

Supporting information

Improving catalytic performance of ozone decomposition over Pd-Ce-OMS-2 catalysts under harsh conditions

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Tab. S1 BET results for the Pd-Ce-OMS-2 catalysts.

Samples	Surface Area	Pore volume
	$\text{m}^2 \cdot \text{g}^{-1}$	$\text{cm}^3 \cdot \text{g}^{-1}$
0% Pd	186	0.35
0.5% Pd	199	0.38
1.0% Pd	226	0.40
1.5% Pd	253	0.41
2.0% Pd	283	0.44
2.5% Pd	323	0.46
3.0% Pd	331	0.49

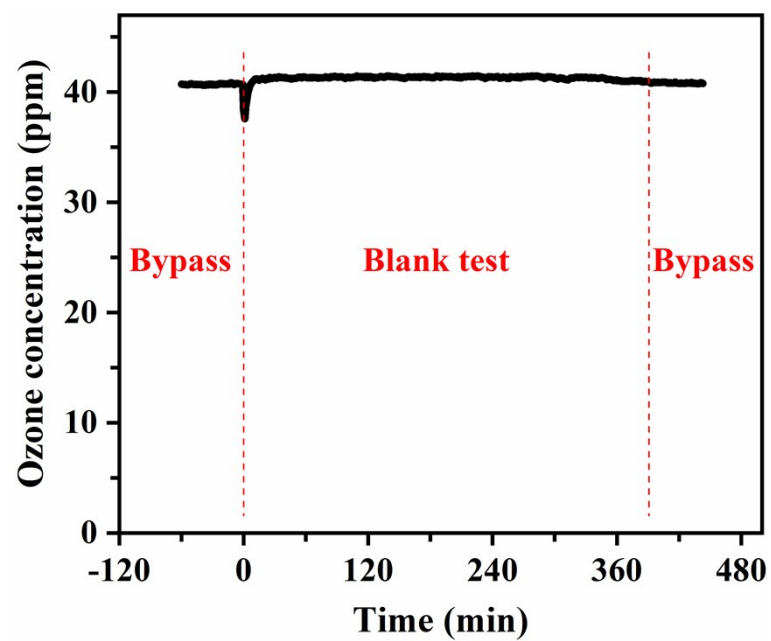


Fig. S1 Blank test of ozone decomposition.

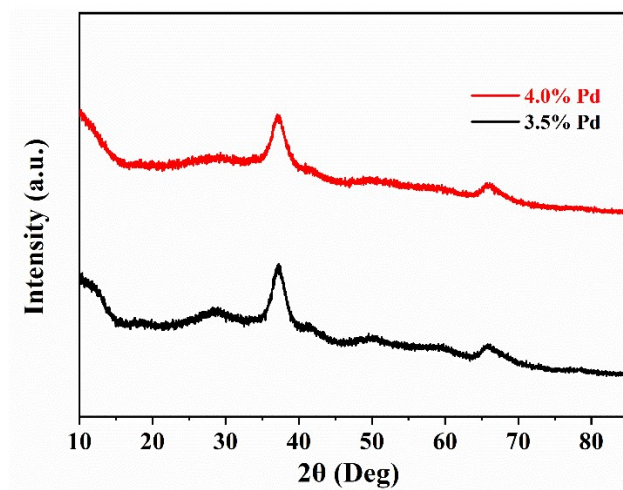


Fig. S2 XRD patterns of the Pd-Ce-OMS-2 catalysts with Pd content of 3.5% and 4.0%.

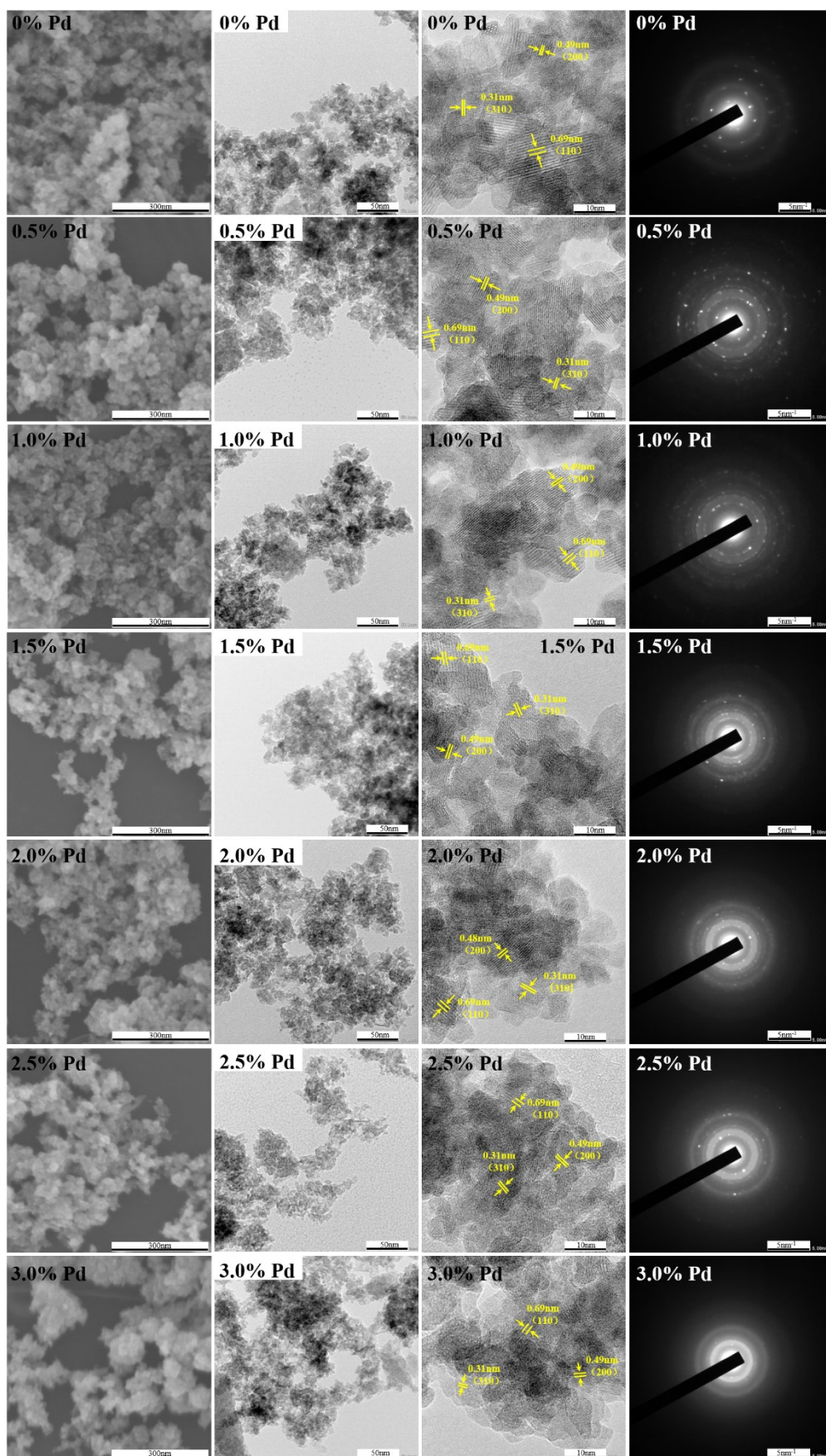


Fig. S3 FE-SEM (first column) and TEM images (columns 2-4) of the Pd-Ce-OMS-2 catalysts.

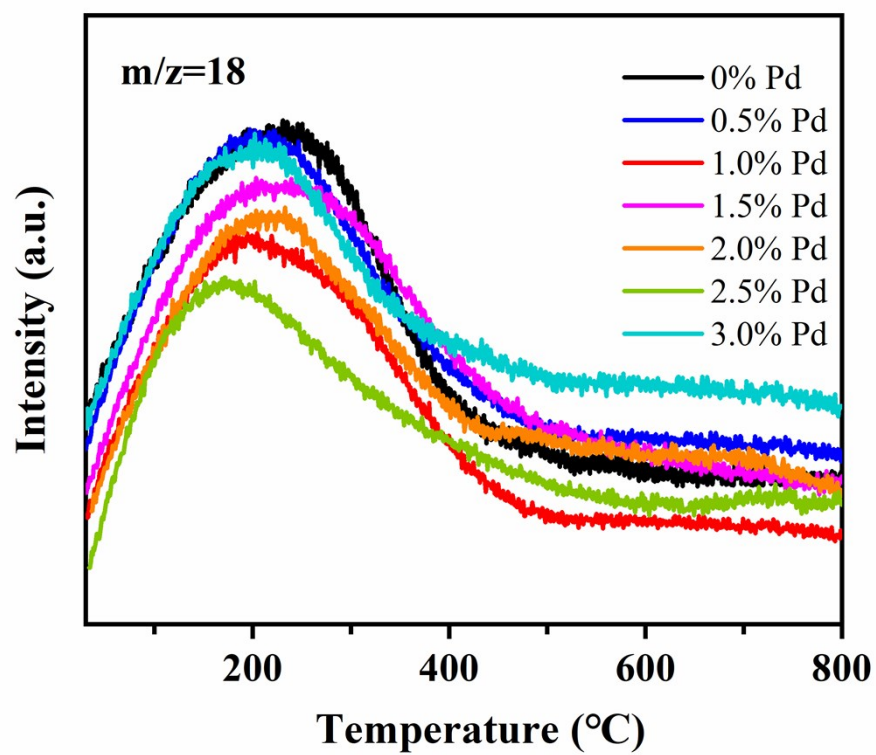


Fig. S4 TG-MS curves of catalysts.

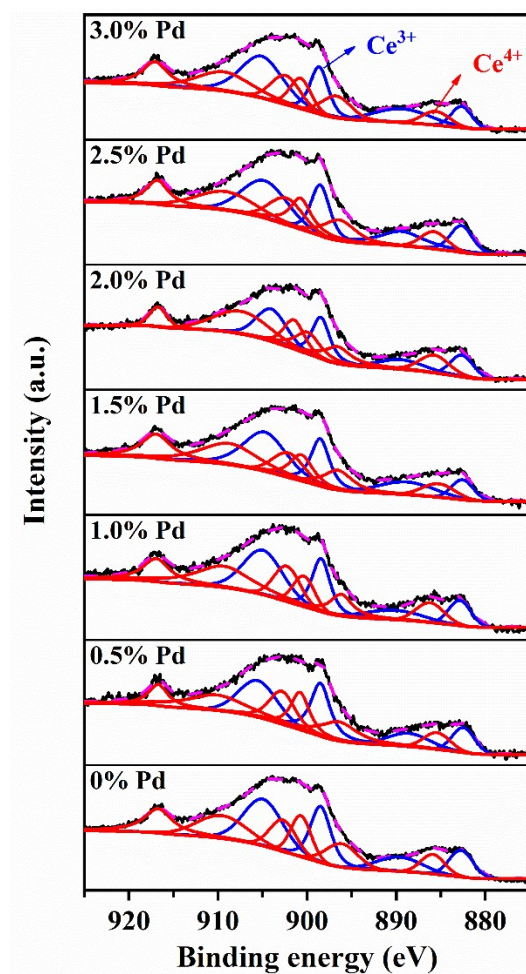


Fig. S5 Deconvoluted XPS spectra of Ce 3d peaks for Pd-Ce-OMS-2 catalysts.

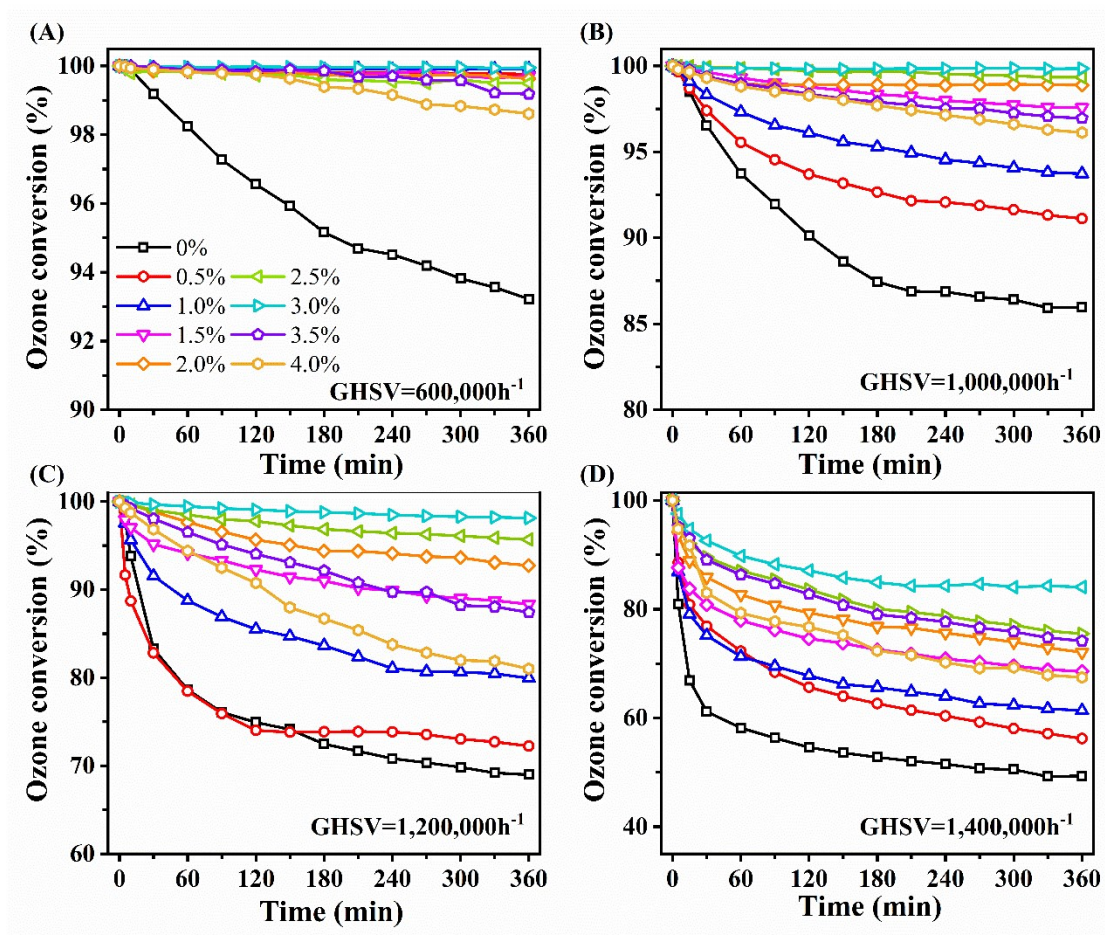


Fig. S6 Ozone conversion on Pd-Ce-OMS-2 catalysts under different GHSV. All reactions were carried out at $O_3=40\pm 2$ ppm, Temp.=30°C, RH = 90%.

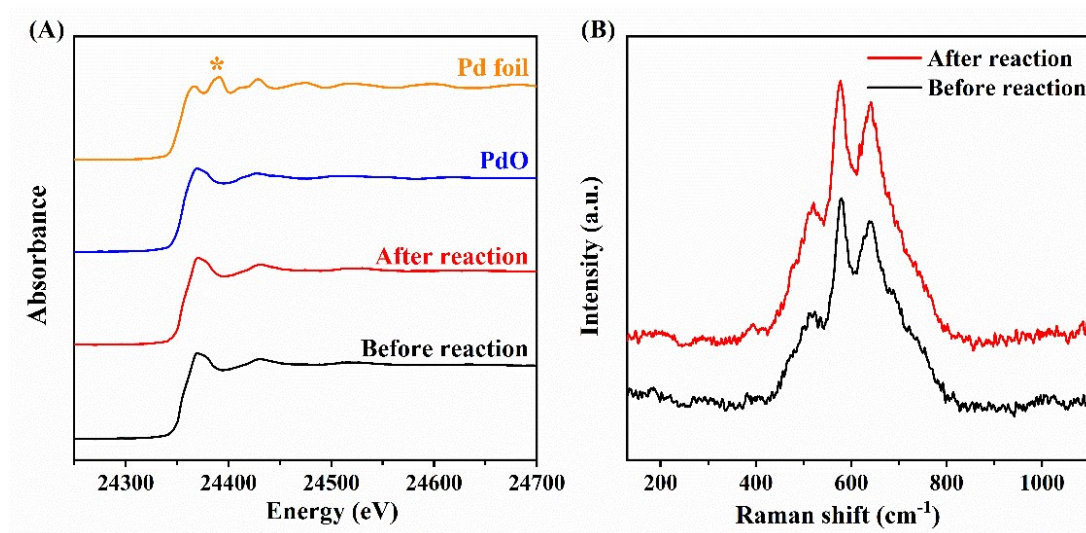


Fig. S7 (A) Normalized XANES of Pd K-edge and (B) Raman spectra of 3% Pd-Ce-OMS-2 sample before and after ozone reaction.