

## Supporting information

# Platinum Nanoflowers Supported on Graphene Oxide Nanosheet: Its Green Synthesis, Growth Mechanism, and Advanced Electrocatalytic Property for Methanol Oxidation

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## Supplementary Results

**Figure S1** TEM images of the aggregated PtNFs synthesized in the absence of GO at different magnifications.

**Figure S2** TEM images of the PtNFs-GO after reacting for 10 min.

**Figure S3** Electrocatalytic cycling stability of PtNFs-GO and Pt black in 0.5 M H<sub>2</sub>SO<sub>4</sub> solution containing 1 M methanol.

**Table S1** Comparison of methanol oxidation on PtNFs-GO hybrids with that on PtNPs-rGO hybrids.

Figure S1

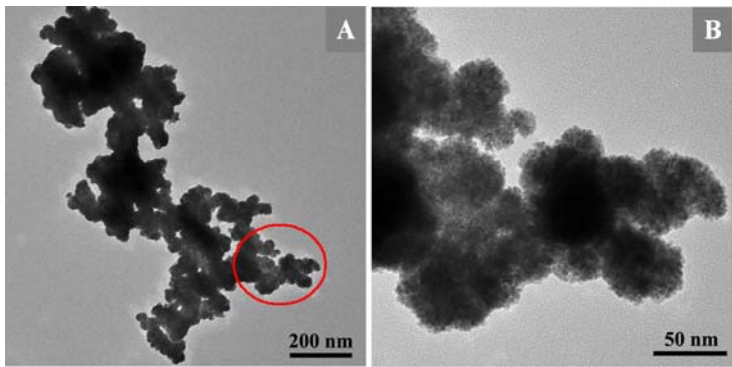


Figure S2

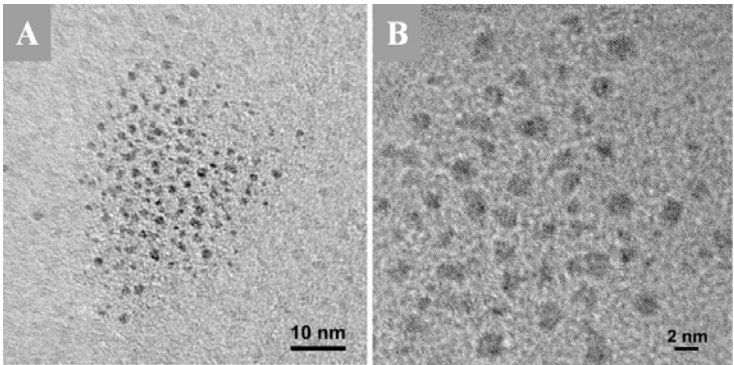


Figure S3

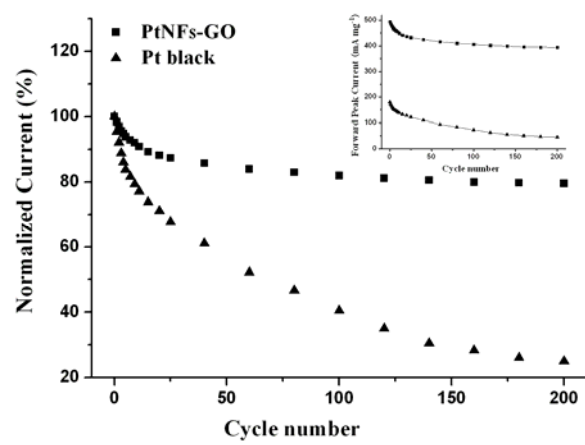


Table S1 Comparison of methanol oxidation on PtNFs-GO hybrids with that on PtNPs-rGO hybrids.

Hybrids	C <sub>methanol</sub> (mol/L)	C <sub>H2SO4</sub> (mol/L)	V <sub>p</sub> (V)	I <sub>f</sub>	I <sub>f</sub> /I <sub>b</sub>	Ref.
PtNFs-GO	1.0	0.5	0.72	523 mA/mg	1.2	This work
PtNPs-rGO	4.0	1.0	0.70	105.7 mA/mg	2.73	1
PtNPs-rGO	0.5	0.5	0.67	4.2 mA /cm <sup>2</sup> .	1.07	2
PtNPs-rGO	1.0	0.5	0.70	299 mA /mg	1.01	3
PtNPs-rGO	2.0	1.0	0.68	38.26 mA/mg	1.2	4
PtNPs-rGO	1.0	0.5	0.7	30.27 mA /cm <sup>2</sup>	0.83	5

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