Supporting Information

Bimetallic Metal-Organic Frameworks Derived Porous Carbon Nanostructure for High Performance Membrane Capacitive Desalination

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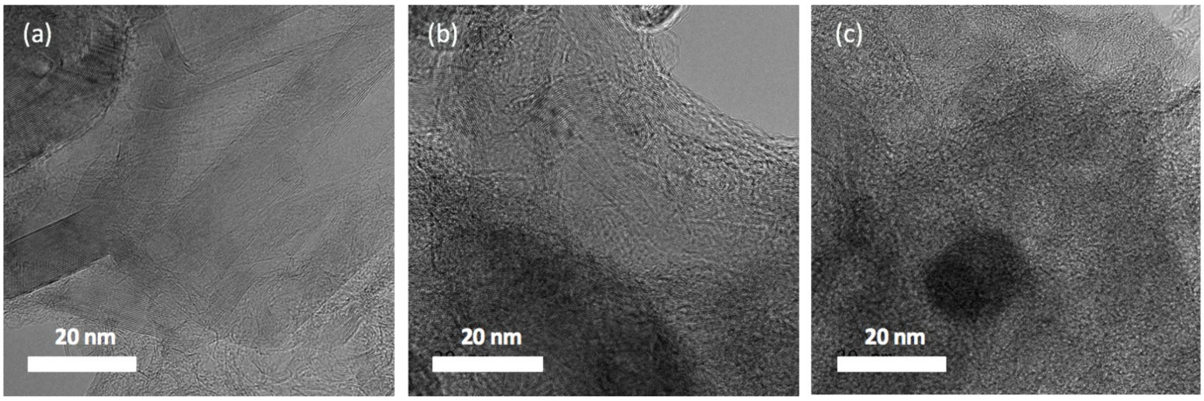

Figure S1. High resolution transmission electron microscopy (HRTEM) images of (a) PC-Co; (b) PC-ZnCo-3 and (c) Co nanoparticle enclosed by the graphitization layers.

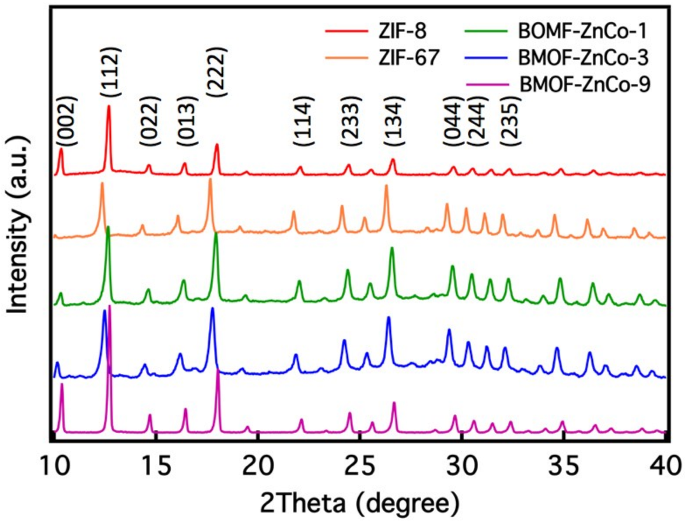

Figure S2. Powder XRD patterns of as-synthesized ZIF-8, ZIF-67, BMOF-ZnCo-1, BMOF-ZnCo-3, and BMOF-ZnCo-9 crystals.

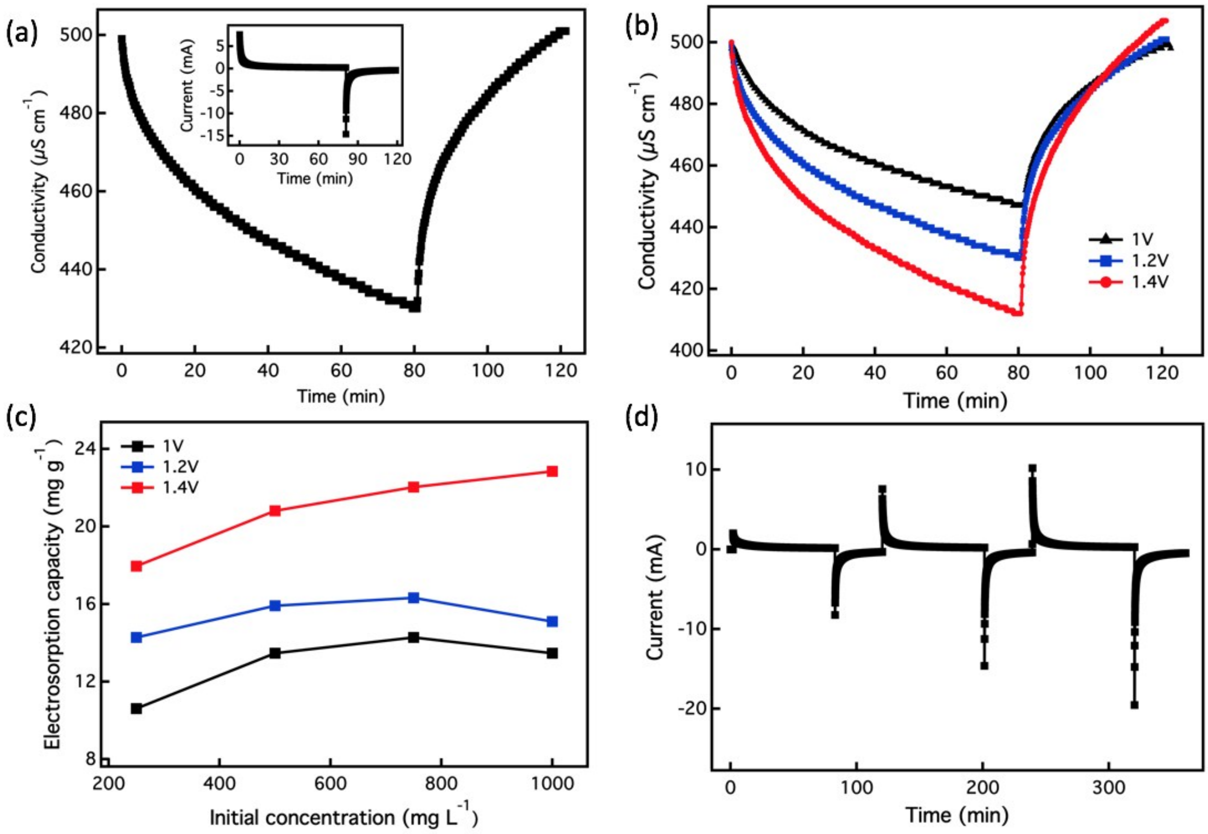

Figure S3. PC-Co electrodes' electrosorption behaviors (a) at 1.2 V in the solution with the initial concentration of 250 ppm (inset in (a): its corresponding current); (b) at voltages varying from 1 V to 1.4 V. (c) electrosorption capacity of PC-Co electrodes for different initial concentrations under 1 V to 1.4 V. (d) current transient for PC-Co electrodes in NaCl solution with the initial concentration of 250 ppm under 1 V to 1.4 V.

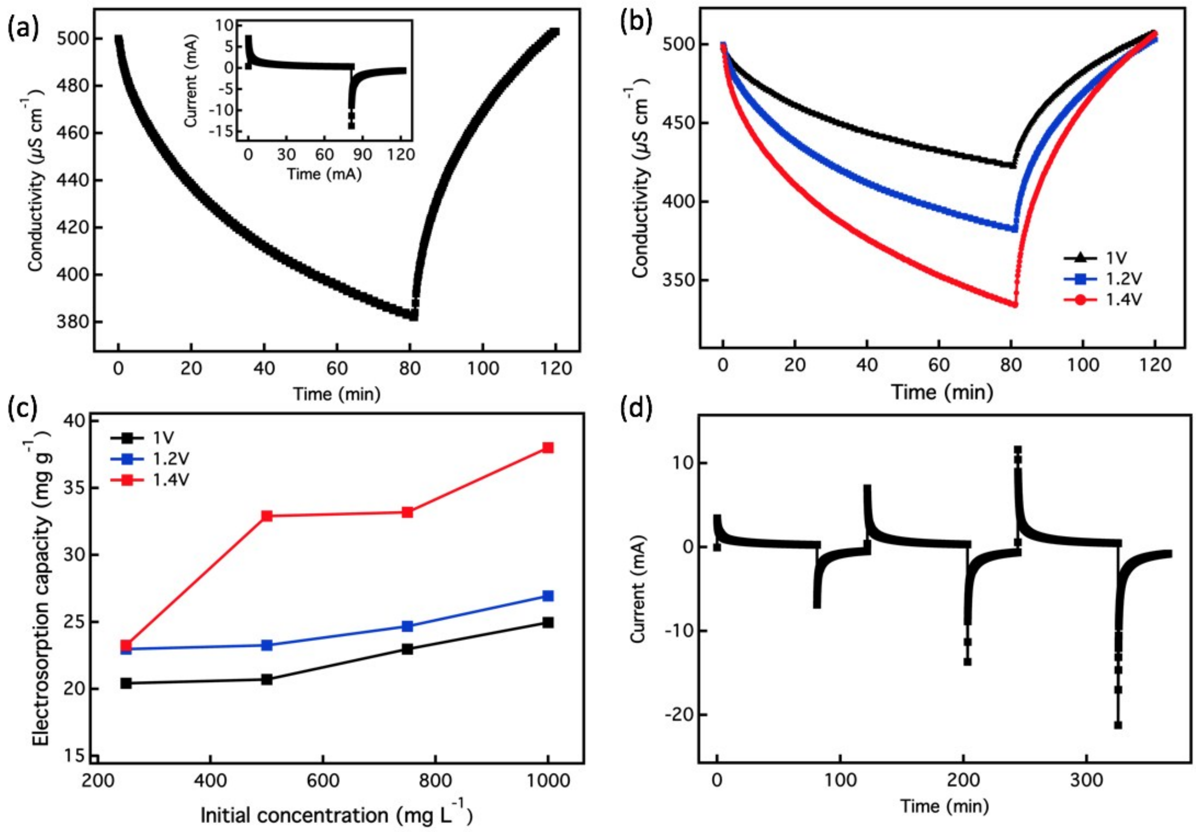

Figure S4. PC-Zn electrodes' electrosorption behaviors (a) at 1.2 V in the solution with the initial concentration of 250 ppm (inset in (a): its corresponding current); (b) at voltages varying from 1 V to 1.4 V. (c) electrosorption capacity of PC-Zn electrodes for different initial concentrations under 1 V to 1.4 V. (d) current transient for PC-Zn electrodes in NaCl solution with the initial concentration of 250 ppm under 1 V to 1.4 V.

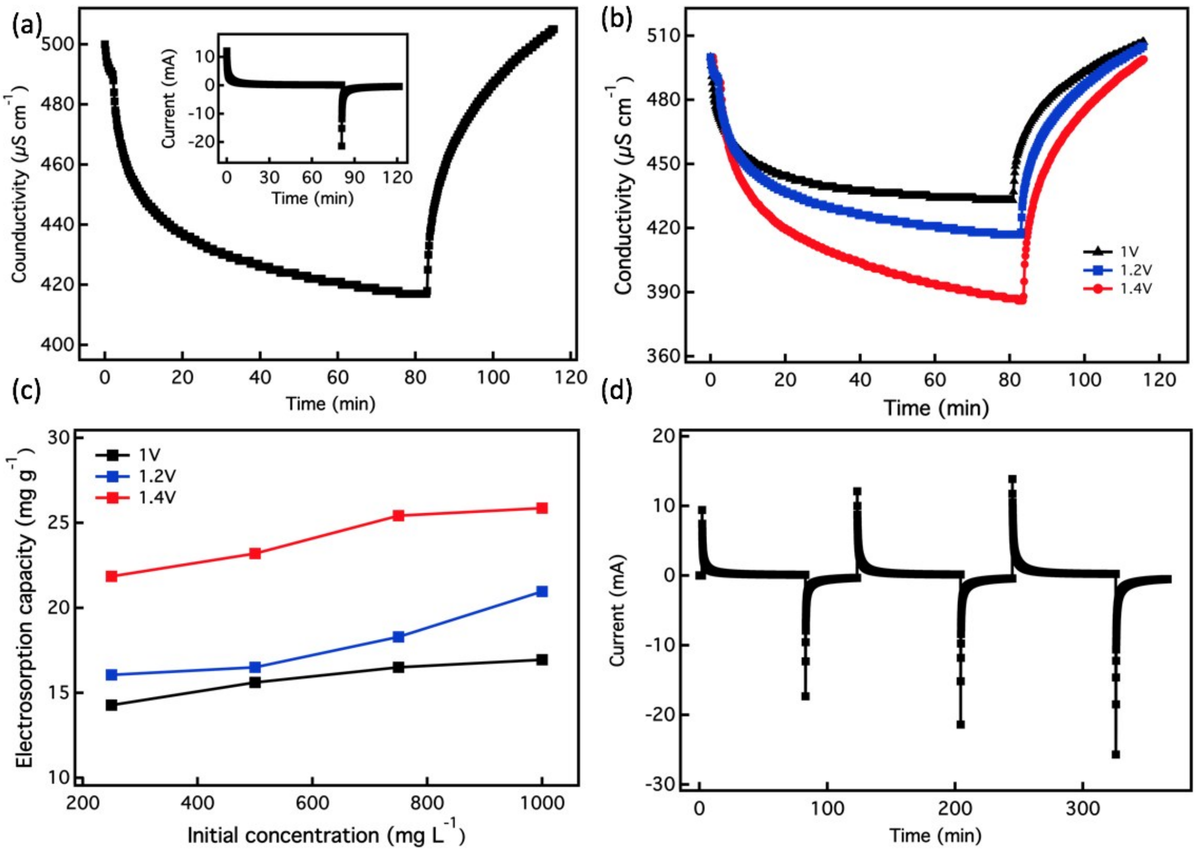

Figure S5. PC-ZnCo-1 electrodes' electrosorption behaviors (a) at 1.2 V in the solution with the initial concentration of 250 ppm (inset in (a): its corresponding current); (b) at voltages varying from 1 V to 1.4 V. (c) electrosoption capacity of PC-ZnCo-1 electrodes for different initial concentrations under 1 V to 1.4 V. (d) current transient for PC-ZnCo-1 electrodes in NaCl solution with the initial concentration of 250 ppm under 1 V to 1.4 V.

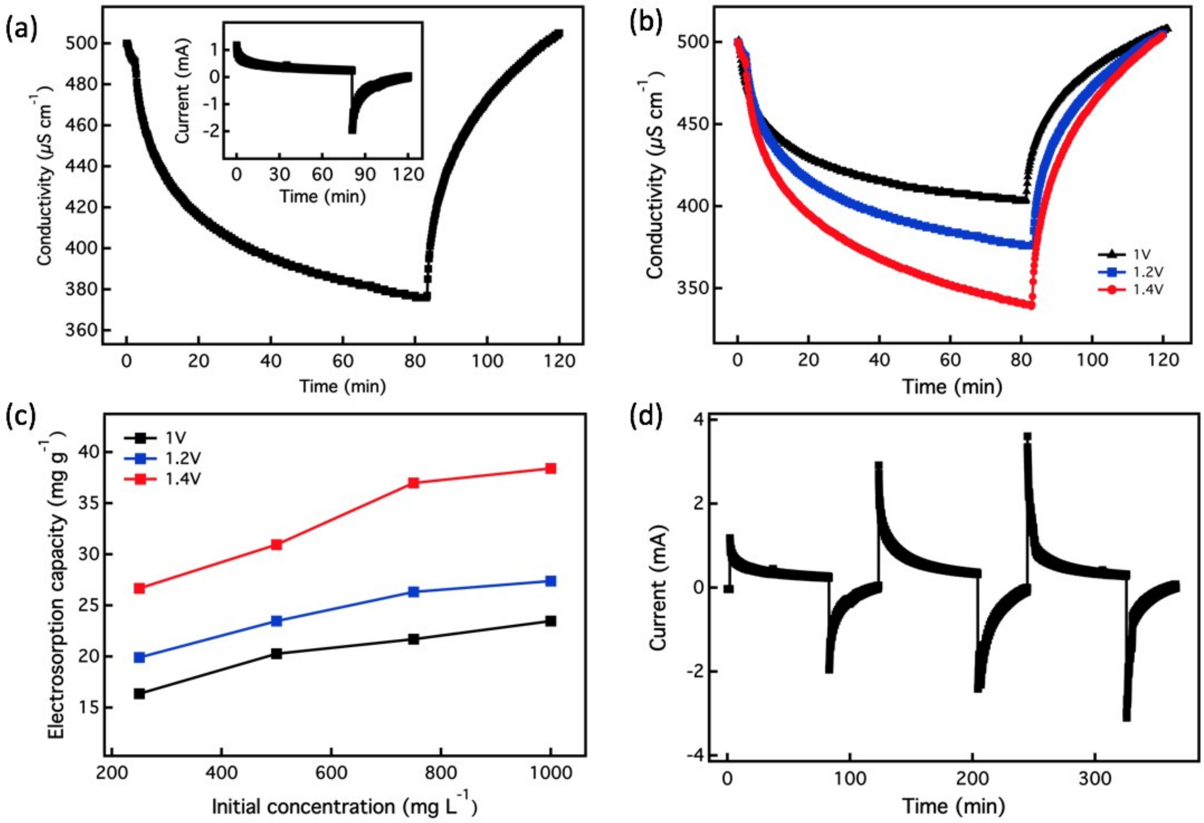

Figure S6. PC-ZnCo-9 electrodes' electrosorption behaviors (a) at 1.2 V in the solution with the initial concentration of 250 ppm (inset in (a): its corresponding current); (b) at voltages varying from 1 V to 1.4 V. (c) electrosorption capacity of PC-ZnCo-9 electrodes for different initial concentrations under 1 V to 1.4 V. (d) current transient for PC-ZnCo-9 electrodes in NaCl solution with the initial concentration of 250 ppm under 1 V to 1.4 V.

Table S1. Comparison of electrosorption capacity of current MCDI electrode materials.

Sample	Applied Voltage (V)	Initial Salt Concentration (mg L^{-1})	Electrosorption Capacity of NaCl (mg g^{-1})	Ref.
Carbon xerogel	1.2	292	3.5	[38]
Graphite cloths	1.5	400	4.2	[39]
rGO/TiO_2	1.2	300	16.4	[18]
CNT-CNF film	1.2	500	17.5	[40]
PC-BMOF-3	1.2	250	25.7	The present work
PC-BMOF-3	1.2	500	29.4	The present work
PC-BMOF-3	1.2	750	30.3	The present work

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