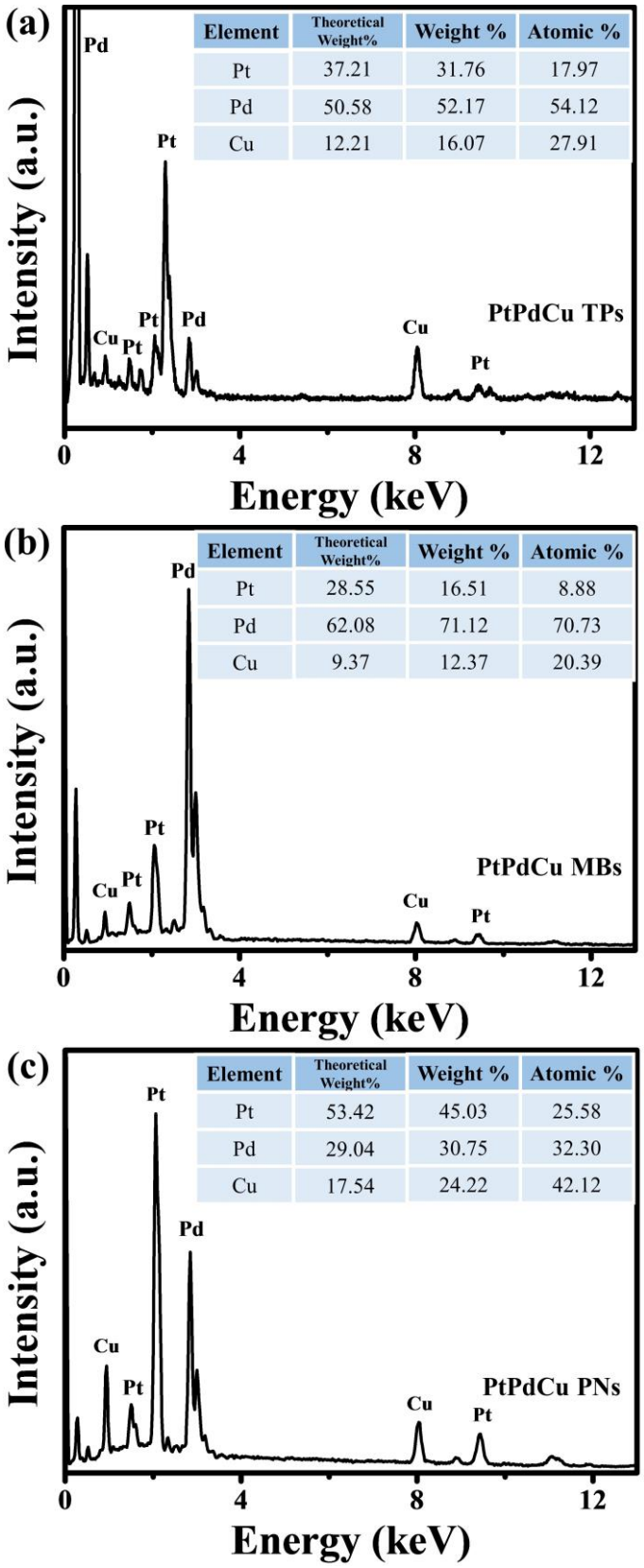

Fig. S1 EDX spectra of the PtPdCu TPs (a), PtPdCu MBs (b), and PtPdCu PNs (c), respectively.

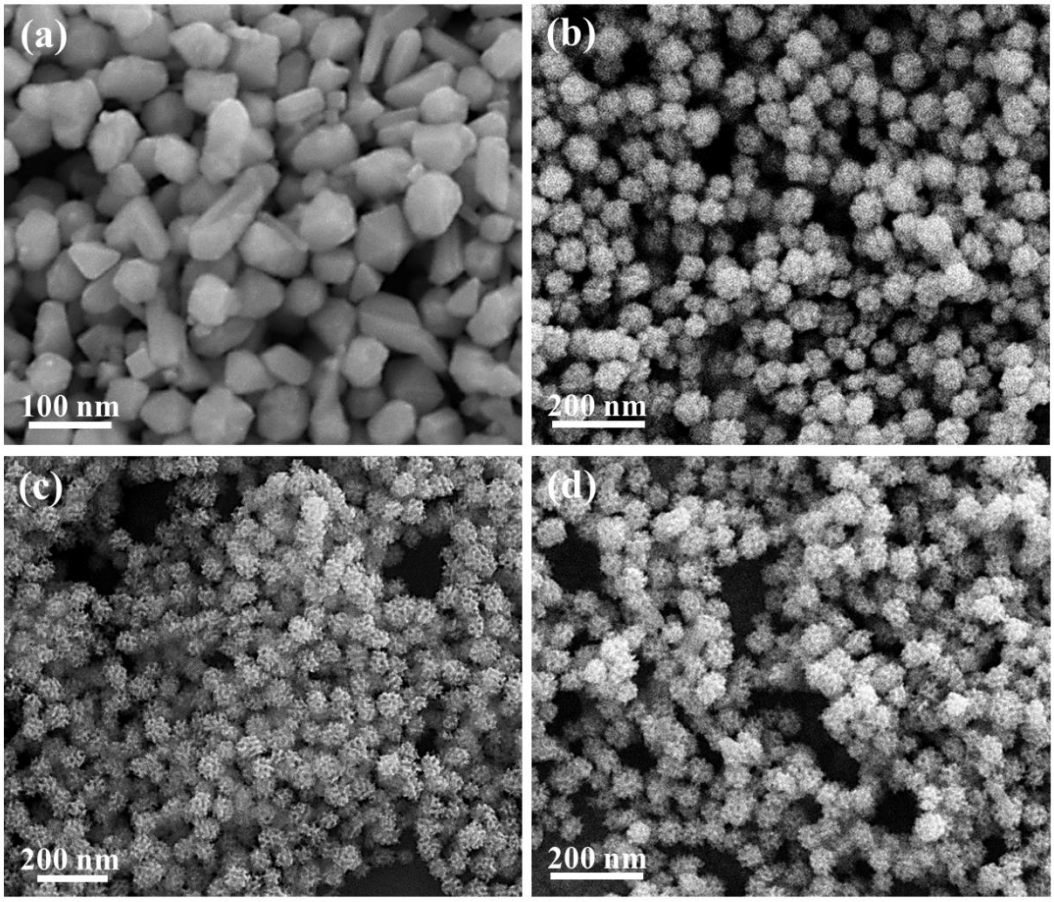

Fig. S2 SEM images of the samples prepared under identical conditions used for the typical synthesis: (a) Pd nanoparticles, (b) PtPd nanoparticles, (c) PtCu nanoparticles, and (d) without KBr.

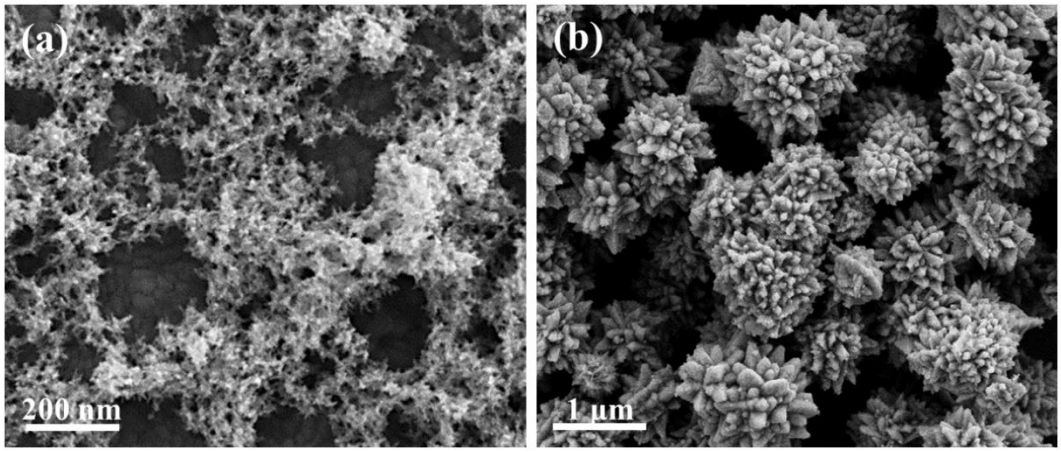

Fig. S3 SEM images of the samples prepared without (a) HCl and (b) F127, respectively, under identical conditions used for the typical synthesis.

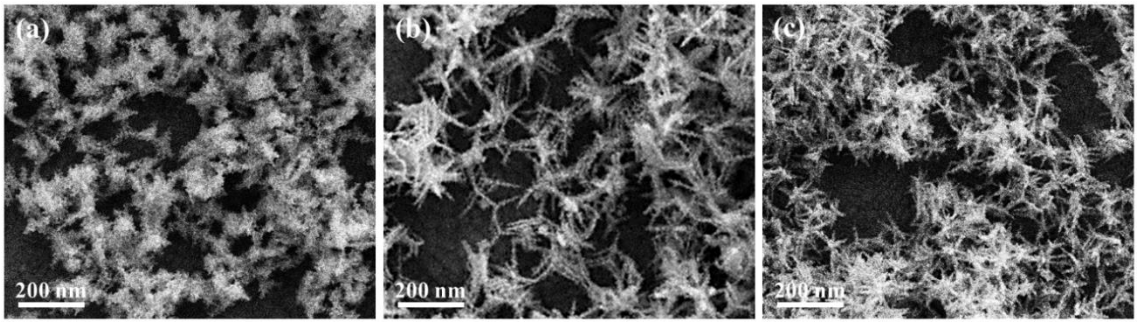

Fig. S4 SEM images of PtPdCu samples prepared with different metallic precursor amounts under identical conditions used for the typical synthesis. The added metallic precursor amounts of K_2PtCl_4, Na_2PdCl_4, $CuCl_2$ are (a) 1.5 mL, 1.5 mL, 1.5 mL (PtPdCu PNs); (b) 1.0 mL, 2.5 mL, 1.0 mL (PtPdCu TPs); (c) 0.75 mL, 3.0 mL, 0.75 mL (PtPdCu MBs), respectively.

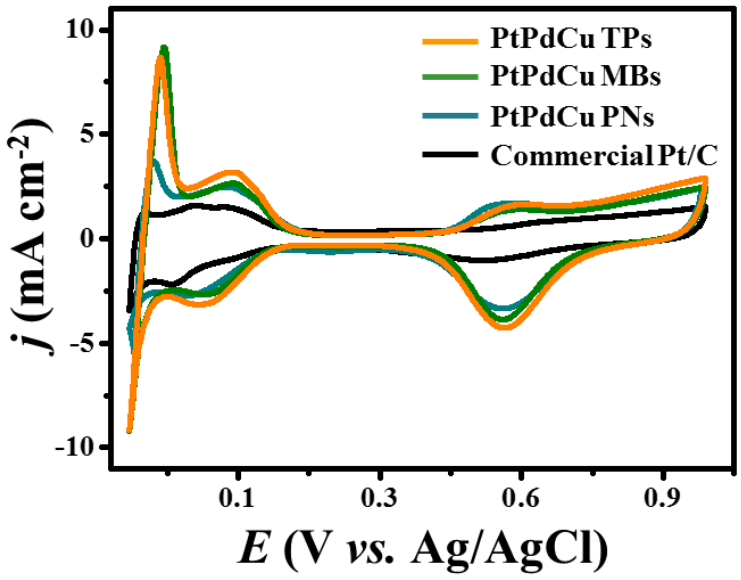

Fig. S5 CV curves of the different catalysts.

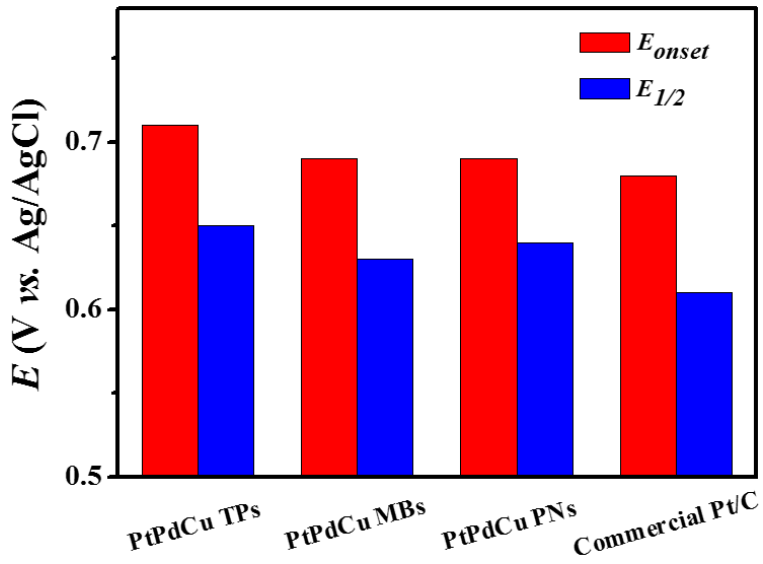

Fig. S6. The comparisons of the E_{onset} and $E_{1/2}$ of the different catalysts.

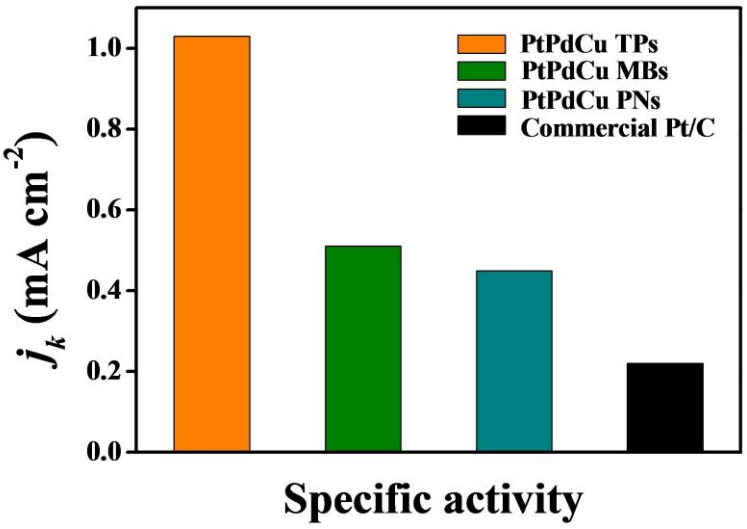

Fig. S7 The comparison of specific activity for the different catalysts.

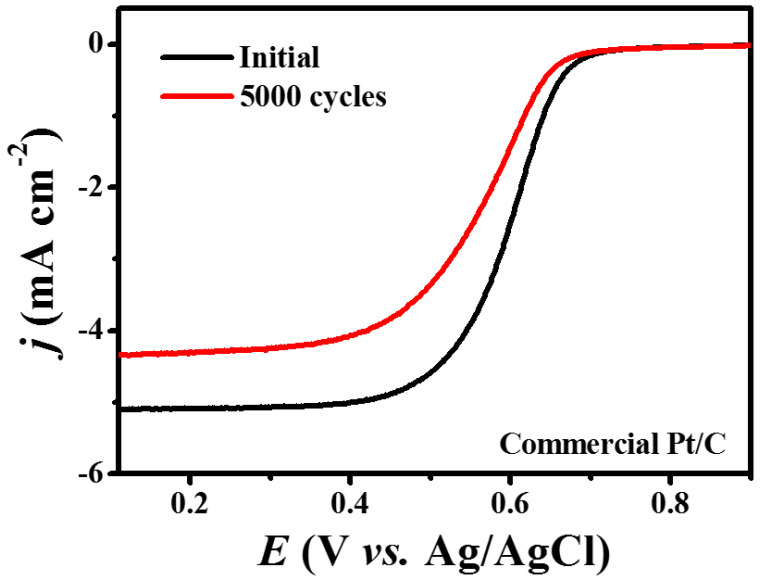

Fig. S8 LSV curves of the commercial Pt/C before and after durability test.

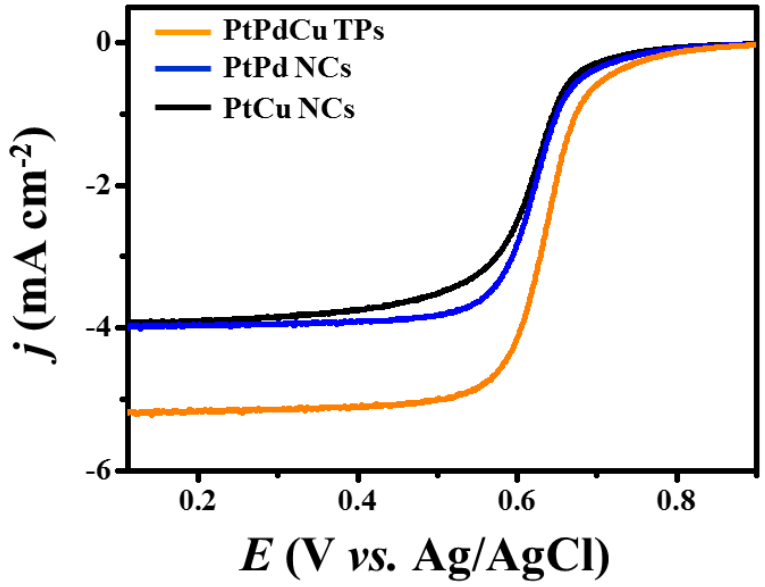

Fig. S9 LSV curves of the PtPdCu TPs, PtPd NCs, and PtCu NCs.

Table S1. The comparison of the ORR performance of the PtPdCu TPs with recently reported Pt-based catalysts.

Catalyst	E_{onset} (V)	$E_{1/2}$ (V)	ECSA ($m^2 g^{-1}$)	Ref.
PtPdCu tripods	1.00	0.94	39.29	This work
Nanoporous Pt	0.85	–	46.1	[1]
Hierarchical PtAu alloy nanodendrites	0.89	–	79.48	[2]
Pt nanoparticles	0.85	–	27	[3]
PtPd alloy networks	0.89	–	38.65	[4]
PtIr dendritic tripods	1.03	0.906	42.1	[5]
Porous PtAg hollow chain-like networks	0.933	0.857	70.1	[6]
AuPt nanoparticles	0.98	0.83	–	[7]
PtCuCo nanoalloys	–	0.905	22.99	[8]
$Pt_{76}Co_{24}$ nanomyriapods	0.92	0.82	24.49	[9]
Rhombic dodecahedral CuPt nanoframes	–	0.87	53.87	[10]

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