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Figure S1. Histograms showing the particle-size distributions of the porous PtCu NCs (a) and dendritic PtCu NCs (b).



Figure S2. XPS spectra for the Pt4f region (Pt4 $f_{5/2}$ and Pt4 $f_{7/2}$) (a) and Cu2p region (Cu2 $p_{1/2}$ and Cu2 $p_{3/2}$) (b) for porous PtCu NCs and dendritic PtCu NCs.



Figure S3. HAADF-STEM images and EDS cross-sectional compositional line profiles for porous PtCu NCs (a and b) and dendritic PtCu NCs (c and d).



Figure S4. XRD pattern of the porous PtCu NCs. The positions of pure Pt and Cu metals are indicated on the bottom.



Figure S5. TEM images of monometallic Pt nanoparticles (a) and Cu nanoparticles (b) prepared under the typical synthetic condition by using a single metallic precursor.



Figure S6. TEM image of PtCu NCs synthesized in the absence of PVP under the typical synthetic condition.



Figure S7. CV curves of the three catalysts measured in a N_2 -saturated 0.1 M HClO₄ solution at a scan rate of 50 mV s⁻¹.



Figure S8. TEM image of porous PtCu NCs after the durability test.