Supporting information

Mesoporous carbon confined gold catalysts with superior activity for selective oxidation of glucose to gluconic acid

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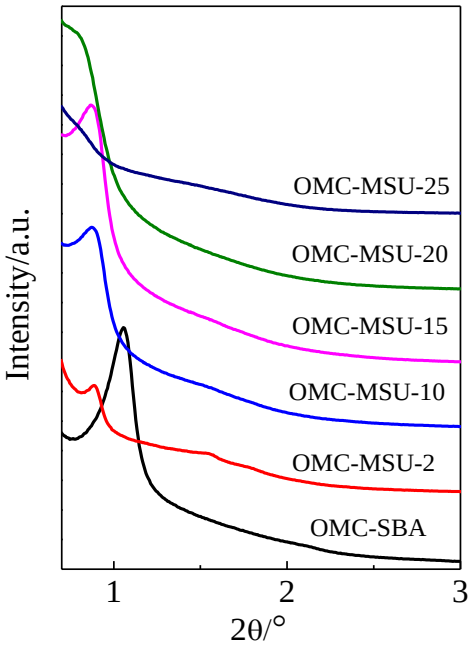

Figure S1 Small angel X-ray diffraction of the OMC supports.

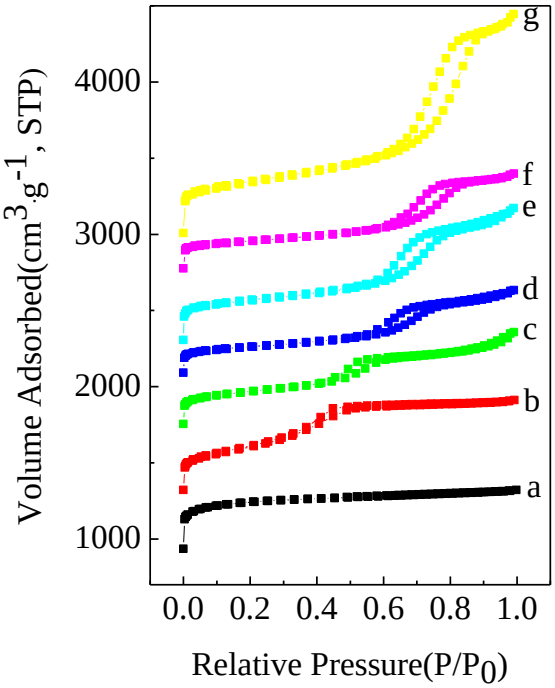

Figure S2 N_2 adsorption/desorption isotherms of the catalysts. (a) Au/AC; (b) Au/OMC-SBA; (c) Au/OMC-MSU-2; (d) Au/OMC-MSU-10; (e) Au/OMC-MSU-15; (f) Au/OMC-MSU-20; (g) Au/OMC-MSU-25. The isotherm curves a, b, c, d, e, f and g in panel are shifted by 917, 1313, 1752, 2088, 2300. 2772 and 3001 $cm^3 \cdot g^{-1}$, STP, respectively, for clarity.

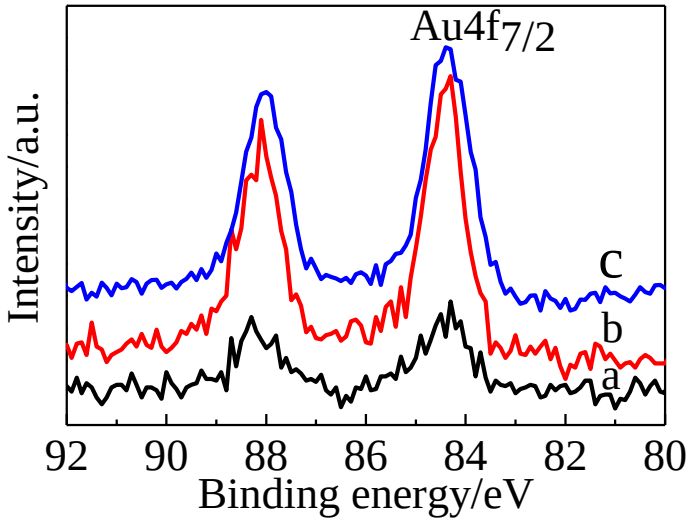

Figure S3 XPS Au 4f spectra obtained for the Au/OMC catalysts. (a) Au/OMC-SBA; (b) Au/OMC-MSU-10; (c) Au/OMC-MSU-15.

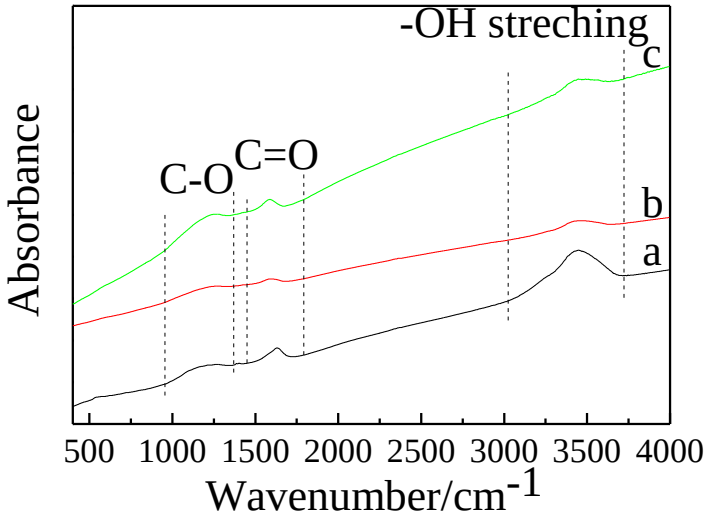

Figure S4 IR spectra of the Au/OMC catalysts. (a) Au/OMC-MSU-2; (b) Au/OMC-MSU-20; (c) Au/OMC-MSU-25.

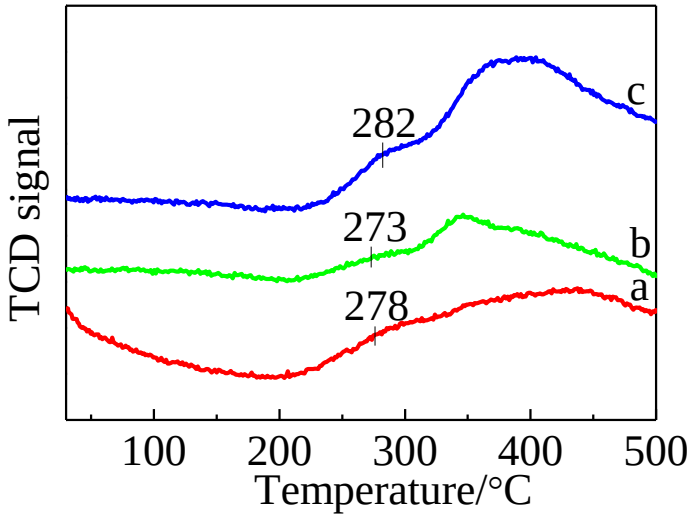

Figure S5 O_2-TPD profiles of the Au/OMC catalysts (a) Au/OMC-MSU-2; (b) Au/OMC-MSU-20; (c) Au/OMC-MSU-25.

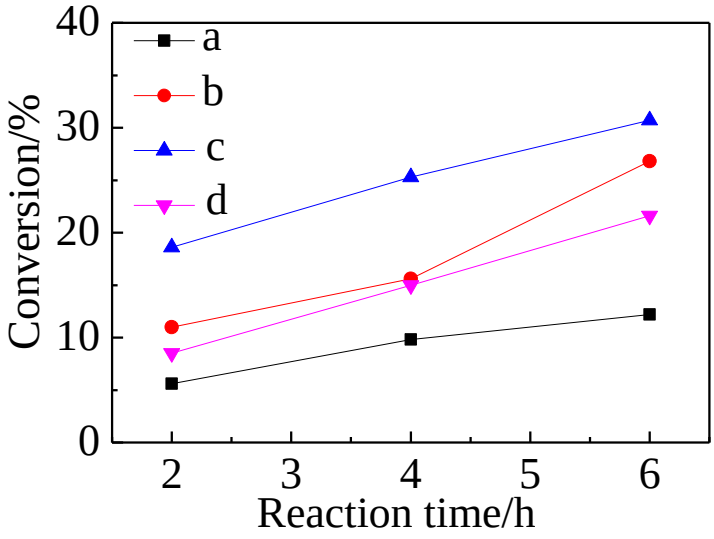

Figure S6 Influence of reaction time on the oxidation of glucose using the Au/OMC catalysts. (a) Au/OMC-SBA; (b) Au/OMC-MSU-2; (c) Au/OMC-MSU-10; (d) Au/OMC-MSU-20.