Supporting Information

Ultrafine Bimetallic Phosphide Nanoparticles Embedded in Carbon Nanosheets: Two-Dimensional Metal-Organic Frameworks-Derived Non-Noble Electrocatalysts for Highly Efficient Oxygen Evolution Reaction

Min Jiang,†,‡ Jun Li,†,‡ Xiaofan Cai,†,‡ Yu Zhao,§,‡ Lijia Pan,§,‡ Qingqi Cao,†,‡ Dunhui Wang,,†,‡ and Youwei Du,†,‡*

†National Laboratory of Solid State Microstructures and Jiangsu Provincial Key Laboratory for Nanotechnology,

‡Collaborative Innovation Center of Advanced Microstructures,

§ School of Electronic Science and Engineering, Nanjing University, Nanjing 210093, China

*Corresponding author

E-mail: wangdh@nju.edu.cn

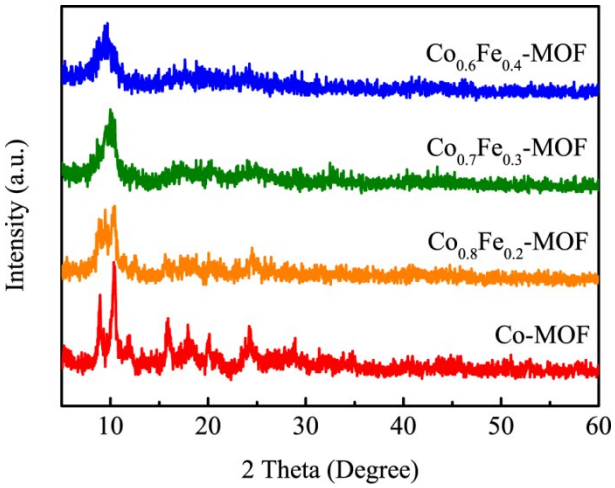


Figure S1. XRD patterns of Co_xFe_y-MOF.

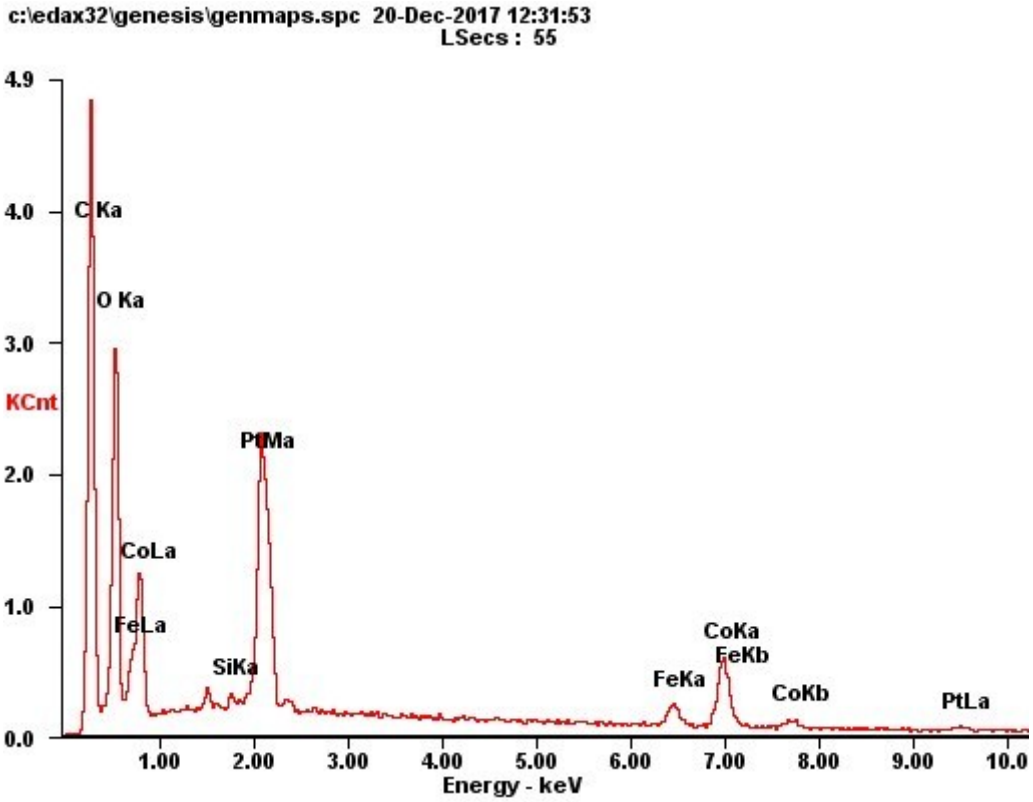


Figure S2. EDX pattern of $Co_{0.7}Fe_{0.3}$-MOF.

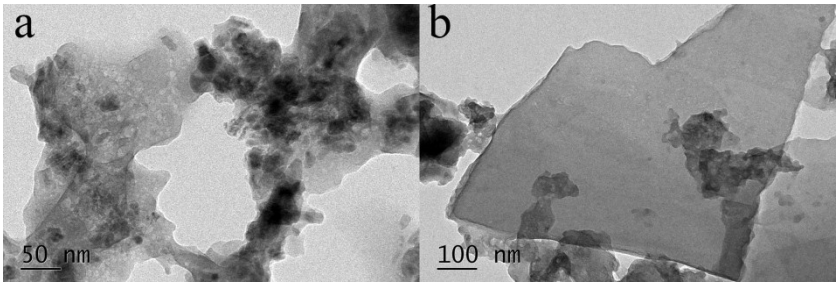


Figure S3. TEM images of a) $Co_{0.8}Fe_{0.2}P/C$ nanosheets and b) $Co_{0.6}Fe_{0.4}P/C$ nanosheets.

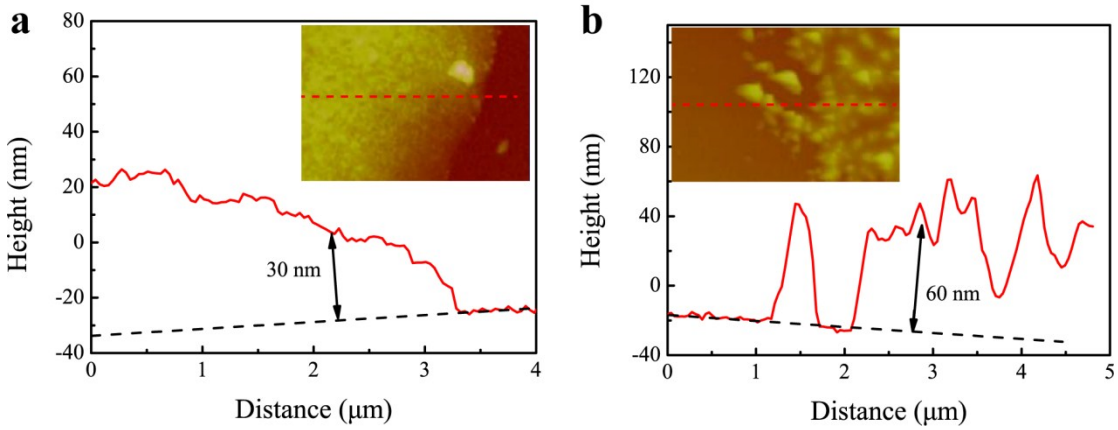


Figure S4. The height profiles of a) Co-MOF and b) CoP/C. the insert showing corresponding AFM images.

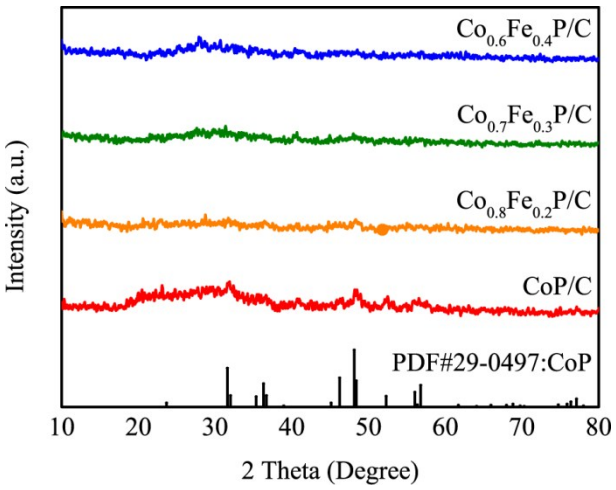
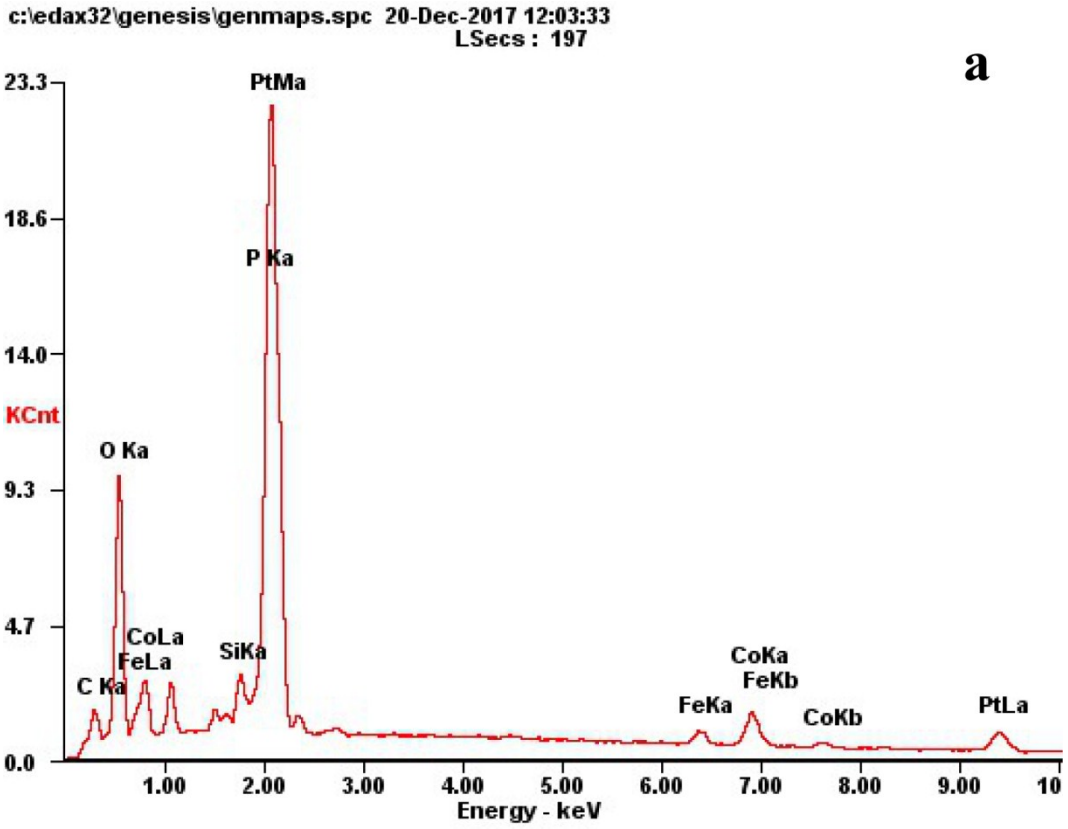


Figure S5. XRD patterns of Co_xFe_yP/C nanosheets.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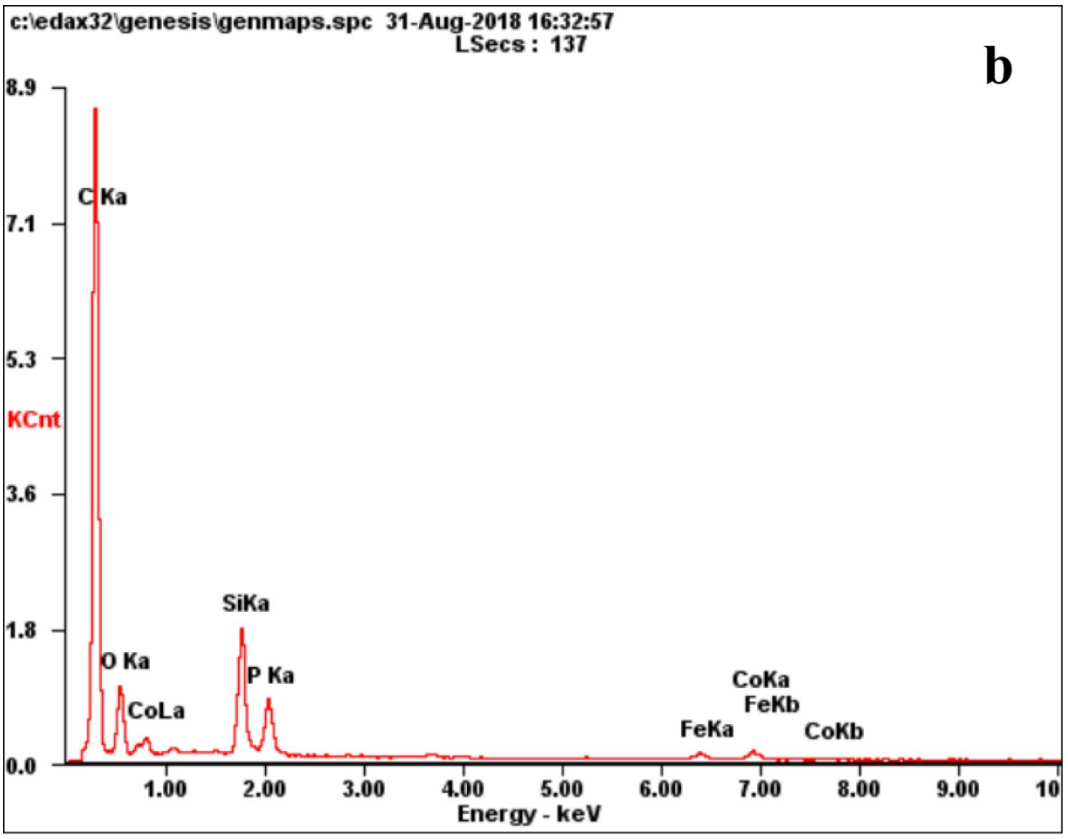
Energy - keV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O Ka
P Ka
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Energy - keV

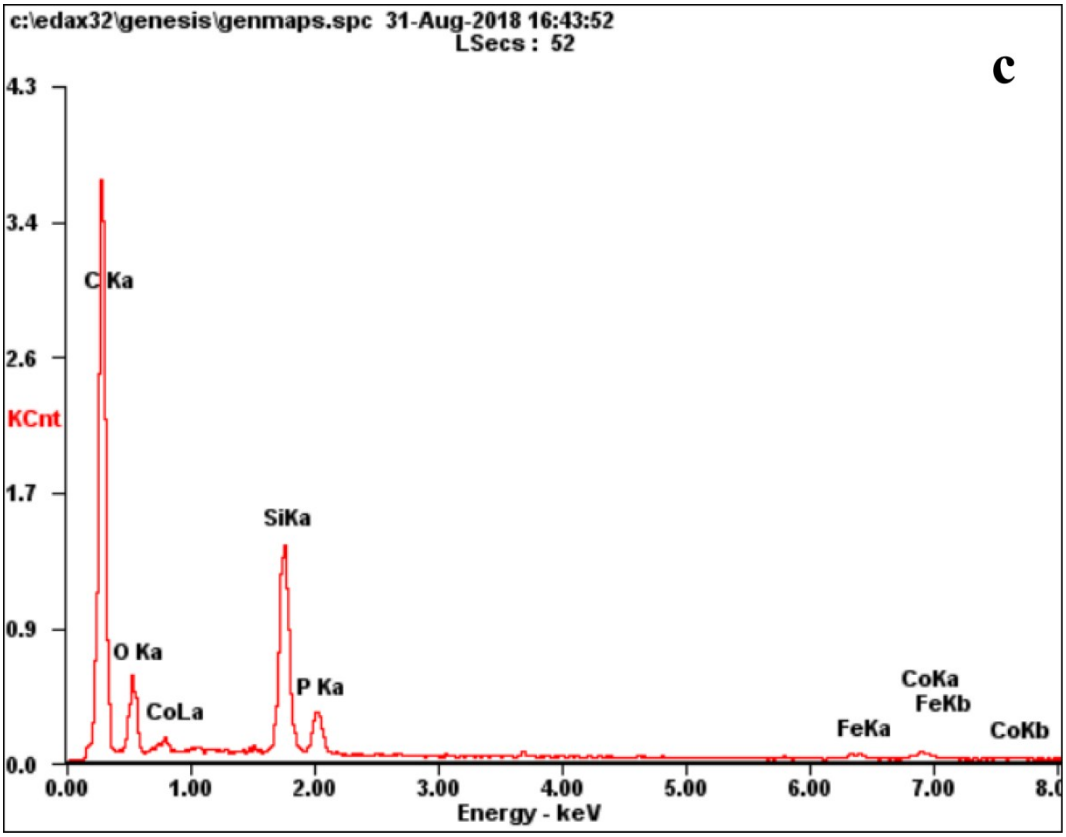

Figure S6. EDX patterns of a) $Co_{0.7}Fe_{0.3}P/C$, b) $Co_{0.8}Fe_{0.2}P/C$ and c) $Co_{0.6}Fe_{0.4}P/C$ nanosheets.

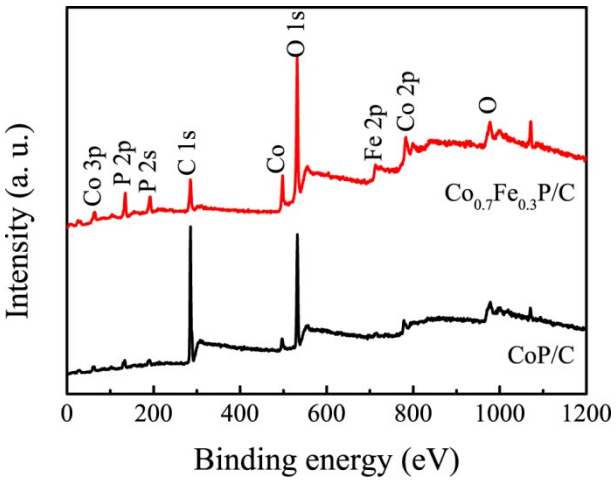

Figure S7. XPS survey scans of CoP/C and $Co_{0.7}Fe_{0.3}P/C$ nanosheets.

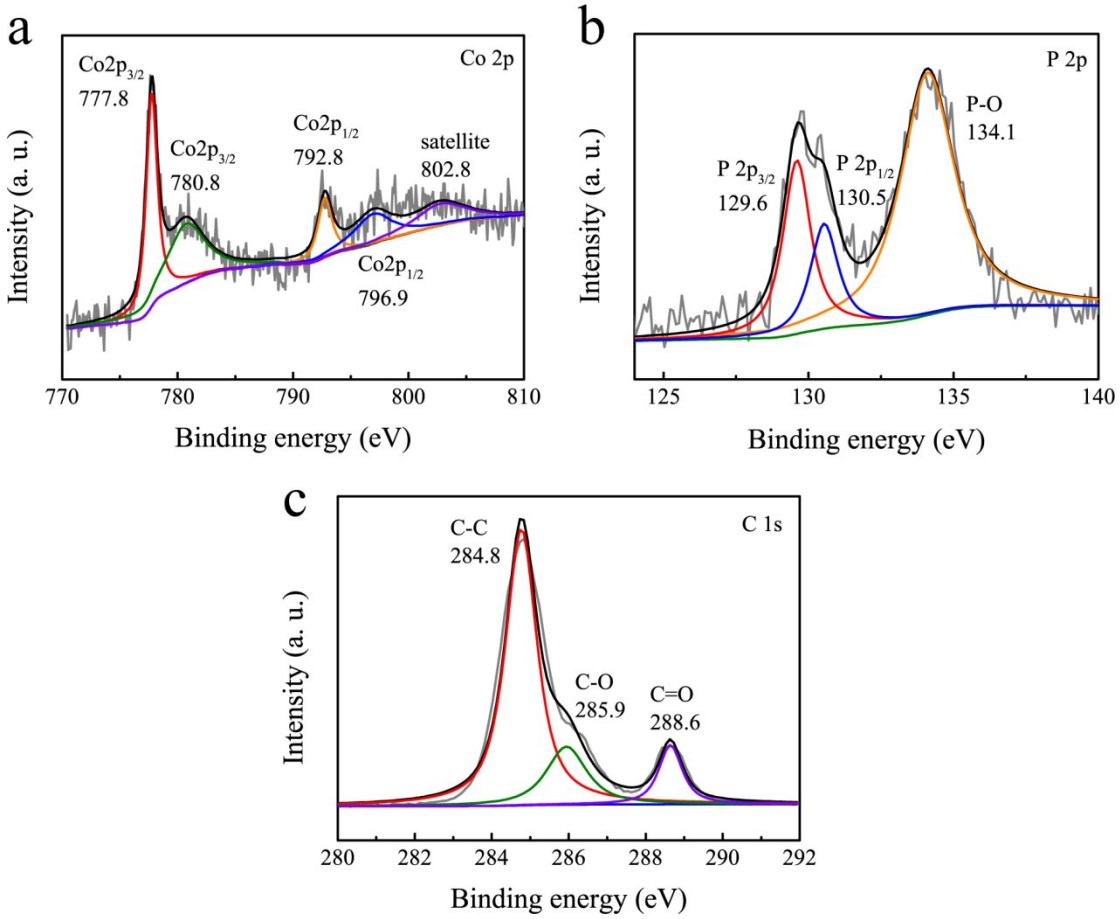

Figure S8. XPS spectra of CoP/C nanosheets: a) Co 2p, b) P 2p and c) C 1s.

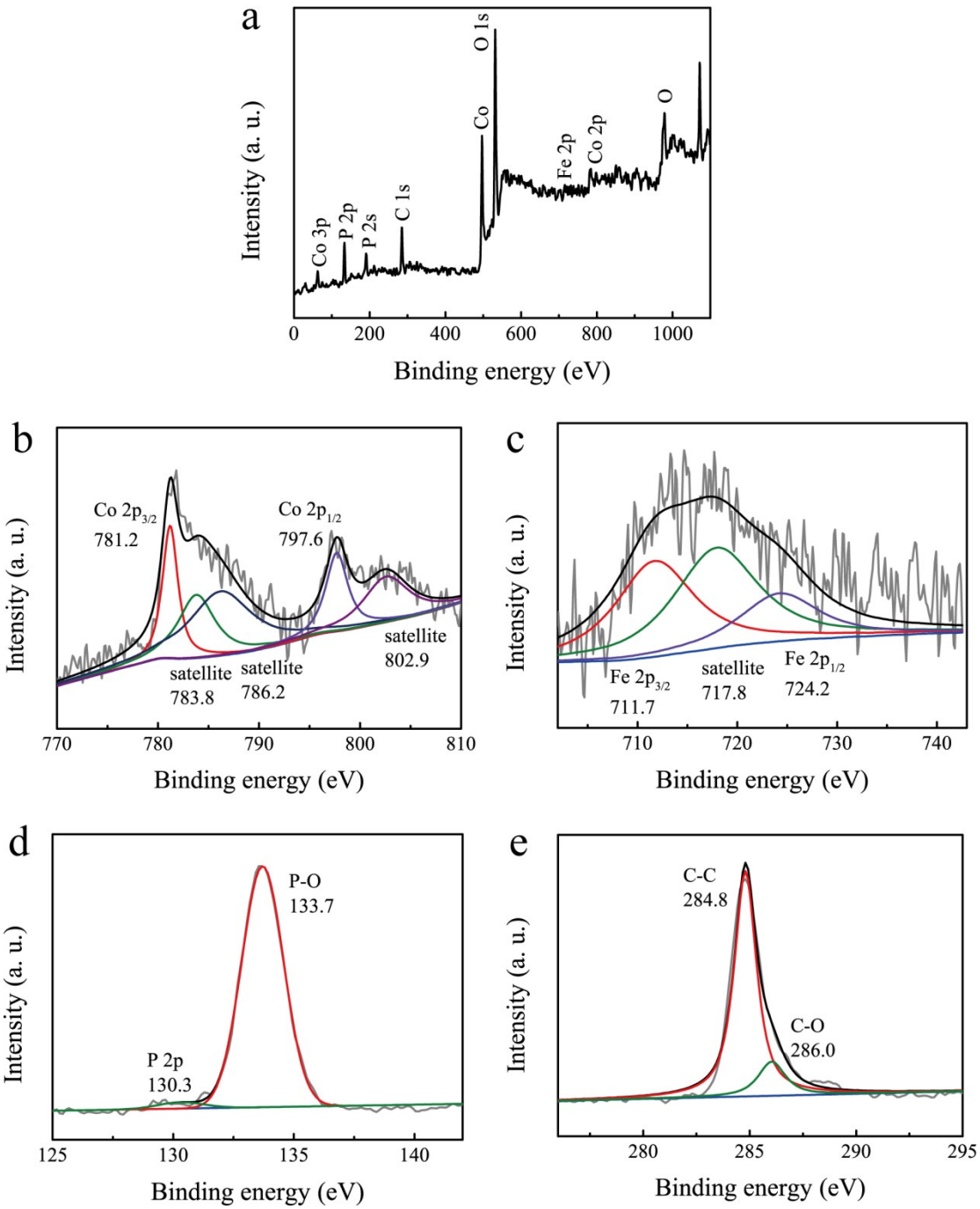

Figure S9. XPS spectra of $Co_{0.8}Fe_{0.2}P/C$ nanosheets: a) survey scans, b) Co 2p, c) Fe 2p, d) P 2p and e) C 1s.

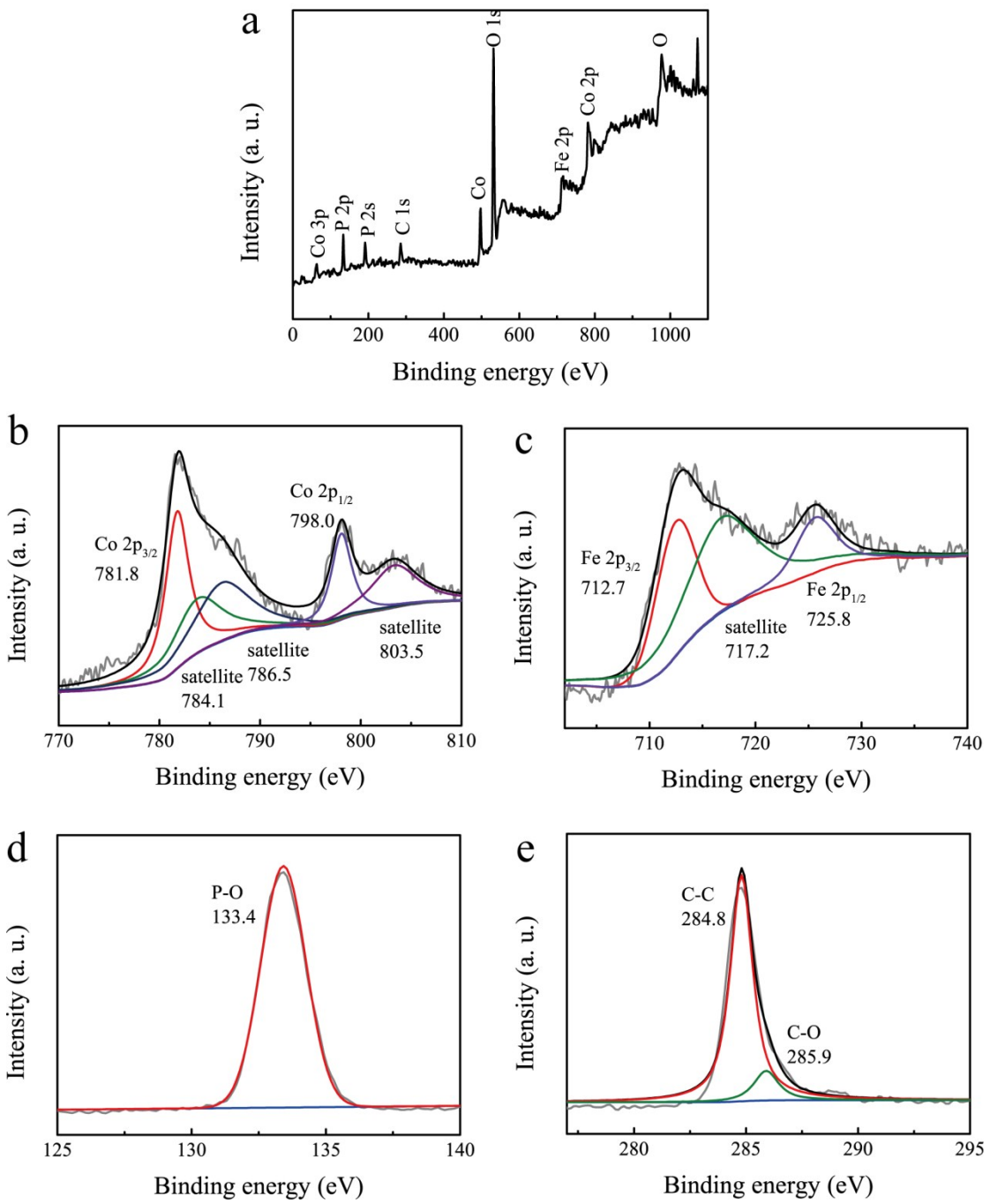

Figure S10. XPS spectra of $Co_{0.6}Fe_{0.4}P$/C nanosheets: a) survey scans, b) Co 2p, c) Fe 2p, d) P 2p and e) C 1s.

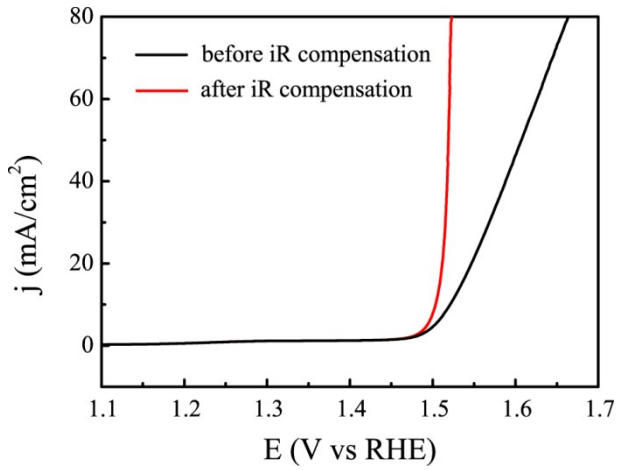

Figure S11. the LSV curves of $Co_{0.7}Fe_{0.3}P$/C nanosheets before and after iR compensation.

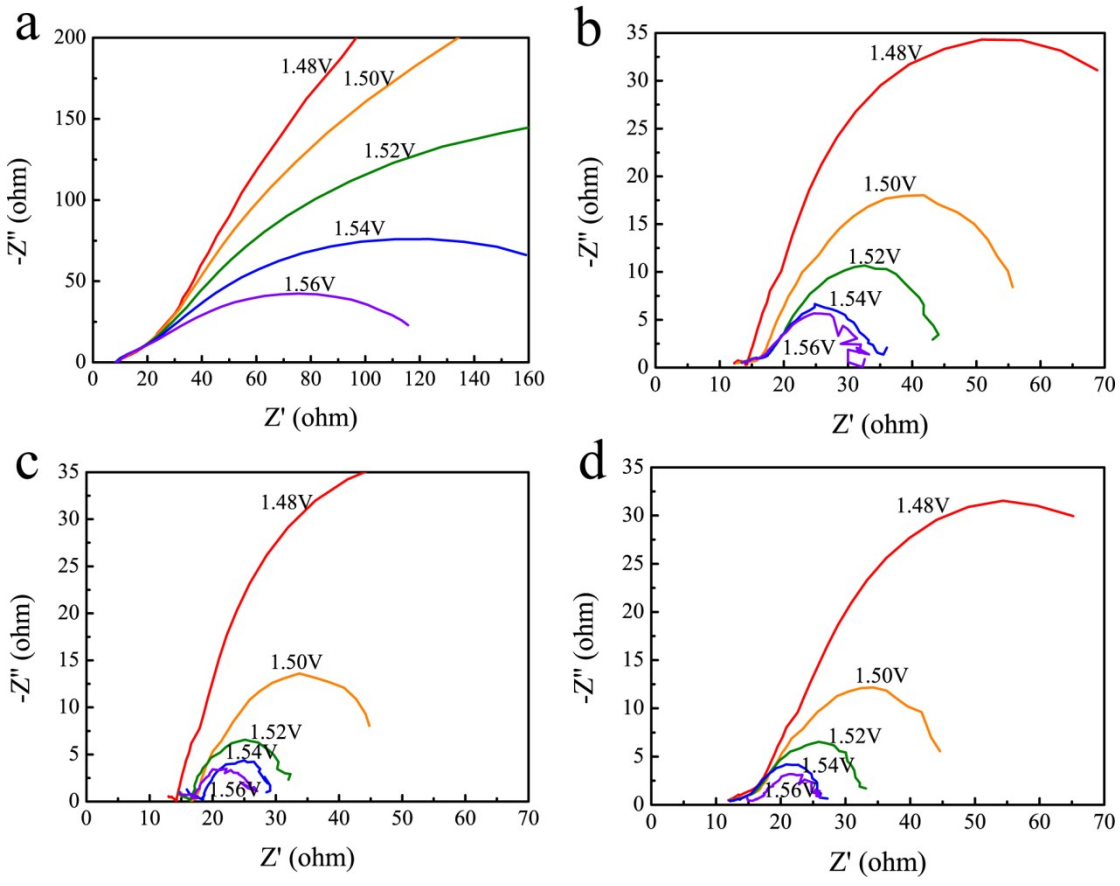

Figure S12. Nyquist plots derived from EIS measurements at different voltages: a) CoP/C, b) $Co_{0.8}Fe_{0.2}P$/C, c) $Co_{0.7}Fe_{0.3}P$/C and d) $Co_{0.6}Fe_{0.4}P$/C.

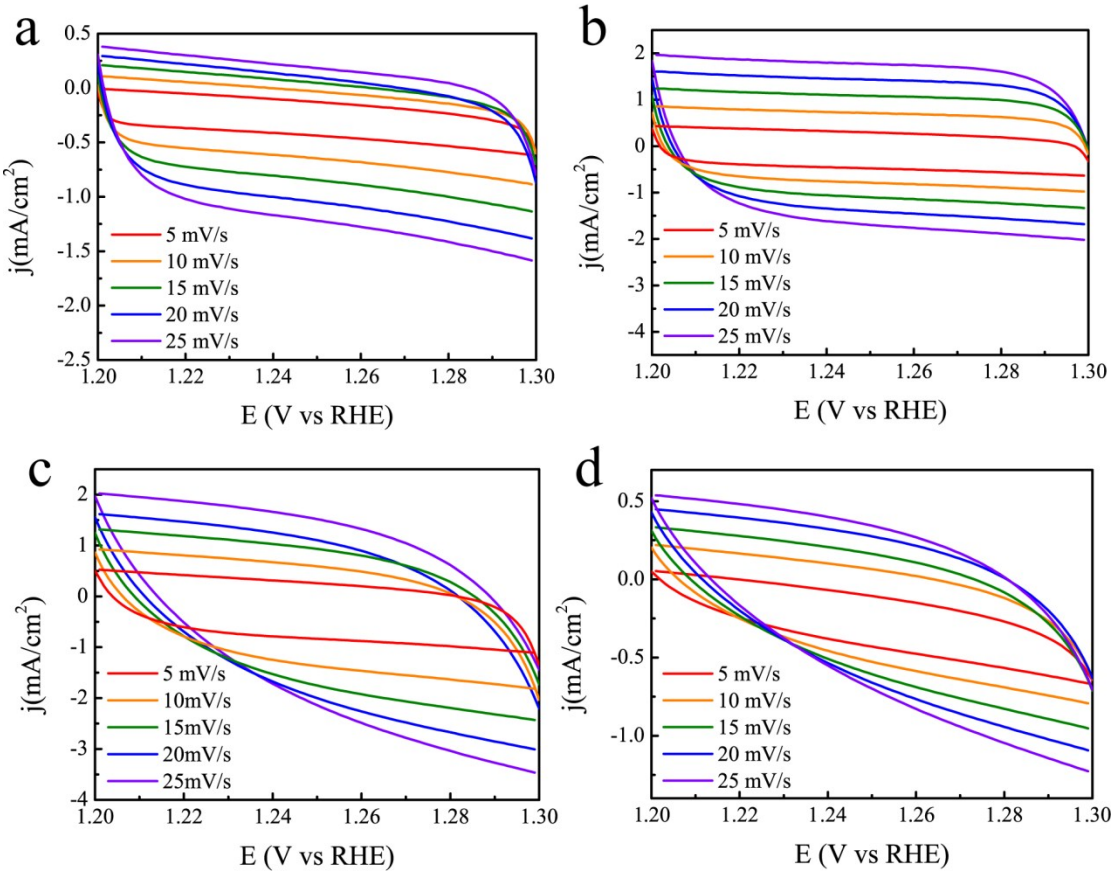

Figure S13. Cyclic voltammetry of a) CoP/C, b) $Co_{0.8}Fe_{0.2}P$/C, c) $Co_{0.7}Fe_{0.3}P$/C and d) $Co_{0.6}Fe_{0.4}P$/C at different scan rate.

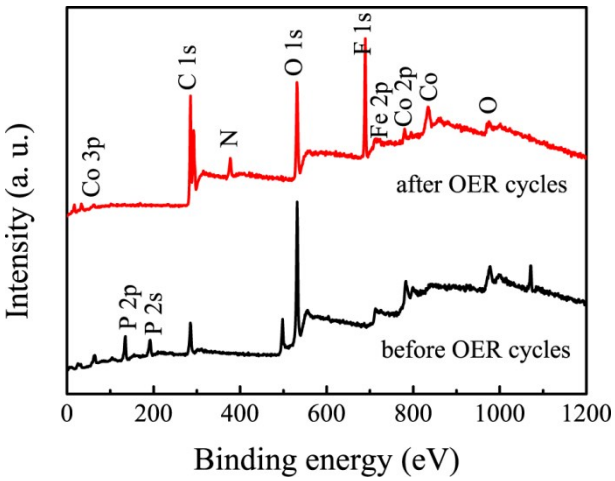

Figure S14. XPS survey scans of $Co_{0.7}Fe_{0.3}P$/C nanosheets before and after OER cycles.