

Electronic Supporting Materials

Heteroatom-doped Nanoporous carbon initiated from bimetallic molecular frameworks micro-rods for supercapacitor electrodes

Qiang Wang* , Hongwei Liang, Dun Wu

*Corresponding author, E-mail:wq@cczu.edu.cn

Scheme S1. The visual evolution of the BMOF precursors and the resultant porous carbon.

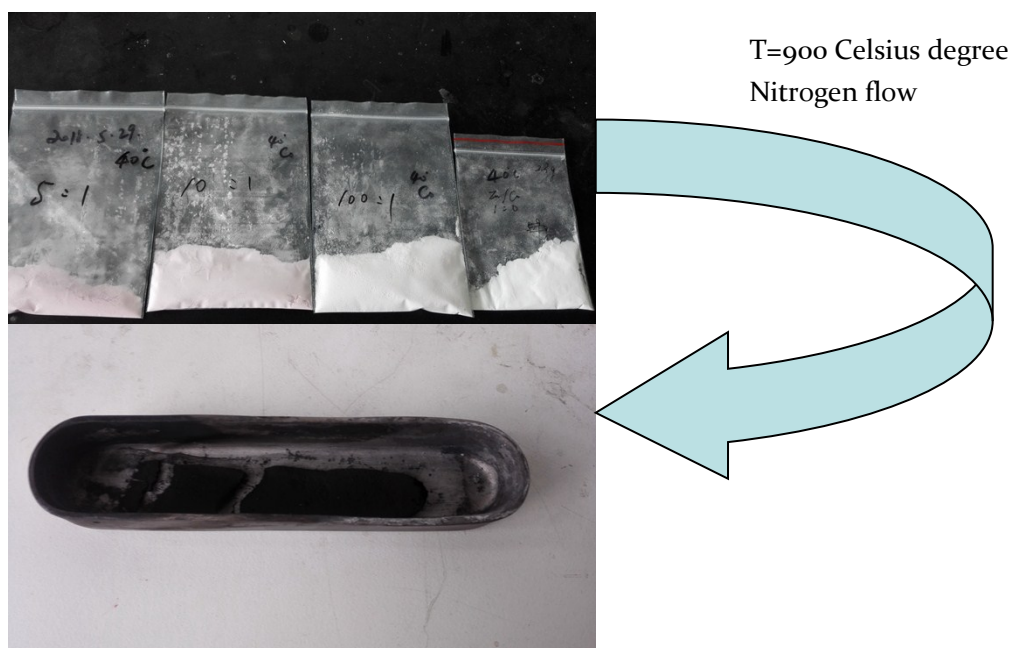


Figure S1. The EDX spectrum of the typical BMOF (Zn-5Co-1) micro-rods

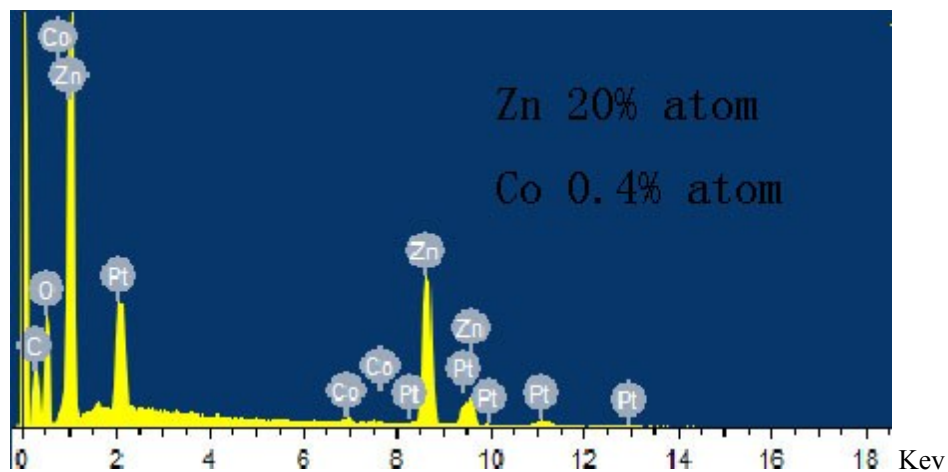


Figure S2. The XRD patterns of the pyrolyzied carbon products derived from BMOF(Zn-5Co-1) and pure Zn-Glu MOF without acid etching.

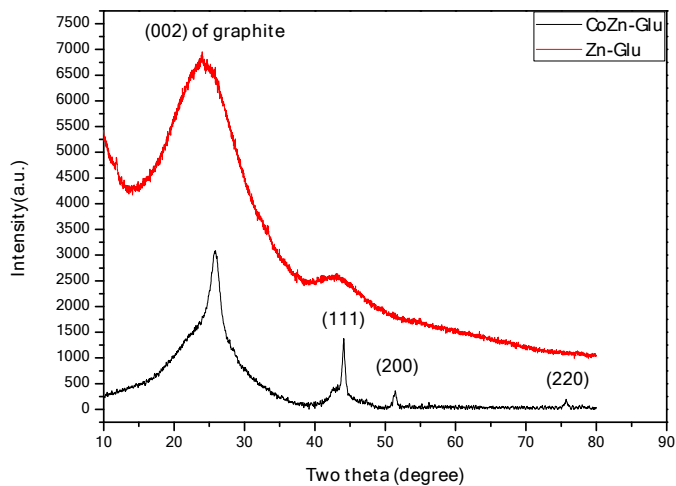


Figure S3. The hollow compartment between two carbon shells (as noted in arrow, scale bar 10 nm)

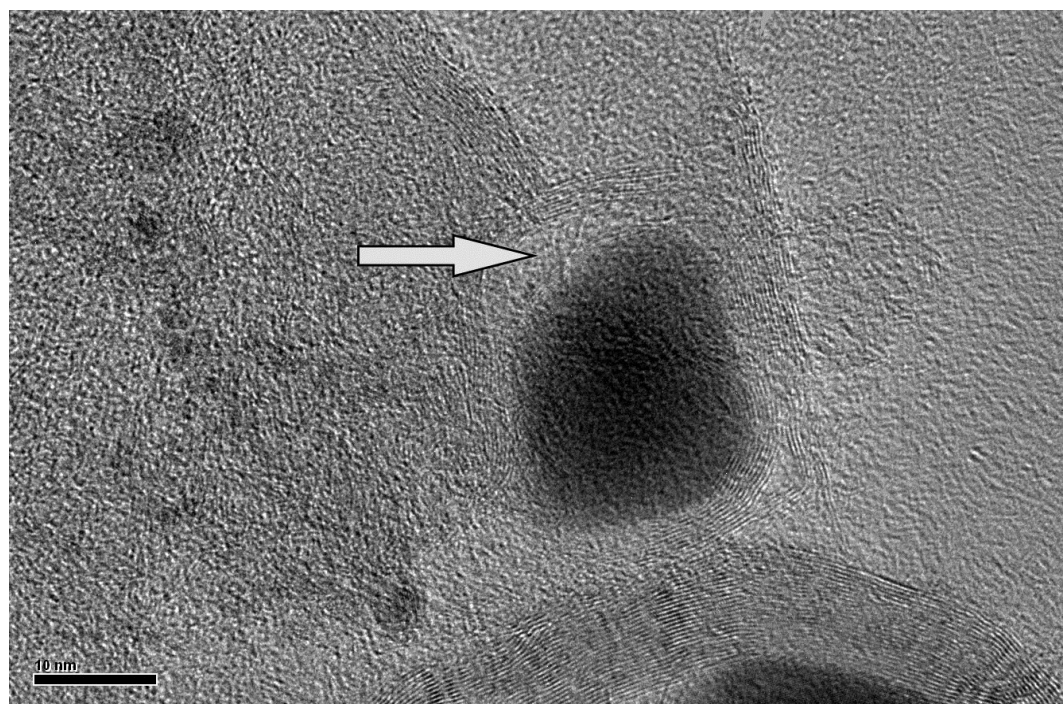
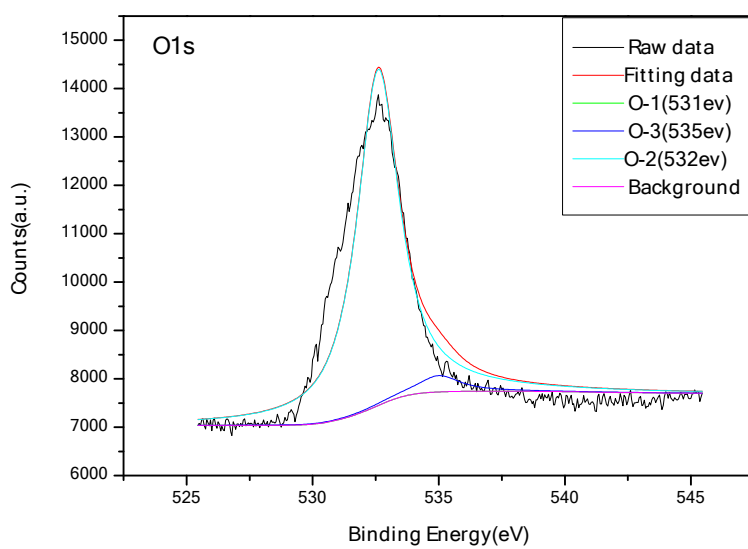


Figure S4. High resolution XPS spectra of O1s and Co2p.



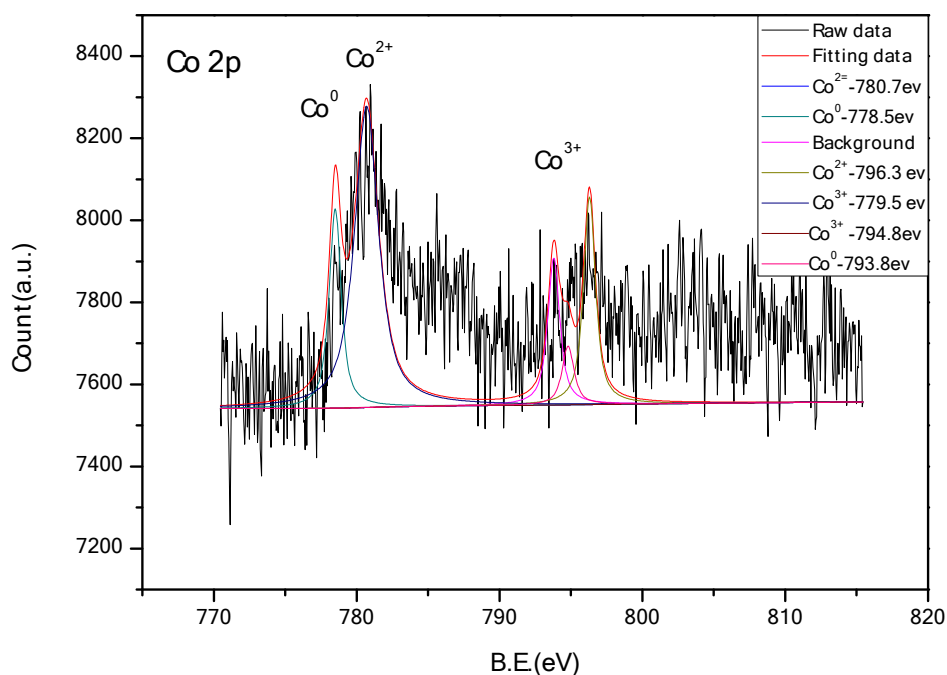


Table S5. The comparison of specific capacitance for our sample with 3D-graphenes and biochar.

	method	electrolyte	density	loading amount	Cs result	reference
3D-graphene	two-electrode/GCD	6M KOH	1A/g	0.65mg/cm ²	231F/g	1
Super-doped Graphene	three-electrode/GCD	6M KOH	1A/g	1mg/cm ²	200-310 F/g	2
Zn-guided 3D graphene	two-electrode/GCD	1M H ₂ SO ₄	0.5A/g	1mg	336 F/g	3
biochar	three-electrode/GCD	6M KOH	0.5A/g	1mg/cm ²	440 F/g	4
our sample	three-electrode/GCD	6M KOH	1A/g	2mg/cm ²	230 F/g	This work

Reference:

1. Porous 3D Few-Layer Graphene-like Carbon for Ultrahigh-Power Supercapacitors with Well-Defined Structure–Performance Relationship, Jin Zhao, Yufei Jiang, Xizhang Wang, Qiang Wu, Zheng Hu, et al, *Adv. Mater.* 2017, 29, 1604569.
2. Nitrogen-Superdoped 3D Graphene Networks for High-Performance Supercapacitors, Weili Zhang, Chuan Xu, Nujiang Tang, Wencai Ren, *Adv. Mater.* 2017, 29, 1701677.
3. Zinc-Tiered Synthesis of 3D Graphene for Monolithic Electrodes, Xiang-Fen Jiang, Ruiqing Li, Ming Hu, Zheng Hu, Dmitri Golberg, Yoshio Bando, XueBin Wang, *Adv. Mater.* 2019, 1901186.
4. Recent developments of post-modification of biochar for electrochemical energy storage, BinHai Cheng, Raymond J. Zeng, Hong Jiang, *Bioresource Technology*, 246 (2017) 224–233.

Figure S6. The cyclic performance of the electrode after 1000th at the scan rate of 50 mV s⁻¹.

