

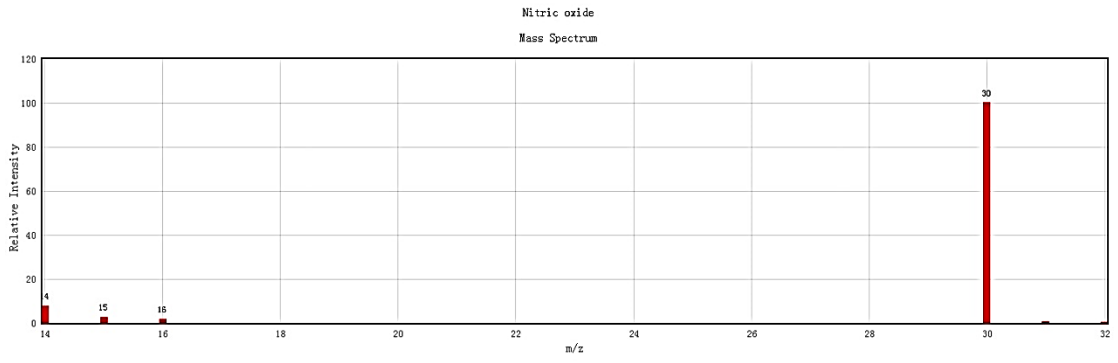
## Supplementary Material

**Table S1.** Peak Temperature of Gas Release Curves for Different Samples  
(Unit: °C)

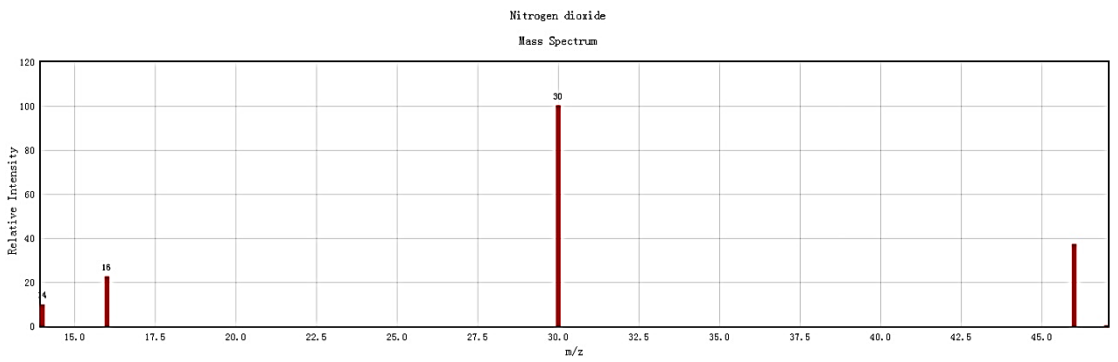
Gas	SGY	SGY-Char	YNI	YNI-Char	YNII	YNII-Char	SM	SM-Char	FJ	FJ-Char
HCNO	501	524	526	548	372	403	517	554	731	738
NO	491	515	525	541	377	398	499	528	724	738
HCN		451	681	469	374	416	517	473	697	708
NO	522	536	558	588	442	438	557	570	717	728
NO <sub>2</sub>	494	520	527	549	373	391	514	549	732	737
H <sub>2</sub> S	213	526	525	551	415	412	519	544	726	726
COS	230		555	535				479		
SO <sub>2</sub>	988	473	517	547	372	351	446	483	679	657

**Table S2.** Initial Release Temperature of Gas Release Curves for Different Samples (Unit: °C)

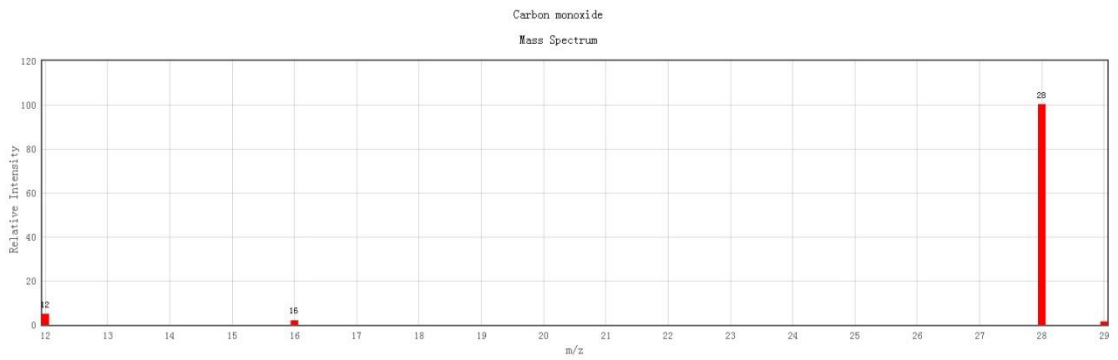
Gas	SGY	SGY-Char	YNI	YNI-Char	YNII	YNII-Char	SM	SM-Char	FJ	FJ-Char
HCNO	285	403	251	496	263	306	245	241	505	510
NO	295	282	480	420	213	231	280	285	652	691
HCN		405	533	410	181	310	402	270	605	612
NO	450	405	430	410	280	380	375	405	603	480
NO <sub>2</sub>	305	460	323	510	292	283	281	282	520	525
H <sub>2</sub> S	381	304	381	405	103	261	402	401	590	595
COS	350		440	451		561		260		
SO <sub>2</sub>	305	390	453	395	305	305	380	295	585	605



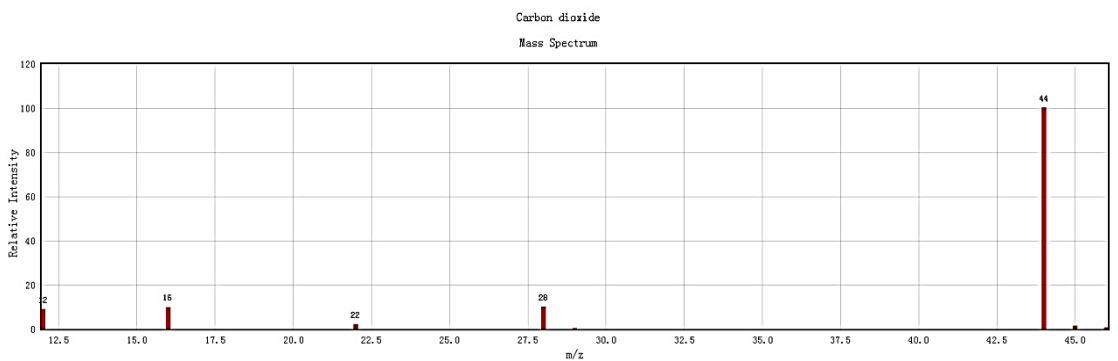
(a) NO mass spectrum



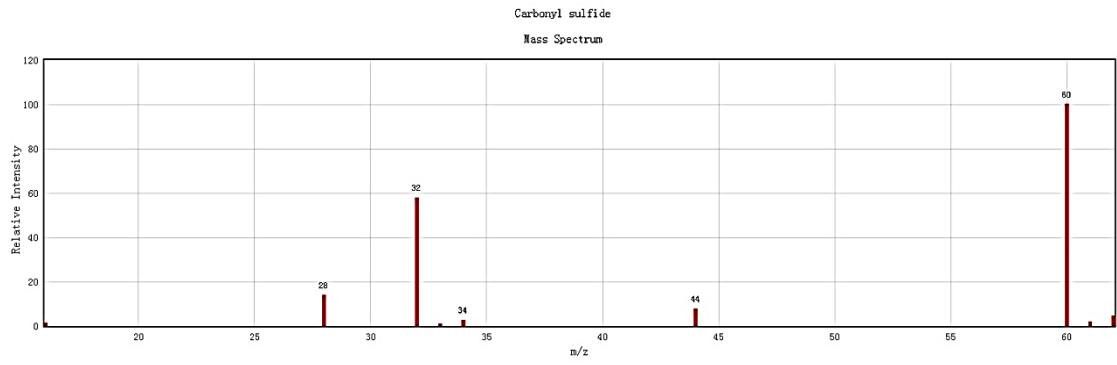
(b) NO<sub>2</sub> mass spectrum



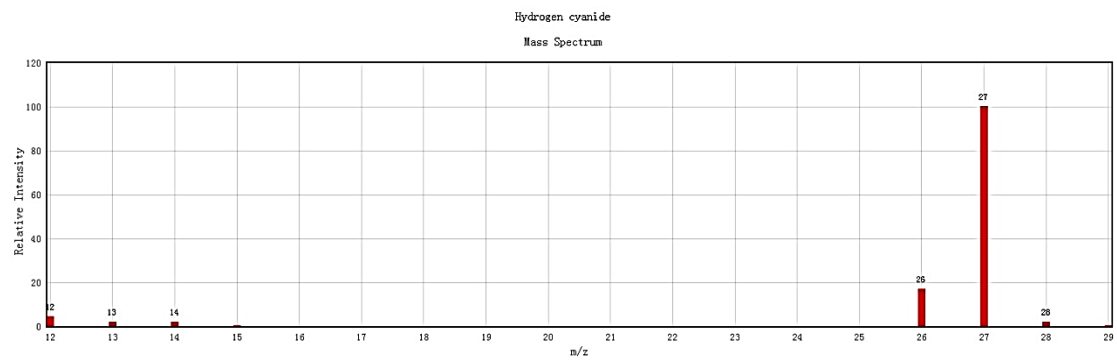
(c) CO mass spectrum



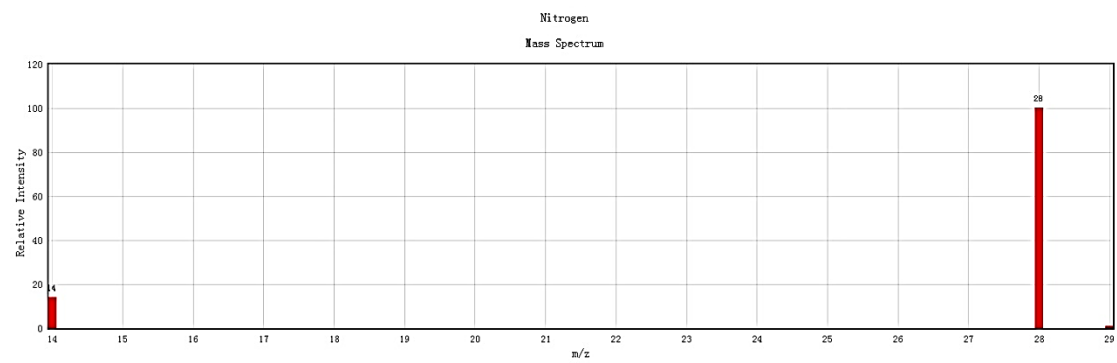
(d) CO<sub>2</sub> mass spectrum



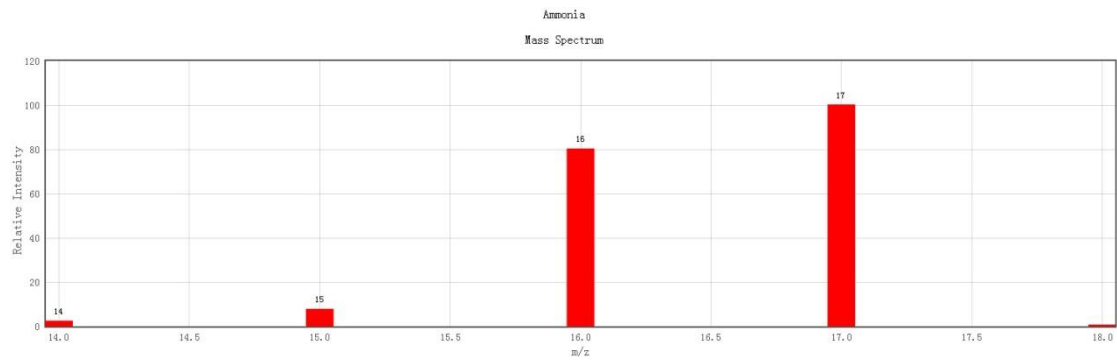
(e) COS mass spectrum



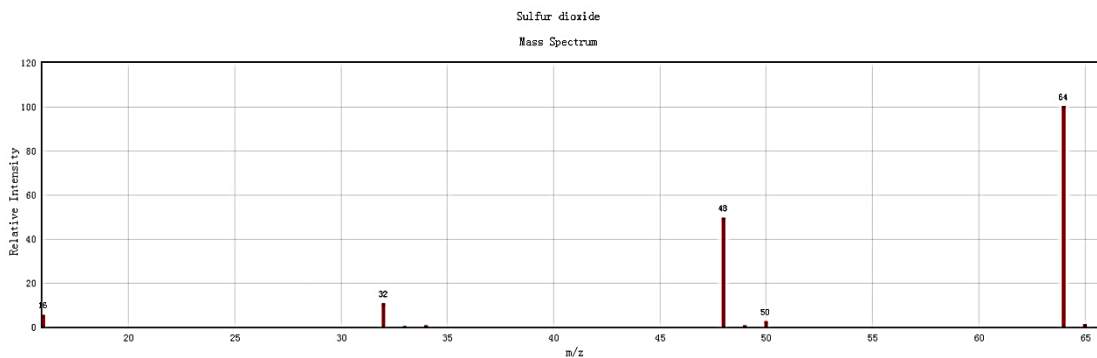
(f) HCN mass spectrum



(g) N<sub>2</sub> mass spectrum



(h) NH<sub>3</sub> mass spectrum



(i) SO<sub>2</sub> mass spectrum

**Fig. S1** Standard gas identification card. (a) NO mass spectrum (b) NO<sub>2</sub> mass spectrum (c) CO mass spectrum (d) CO<sub>2</sub> mass spectrum (e) COS mass spectrum (f) HCN mass spectrum (g) N<sub>2</sub> mass spectrum (h) NH<sub>3</sub> mass spectrum (i) SO<sub>2</sub> mass spectrum