

Supporting Information

Water-soluble metal nanoparticles stabilized by plant polyphenols for improving the catalytic properties in oxidation of alcohols

H. Mao^a, J. Ma^a, Y. Liao^a, S. L. Zhao^{a} and F. W. Huo^{b*}*

^a College of Chemistry and Materials Science, The Engineering Center for the Development of Farmland Ecosystem Service Function, Sichuan Normal University, Chengdu 610068, P.R. China.

^b Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Jiangsu National Synergistic Innovation Center for Advanced Materials (SICAM), Institute of Advanced Materials, Nanjing Tech University (NanjingTech), Nanjing 211816, P.R. China.

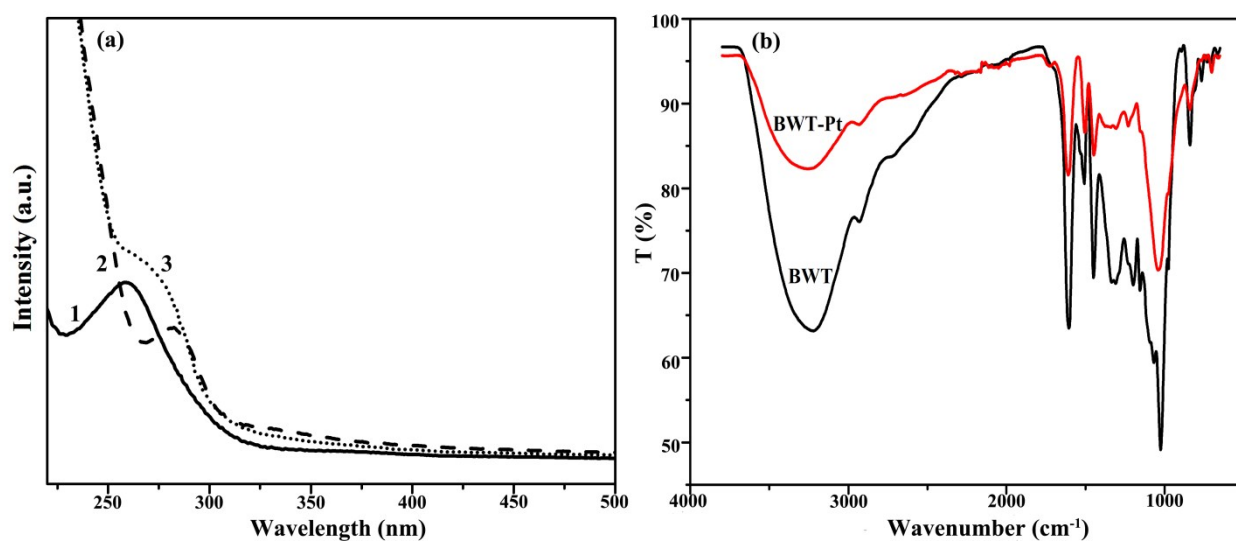


Fig. S1. UV-vis and FT-IR spectrum of BWT and BWT-Pt (a: UV-vis spectrum, 1: Pt^{4+} solution, 2: BWT-Pt solution, 3: BWT- Pt^{4+} solution; b: FT-IR spectrum).

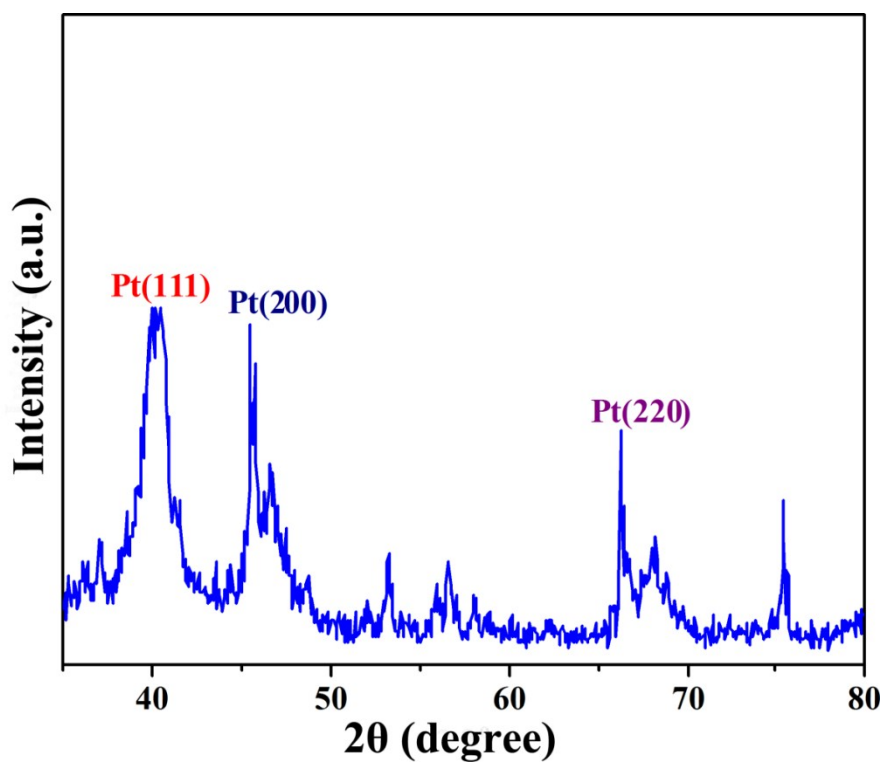


Fig. S2. XRD pattern of $\text{BWT}_{3.75}\text{-Pt}$.

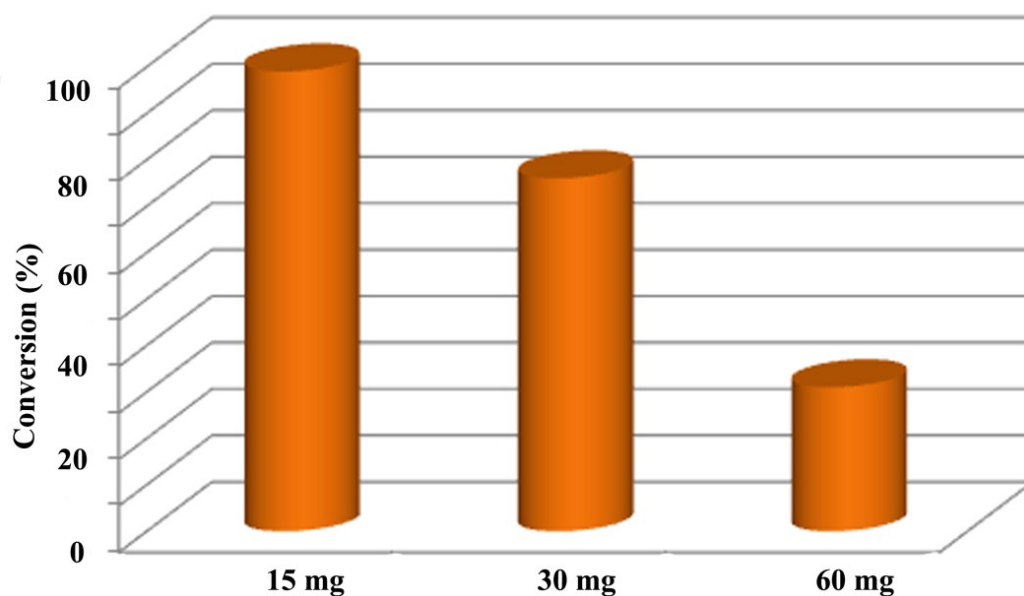


Fig. S3. Oxidation of benzyl alcohol using BWT-Pt NPs catalysts with different amount of BWT (20 μmol of Pt, 1 mmol of benzyl alcohol, 15 ml of H_2O , 50°C, 0.5 mmol of base, 24 h).

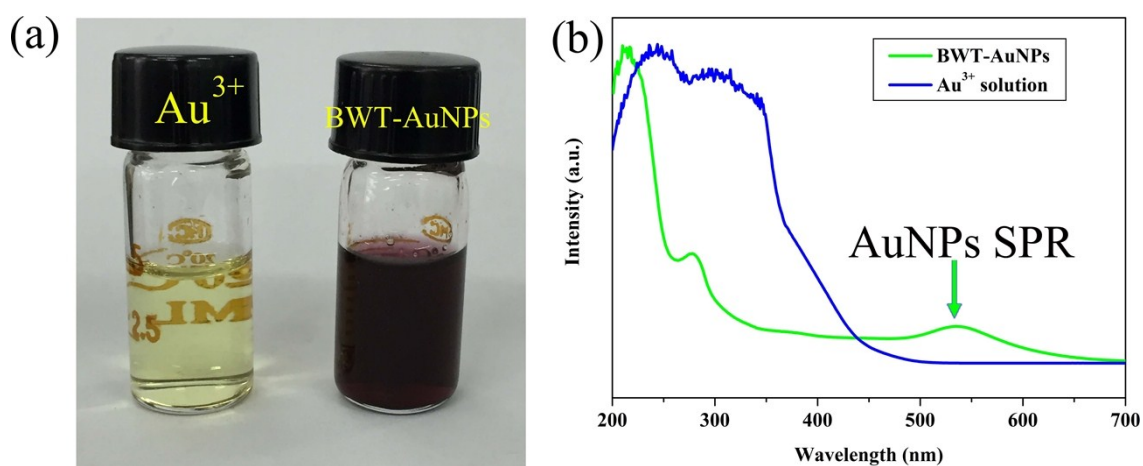


Fig. S4. (a) Photos and (b) Uv-vis spectra of Au^{3+} solution and BWT-AuNPs colloid solutions (5 mg BWT, 5 ml H_2O , 50 μmol Au^{3+})