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Supporting Information

for

Thermal control of the defunctionalization of supported $Au_{25}(glutathione)_{18}$ catalysts for benzyl alcohol oxidation

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Additional experimental results

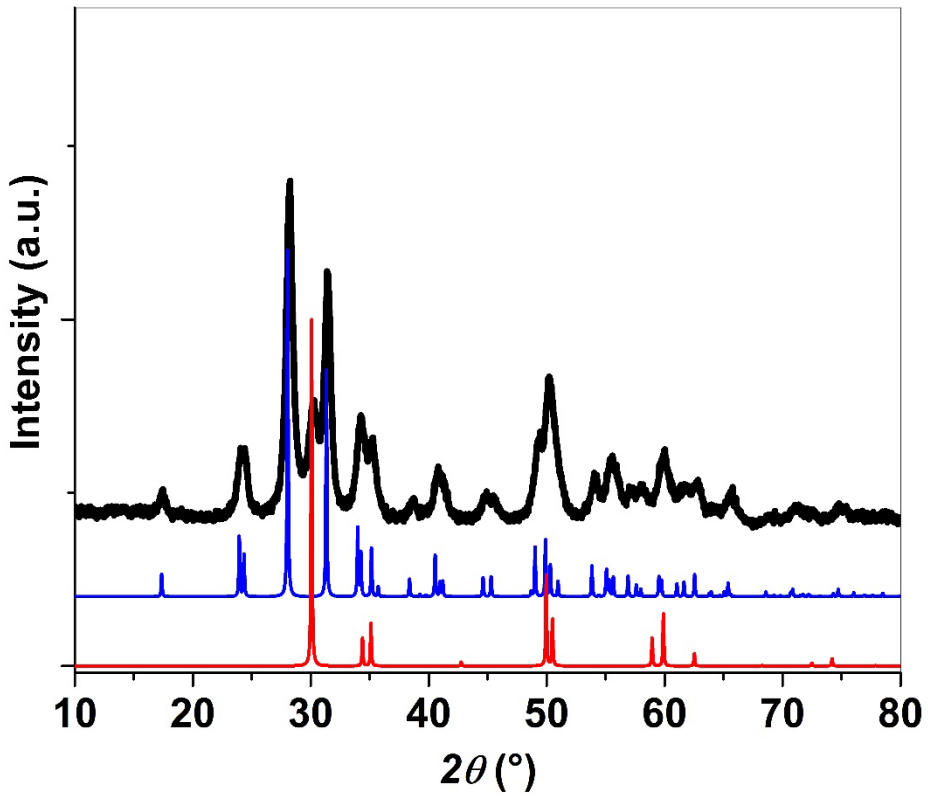

Figure S1: Powder X-ray diffraction patterns of synthesized ZrO_2 (black) and simulated monoclinic (blue) and tetragonal (red) phases of ZrO_2.

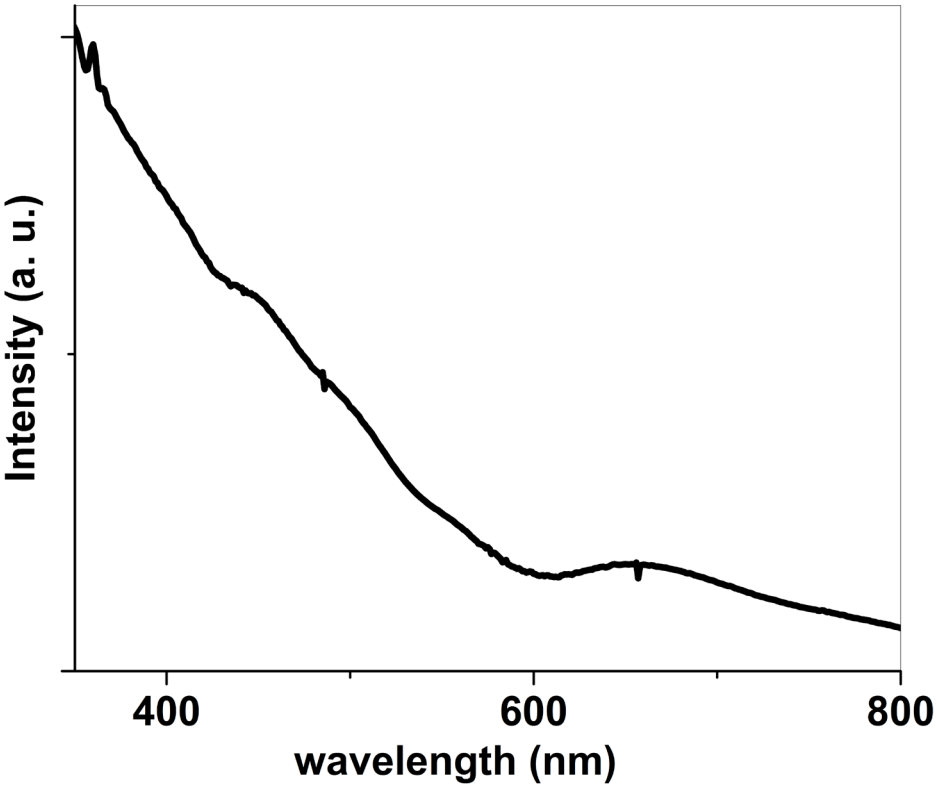

Figure S2: UV-vis spectrum of $Au_{25}(SG)_{18}$ in water.

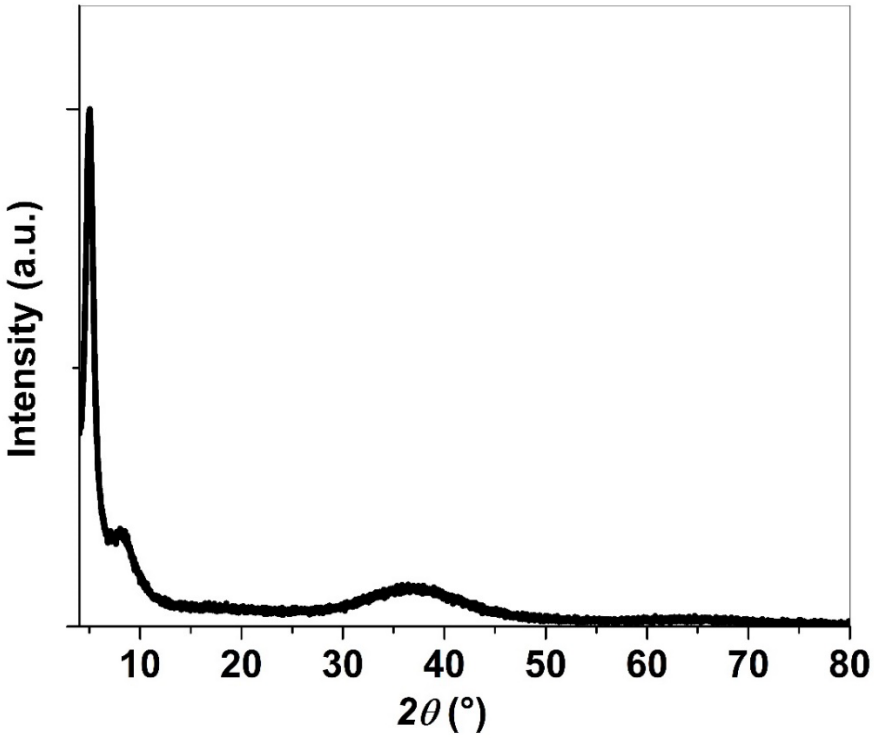

Figure S3: Powder X-ray diffraction pattern of $Au_{25}(SG)_{18}$. The intense reflection at 2θ = 5.01° corresponds to a center-to-center clusters distance of 1.76 nm by applying the Bragg's law [S1].

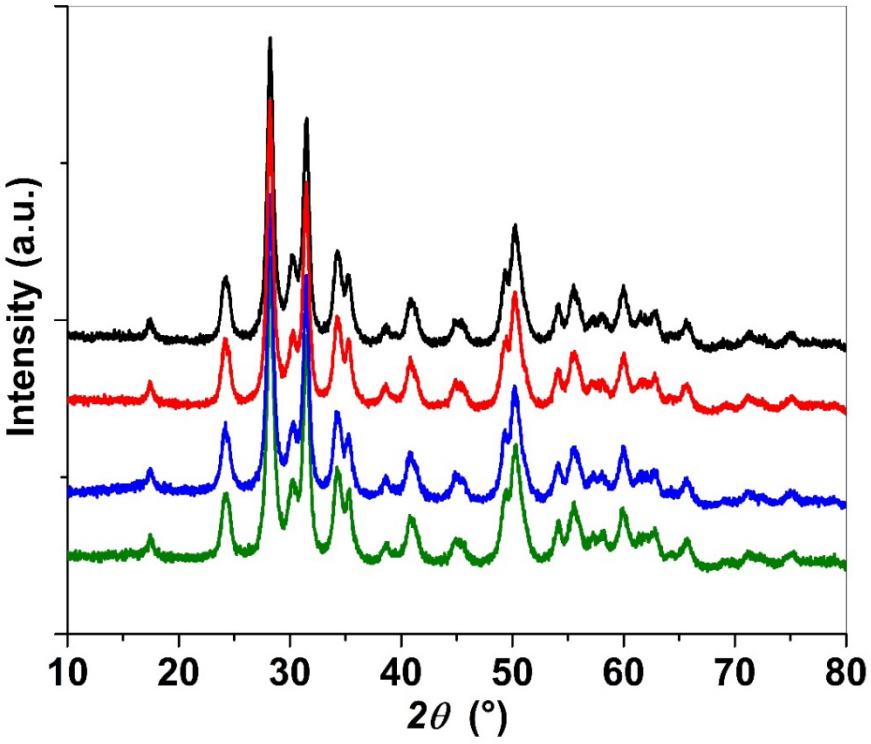

Figure S4: Powder X Ray diffraction patterns of $Au_{25}(SG)_{18}$@ZrO_2 after calcination at 400 °C for 12 hours under air (red), calcination at 300 °C for 4 hours under air (blue), calcination at 200 °C for 4 hours under air (green), and ZrO_2 support alone (black).

[S1] Lavenn, C.; Albrieux, F.; Bergeret, G.; Chiriac, R.; Delichère, P.; Tuel, A.; Demessence, A. *Nanoscale* **2012,** *4*, 7334.