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Supporting Information

Layered birnessite-type MnO_2 with surface pits for the enhanced formaldehyde catalytic oxidation activity

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Table S1. Survey of catalytic performance of manganese oxides in HCHO oxidation.

Catalyst	Reaction conditions	$T_{100\%}$ °C	Ref.
Hollow MnO_2 nanoshphere	100 ppm HCHO, GHSV~50000 h^{-1}	80	[10]
Pyrolusite Cryptomelane Todorokite	400 ppm HCHO, GHSV~18000 mL/g h	180 140 170	[30]
MnO_2/Cellulose Fibers	100 ppm HCHO, GHSV~ 50000 h^{-1}	140	[11]
Porous MnO_2	460 ppm HCHO, GHSV~30000 mL/g h	100	[31]
β-MnO_2/SiO_2	120 ppm HCHO, GHSV~30000 mL/g h	130	[32]
α-MnO_2 β-MnO_2 γ-MnO_2 δ-MnO_2	170 ppm HCHO, GHSV~100000 mL/g h	125 200 150 80	[13]
3D-β-MnO_2	400 ppm HCHO, GHSV~30000 mL/g h	130	[33]
MnO_2-Graphene	100 ppm HCHO, GHSV~30000 mL/g h	65	[15]
MnO_2 with Mn vacancy	40 ppm HCHO, GHSV~120000 mL/g h	110	[18]
MnO_2 with surface pits	200 ppm HCHO, GHSV~120000 mL/g h	100	This work

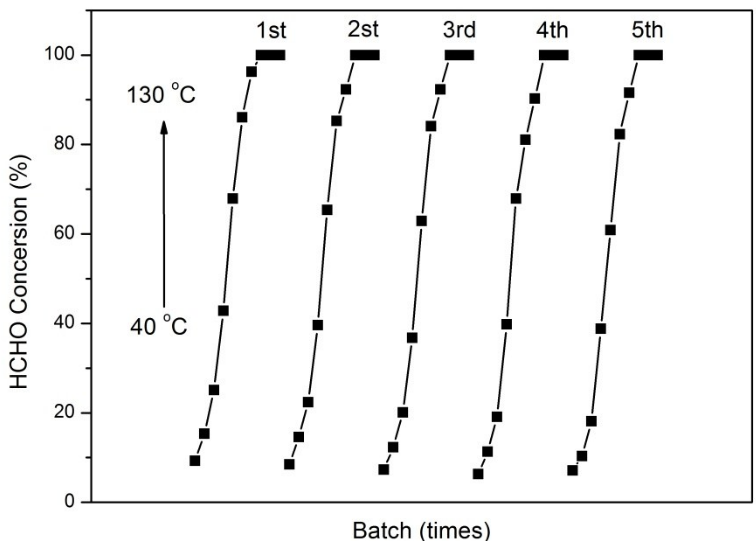

Fig. S1 The reusability of MnO_2-P2 catalyst for oxidation of HCHO. Reaction conditions: 200 ppm HCHO; GHSV 120000 h^{-1}.