

Fig. S2 Mass spectra showing the parent clusters and the products in the reactions between Au_n^- ($n = 10 - 80$) and NO. The experiments were carried out using the reactor configuration for large cluster sizes running at 150 K. The spectra in black, red, and blue showed the results with NO flows of 0.00 sccm, 0.15 sccm, and 0.40 sccm, respectively. The single numbers on the top of each panel showed the numbers of gold atoms in the indicated Au_n^- . The vertical dashed lines indicated the saturated products $Au_n(NO)_3^-$ for most of the active sizes; the solid vertical line indicated the disproportionational product $Au_{20}NO_2^-$. The number pairs (n, x) in the top panel indicated saturated complexes $Au_n(NO)_x^-$ with $n=10, 11,$ and 17 .

