Supporting information

Facile Synthesis of Meso-structured Pd/FeO_x and Its Highly Catalytic performance for Low Temperature CO Oxidation under Ambient Condition

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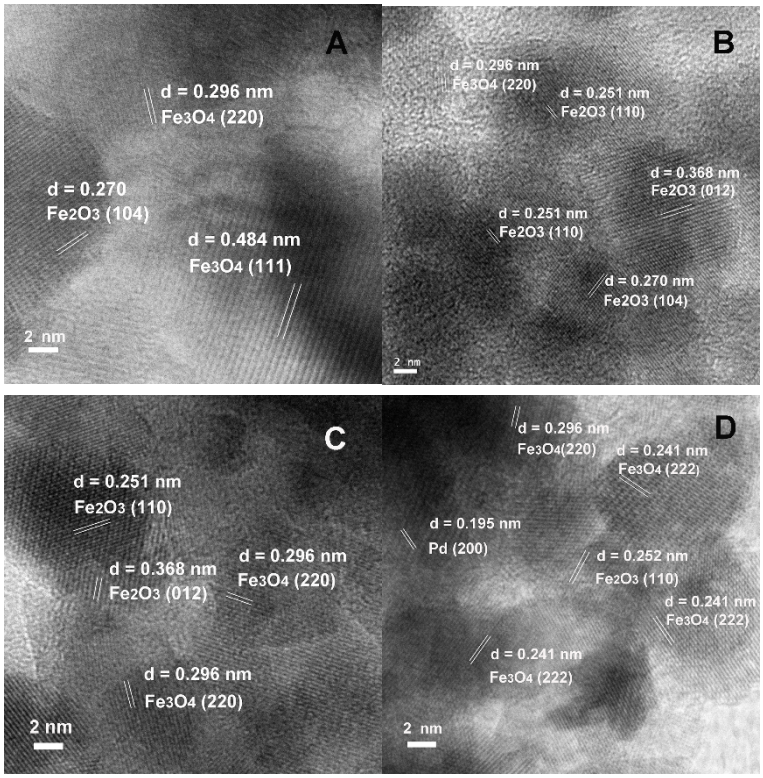

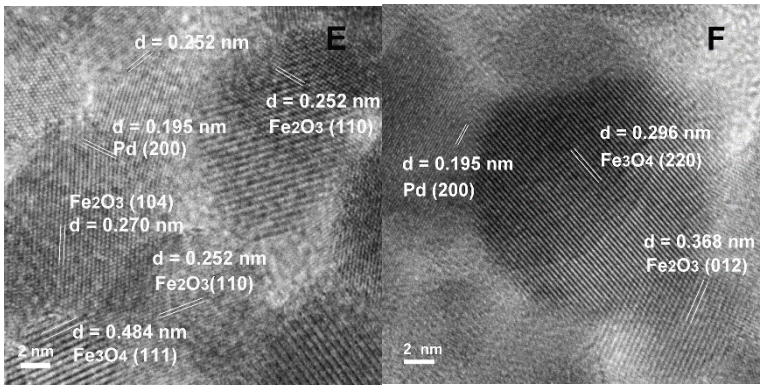

Fig. S1 HRTEM images of Pd/FeOx materials with different Pd loading content: 0 wt% (A), 1.1wt% (B), 3.3wt% (C), 5.8wt% (D), 7.1wt% (E) and 9.0wt% (F)

Table 1 The assignment of Fe $2p_{2/3}$ photoelectron peaks of the samples.

Samples	Fe^{2+} oct	%	Fe^{3+} oct	%	Fe^{3+} tet	%
FeO_x support	709.7eV	14.4	710.8eV	62.5	713.6eV	23.1
7.1 wt% Pd/FeOx (no pretest)	709.6eV	17.3	710.7ev	59.9	713.4eV	22.8
7.1 wt% Pd/FeOx (pretest under dry condition)	709.7eV	18.0	710.8eV	60.5	713.5eV	21.5
7.1 wt% Pd/FeOx (pretest under moisture condition)	709.7eV	20.9	710.8eV	58.1	713.5eV	21.0

Table 2 The assignment of O1s photoelectron peaks of the samples.

Samples	O_{latt}	**%**	O_{ads}	**%**
FeO_x support	529.6 eV	62.7	531.4 eV	37.3
7.1 wt% Pd/FeOx (no pretest)	529.6 eV	56.2	531.5 eV	43.8
7.1 wt% Pd/FeOx (pretest under dry condition)	529.6 eV	59.6	531.3 eV	40.4
7.1 wt% Pd/FeOx (pretest under moisture condition)	529.6 eV	58.2	531.4 eV	41.8

Table 3 The assignment of Pd 3d photoelectron peaks of the samples.

Samples	Pd^0		**%**	Pd^{2+}		**%**
7.1 wt% Pd/FeOx (no pretest)	335.1 eV	340.4 eV	78.1	336.6 eV	342.1 eV	21.9
7.1 wt% Pd/FeOx (pretest under dry condition)	335.1 eV	340.3 eV	67.7	336.7 eV	342.1 eV	32.3
7.1 wt% Pd/FeOx (pretest under moisture condition)	335.0 eV	340.4 eV	57.3	336.7 eV	342.1 eV	42.7

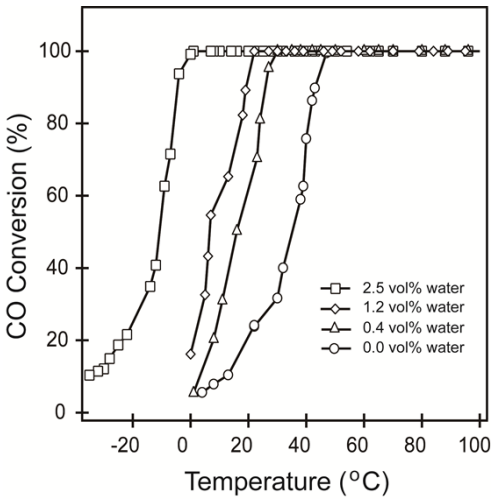

Fig. S2 The effect of water on the catalytic activity for CO oxidation over 7.1wt% Pd loaded catalyst.