

Photooxidation of cyclohexene in the presence of SO₂: SOA yield and chemical composition

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Supplementary material

Table S1 Experimental conditions for the photooxidation of cyclohexene/NO_x/SO₂ system. All experiments were performed under dry conditions (relative humidity < 10 %). ΔM₀ is the produced organic aerosol mass concentration and Y is the SOA yield.

Exp.	T (K)	SO ₂ (ppb)	cyclohexene (ppb)	NO _x (ppb)	cyclohexene /NO _x	ΔM ₀ (μg m ⁻³)	Y (%)
1	308	0.0	596	122.0	4.9	57.0	2.66
2	305	0.0	651	93.7	6.9	79.7	3.40
3	309	2.4	553	95.7	5.8	62.6	3.15
4	307	5.8	612	92.7	6.6	41.0	1.87
5	309	9.3	599	93.5	6.4	48.1	2.23
6	309	11.0	574	94.7	6.1	47.1	2.28
7	309	23.0	514	90.5	5.7	42.6	2.30
8	305	36.6	665	99.7	6.7	96.3	2.01
9	308	40.8	472	91.4	5.2	22.6	1.33
10	308	44.3	592	98.6	6.0	35.3	1.66
11	305	55.0	497	113.0	4.4	77.3	2.16
12	308	58.8	577	96.7	6.0	44.3	2.13
13	309	60.8	626	102.0	6.1	43.9	1.95
14	308	72.7	581	98.4	5.9	49.2	2.35
15	306	90.0	543	99.6	5.4	102.0	2.62
16	309	104.7	608	93.7	6.5	77.1	3.52
17	305	236.0	1048	198.0	5.3	-	-

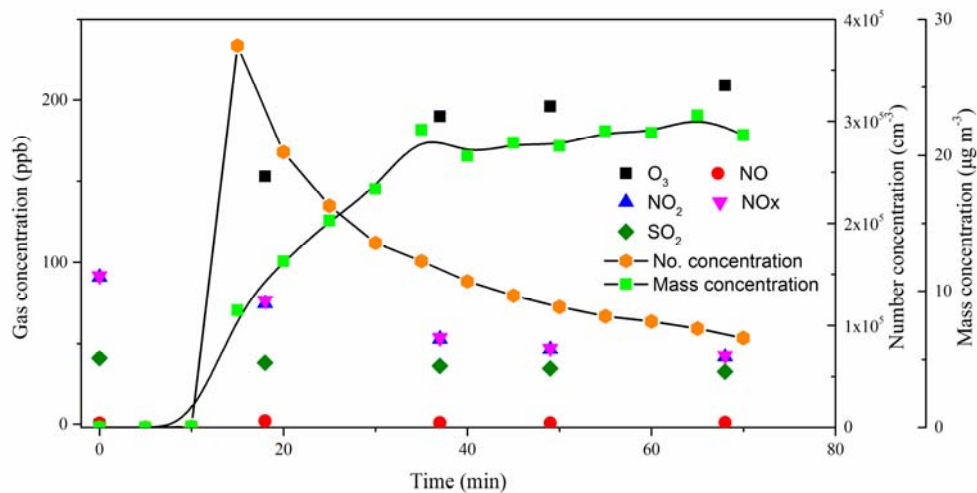


Figure S1: Typical profiles of the gas and particle phases (SOA) in the experiments.

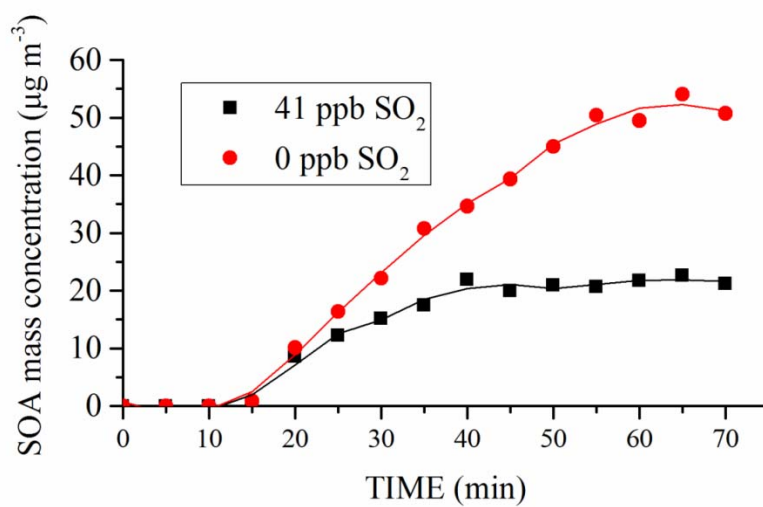


Figure S2: Changes of SOA mass concentrations with time for two different initial SO₂ concentrations, 0 and 41 ppb.