

Electronic Supplementary Information

Biotemplated synthesis of bark-structured TiC nanowires as Pt catalyst support with enhanced electrocatalytic activity and durability for methanol oxidation

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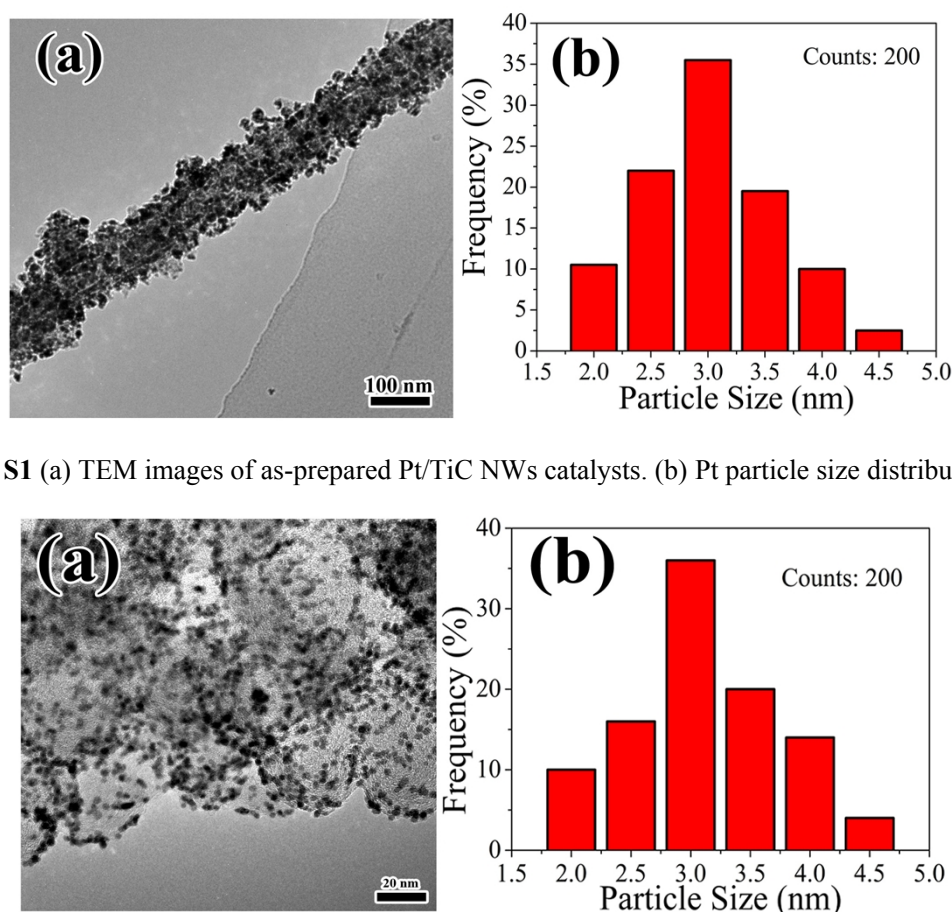


Fig. S1 (a) TEM images of as-prepared Pt/TiC NWs catalysts. (b) Pt particle size distribution.

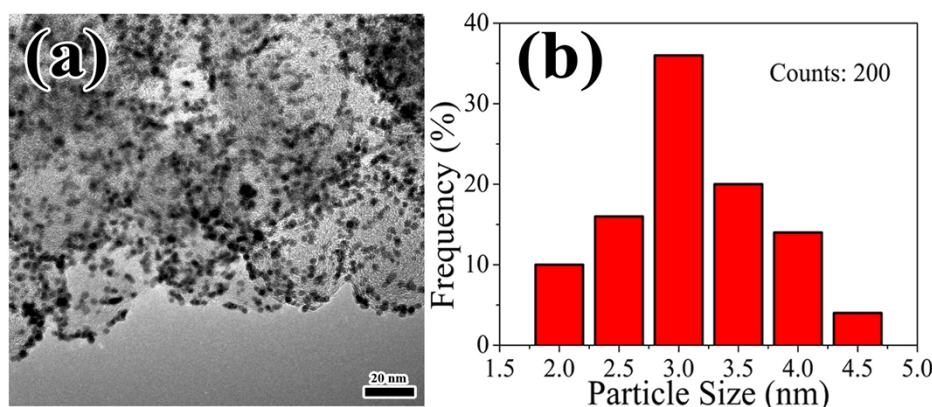


Fig. S2 (a) TEM image of Pt/C (Vulcan XC-72) catalyst. (b) Pt particle size distribution.

Fig. S2a presents TEM images of Pt/C (Vulcan XC-72) catalyst. From Fig. S2b, they can be clearly seen that platinum (Pt) nanoparticles with average particle size of about 3 nm were highly

dispersed on the surface of Vulcan XC-72 carbon via urea-assisted ethylene glycol reduction method. It obviously indicates that the average size of Pt particle on Vulcan XC-72 carbon is similar to that on TiC NWs (Fig. S1).

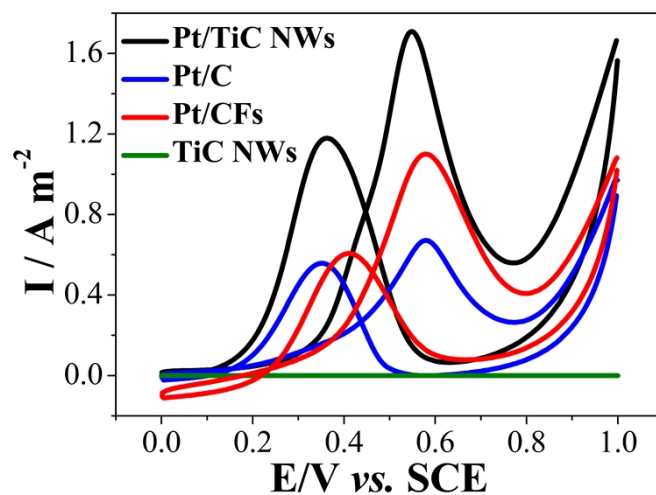


Fig. S3 CVs of the Pt/TiC NWs, Pt/C and Pt/CFs catalysts in 0.1 M H₂SO₄ and 1.0 M CH₃OH at a scan rate of 20 mV s⁻¹. Currents were normalized with the ECSA of Pt.

Table S1 Pt 4f XPS spectra of Pt/TiC NWs, Pt/C and Pt/CFs.

Catalyst	Pt 4f _{5/2} (ev)	Pt 4f _{7/2} (ev)
Pt/TiC NWs	71.76	75.08
Pt/C	71.34	74.64
Pt/CFs	71.71	75.07