Electronic Supporting Information

Trimetallic PtAuNi Alloy Nanoparticles as an Efficient Electrocatalyst for Methanol Electrooxidation Reaction

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Fig S1. EDX spectra of alloy NPs solvothermally synthesized at 200°C for 72 h. (i) Pt_{80}Au_{20}, (ii) Pt_{76}Au_{10}Ni_{14}, (iii) Pt_{66}Au_{11}Ni_{23}, (iv) Pt_{55}Au_{9}Ni_{35}, (v) Pt_{76}Ni_{24} NPs. The X-axis and Y-axis title of all above EDX spectra are Counts and Energy (keV), respectively.
Fig S2. Histograms on the particle size of (a) Pt$_{66}$Au$_{11}$Ni$_{23}$, (b) Pt$_{56}$Au$_{9}$Ni$_{35}$, and (c) Pt$_{76}$Ni$_{24}$ NPs.

Fig S3. TEM image of Pt$_{66}$Au$_{11}$Ni$_{23}$ NPs synthesized using the same procedure without adding PVP.
**Fig S4.** CVs of (a) Pt$_{80}$Au$_{20}$, (b) Pt$_{66}$Au$_{11}$Ni$_{23}$, and (c) Pt$_{76}$Ni$_{24}$ NPs at its 100$^{th}$ and 1000$^{th}$ cycles in 0.5 M H$_2$SO$_4$. 