

Support Information

Promoting effects of CuSO₄ on N₂ selectivity in selective catalytic oxidation of ammonia over Pt/TiO₂ catalysts

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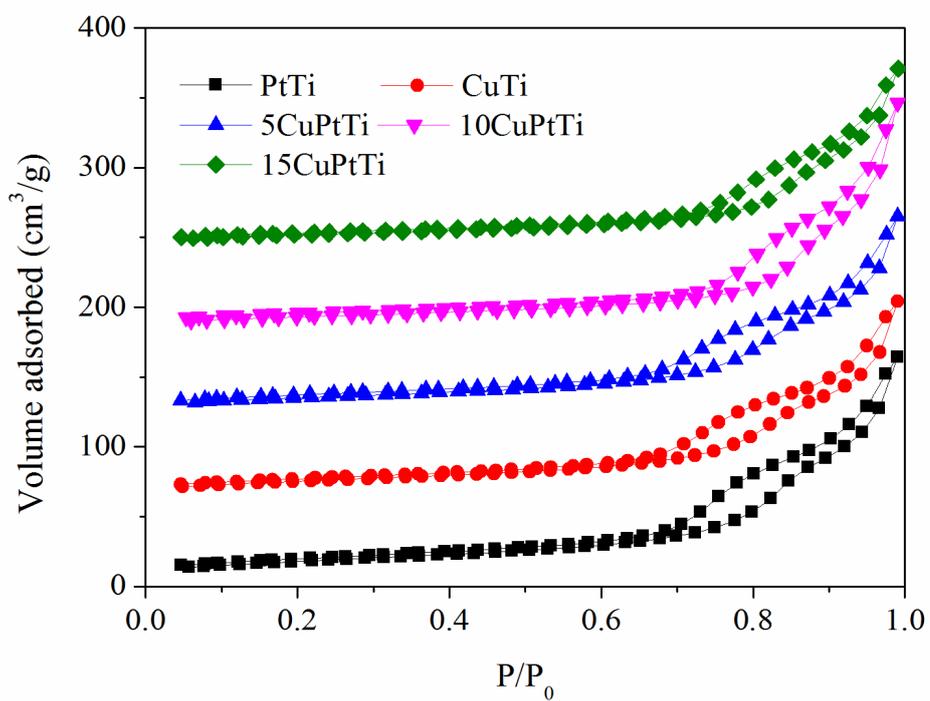


Figure S1. N₂ adsorption-desorption isotherm of each sample.

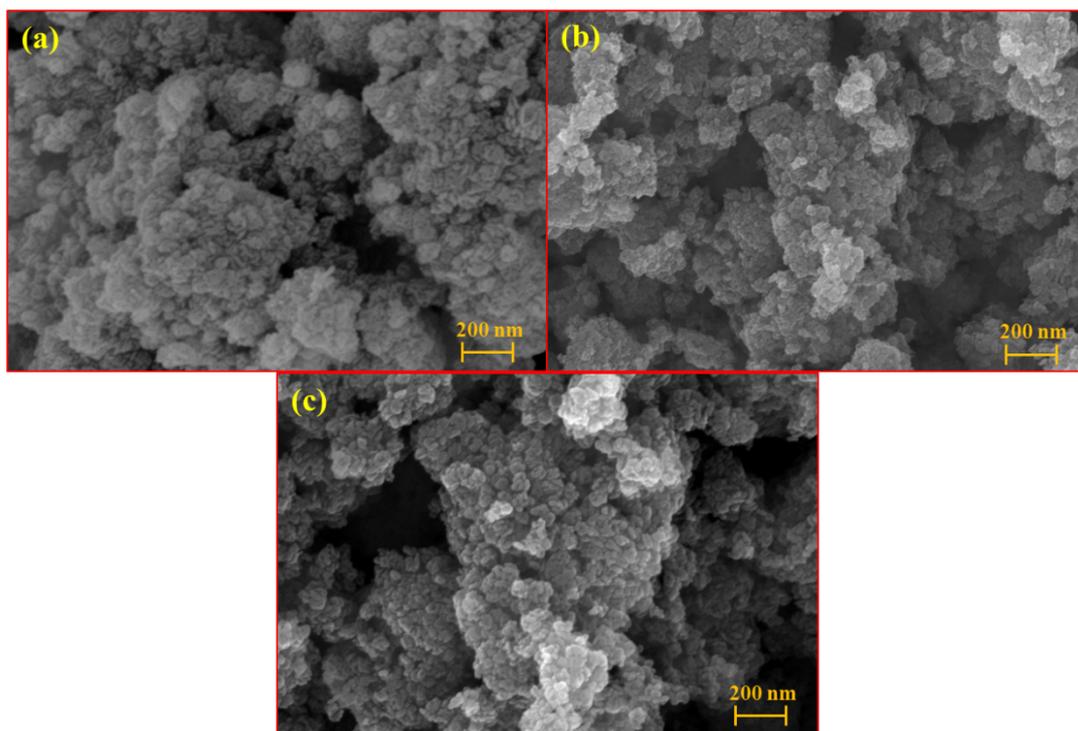


Figure S2. SEM photo of (a) PtTi, (b) CuTi and (c) 10CuPtTi sample.

Table S1 Performance of reported Pt-based catalysts in NH₃-SCO reaction

Catalyst	Tested conditions	T ₁₀₀ (°C)	N ₂ selectivity (%)	Reference
Pt/Al ₂ O ₃	200 ppm NH ₃ , 8% O ₂ , GHSV = 100 000 h ⁻¹ .	300	30	1
Pt/CeZrO ₂	Same as above conditions	325	42	1
Pt/Al ₂ O ₃ (H ₂ reduced)	1000 ppm NH ₃ , 4% O ₂ , GHSV = 120 000 h ⁻¹	220	63	2
Pt/SiO ₂ -Al ₂ O ₃	200 ppm NH ₃ , 10% O ₂ , 5% H ₂ O, GHSV = 100 000 h ⁻¹	238	50	3
Pt/SiAl-E	Same as above	240	63	4
PtCu/ZSM-5	180 ppm NH ₃ , 8% O ₂ , GHSV = 100 000 h ⁻¹	275	72	5
FeZ(1.5)Pt(3)	500 ppm NH ₃ , 5% O ₂ , GHSV = 66 000 h ⁻¹	300	72	6
Pt-WO ₃ /ZrO ₂	180 ppm NH ₃ , 8% O ₂ , GHSV = 100 000 h ⁻¹ .	300	58	7
Pt/TiO ₂	2000 ppm NH ₃ , 8% O ₂ , GHSV = 60 000 h ⁻¹	275	48	8
Pt/Al ₂ O ₃	500 ppm NH ₃ , 5% O ₂ , GHSV = 66 000 h ⁻¹	250	50	9
Pt-CuSO ₄ /TiO ₂	500 ppm NH ₃ , 4% O ₂ , GHSV = 60 000 h ⁻¹	250	78	This work

References

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Table S2 The concentration of Pt and Cu in each sample (wt.%)

Sample	Pt	Cu
PtTi	0.48	-
10CuTi	-	3.91
10CuPtTi	0.47	3.89