

Figure. S1 SEM images of Co-MOF nanocubes at different magnifications.

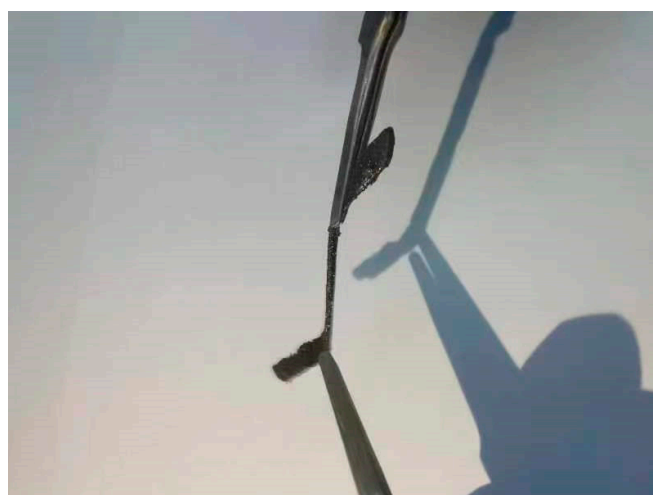


Figure. S2 Digital images of CoO@rGO films ;

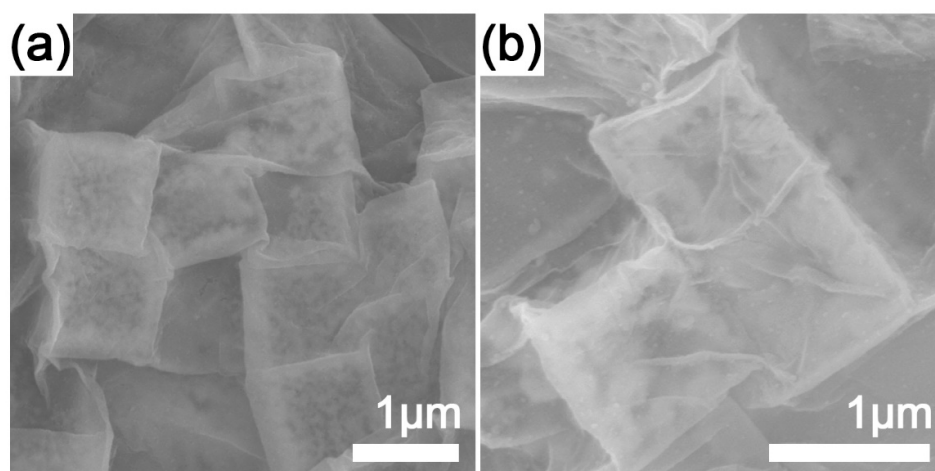


Figure. S3 SEM images of hollow porous CoO@rGO flexible film

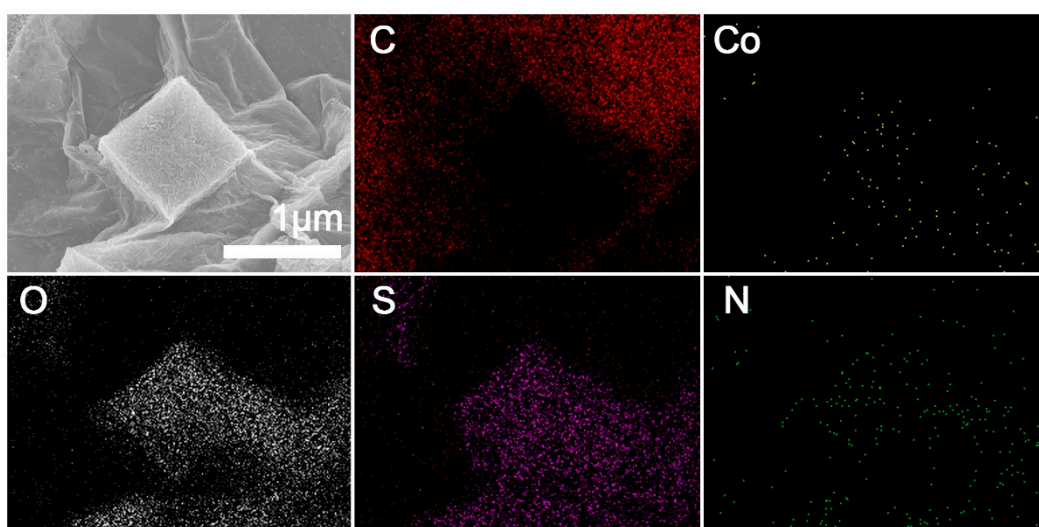


Figure. S4 EDS analysis of the hollow porous CoO@rGO flexible film.

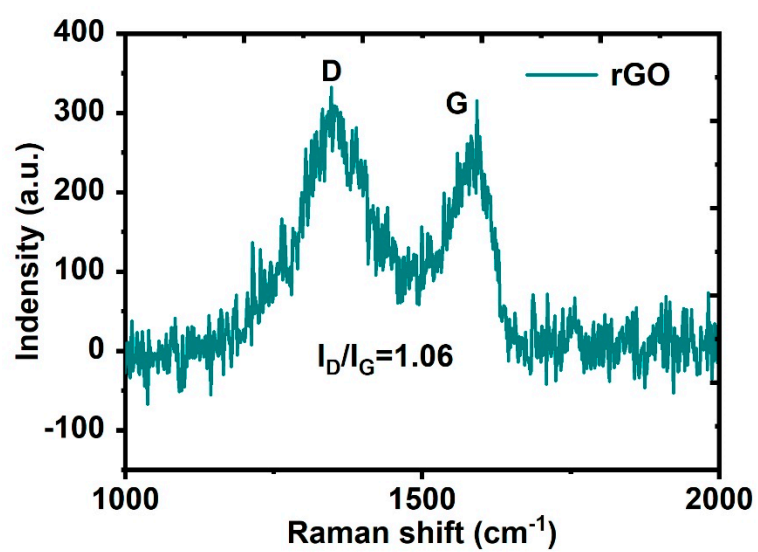


Figure. S5 Raman spectra of rGo flexible film.

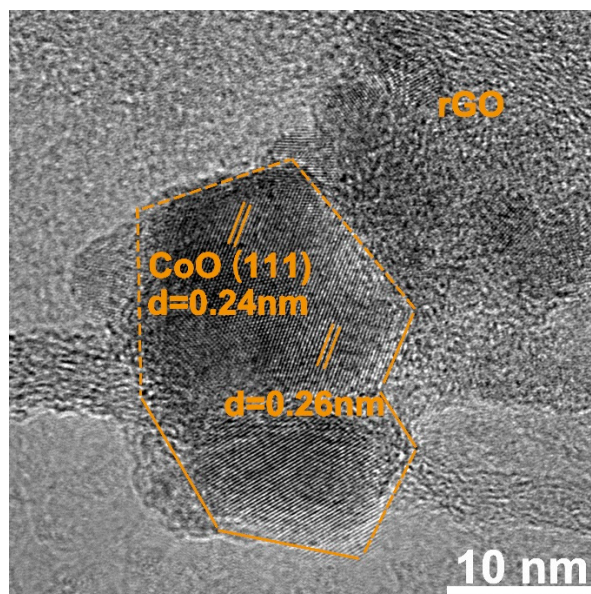


Figure. S6 HRTEM image of Co-MOF@rGO

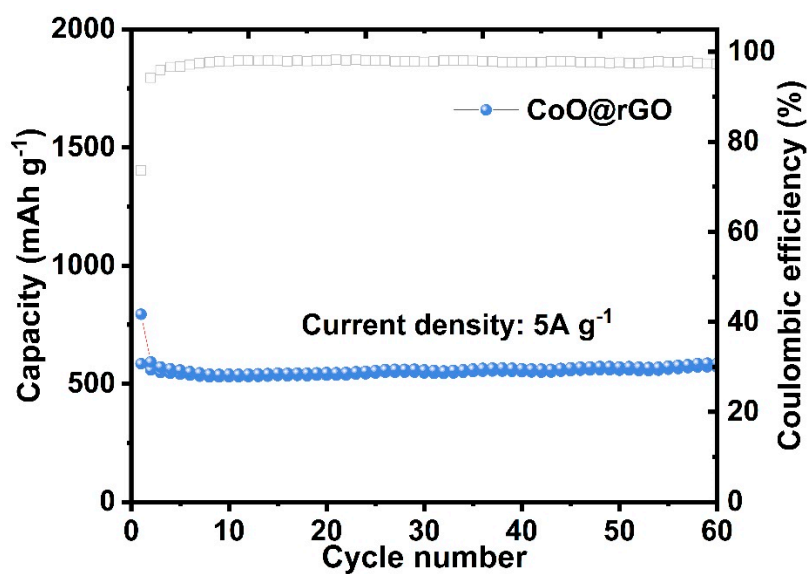


Figure. S7 Cycling performance at 5 A g⁻¹ of CoO@rGO flexible film for LIBs

Table S1 Comparison of electrochemical performances for this work.

Electrode	Current density (mA g ⁻¹)	specific capacity (mAh g ⁻¹)	Cycle number (cycles)	Coulombic efficiency (%)
CoO	1000	483	600	99.7
rGO	1000	155	600	99.7
CoO@rGO	1000	1103	600	99.1

CoO@rGO	5000	586	60	97.2
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Table S2 Test conditions and electrochemical performances of Co-based LIBs anodes.

Electrode	Current density (mA g ⁻¹)	specific capacity (mAh g ⁻¹)	Cycle number (cycles)	reference
CoO hollow spheres	100	584	50	1
CoO octahedral nanocages	200	807	50	2
Core-shell Co@CoO	50	800	50	3
Co ₃ O ₄ Nps	50	817	30	4
Co ₃ O ₄ nanocages	50	970	30	5
Co ₃ O ₄ @graphene	200	941	60	6
MWCNTs/Co ₃ O ₄	1000	514	100	7
Carbon-doped Co ₃ O ₄	200	1121	100	8
Hollow Co ₃ O ₄ /N,S-rGO	1000	1590	60	9
Co ₃ O ₄ /CuO nanowire	1000	810	500	10
CoO/CoFe ₂ O ₄	1000	603	100	11
SiO _x @C@CoO	1000	714	750	12
This work	1000	1103	600	
	5000	586	60	

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