Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Large-scale and Facile Synthesis of Porous High-entropy Alloy CrMnFeCoNi as an Efficient Catalyst

Hailong Peng[a,#], Yangcenzi Xie[a,#], Zicheng Xie[a], Yunfeng Wu[a], Wenkun Zhu[b], Shuquan Liang[a], Liangbing Wang[a,b,*]

[a] *State Key Laboratory for Powder Metallurgy, Key Laboratory of Electronic Packing and Advanced Functional Materials of Hunan Province, School of Materials Science and Engineering, Central South University, Changsha, Hunan 410083, P. R. China*

[b] *State Key Laboratory of Environment-friendly Energy Materials, Southwest University of Science and Technology, Mianyang, Sichuan 621010, P. R. China*

[#] These authors contributed equally to this work.

[*]To whom correspondence should be addressed. E-mail: wanglb@csu.edu.cn

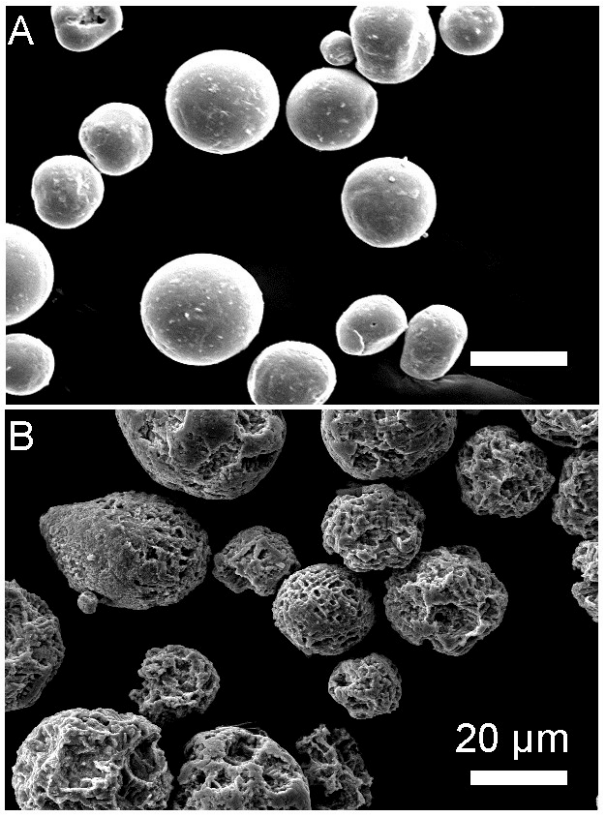

Figure S1. (A, B) SEM images of CMFCN-0 and CMFCN-4, respectively. All bars represent 20 µm.

Figure S2. Large-scale production of CMFCN-4 powders obtained by etching 20 g of CMFCN-0.

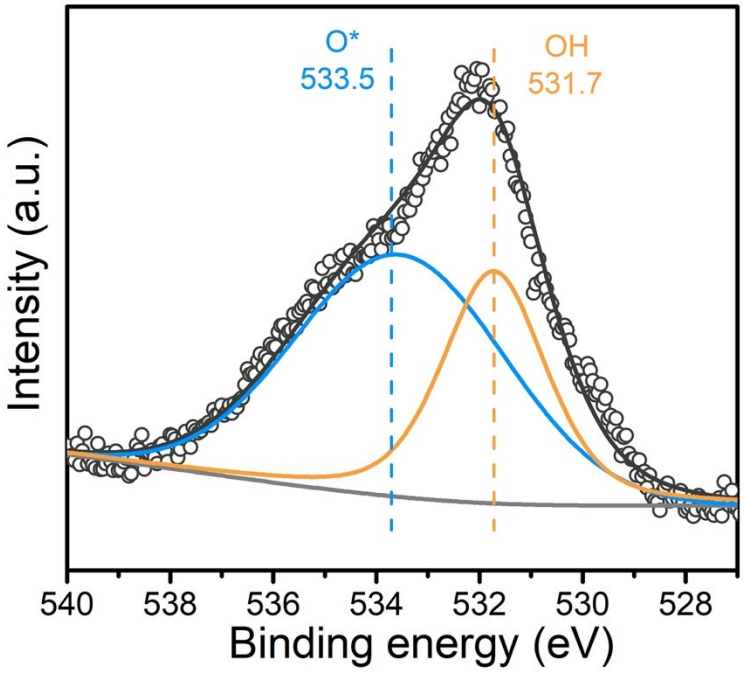

Figure S3. XPS spectra of O 1*s* for CMFCN-4.

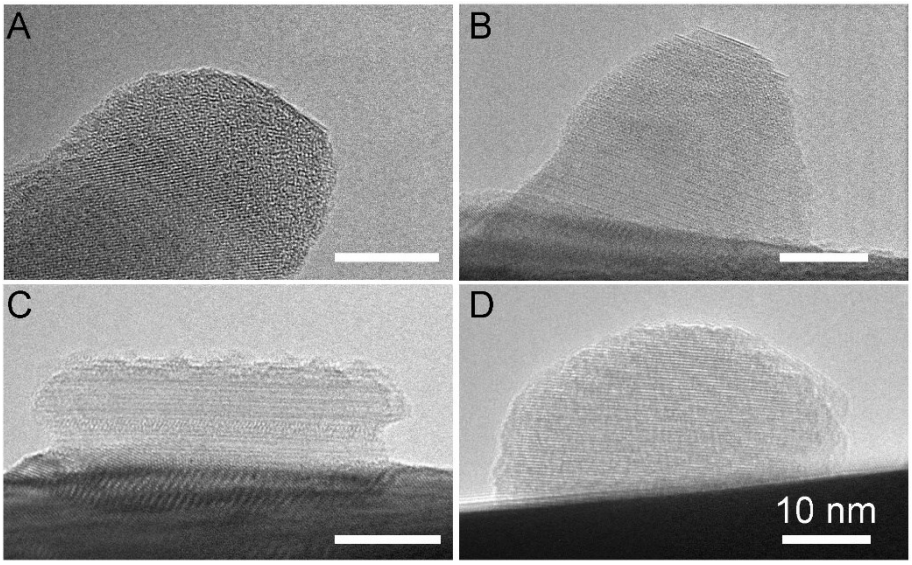

Figure S4. (A-D) HRTEM images of CMFCN-4. All bars represent 10 nm.

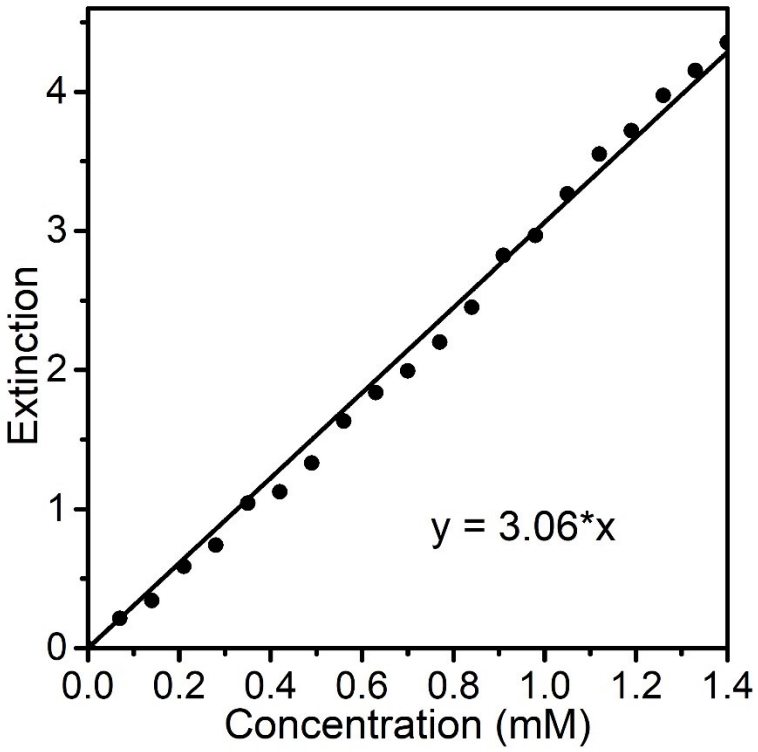

Figure S5. The extinction at 400 nm of a series of p-nitrophenol solution with distinct concentrations.

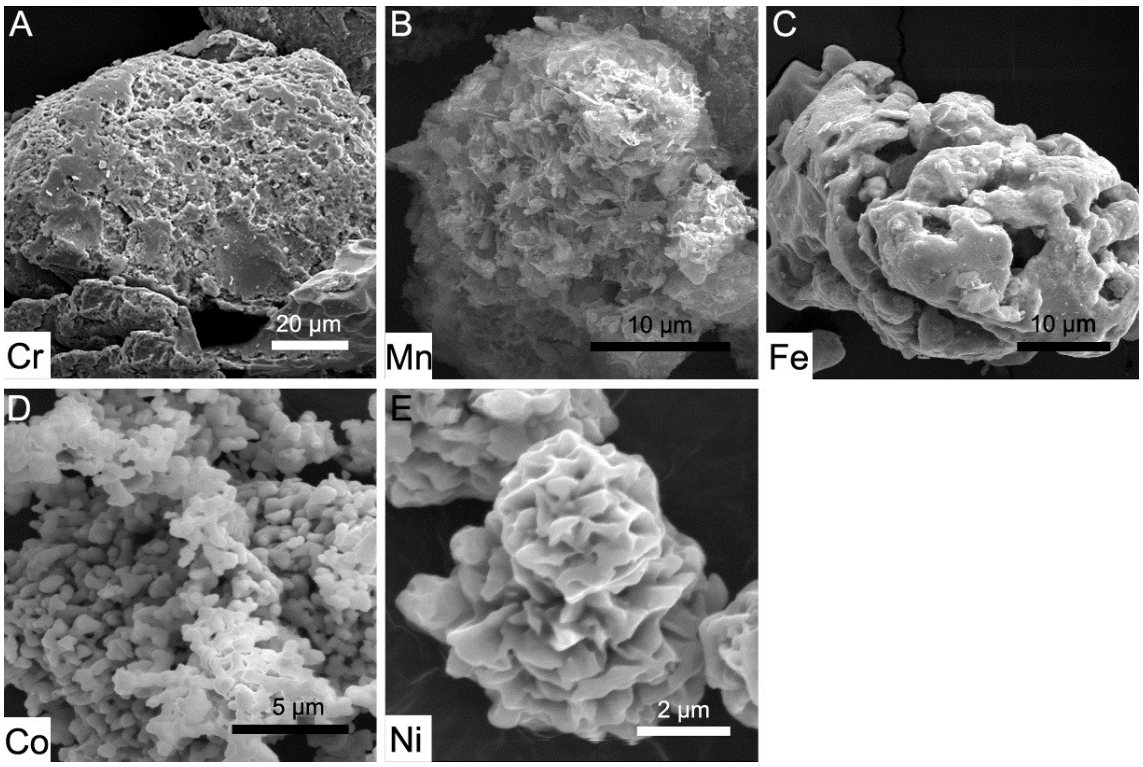

Figure S6. SEM images of porous Cr, Mn, Fe, Co and Ni, respectively.

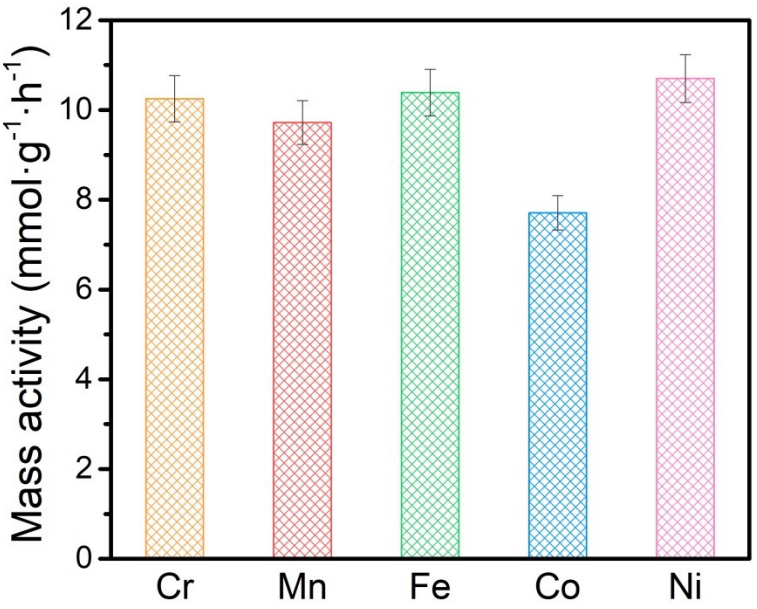

Figure S7. Mass activities for porous Cr, Mn, Fe, Co and Ni, respectively.

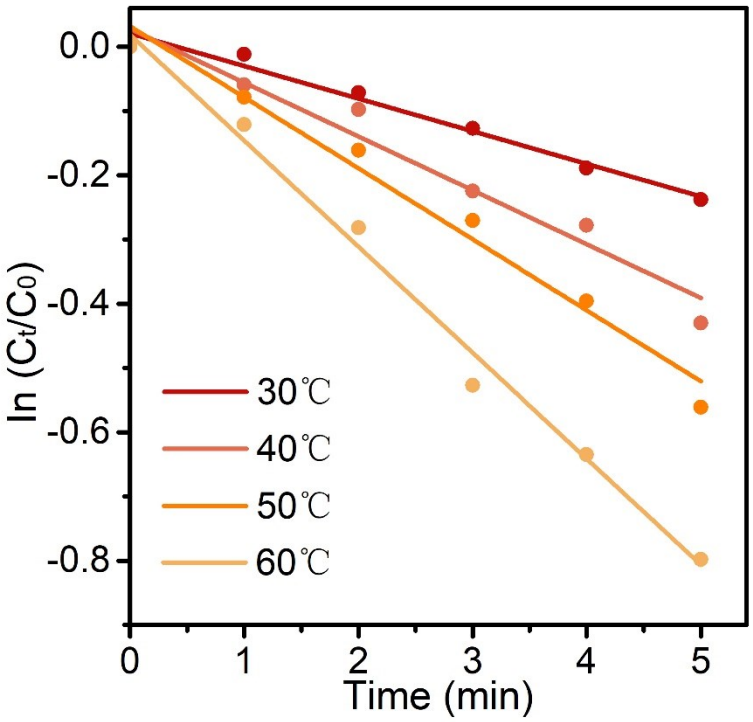

Figure S8. Plots of ln (C_t/C_0) versus time catalyzed by CMFCN-4 at different temperatures.

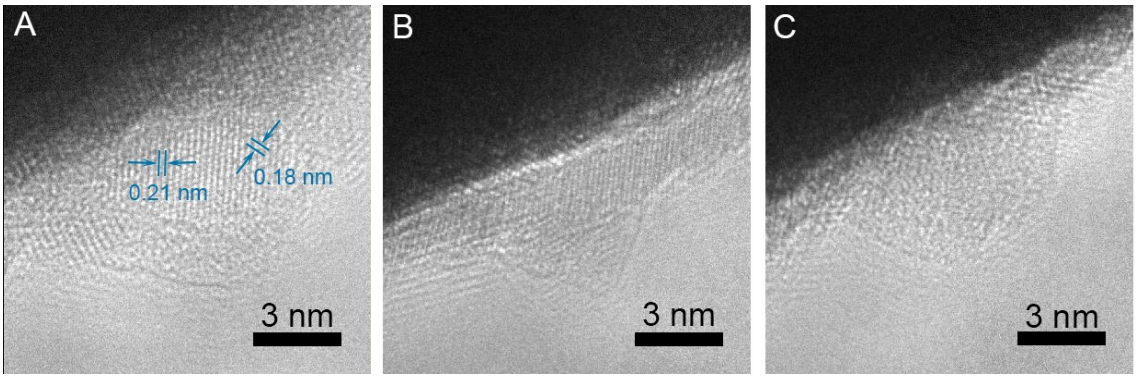

Figure S9. HRTEM images of CMFCN-4 recovered after stability tests.

Table S1. Reported catalytic performance for the reduction of p-nitrophenol by noble-metal based catalysts.

Catalyst	k (min^{-1})	E_a ($kJ \cdot mol^{-1}$)	Ref.
CMFCN-4	0.061	31.8	This work.
Fe_3O_4@PPy-MAA/Ag	0.143	-	[S1]
Au/PG/CF	2.927×10^{-3}	-	[S2]
Hydrogel5-Au	0.138	38.80	[S3]
Naked-Au(5 nm)-γ-Fe_2O_3	2.43	-	[S4]
TiO_2 NW@hollow Ag/Pt	0.23	52.4	[S5]
KCC-1-IL/Au	0.718	-	[S6]
QC–Ag@AL	2.8	-	[S7]
$THAg_2$	1.5	-	[S8]
Au-Based Nanocages	2.83±0.11	28.04±1.43	[S9]
Pd_8 NCs	0.116	-	[S10]

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