

Supporting Information

Fabrication of $\text{Bi}_x\text{Pt}_y\text{Pd}_z$ Alloy Nanoporous plates with Electro-catalytic Activity

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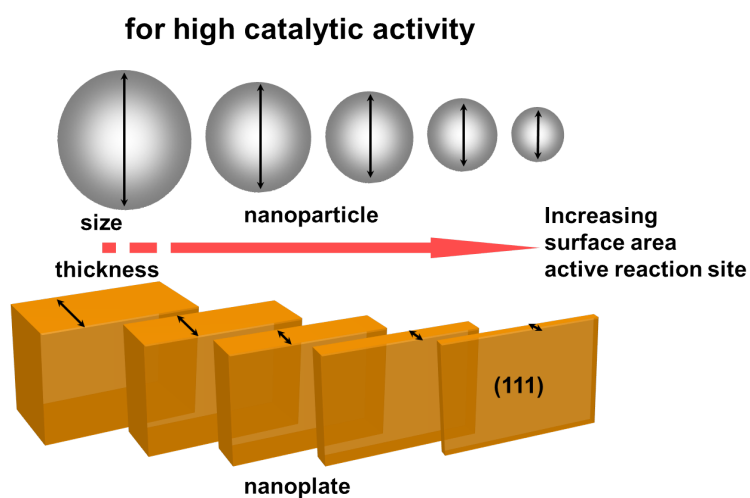


Figure S1. Increasing Surface area active reaction site of spherical particle and plate structure.

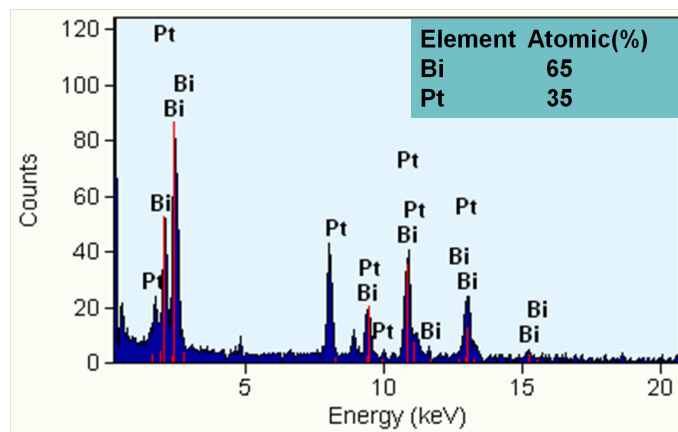


Figure S2. EDS spectrum of $\text{Bi}_{0.65}\text{Pt}_{0.35}$ nanoplates.

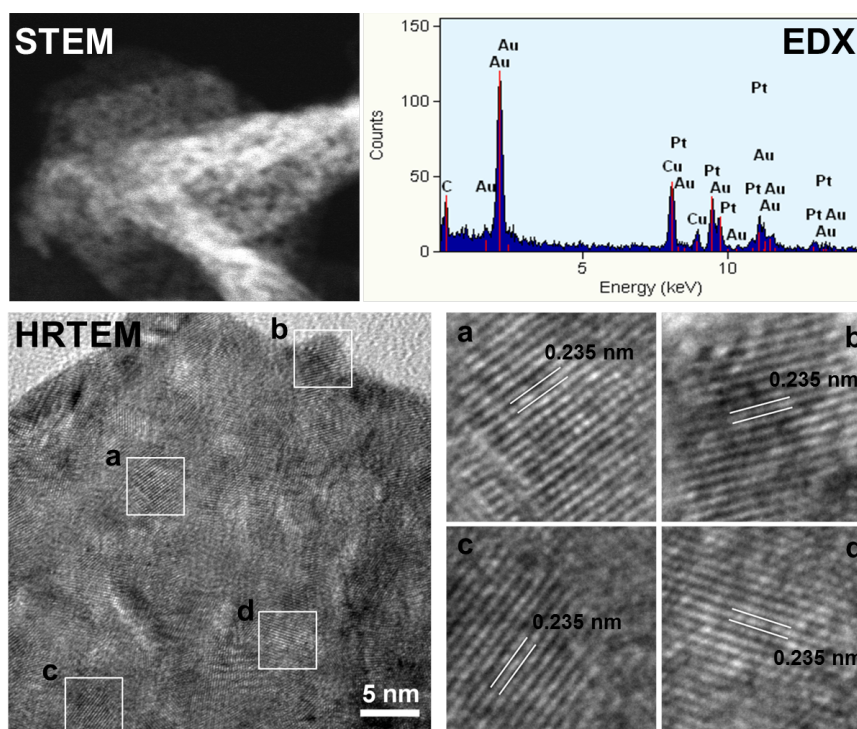


Figure S3. The HRTEM image of $\text{Pt}_{35}\text{Au}_{65}$ exhibits clear lattice fringes with the d spacing of 0.235 nm, corresponding to the (111) lattice spacing of cubic gold crystals. The enlarged image of Figure. S4 (a-d) further confirmed the exposed surface of {111} face; a d -spacing of 0.235 nm for adjacent lattice planes corresponds to the {111} planes of fcc Au.

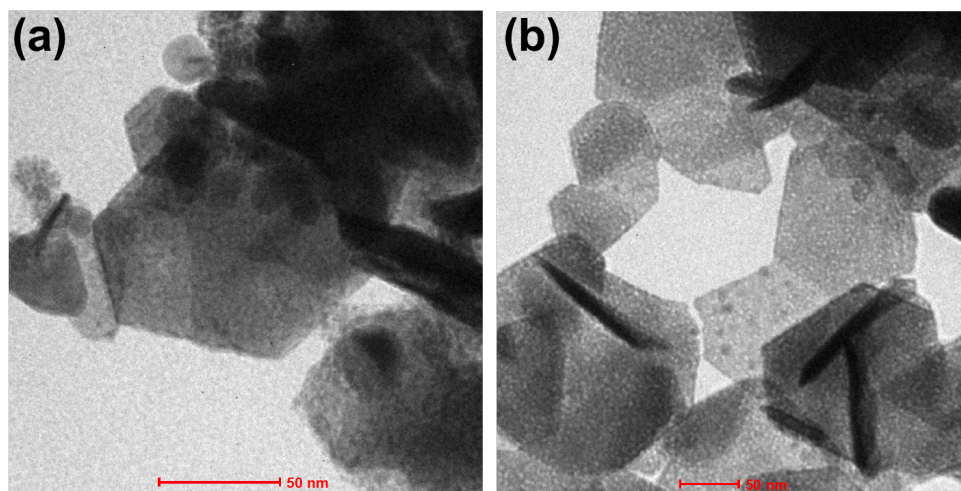


Figure S4 Formation of $\text{Bi}_x\text{Pt}_y\text{Pd}_z$ nanoplates by adding 200 μL of 10 mM K_2PdCl_4 water (a) and ethanol/water (1/1) mixed solution (b) to methanol solution contained 2 mg/mL of $\text{Bi}_{65}\text{Pt}_{35}$.