

Supporting Information

Porous carbon with large surface area derived from metal-organic framework as a lithium-ion battery anode material

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Table S1 Crystal data and structure refinement for Cd-MOF.

Empirical formula	C ₆₀ H ₄₈ Cd ₃ N ₂ O ₂₂ *
Formula weight	1486.23
Crystal system	Orthorhombic
Space group	F d d d
<i>a</i> (Å)	16.8213(16)
<i>b</i> (Å)	41.992(4)
<i>c</i> (Å)	49.548(4)
α (°)	90
β (°)	90
γ (°)	90
<i>V</i> (Å ³)	34999(5)
<i>Z</i>	16
ρ_{calc} (g/cm ³)	1.221
<i>F</i> (000)	12928
μ (mm ⁻¹)	6.359
Reflections collected	6218
GOF	1.095
<i>R</i> ₁ , <i>wR</i> ₂ indices [<i>I</i> > 2 σ (<i>I</i>)]	0.0651, 0.1895
<i>R</i> ₁ , <i>wR</i> ₂ indices (all data)	0.0764, 0.2029

*Distorted water molecules were calculated by PLATON/SQUEEZE program and confirmed by EA and TGA, which is not shown in final formula in CIF files.

Table S2 Selected bond lengths (Å) and bond angles (°) for Cd-MOF.

Cd-MOF			
Cd(2)-O(6)#1	2.202(10)	O(6)#1-Cd(2)-O(6)#2	180.0
Cd(2)-O(6)#2	2.202(10)	O(6)#1-Cd(2)-O(9)#3	90.7(4)
Cd(2)-O(9)#3	2.264(12)	O(6)#2-Cd(2)-O(9)#3	89.3(4)
Cd(2)-O(9)#4	2.264(12)	O(6)#1-Cd(2)-O(9)#4	89.3(4)
Cd(2)-O(5)	2.319(8)	O(6)#2-Cd(2)-O(9)#4	90.7(4)
Cd(2)-O(5)#5	2.381(16)	O(9)#3-Cd(2)-O(9)#4	180.0
Cd(1)-O(8)#3	2.225(10)	O(6)#1-Cd(2)-O(5)	90.5(4)
Cd(1)-O(11)	2.238(12)	O(6)#2-Cd(2)-O(5)	89.5(4)
Cd(1)-O(7)#1	2.290(9)	O(9)#3-Cd(2)-O(5)	82.2(4)
Cd(1)-O(5)	2.330(10)	O(9)#4-Cd(2)-O(5)	97.8(4)
Cd(1)-O(1W)	2.323(11)	O(6)#1-Cd(2)-O(5)#5	89.5(3)
Cd(1)-O(4)	2.346(8)	O(6)#2-Cd(2)-O(5)#5	90.5(3)
O(11)-Cd(1)-O(7)#1	89.9(5)	O(5)-Cd(2)-O(5)#5	180.0
O(8)#3-Cd(1)-O(5)	109.6(4)	O(8)#3-Cd(1)-O(11)	97.7(5)
O(8)#3-Cd(1)-O(1W)	86.1(4)	O(8)#3-Cd(1)-O(7)#1	101.7(3)

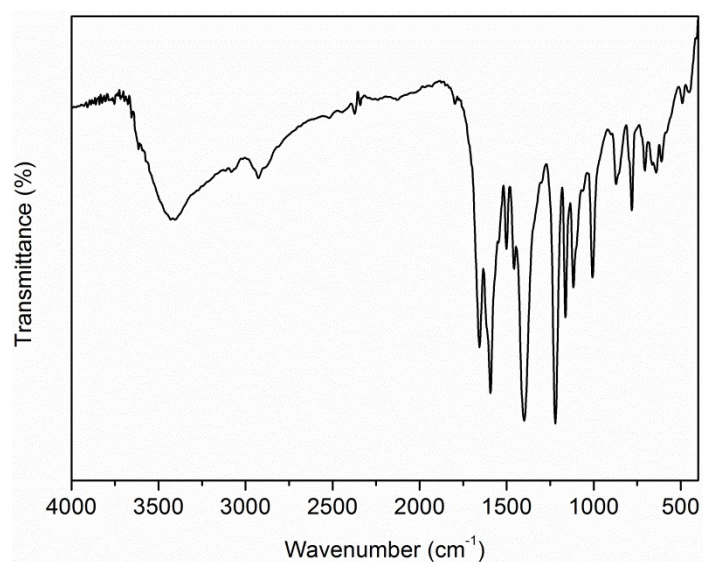


Fig. S1 IR spectra of as-synthesized Cd-MOF.

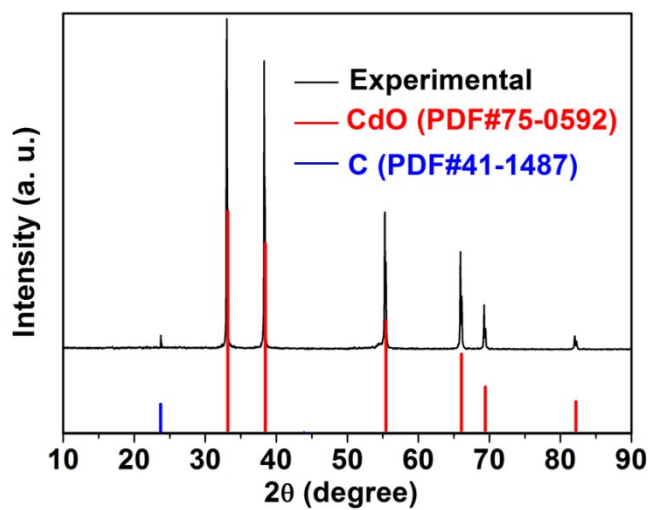


Fig. S2 PXRD pattern of the obtained product calcined under N₂ atmosphere at 800°C for 2h.

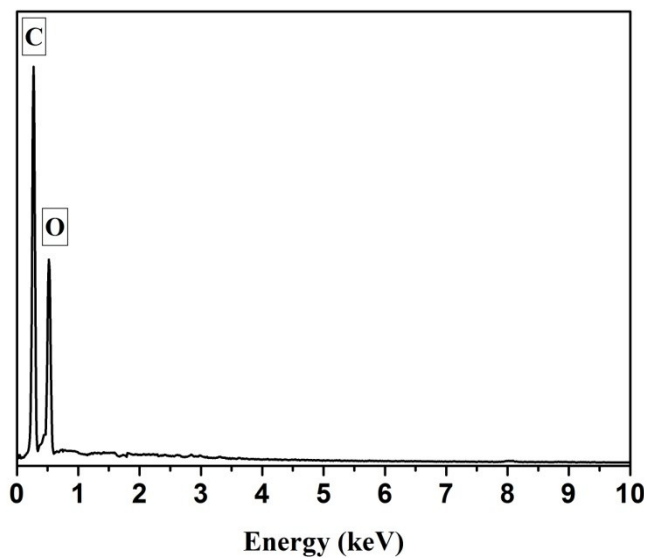


Fig. S3 EDS of the obtained carbon material.

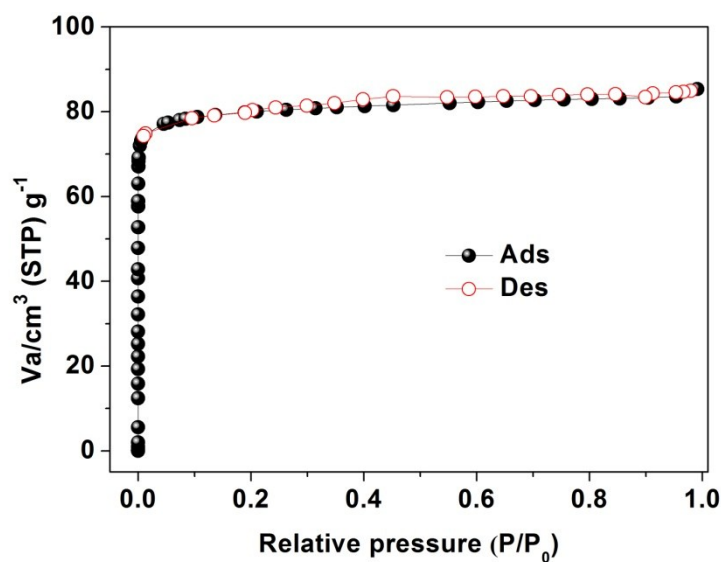


Fig. S4 Nitrogen adsorption-desorption isotherms of Cd-MOF.