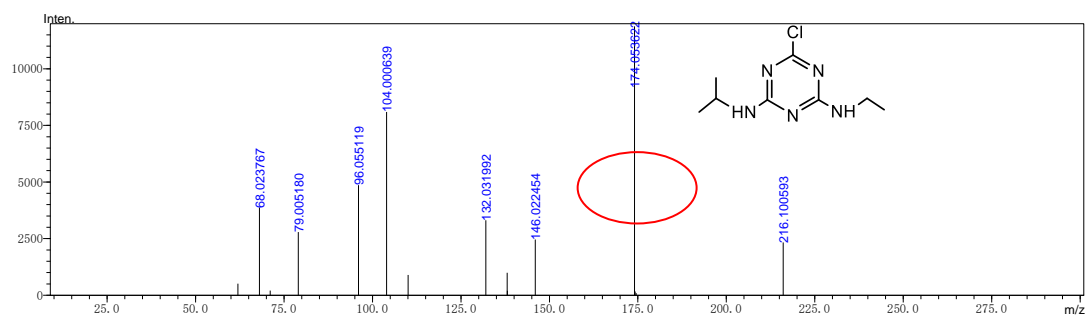
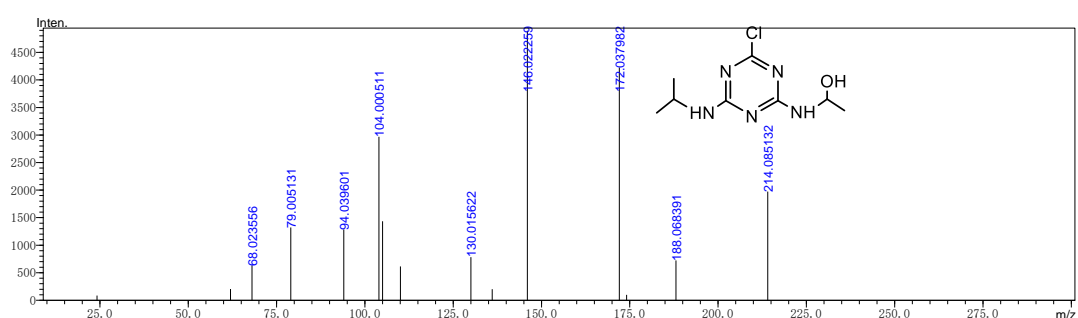


Supplementary Material

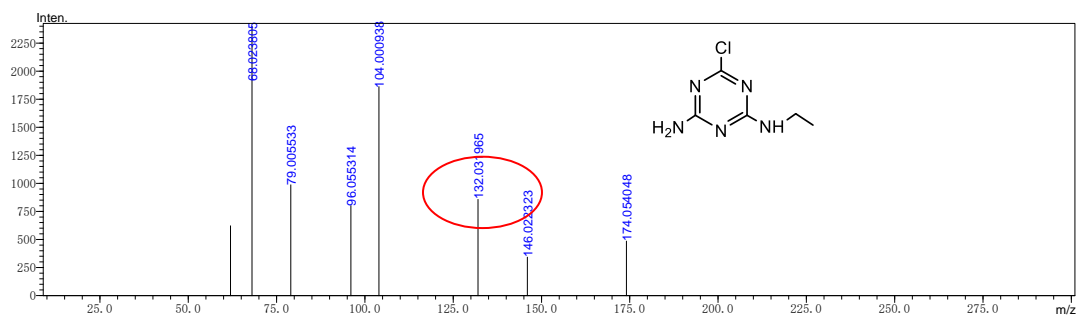
m/z=216.1006



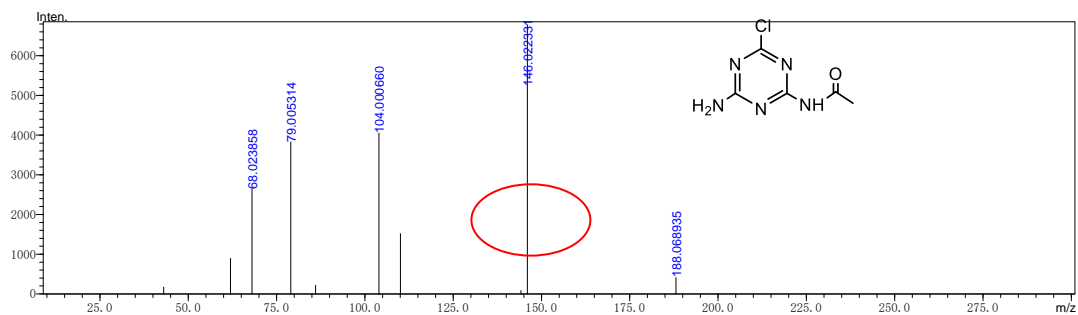
m/z=232.0771



m/z=174.0540



m/z=188.0689



m/z=230.0800

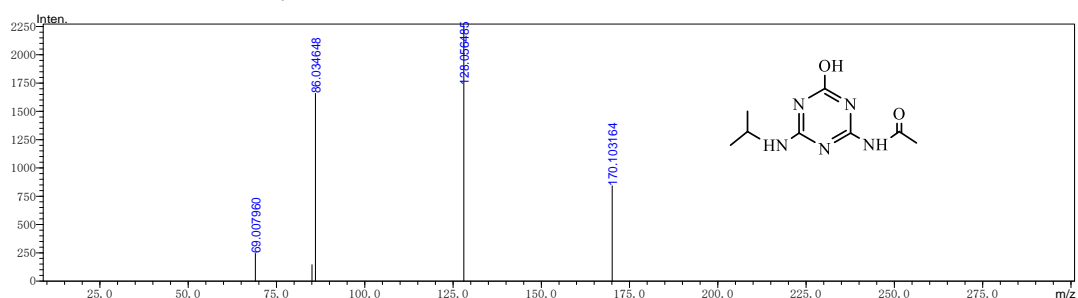
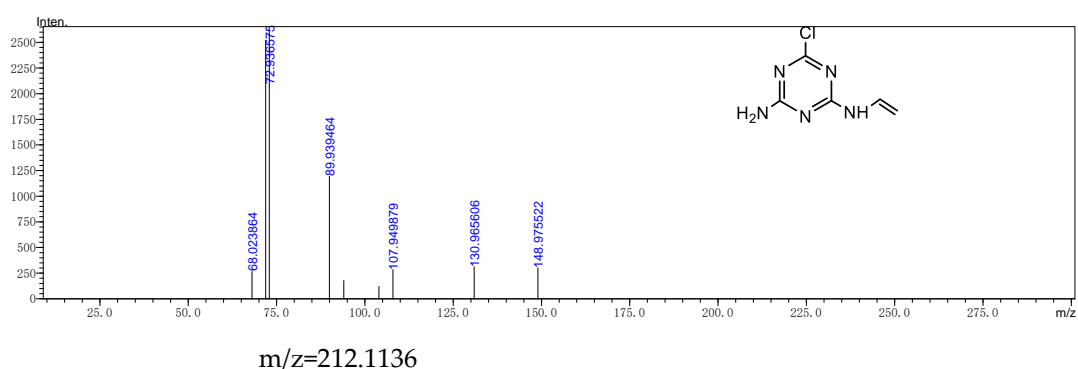
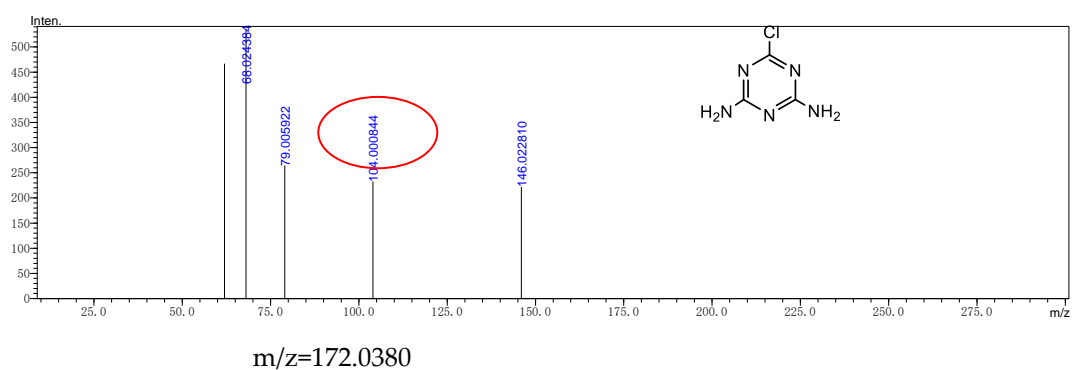
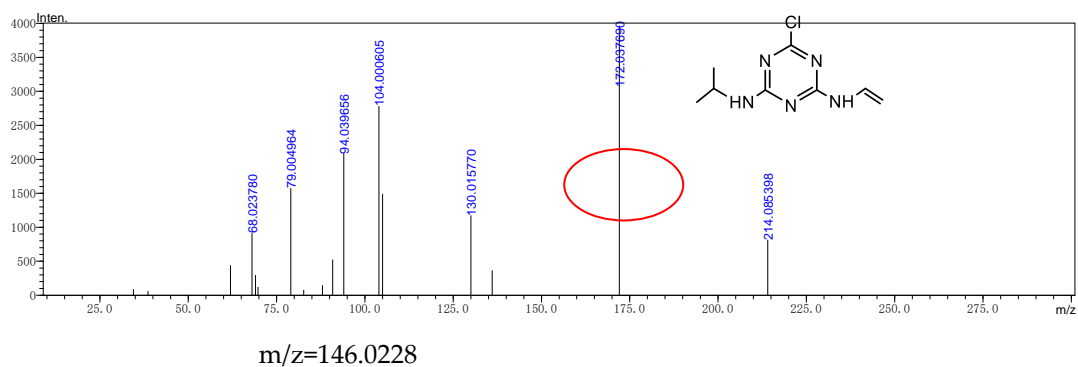
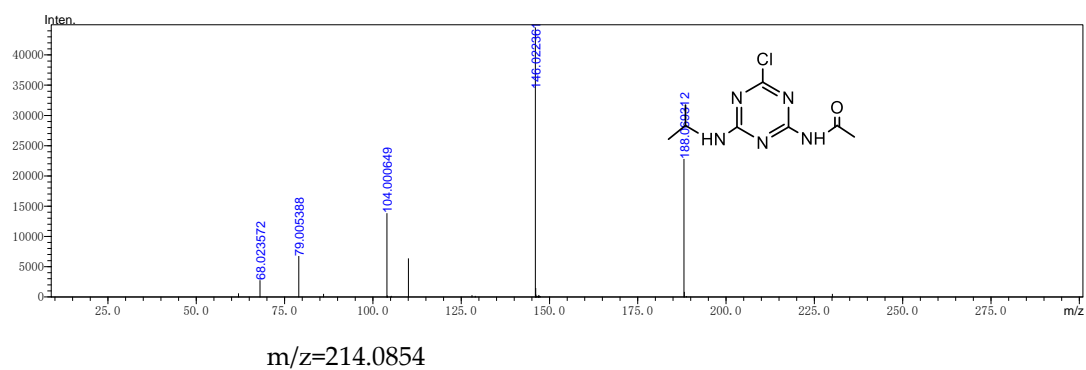


Figure S1. HPLC-MS/MS chromatogram of atrazine and intermediates.

Table S1. Physical properties of the catalysts.

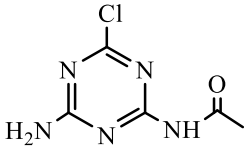
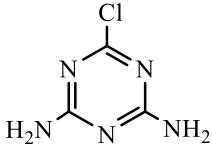
Catalysts	BET Surface Area (m ² g ⁻¹)	Pore Volume (cm ³ g ⁻¹)	Pore Size (nm)
CeO ₂ (synthetical)	95.08	0.24	10.3
CeO ₂ (commercial)	1.44	0.0088	-
CeO ₂ nanorods [1]	109.40	0.22	7.88
CeO ₂ [2]	153.8	0.47	3.43
MnO ₂ [3]	100	0.26	10.3

Table S2. Energy positions of Ce spin orbit components in different samples (unit: eV).

	Ce 3d _{3/2}					Ce 3d _{5/2}					%	
	v ₀	v	v'	v''	v'''	u ₀	u	u'	u''	u'''		
	Ce(III)	Ce(IV)	Ce(III)	Ce(IV)	Ce(IV)	Ce(III)	Ce(IV)	Ce(III)	Ce(IV)	Ce(IV)	Ce(III)	Ce(IV)
Commercial	880.20	882.29	884.36	888.76	898.09	898.83	900.89	902.59	907.43	916.63	11.18	88.82
Synthetical	880.38	882.46	884.84	888.87	898.18	898.38	900.98	903.05	907.61	916.83	9.21	90.79

Table S3. UPLC-MS/MS analysis of atrazine and intermediates.

Compound	m/z	Molecular Formula	Structure
ATZ	216.1006	C ₈ H ₁₄ ClN ₅	
P1	232.0711	C ₈ H ₁₄ ClN ₅ O	
P2	174.0540	C ₅ H ₈ ClN ₅	
P3	214.0854	C ₈ H ₁₂ ClN ₅	
P4	230.0800	C ₈ H ₁₂ ClN ₅ O	
P5	172.0380	C ₅ H ₆ ClN ₅	
P6	212.1136	C ₈ H ₁₃ N ₅ O ₂	

P7	188.0689	C ₅ H ₆ ClN ₅ O	
P8	146.0228	C ₃ H ₄ ClN ₅	

References

1. Qiu, X.H.; Su, X.Y.; Li, X.J.; Li, N. Preparation of CeO₂ with Different Morphologies and Its Application to Catalytic Ozonation of Aqueous Lemon Yellow Solutions. *Adv. Mater. Res.* **2014**, *997*, 3–8, <https://doi.org/10.4028/www.scientific.net/amr.997.3>.
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3. Zhang, J.; Zhuang, T.; Liu, S.; Zhang, G.C.; Huo, K. Catalytic ozonation of phenol enhanced by mesoporous MnO₂ prepared through nanocasting method with SBA-15 as template. *J. Environ. Chem. Eng.* **2020**, *8*, 103967.