Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.

One-dimensional nickel-cobalt bimetallic phosphide nanofibers for efficient oxygen evolution reaction

Yue Wang, Xin Chang, Zexing Huang, Jiahui Fan, Lu Li* and Mingyi Zhang*

Key Laboratory for Photonic and Electronic Bandgap Materials, Ministry of Education, School of Physics and Electronic Engineering, Harbin Normal University, Harbin 150025, People's Republic of China.

*Corresponding author:

Key Laboratory for Photonic and Electronic Bandgap Materials, Ministry of Education, School of Physics and Electronic Engineering, Harbin Normal University, Harbin 150025, P. R. China.

Email: zhangmingyi@hrbnu.edu.cn (M.Y. Zhang)

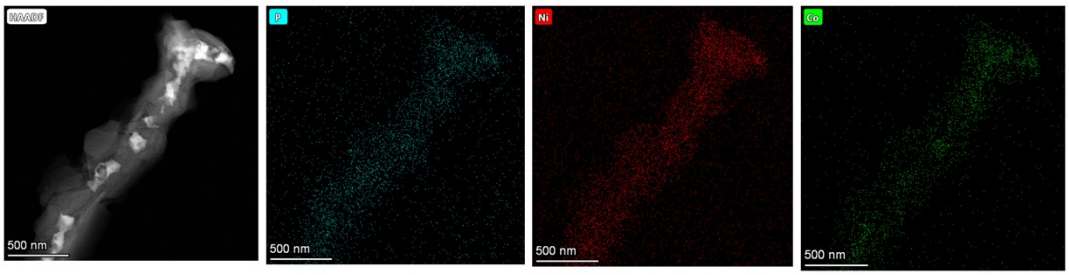

Figure S1. The corresponding elemental mappings of P, Ni, and Co of NiCoP-600 nanofibers.

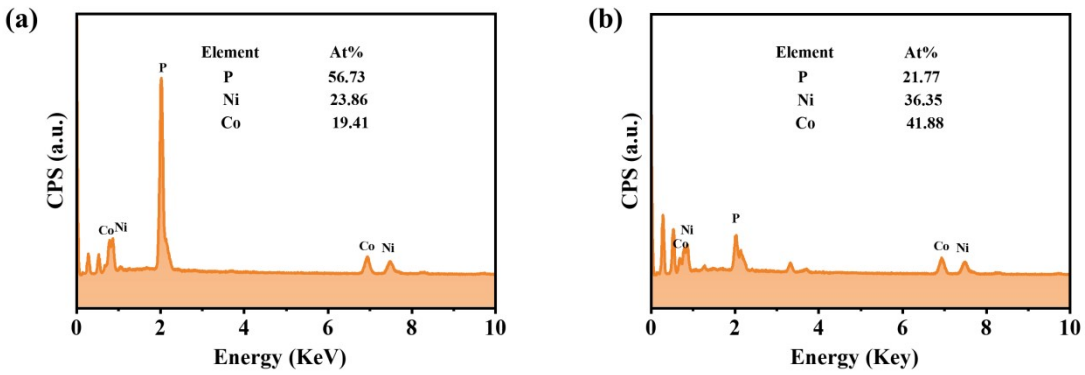

Figure S2. EDS images of NiCoP-600 catalysts before（a）and after (b) electrocatalytic OER

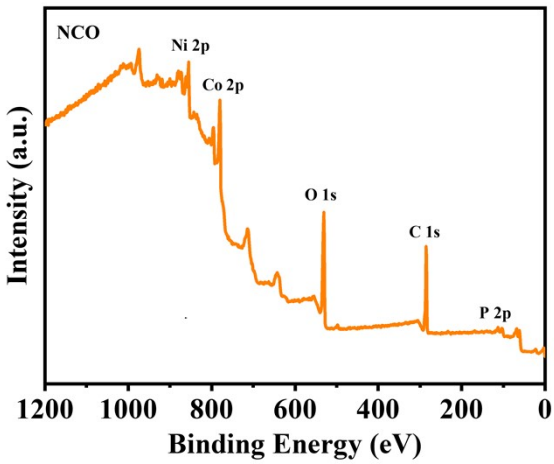

Figure S3. The XPS spectrum of Full spectrum of $NiCo_2O_4$ nanofibers.

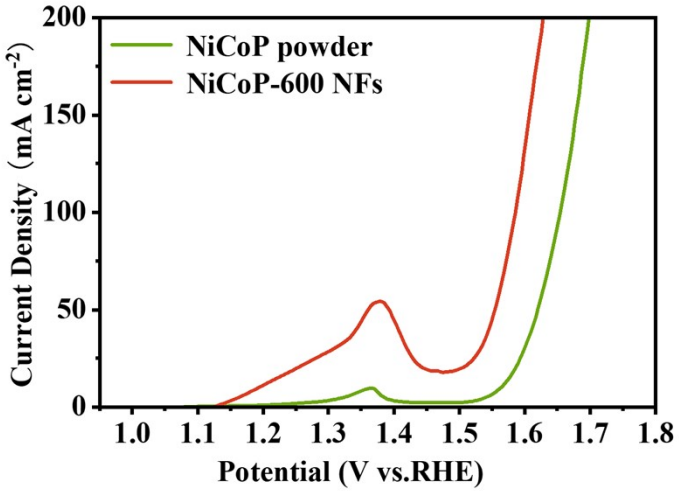

Figure S4. LSV curves of NiCoP powder and NiCoP-600 NFs.

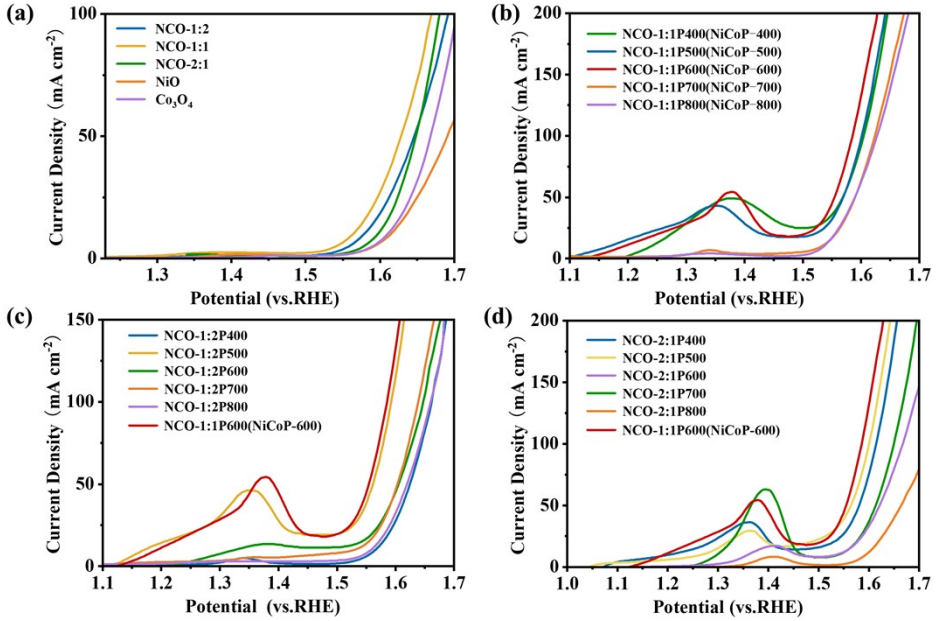

Figure S5.(a) LSV curves of NCO-1:1, NCO-1:2, NCO-2:1, NiO nanofibers, and Co_3O_4 nanofibers. (b) LSV curves of NCO-1:1P400(NiCoP-400), NCO-1:1P500(NiCoP-500), NCO-1:1P600(NiCoP-600), NCO-1:1P700(NiCoP-700), and NCO-1:1P800(NiCoP-800). (c) LSV curves of NCO-1:2P400, NCO-1:2P500, NCO-1:2P600, NCO-1:2P700, NCO-1:2P800, and NCO-1:1P600. (d) LSV curves of NCO-2:1P400, NCO-2:1P500, NCO-2:1P600, NCO-2:1P700, NCO-2:1P800, and NCO-1:1P600.

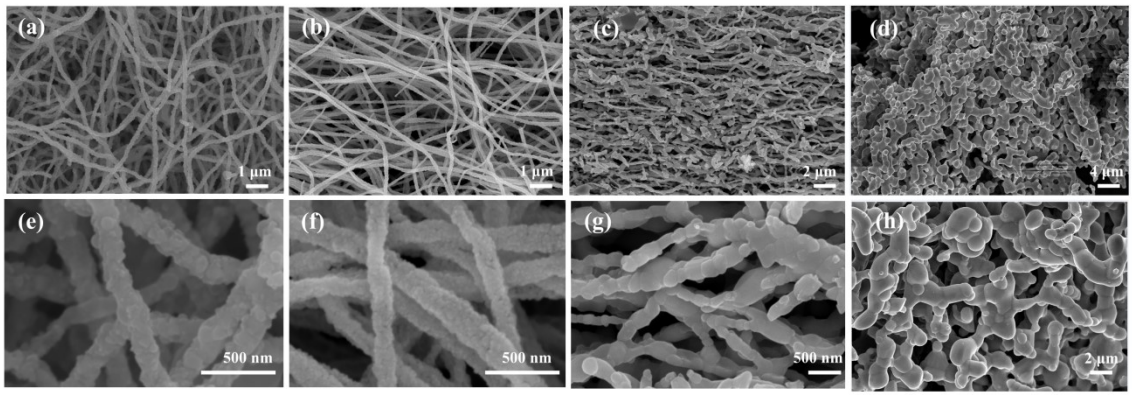

Figure S6. The SEM images of NiCoP-500(a, e), NiCoP-600(b, f), NiCoP-700(c, g), and NiCoP-800(d, h).

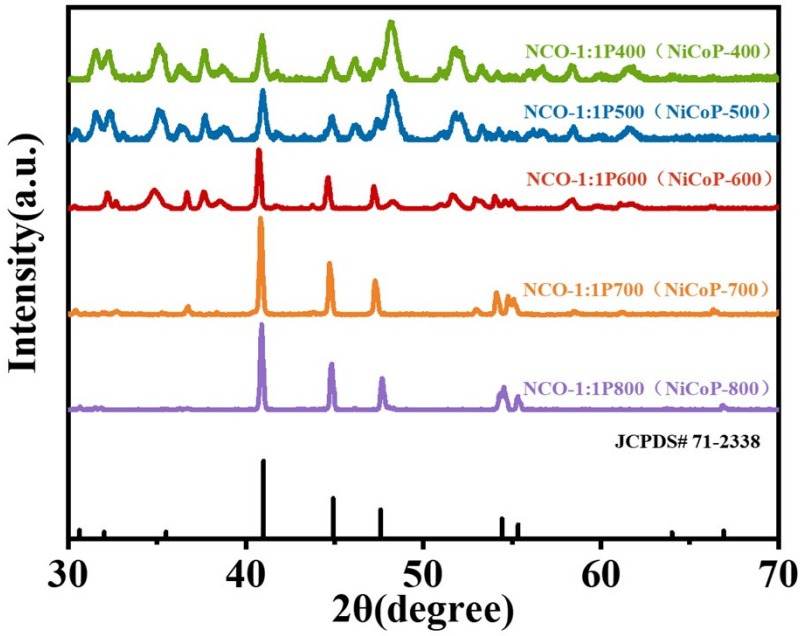

Figure S7. The XRD patterns of the NiCoP-400, NiCoP-500, NiCoP-600, NiCoP-700, and NiCoP-800 nanofibers.

Catalysts	Electrolyte	Overpotential	References

		(mV) @50 mA cm^{-2}	
NiCoP-600	1 M KOH	325	this work
$NiCo_2O_4$ NFs	1 M KOH	400	this work
CoRuPO/NFs	1 M KOH	342	1
$NiS_x/Ni(OH)_2$/NiOOH	1 M KOH	374	2
Ce-$CoSe_2$	1 M KOH	398	3
Co-Ni_3S_2/NFs	1 M KOH	459	4
Ni_2P/Mn_2O_3	1 M KOH	367	5
CNF/Co-CNT	1 M KOH	359	6

Table S1. Summary of various OER catalysts that have been proposed.

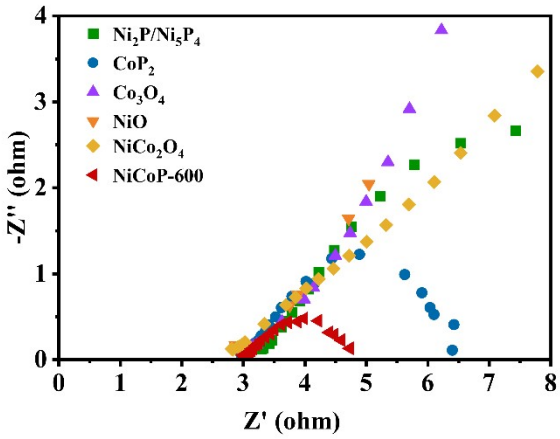

Figure S8. EIS pattern of the NiO nanofibers, Co_3O_4 nanofibers , $NiCo_2O_4$ nanofibers , Ni_2P/Ni_5P_4 nanofibers , CoP_2 nanofibers, and NiCoP-600 nanofibers.

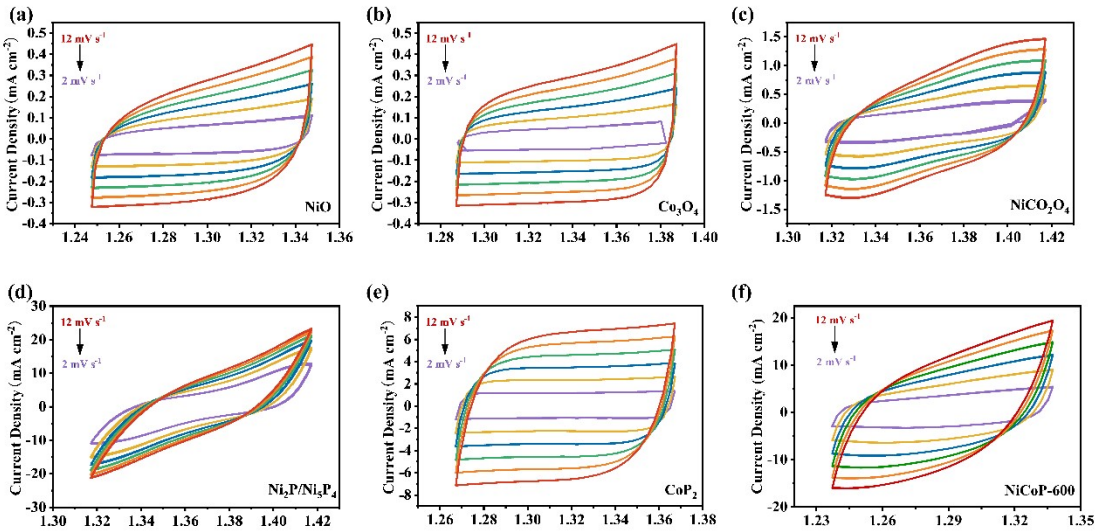

Figure S9. The CV diagram of the NiO nanofibers(a), Co_3O_4 nanofibers(b), $NiCo_2O_4$ nanofibers(c), Ni_2P/Ni_5P_4 nanofibers(d), CoP_2 nanofibers(e), and NiCoP-600 nanofibers(f).

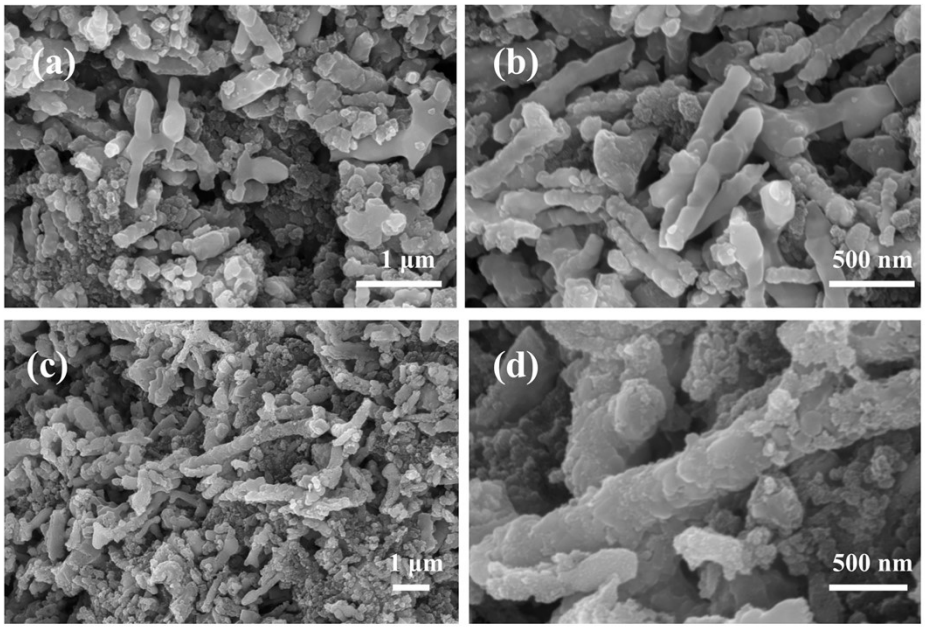

Figure S10. The SEM images of NiCoP-600 catalysts before (a,b) and after (c,d) electrocatalytic OER

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