Electronic Supplementary Material

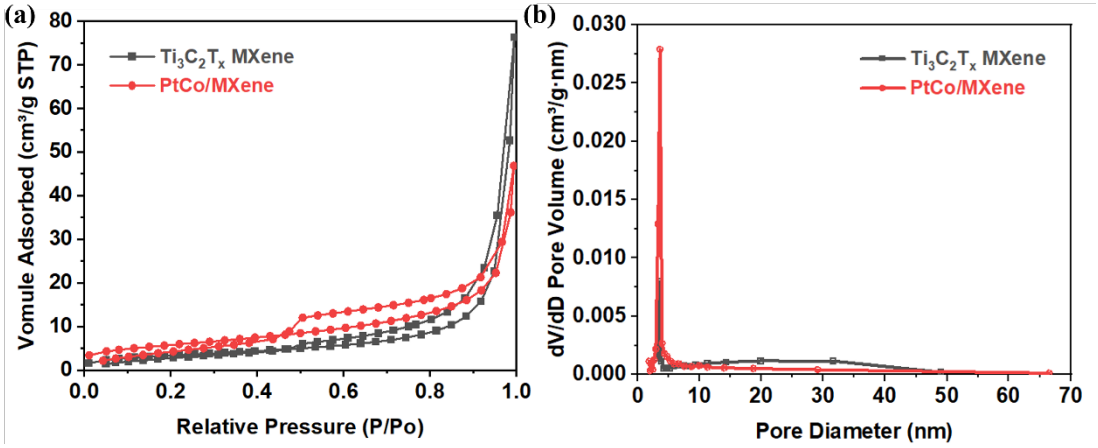

Fig. S1 Characterization and analysis of specific surface area.

(a) N_2 adsorption-desorption isotherms curves; (b) pore size distributions of as-prepared catalysts ($Ti_3C_2T_x$ MXene and PtCo/MXene).

Table S1 Specific surface area, pore diameter, and pore volumes of $Ti_3C_2T_x$ MXene and PtCo/MXene

Sample	Specific surface area/($m^2 \cdot g^{-1}$)	Desorption pore volume/($cm^3 \cdot g^{-1}$)	Desorption mean pore diameter/nm
MXene	12.36	0.047	24.28
Ptco/MXene	20.82	0.036	10.57

Table S2 Co and Pt loading qualification for PtCo/MXene, Pt/MXene, and Co/MXene by ICP-AES

Sample	Co loading/wt.%	Pt loading/wt.%
PtCo/MXene	3.82	0.43
Pt/MXene	0	0.44
Co/MXene	3.84	0

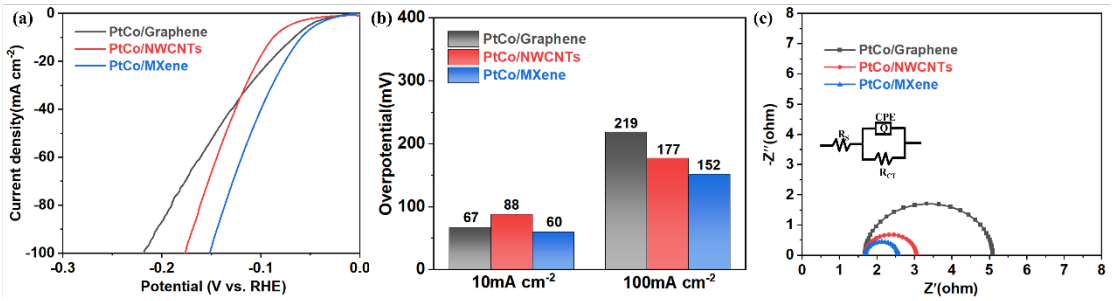

Fig. S2 Electrocatalytic HER performances of the PtCo/MXene, PtCo/Graphene, and PtCo/NWCNTs in 0.5 mol/L H_2SO_4. (a) LSV polarization curves at a scan rate of 5 mV/s; (b) overpotentials at −10 mA /cm^2 and −100 mA cm^2; (c) Nyquist plots.

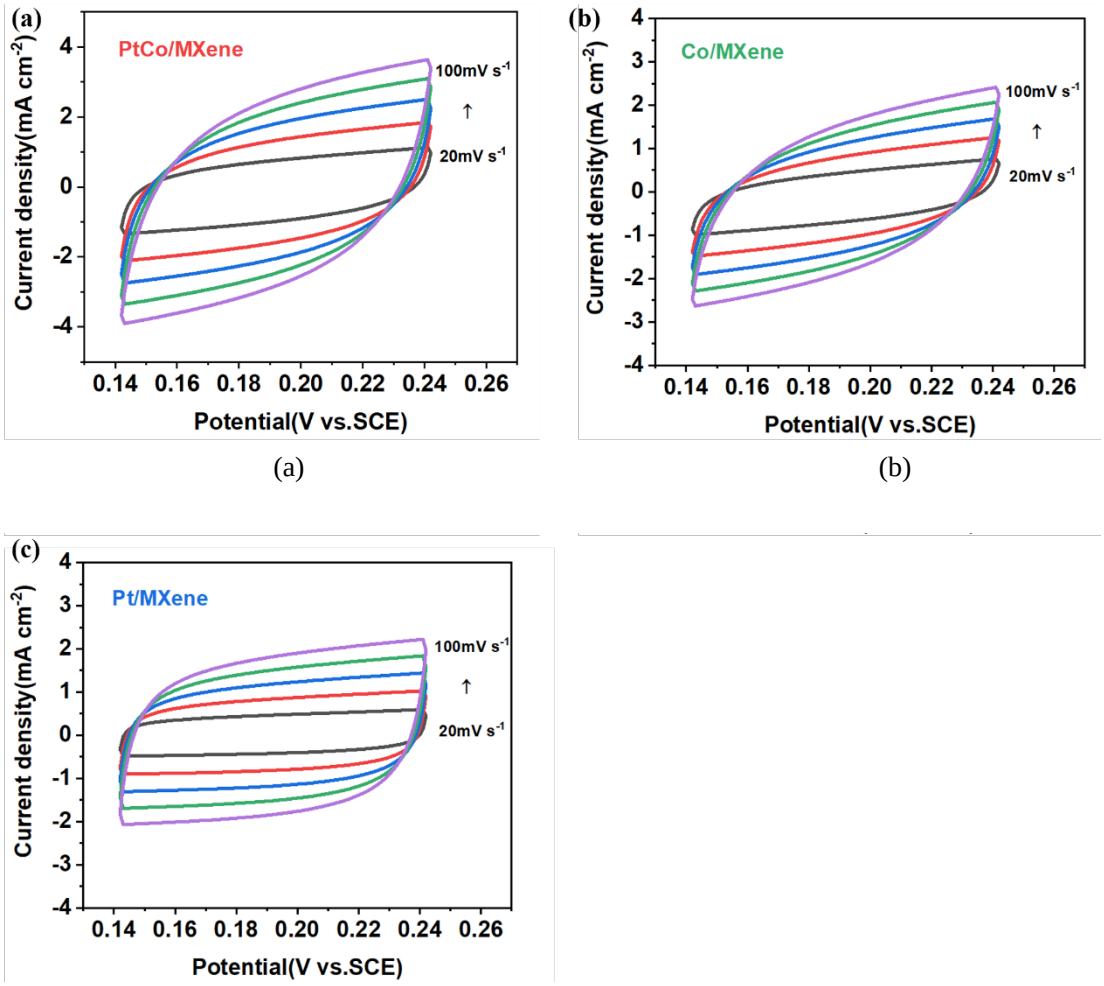

Fig. S3 CV at different scan rates and an overpotential range of 0.15–0.25 V versus SCE. (a) PtCo/MXene; (b) Co/MXene; (c) Pt/MXene.