

Supplementary Materials for
***Flower-like Co₃O₄ Catalysts for Efficient Catalytic Oxidation
of Multi-pollutants from Diesel Exhaust***

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Table S1. The comparison of catalytic activities of different catalysts towards CO, C₃H₆, and NO oxidation from diesel emissions.

Samples	Reaction conditions	CO		C ₃ H ₆		NO	Ref.
		T ₅₀ (°C)	T ₉₀ (°C)	T ₅₀ (°C)	T ₉₀ (°C)	T ₅₀ (°C)	
Pt/Co ₃ O ₄ -F	4000 ppm CO, 1000 ppm C ₃ H ₆ , 500 ppm NO, and 10% O ₂ balanced in N ₂ , WHSV= 240, 000 mL g ⁻¹ h ⁻¹ .	158	176	204	220	211	This work
Pt/Al ₂ O ₃	1000 ppm of CO, 500 ppm of NO, 500 ppm of C ₃ H ₆ , 500 ppm of C ₃ H ₈ , 10% O ₂ , and 5 % H ₂ O balanced in Ar, GHSV = 22, 520 h ⁻¹ .	175	247	244	252	252	[1]
Commercial DOC	5500 ppm CO, 600 ppm C ₃ H ₆ , 275 ppm NO, 2% O ₂ , 10% CO ₂ , and 5% H ₂ O balanced in N ₂ , GHSV=50, 000 h ⁻¹	239	248	242	249	-	[2]
Pt-Pd/Al ₂ O ₃	3000 ppm CO, 1500 ppm C ₃ H ₆ , and 8% O ₂ balanced in N ₂ , WHSV= 292, 000 mL g ⁻¹ h ⁻¹ .	218	220	219	222	-	[3]
CeO ₂ -Co ₃ O ₄ nanorods	4000 ppm CO, 1000 ppm C ₃ H ₆ , 500 ppm NO, 10% O ₂ , and 5% H ₂ O balanced in N ₂ , WHSV = 240, 000 mL g ⁻¹ h ⁻¹ .	170	186	229	240	275	[4]

Table S2. BET surface area and pore parameters of Pt/Co₃O₄-F and Co₃O₄-F catalysts.

Samples	Surface area (m ² /g)	Pore volume (cm ³ /g)	Pore diameter (nm)
Co ₃ O ₄	30.4	0.089	21.0
Pt/Co ₃ O ₄	30.2	0.090	20.3

References

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