

Support information

Pt Loaded on Silicon Carbide/Porous Carbon Hybrid as an excellent Electrocatalyst for Methanol Oxidation Reaction

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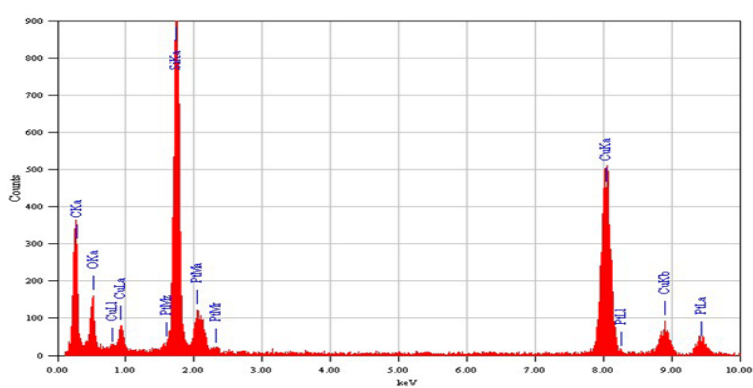


Figure S1. The EDS pattern of Pt/SiC-PC-1300 catalyst.

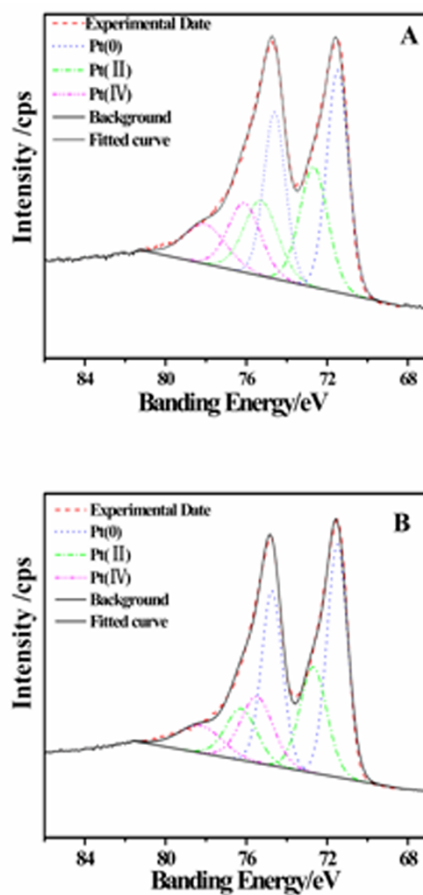


Figure S2. High resolution Pt 4f XPS spectra of (A) Pt/PC and (B) Pt/SiC-PC-1300 catalysts.

Table S1 Binding energies and relative intensities of XPS spectra of Pt species in catalysts.

Catalyst	Species	Binding energy (eV)		Relative intensity (%)
		Pt(4f _{7/2})	Pt(4f _{5/2})	
Pt/PC-1300	Pt metal	71.4	74.6	47.73
	PtO	72.6	76.2	29.87
	PtO ₂	75.3	78.2	22.40
Pt/SiC-PC-1300	Pt metal	71.5	74.7	52.03
	PtO	72.7	76.3	27.42
	PtO ₂	75.5	78.3	20.55

Table S2 Electrochemical activities towards methanol oxidation of Pt/SiC-PC-1200, Pt/SiC-PC-1300, and Pt/SiC-PC-1400 catalysts.

Catalyst	Onset potential (V)	Peak current (A /g Pt)	Peak Potential (V)	Residual current after 3600s (A /g Pt)
Pt/SiC-PC-1200	0.21	421.42	0.74	171.00
Pt/SiC-PC-1300	0.21	836.93	0.72	202.12
Pt/SiC-PC-1400	0.21	338.18	0.76	131.00