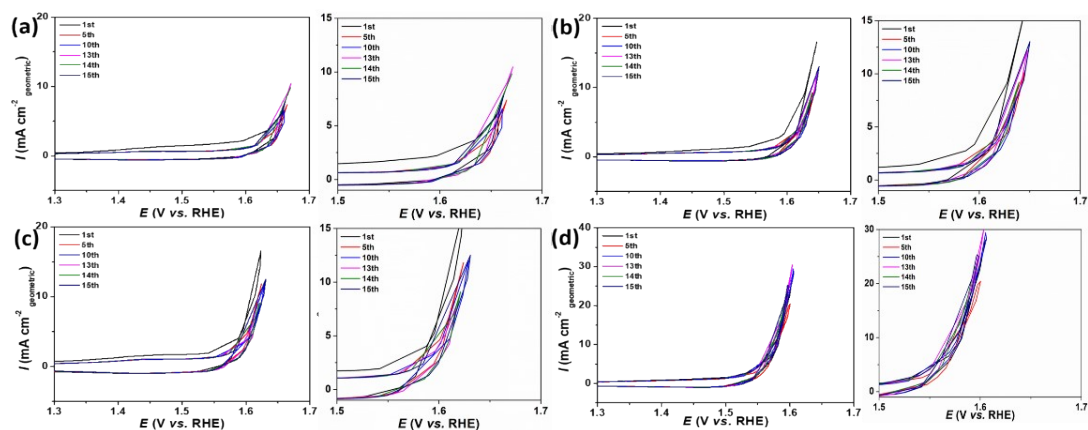


Figure S6. CV curves of the electrocatalysts in 1 M KOH at 100 mV s^{-1} with a rotation rate of 1,600 rpm: (a) CC, (b) CCF0.063, (c) CCF0.125 and (d) CCF0.25.

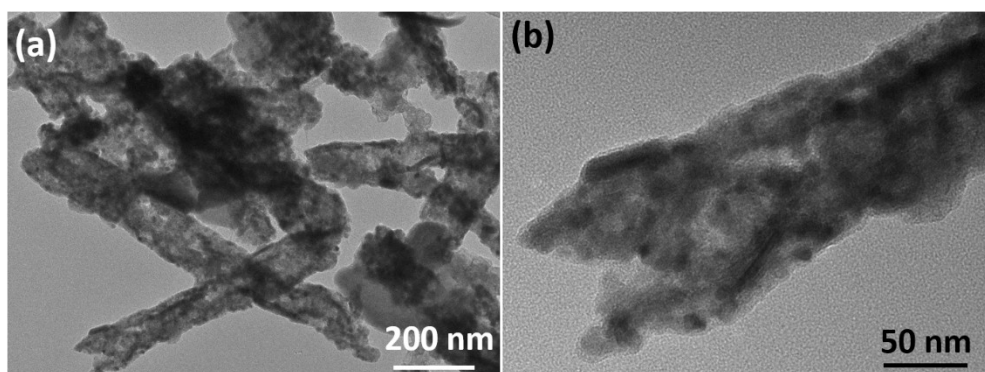


Figure S7. TEM images of the CCF0.25 nanofibers after stability test for 12 h.

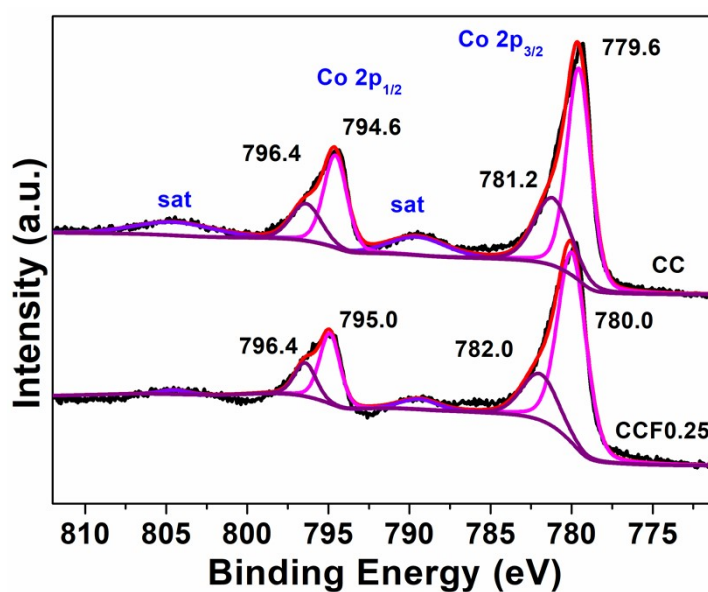


Figure S8. High-resolution XPS spectra of Co 2p.

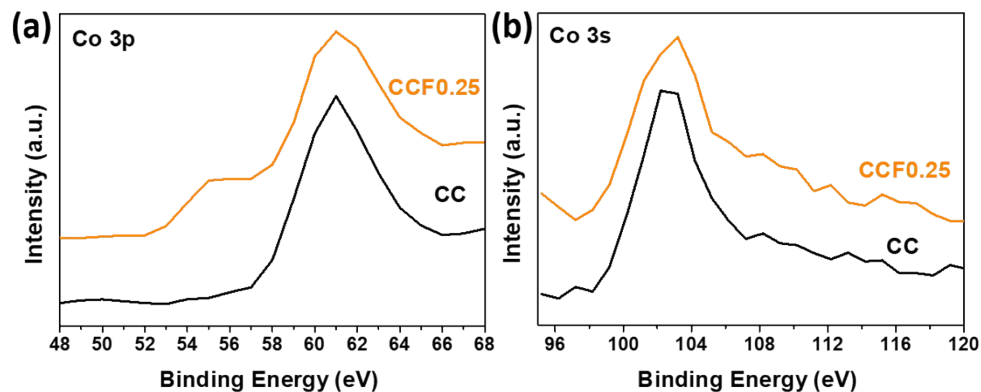


Figure S9. XPS spectra of (a) Co 3p and (b) Co 3s in the CC and CCF0.25.

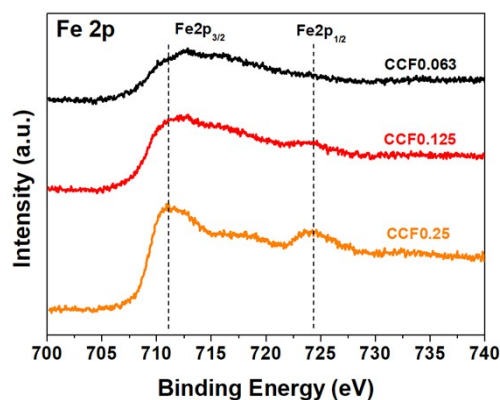


Figure S10. XPS spectra of Fe 2p in the CC, CCF0.063, CCF0.125 and CCF0.25.

Table S1 elemental proportion of Co and Fe in CC, CCF0.063, CCF0.125 and CCF0.25

Samples	SEM mapping/at. %	
	Co	Fe
CC	1	/
CCF0.063	0.936	0.064
CCF0.125	0.877	0.123
CCF0.25	0.746	0.254

Table S2. Detailed parameters of the electrocatalysts in our work

Catalyst	$\eta@10 \text{ mA cm}^{-2}$ (mV)	Tafel slope (mV dec ⁻¹)	R_{ct} ($\Omega \text{ cm}^2$)	mass activity (A g ⁻¹)	Intrinsic activity (A m ⁻²)
CC	410	40.1	20.4	6.58	0.30
CCF0.063	390	40.2	10.6	18.1	0.88
CCF0.125	380	40.1	5.6	28.0	0.90
CCF0.25	346	39.3	2.1	129.9	3.71

Table S3. Comparison of OER properties over different catalysts in basic solution

Catalyst	Electrode collector	Electrolyte	$\eta@10$ mA cm ⁻² (mV)	Tafel slope (mV dec ⁻¹)	Mass loading (mg cm ⁻²)	Reference
CCF0.25	Glassy carbon (GC)	1 M KOH	346	39.3	0.202	This work
ELCMO	GC	1 M KOH	329	33.8	0.4	<i>Adv. Energy Mater.</i> , 2019 , 1803482
CoZn-Se	GC	1 M KOH	320	66	0.19	<i>ACS Nano</i> , 2019 , 13, 5, 5635-5645
La _{1-x} Ce _x CoO ₃	GC	1 M NaOH	380	80	0.734	<i>Nanoscale</i> , 2021 , 13, 9952
{Cu ₂ SiW ₁₂ O ₄₀ }@HKUST-1	GC	1 M KOH	340	73	-	<i>J. Mater. Chem. A</i> , 2021 , 9, 13161
Co-MoOx	GC	1 M KOH	340	49	0.28	<i>J. Mater. Chem. A</i> , 2019 , 7, 1005
CoNi-NS/rGO	GC	1 M KOH	330	62	0.48	<i>Energy Storage Mater.</i> , 2019 , 16, 24
Ru/RuO ₂ on La _{0.9} Fe _{0.92} Ru _{0.08} O _{3-δ}	GC	1M KOH	380	39	0.255	<i>Chem Eng J</i> , 2021 , 418, 129422
Fe@N-CNT/HMCS	GC	1 M KOH	350	76	1.0	<i>Appl. Catal., B</i> , 2019 , 243, 151
Ni-MOF@CNT	GC	1 M KOH	370	138.2	-	<i>Appl. Catal., B</i> , 2021 , 285, 119793