

Supplementary Material (ESI) for New Journal of Chemistry
This journal is © The Royal Society of Chemistry

Supporting Information

Visible-light-driven oxidation of vanillyl alcohol in air with Au-Pd bimetallic nanoparticles on phosphorylated hydrotalcite

Miao Wu,^{ab} Jin-Hui Pang,^c Ping-Ping Song,^a Jian-Jun Peng,^b Feng Xu,^a Qiang
Li^{*d} and Xue-Ming Zhang^{*a}

^a Beijing Key Laboratory of Lignocellulosic Chemistry, Beijing Forestry University, Beijing, 100083, P. R. China.

^b National Engineering Laboratory for Pulp and Paper, China National Pulp and Paper Research Institute, Beijing, 100102, P. R. China.

^c College of Marine Science and Biological Engineering, Qingdao University of Science and Technology, Qingdao, 266042, P. R. China.

^d School of Science, Beijing Forestry University, Beijing, 100083, P. R. China.

E-mail address: xm_zhang@bjfu.edu.cn; liqiang@bjfu.edu.cn

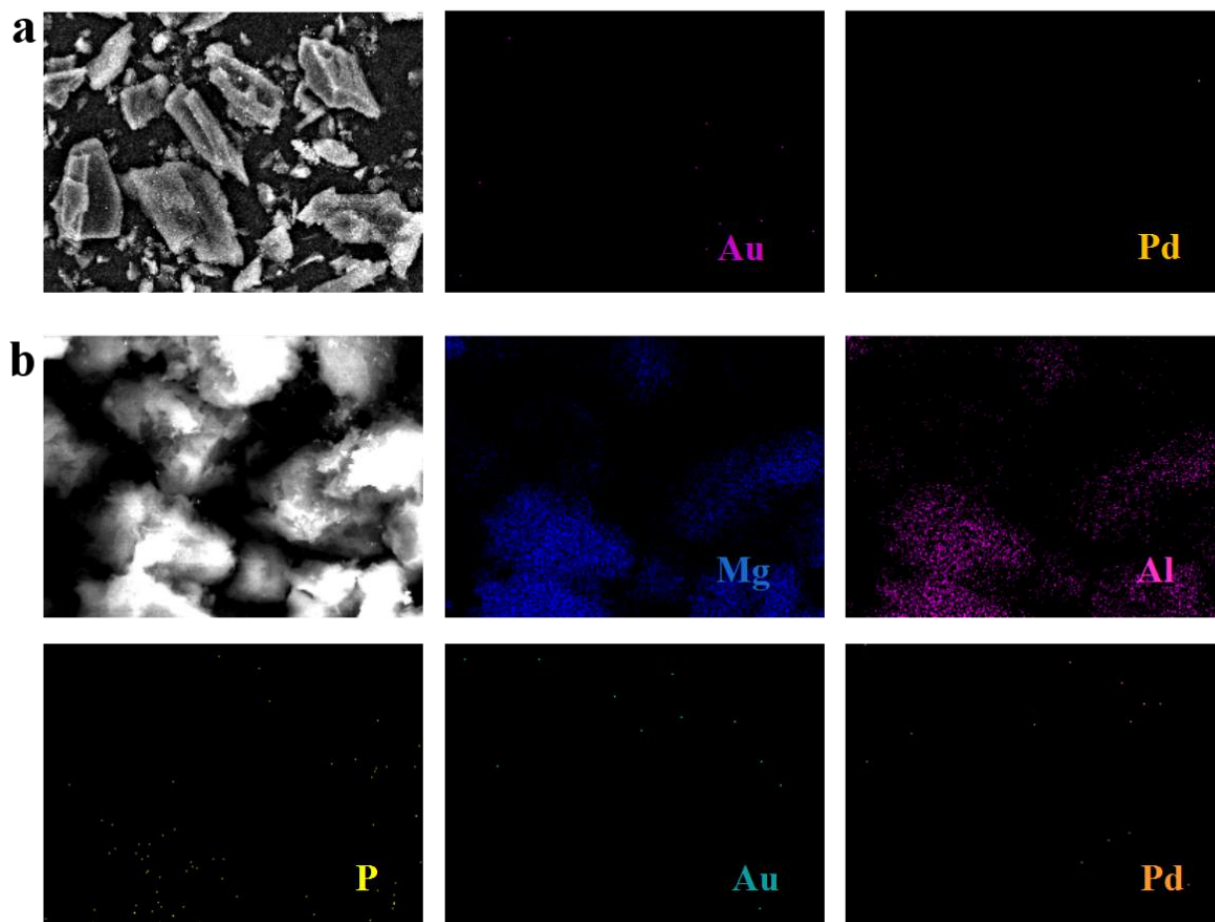


Figure S1. SEM-EDX images of Au-Pd@C (a) and Au-Pd@HT-PO₄³⁻ (b) catalysts

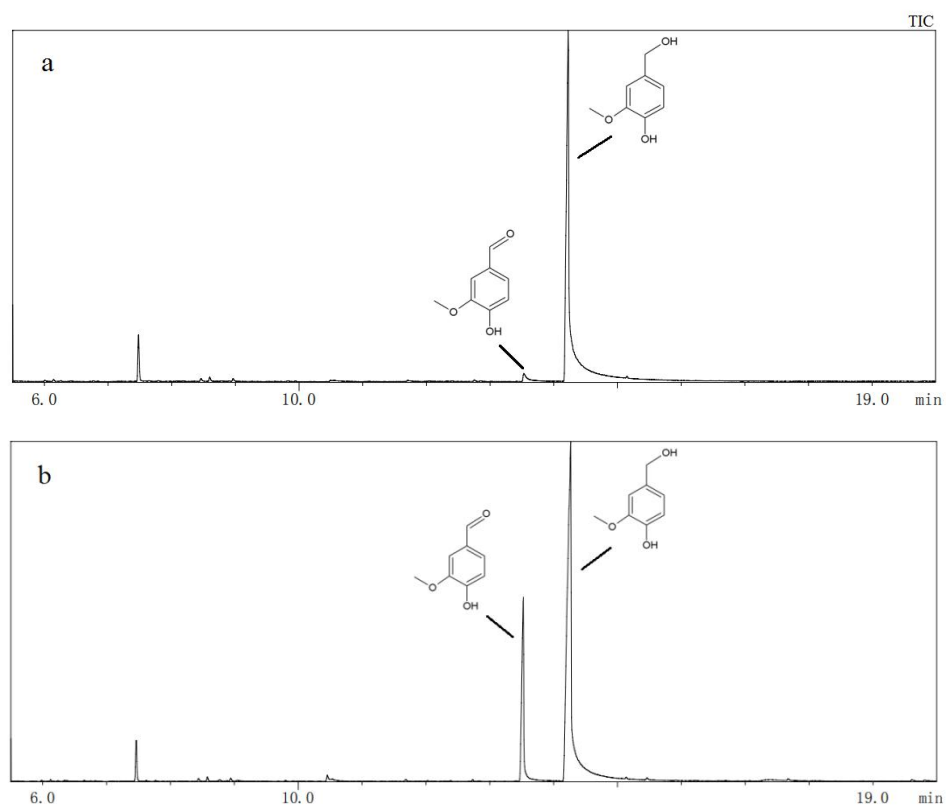


Figure S2. GC-MS chromatograms of the products under dark (a) and light (b) conditions with Au-Pd@C as catalyst

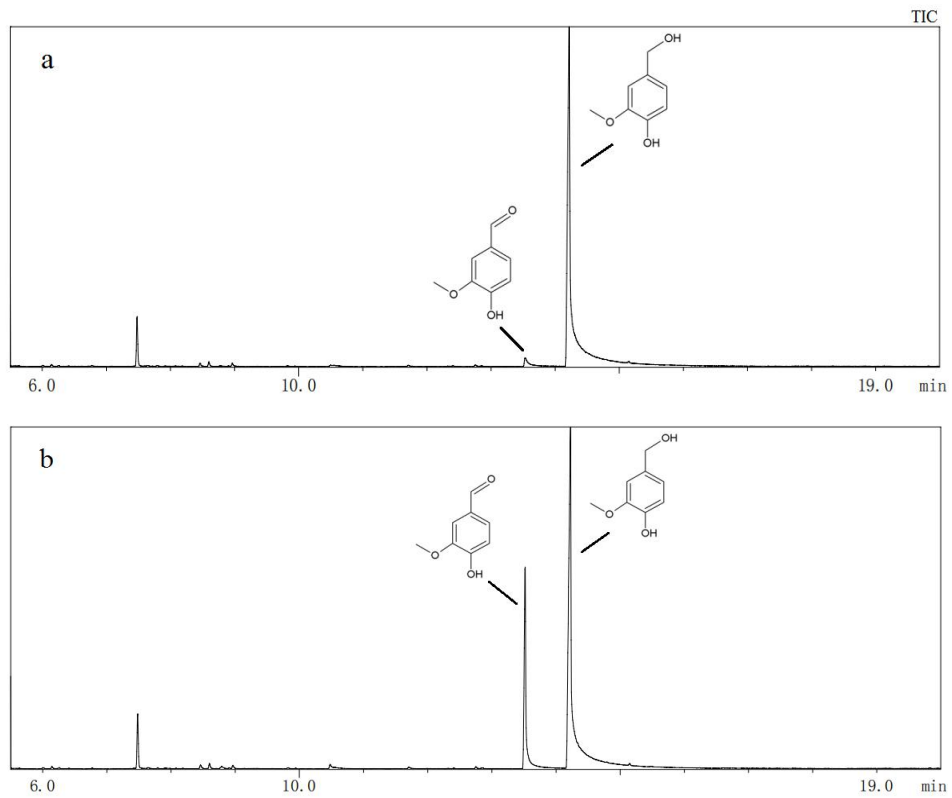


Figure S3. GC-MS chromatograms of the products under dark (a) and light (b) conditions with Au-Pd@HT-PO₄³⁻ as catalyst

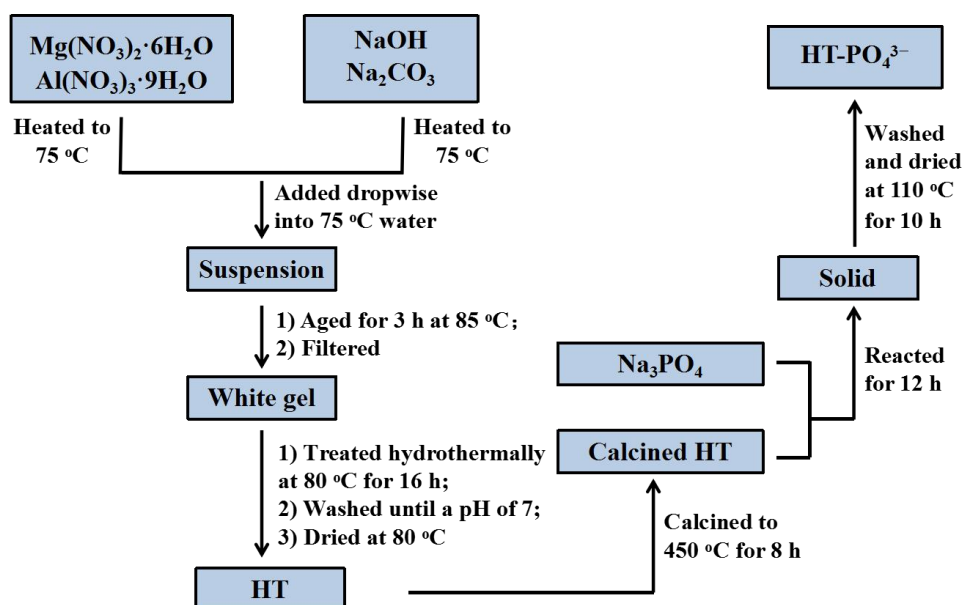


Figure S4. Scheme for preparation of the support HT-PO_4^{3-}

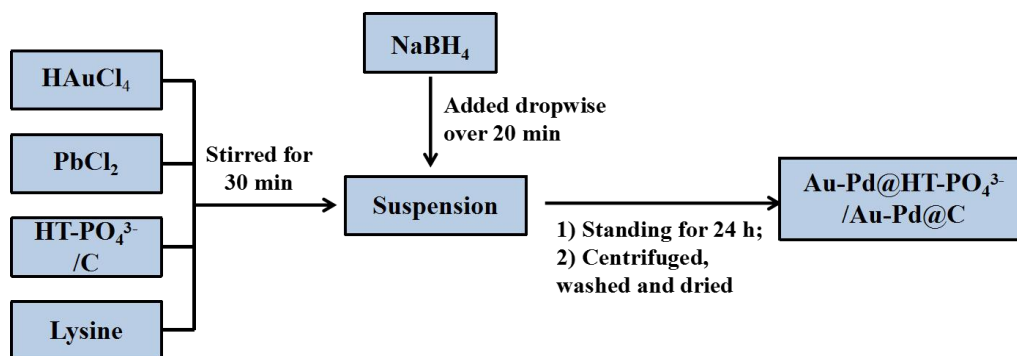


Figure S5. Scheme for preparation of $\text{Au-Pd@HT-PO}_4^{3-}$ and Au-Pd@C catalysts

Table S1 The percentages of elements in the catalysts detected by EDX

Catalyst (wt %)	Mg	Al	P	Au	Pd
Au-Pd@C	ND ^a	ND	ND	0.47	0.31
Au-Pd@HT-PO ₄ ³⁻	18.56	6.64	0.30	1.46	1.64

^a ND, not detected.