

Supporting Information

Synthesis and Durability of Highly Dispersed Platinum Nanoparticles Supported on Ordered Mesoporous Carbon and Their Electrocatalytic Properties for Ethanol oxidation

Ming-Hui Chen, Yan-Xia Jiang*, Shu-Ru Chen, Rui Huang, Jian-Long Lin,

Sheng-Pei Chen, Shi-Gang Sun*

State key laboratory of physical chemistry of solid surfaces, Department of Chemistry,
College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005,
China

* Author to whom correspondence should be addressed.

Tel: +86-(0)592-2180181; Fax: +86-(0)592-2183047

E-mail: yxjiang@xmu.edu.cn, sgsun@xmu.edu.cn

State key laboratory of physical chemistry of solid surfaces,
College of Chemistry and Chemical Engineering, Xiamen University, Xiamen 361005

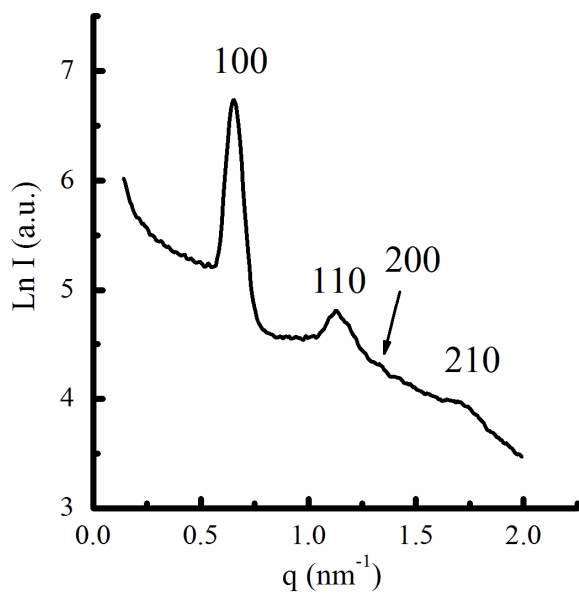


Figure S2. SAXS pattern of the mesoporous carbon (MPC).

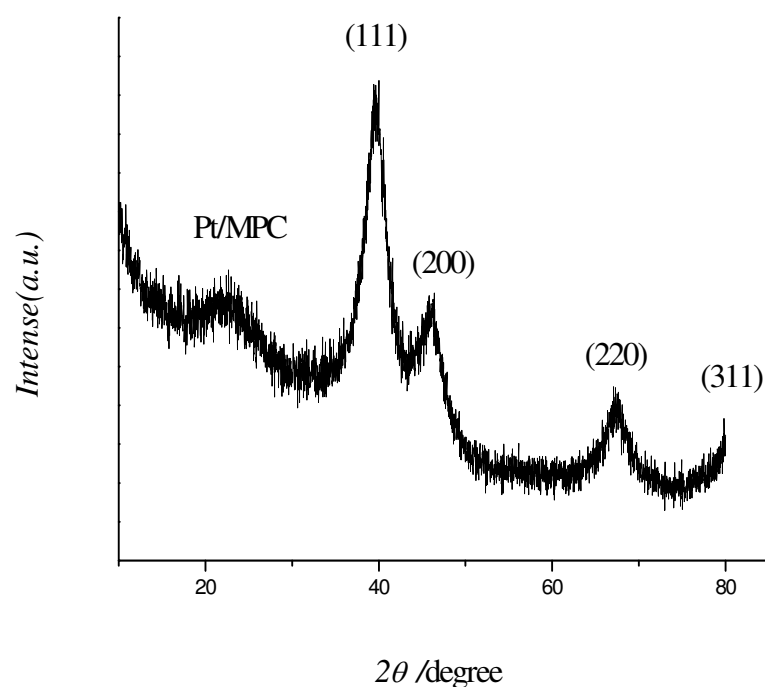


Figure S3. Large-angle XRD pattern of the Pt/MPC.

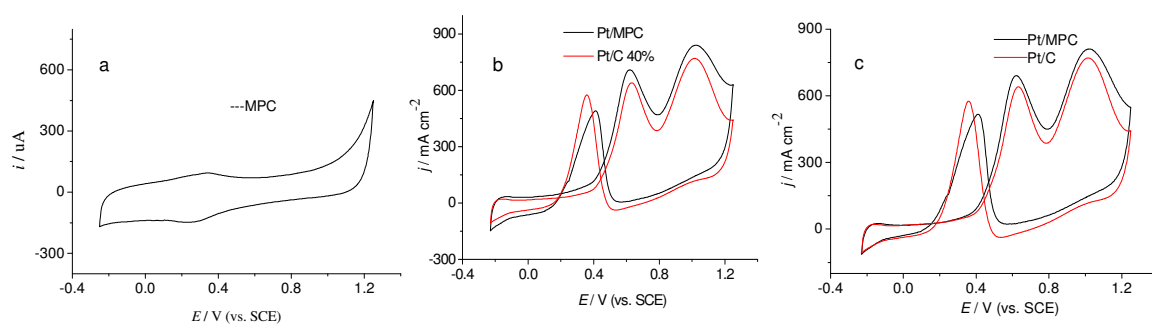


Figure S4. (a) Cyclic voltammogram of MPC in 0.1 M HClO₄, and (b) cyclic voltammogram of ethanol oxidation on Pt/MPC 0.1 M ethanol + 0.1 M HClO₄, (c) all conditions is same as (b) except the correction of double layer charge of MPC.

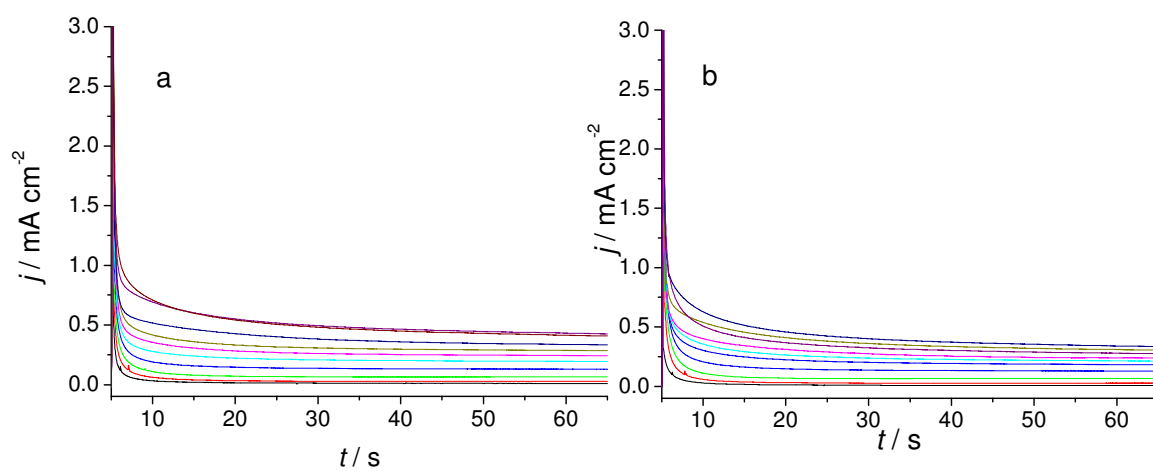


Figure S5. Plots of $J - t$ transients for the oxidation of ethanol according to the potential step program represented by the inset to this figure, the oxidation potential changed from 0.15 V to 0.60 V with a 50 mV interval, in 0.1 M HClO_4 + 0.1 M ethanol on Pt/MPC (a) and commercial Pt/C catalyst (b)