

Supplementary Information

Engineering the structures of ZnCo-MOFs via ligand effect for enhanced supercapacitor performance

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Table S1: Properties of organic ligands used for this study

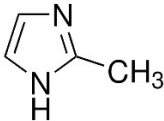
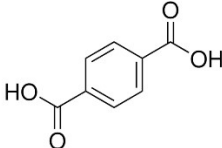
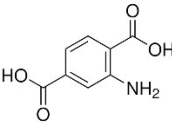
| Organic ligand | Molecular formula | Structural formula | Molecular mass | CAS No. |
|----------------|---|---|----------------|------------|
| HMIM | C ₄ H ₆ N ₂ |  | 82.10 | 693-98-1 |
| BDC | C ₈ H ₆ O ₄ |  | 166.13 | 110-21-0 |
| ABDC | C ₈ H ₇ NO ₄ |  | 181.15 | 10312-55-7 |

Table S2: N₂ adsorption-desorption measurement results of ZnCo-MOFs

| Sample | BET surface area (m²/g) | Micropore surface area (m²/g) | Mesopore surface area (m²/g) | Total pore volume (cm³/g) | Micropore volume (cm³/g) | Average pore size (nm) |
|----------------------|---|---|--|---|--|-------------------------------|
| ZnCo-MOF-HMIM | 66.76 | 0.000 | 66.76 | 0.1366 | 0.000000 | 8.18 |
| ZnCo-MOF-BDC | 12.97 | 1.058 | 11.91 | 0.0160 | 0.000235 | 4.95 |
| ZnCo-MOF-ABDC | 15.06 | 5.479 | 9.58 | 0.0802 | 0.067621 | 21.29 |

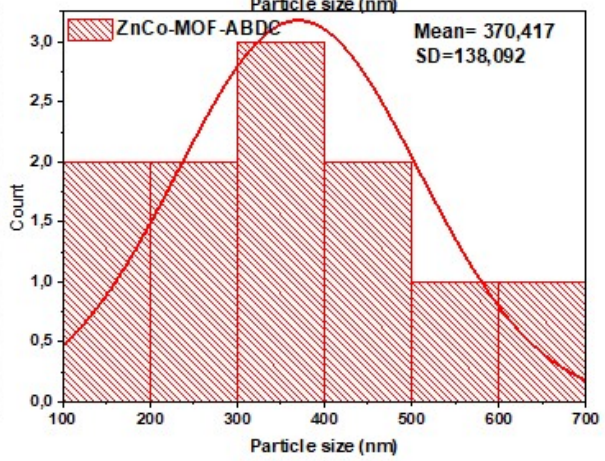
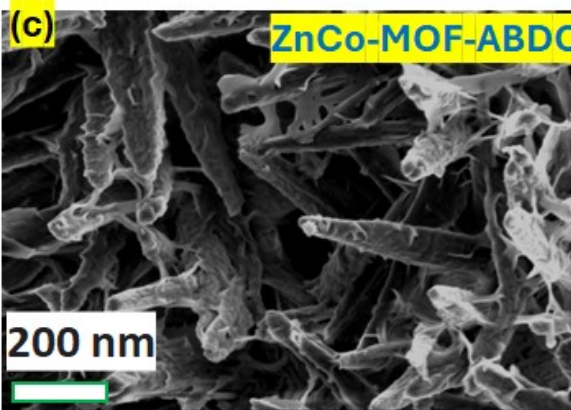
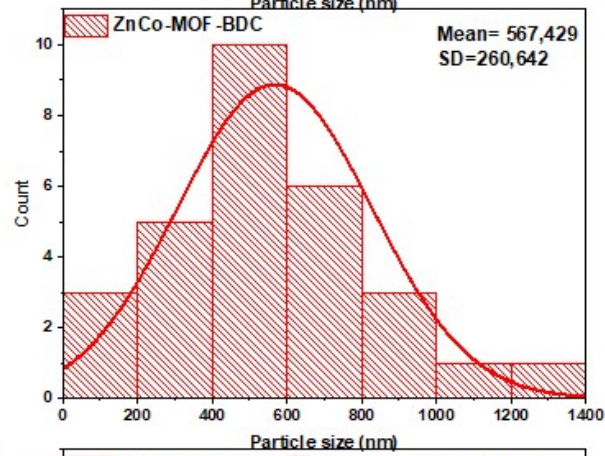
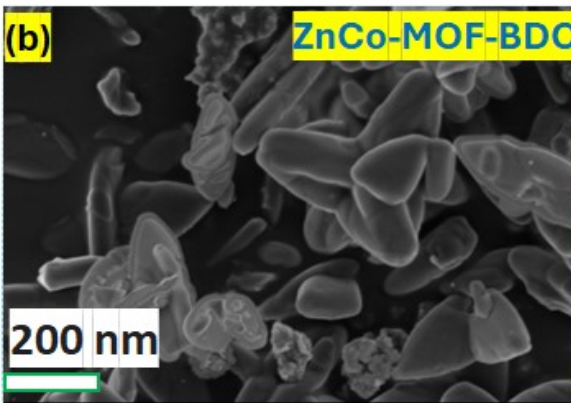
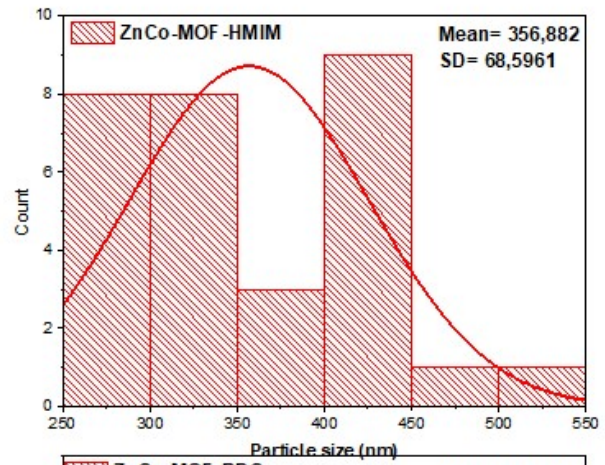
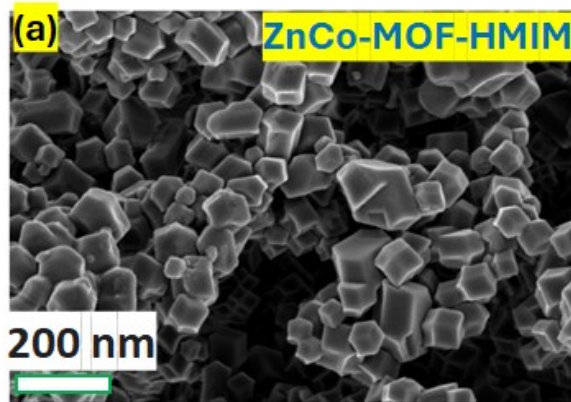


Fig. S1: SEM images and particle size (nm) distribution of ZnCo-MOFs

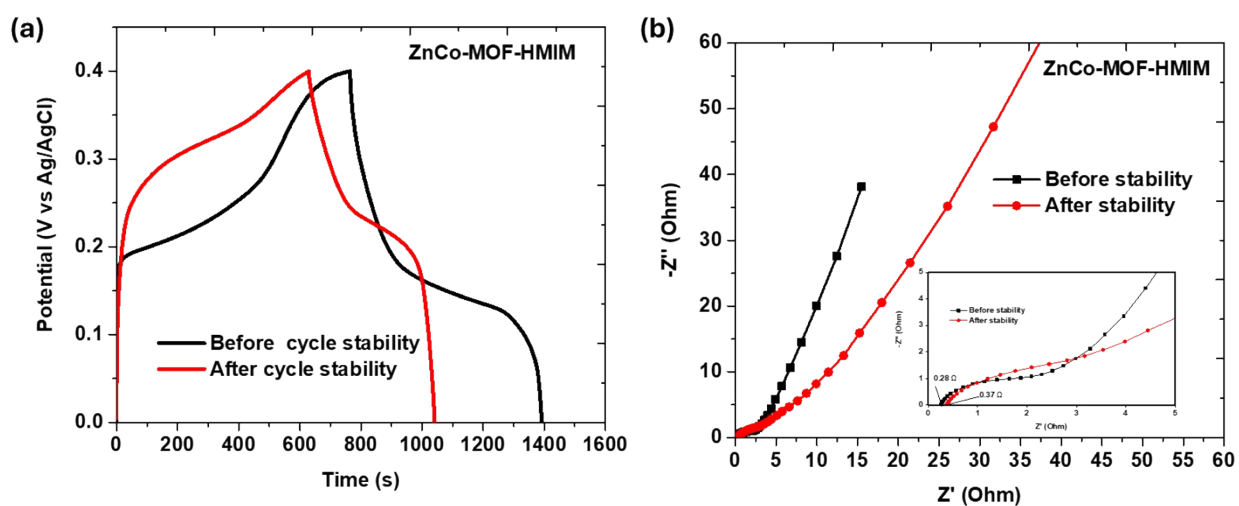


Fig. S2: GCD and EIS of ZnCo-MOF-HMIM after 5000 charge-discharge cycles

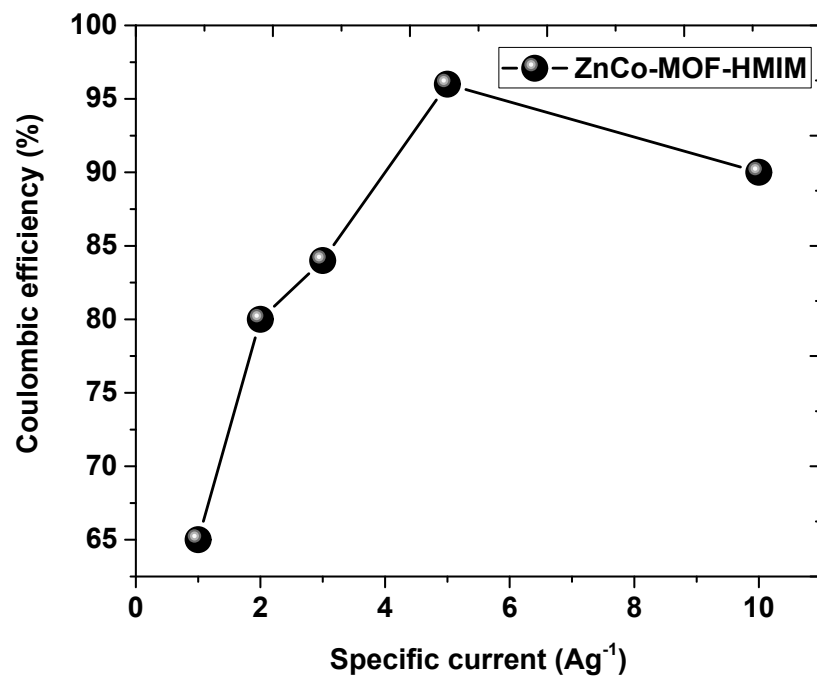


Fig. S3: Coulombic efficiency of ZnCo-MOF-HMIM at different specific currents.

(2020).