

Supporting Information

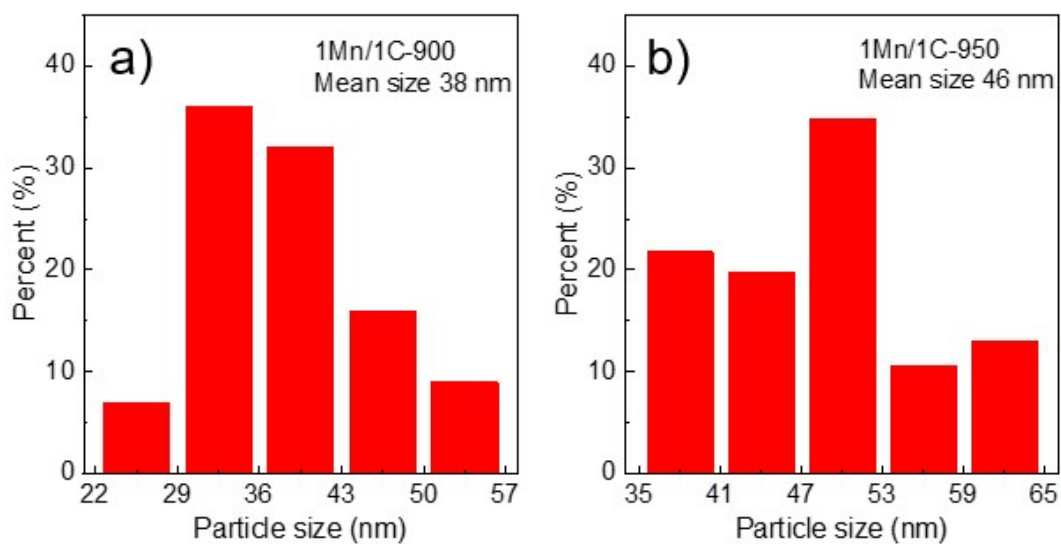


Fig. S1. The particle size distribution of MnO_x in 1Mn/1C catalysts: a) 1Mn/1C-900 and b) 1Mn/1C-950.

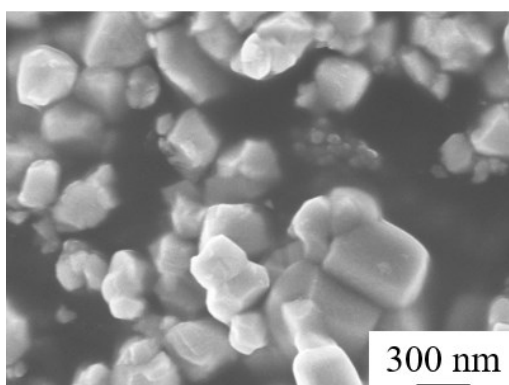


Fig. S2 SEM picture of MnO_x catalyst prepared under 900 °C.

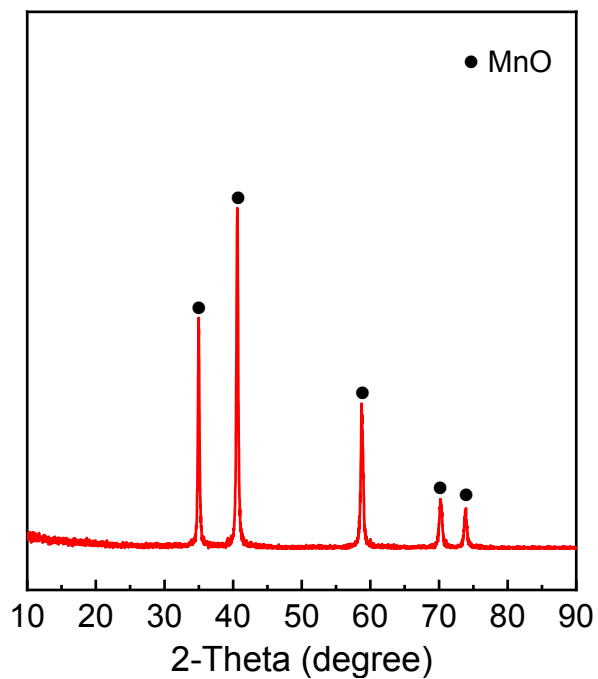


Fig. S3 XRD pattern of MnO_x catalyst prepared under 900 °C.

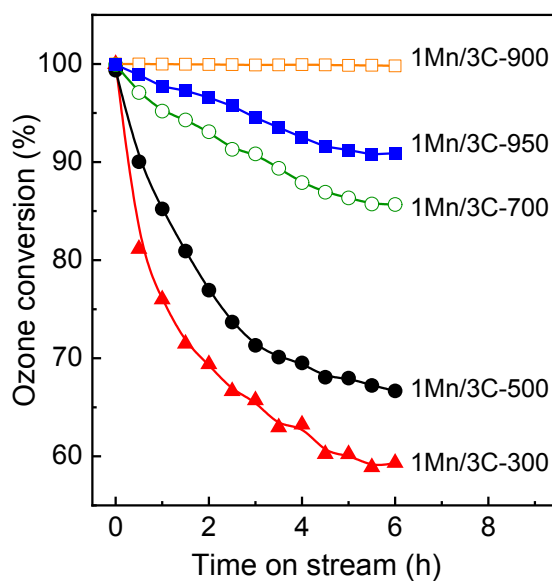


Fig. S4 The stability of 1Mn/3C catalyst for ozone decomposition (reaction condition: 0.1 g catalysts, ozone inlet concentration = 25 ± 1 ppm, $T = 25$ °C, RH = 90%, WHSV = $600 \text{ L g}_{\text{cat}}^{-1} \text{ h}^{-1}$).

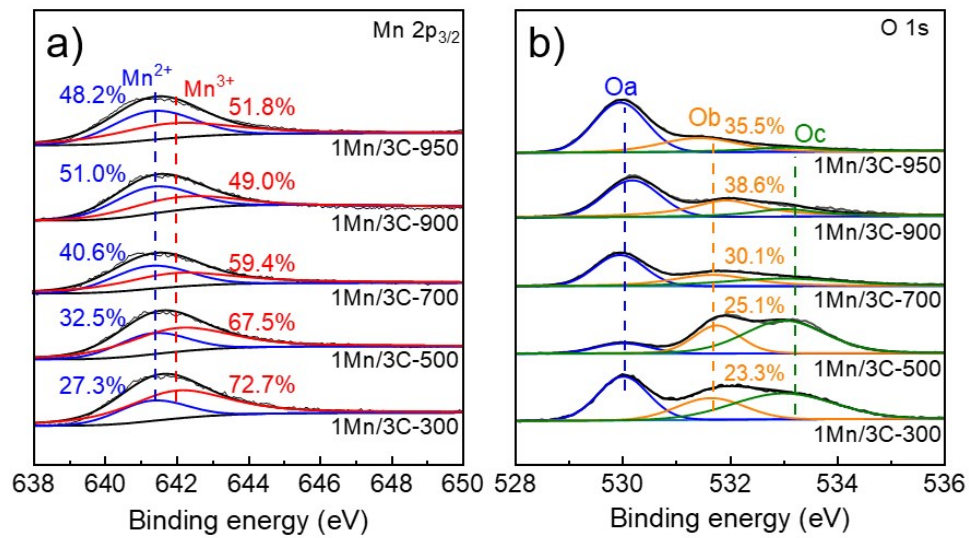


Fig. S5 XPS spectra of the 1Mn/3C-900 catalyst: a) Mn 2p_{3/2}, b) O 1s.

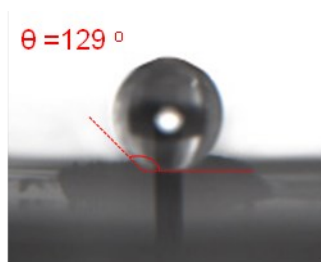


Fig. S6 Water contact angle test of 1Mn/3C-900 catalyst.

Table S1 The BET surface area and actual Mn content of Mn/C catalysts.

Entry	Catalysts	BET surface area (m ² /g)	Actual Mn content (wt%)
1	C sphere	558	0
2	1Mn/1C-300	35	40.5
3	1Mn/1C-500	159	41.8
4	1Mn/1C-700	200	39.7
5	1Mn/1C-900	135	37.7
6	1Mn/1C-950	189	38.9
7	5Mn/1C-900	32	45.8
8	3Mn/1C-900	136	41.5
9	1Mn/3C-900	336	17.9
10	1Mn/5C-900	343	13.8
11	1Mn/10C-900	398	8.3