

Supporting information

MOF-Derived $\text{Bi}_2\text{O}_3@\text{C}$ microrods as negative electrodes for advanced asymmetric supercapacitors

Xianbo Yu^{a,b}, Jie Sun^a, Wen-Na Zhao^{b,*}, Shihang Zhao^a, Hongmei Chen^a, Kai Tao^a, Yaoping Hu^a and Lei Han^{a*}

^a State Key Laboratory Base of Novel Functional Materials and Preparation Science, School of Materials Science & Chemical Engineering, Ningbo University, Ningbo 315211, China. E-mail: hanlei@nbu.edu.cn

^b Key Laboratory for Molecular Design and Nutrition Engineering of Ningbo, Ningbo Institute of Technology, Zhejiang University, Ningbo, Zhejiang 315100, China. E-mail: wzhaoh@nit.zju.edu.cn

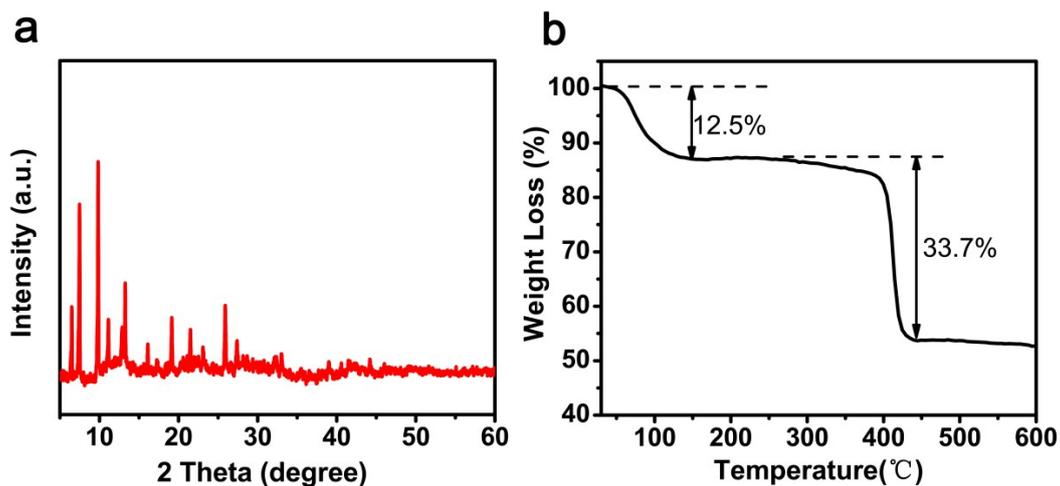


Figure S1. (a) XRD pattern of CAU-17 hexagonal prisms. (b) TGA characterizations of CAU-17.

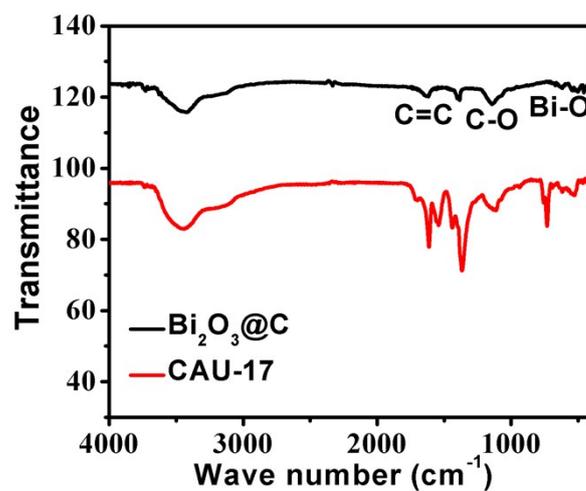


Figure S2. FT-IR spectrum of $\text{Bi}_2\text{O}_3@\text{C}$ and CAU-17.

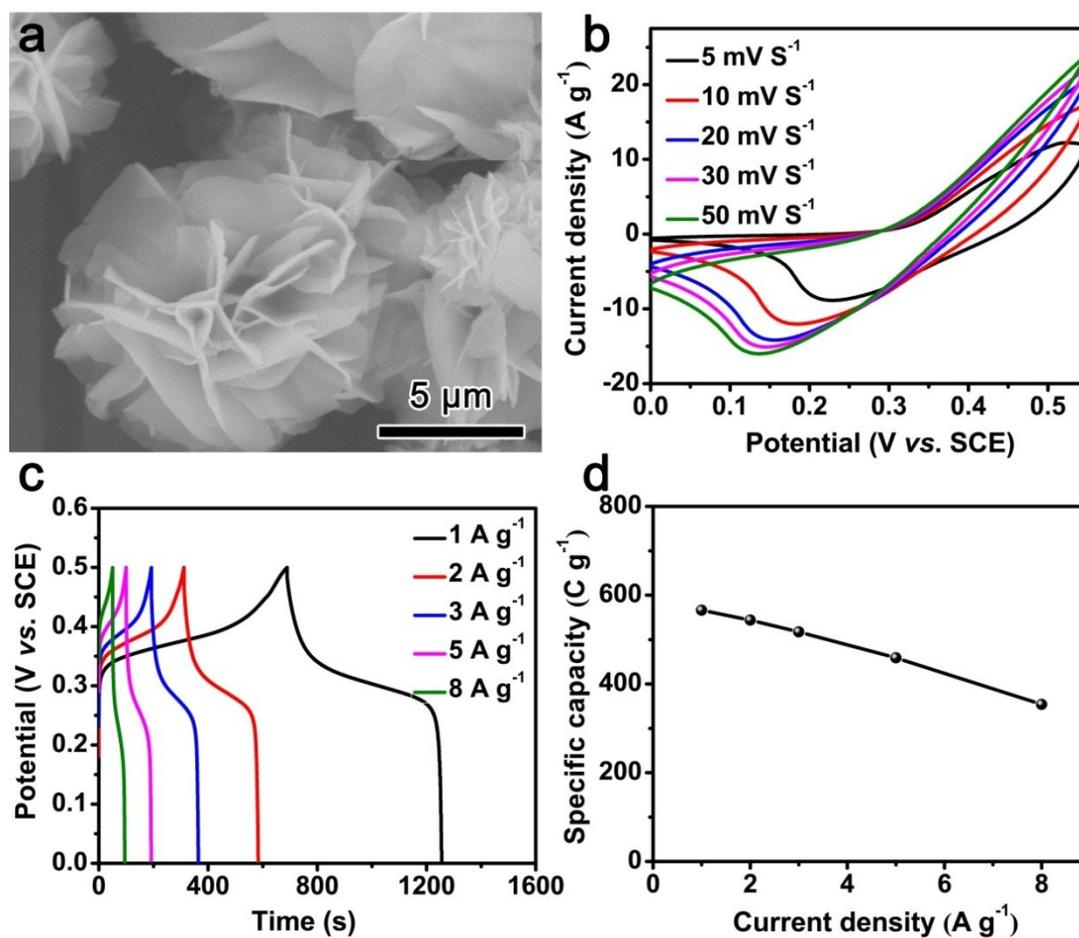


Figure S3. (a) SEM image of CoNi-LDH. (b) CV curves of CoNi-LDH electrode at different scan rates; (c) GCD curves of CoNi-LDH electrode at different current densities. (d) The specific capacity of CoNi-LDH.

Table S1. Electrochemical performance of representative bismuth oxide electrodes

Electrode materials	Specific capacities	Current density	Refs
Bi₂O₃@C	745 C g ⁻¹	2 A g ⁻¹	1
3-D Bi₂O₃	447 C g ⁻¹	2 A g ⁻¹	2
Bi₂O₃ nanowires	576 C g ⁻¹	2 A g ⁻¹	3
Bi₂O₃	920 C g ⁻¹	2 A g ⁻¹	4
Bi₂O₃@MnO₂	70.2 C g ⁻¹	2 A g ⁻¹	5
β-Bi₂O₃	783 C g ⁻¹	2 A g ⁻¹	6
Bi₂O₃@C	937 C g ⁻¹	2 A g ⁻¹	This work

References

1. Z. Zhao, Y. Ye, W. Zhu, L. Xiao, B. Deng and J. Liu, *Chin. Chem. Lett.*, 2018, **29**, 629-632.
2. N. M. Shinde, Q. X. Xia, J. M. Yun, R. S. Mane and K. H. Kim, *ACS Appl. Mater. Interfaces*, 2018, **10**, 11037-11047.
3. Y. Qiu, H. Fan, X. Chang, H. Dang, Q. Luo and Z. Cheng, *Appl. Surf. Sci.*, 2018, **434**, 16-20.
4. H. Su, S. Cao, N. Xia, X. Huang, J. Yan, Q. Liang and D. Yuan, *J. Appl. Electrochem.*, 2014, **44**, 735-740.
5. J. Ma, S. Zhu, Q. Shan, S. Liu, Y. Zhang, F. Dong and H. Liu, *Electrochim. Acta*, 2015, **168**, 97-103.
6. X.-J. Ma, W.-B. Zhang, L.-B. Kong, Y.-C. Luo and L. Kang, *Electrochim. Acta*, 2016, **192**, 45-51.