

Supporting information

Incorporated O-CoP nanosheets with an O-P interpenetrated interface as electrocatalytic cathodes for rechargeable Li-CO₂ batteries

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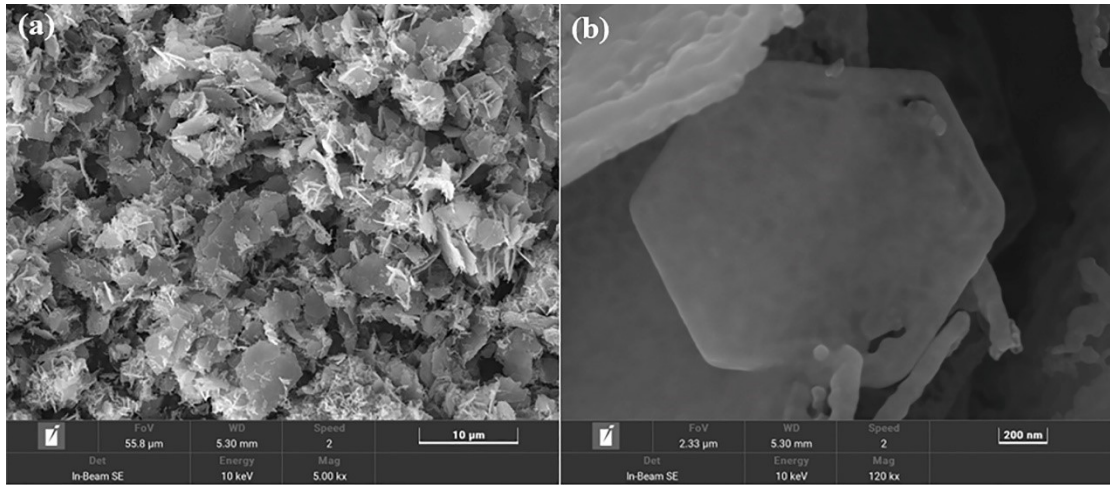


Fig. S1 The SEM images of O-CoP-2h nanosheets.

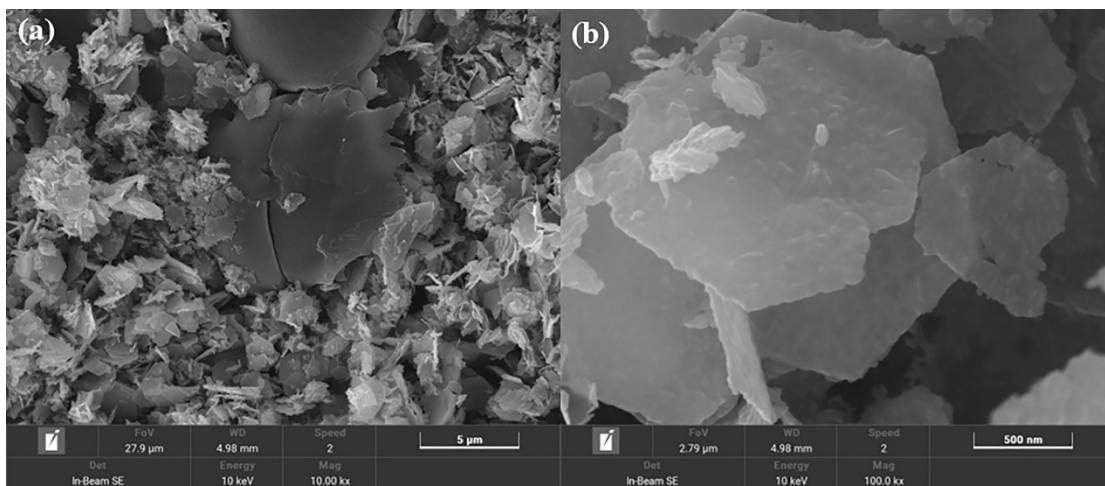


Fig. S2 The SEM images of O-CoP-4h nanosheets.

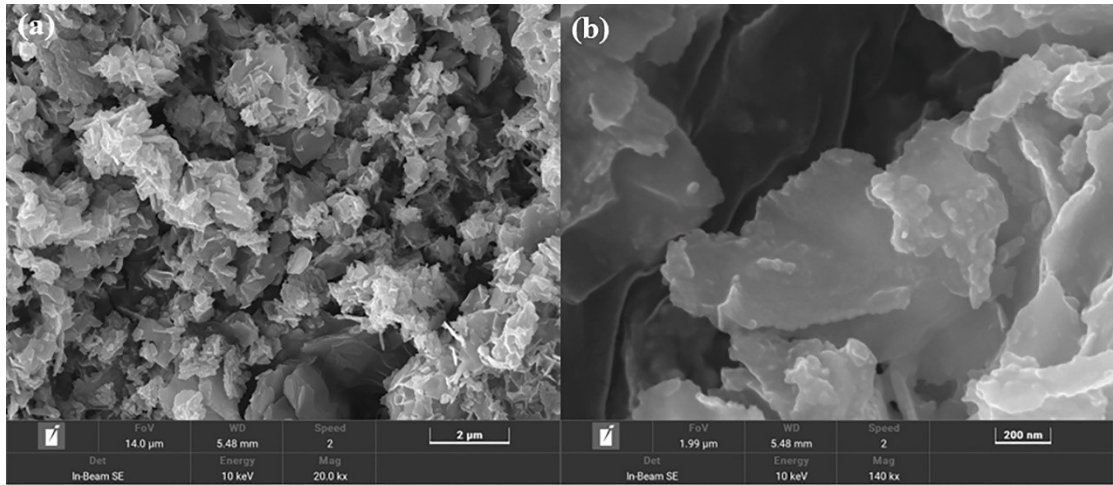


Fig. S3 The SEM images of O-CoP-5h nanosheets.

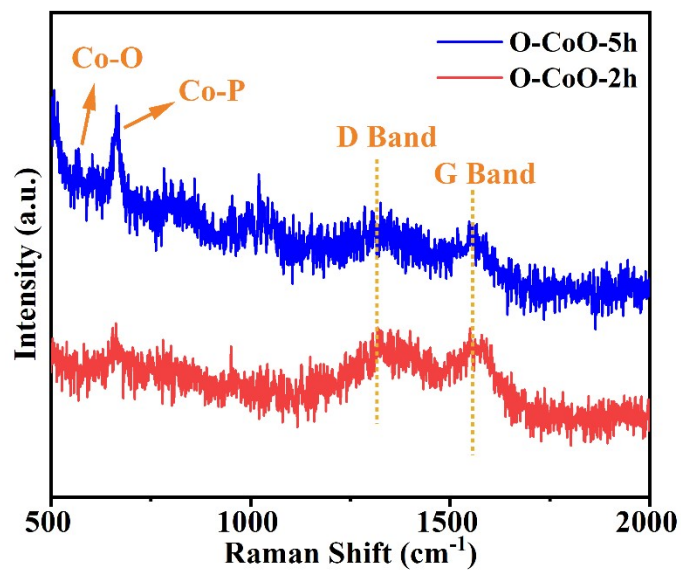


Fig. S4 The Raman tests of O-CoP at different calcination time. It can be seen from the figure that when the calcination time is increased, an obvious characteristic peak at 566 cm⁻¹ will appear, which belongs to the Co-O peak, compared with the short-time calcination. This change corroborates that the calcination time can promote the construction of Co-O bonds.

Table S1. Performance comparison of typical reported cathode catalysts for Li-CO₂ batteries.

Cathode	Current density (mA g ⁻¹)	Capacity (mAh g ⁻¹)	Total usage of active substance	Cycling stability	Ref.
MnOOH	300	~7300	0.3 mg	138	[1]
W ₂ C-CNTs	100	10632	0.34 mg	75	[2]
RuO ₂ /CoSnO ₃	100	6000	2 mg	140	[3]
NiO	100	11231	0.4 mg	159	[4]
Ti ₃ C ₂ -CNT	200	11458	~0.5 mg	100	[5]
Ru(bpy) ₃ Cl	200	22119	~0.13 mg	60	[6]
Cu ₂ O	100	6235	~0.5mg	50	[7]
IrO ₂ -CNT	100	4634	~0.2 mg	316	[8]
COFs	100	1000	0.15 mg	30	[9]
MnO	50	25000	0.3 mg	15	[10]
Mn-CeO₂@PPy	100 mA/g	13500	~0.35 mg	>50	This work

Supplementary references

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