Supporting Information

Popcorn-like PtAu nanoparticles supported on reduced graphene oxide: Facile synthesis and catalytic applications

Jie-Ning Zheng,[a] Shan-Shan Li,[a] Xiaohong Ma,[b] Fang-Yi Chen,[a] Ai-Jun Wang,[a]* Jian-Rong Chen,[a] Jiu-Ju Feng,[a]*

[a] *College of Chemistry and Life Science, College of Geography and Environmental Science, Zhejiang Normal University, Jinhua, 321004, China*

[b] *State Key Laboratory of Multiphase Complex Systems, Institute of Process Engineering, Chinese Academy of Sciences, Beijing 100190, China.*

**Corresponding author: jjfeng@zjnu.cn (JJF), ajwang@zjnu.cn (AJW).*

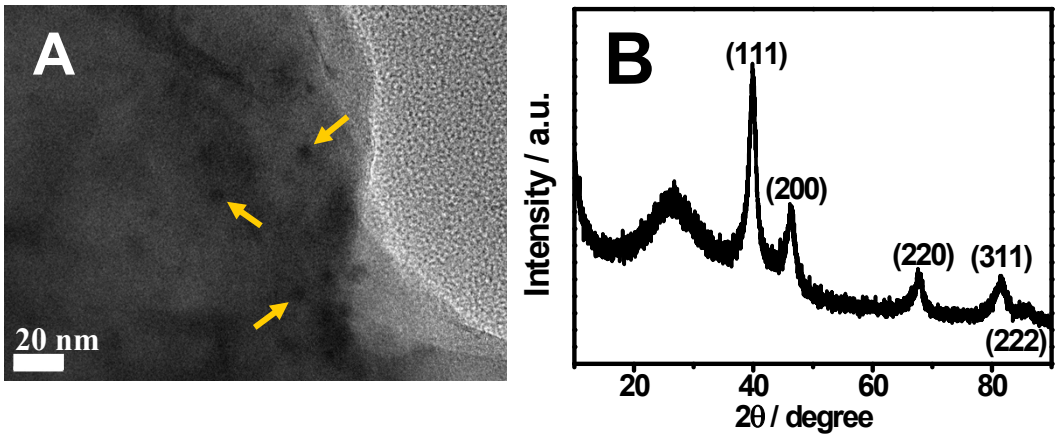

Figure S1. TEM image (A) and XRD pattern (B) of the commercial 10% Pt/C.

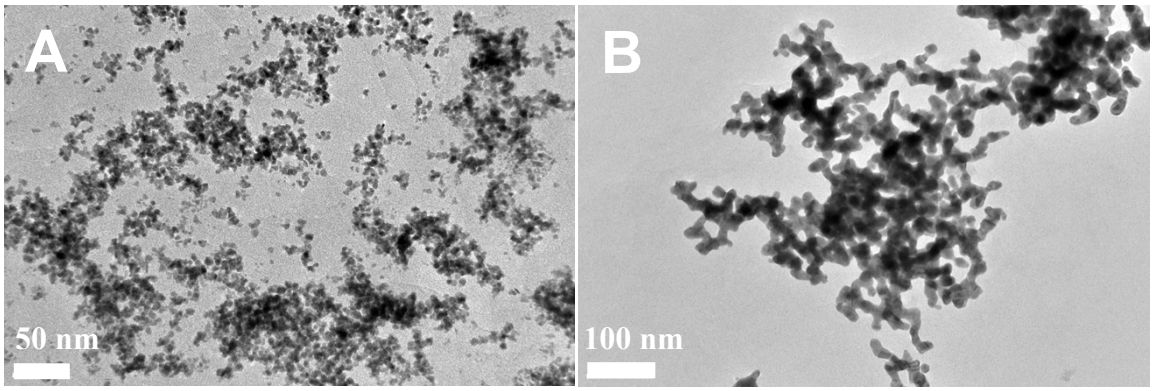

Figure S2. TEM images of the Pt–rGO (A) and Au–rGO (B).

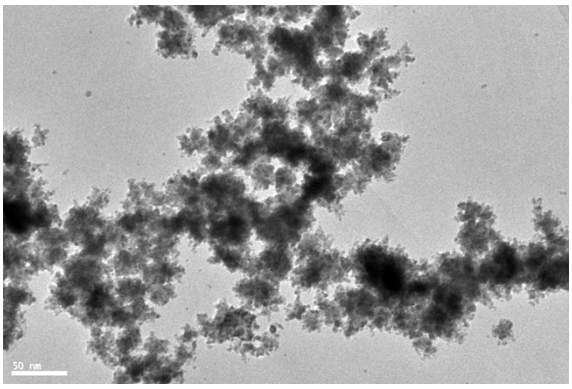

Figure S3. TEM images of the products obtained without PVP.

Table S1. Comparison of methanol electro-oxidation activities of the PtAu-rGO, Pt-rGO, and commercial Pt black catalysts.

Catalysts	Current density ($mA\ cm^{-2}$)	Specific activity ($mA\ cm_{Pt}^{-2}$)	Mass activity ($mA\ mg_{Pt}^{-1}$)
PtAu-rGO	28.95	0.84	636.66
Pt-rGO	6.36	0.42	75.24
Commercial Pt/C	0.85	0.38	14.99