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Supporting information

PtPdCu cubic nanoframes as electrocatalysts for methanol oxidation reaction

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Table S1 Comparison of the electrocalytic performances of the catalysts in this work and references.

Catalysts	ECSA $[m^2\ g^{-1}_{Pt}]$	Mass activity	Ref.
Hexameric octahedral PtPdCu	-	3.47 mA cm^{-2}	29
PtPdCu thin-film	76.2	366.1 mA mg^{-1}_{Pt}	30
PtPdCu concave nanooctahedra	25.8	529.5 mA mg^{-1}_{Pt}	31
PtPdCu spherical network	86.9	845 mA mg^{-1}	32
PtPdCu nanowires	58.8	535.3 mA mg^{-1}_{Pt}	33
PtPdCu nanodendrites	75.0	520 mA mg^{-1}_{Pt}	34
PtPdCu porous nanocubes	50.0	341 mA mg^{-1}_{Pt}	34
PtPdCu cubic nanoframes	51.5	455 mA mg^{-1}_{Pt+Pd}	This work
Commercial Pt/C	48.6	177 mA mg^{-1}_{Pt}	This work

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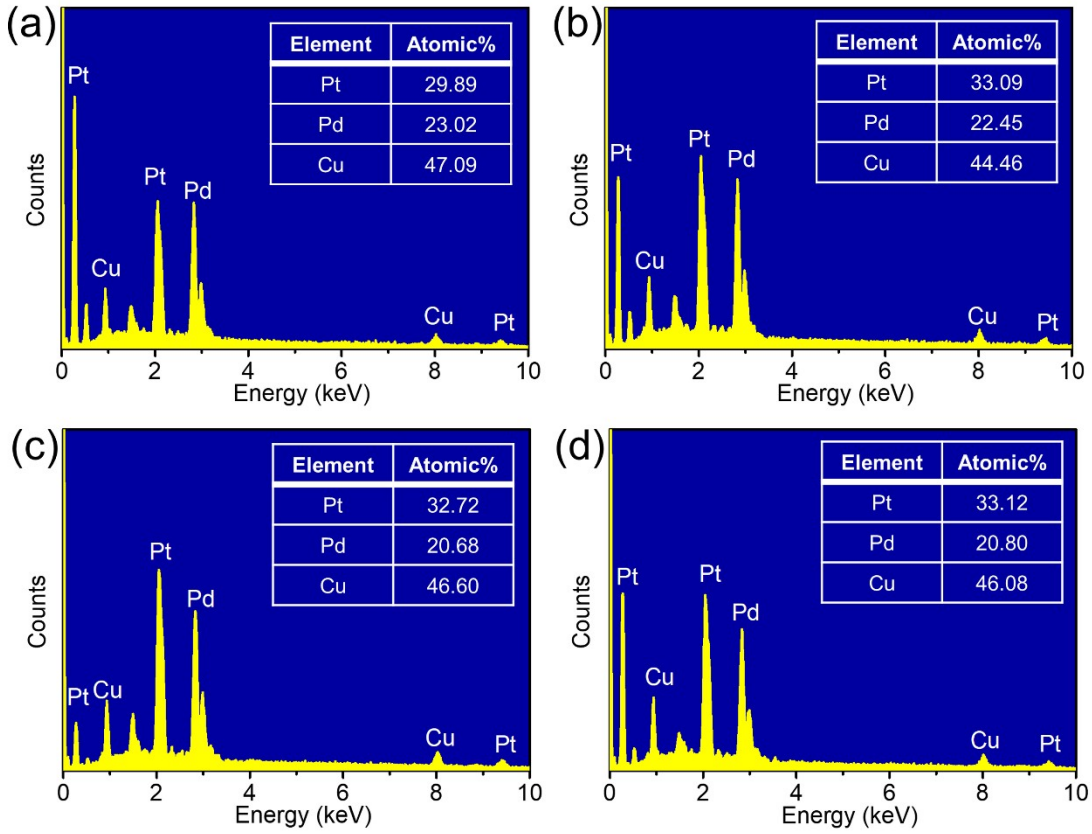

Fig. S1 EDS spectra of the PtPdCu products obtained at different reaction time: (a) 10 min, (b) 50 min, (c) 120 min and (d) 160 min. These EDS spectra are obtained by a Bruker QUANTAX EDS on a Hitachi S-8100 field-emission scanning electron microscope.

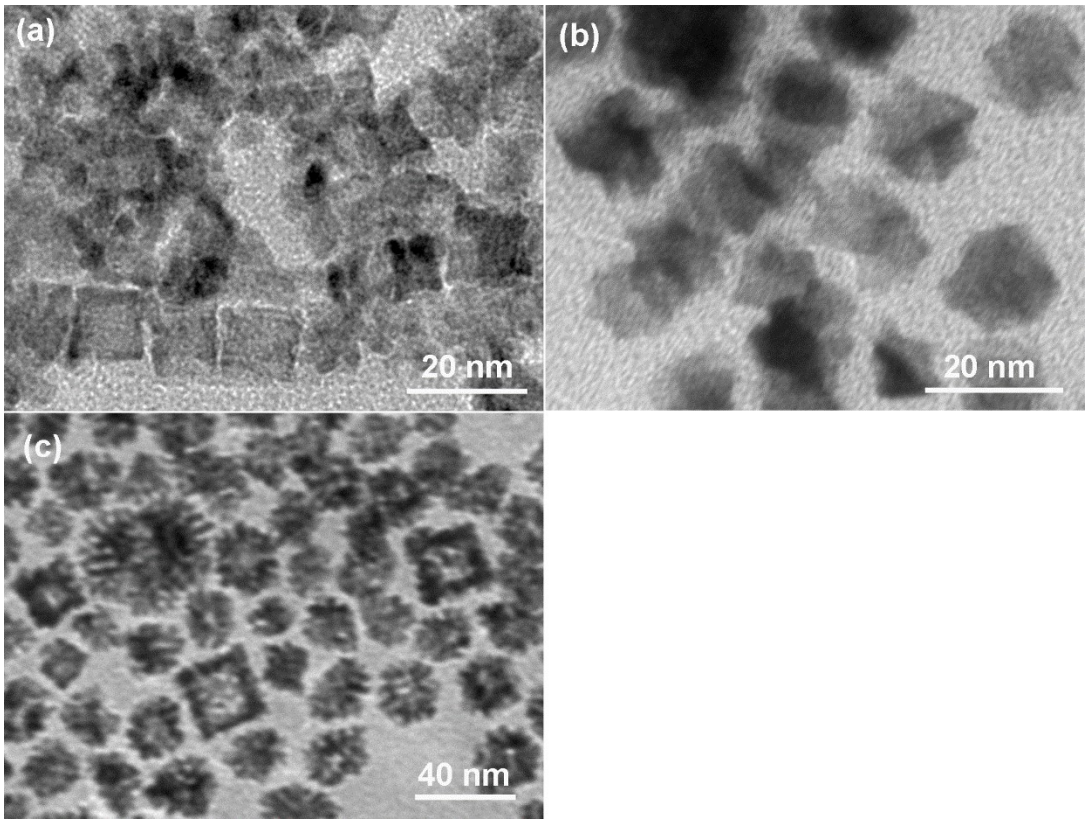

Fig. S2 (a) TEM image of the sample prepared under the protection of N_2 gas. During the synthesis process, the beaker was sealed by a plastic film, and the air in the beaker is purged by N_2 gas. (b) TEM image of the sample prepared by replacing CTAB with CTAC (50 mg). (c) TEM image of the sample obtained by replacing CTAB with CTAC (50 mg) and KBr (19 mg).