

Fast heterogeneous N_2O_5 uptake and ClNO_2 production in power plant plumes observed in the nocturnal residual layer over the North China Plain

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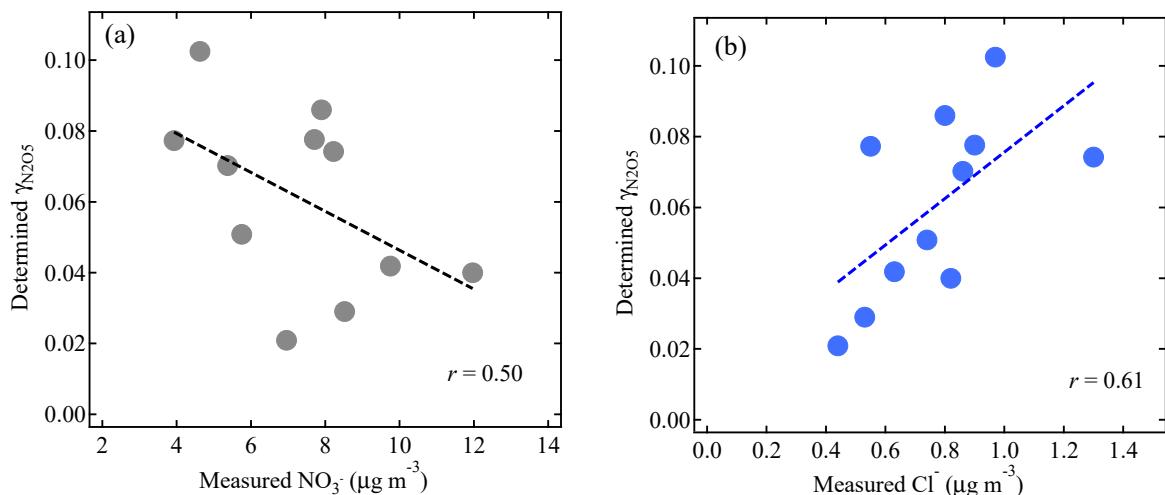


Figure S1: Correlation of determined $\gamma_{\text{N}2\text{O}5}$ from the measurements with the concentrations of (a) aerosol nitrate and (b) chloride during the study period.

Table S1: Mean mixing ratios of VOC species measured in early morning before sunrise and in the evening during previous campaign at Mt. Tai in 2007. Bimolecular rate coefficients for VOCs-NO_x reactions were determined following Brown et al. (2011) and Atkinson and Arey (2003).

Species	Mean mixing ratio (pptv)		Species	Mean mixing ratio (pptv)		
	Early morning	Evening		Early morning	Evening	
Alkanes						
Ethane	3372	3340	Benzene	1238	981	
Propane	1331	1340	Toluene	1872	2775	
i-Butane	343	411	Ethylbenzene	168	194	
n-Butane	453	591	m,p-Xylene	289	417	
i-Pentane	1223	1385	o-Xylene	104	143	
n-Pentane	209	384	i-Propylbenzene	14	22	
2-Methylpentane	1135	2095	n-Propylbenzene	30	47	
3-Methylpentane	908	1598	2-Ethyltoluene, 3-Ethyltoluene, 4-Ethyltoluene	127	218	
n-Hexane	923	1558	1,3,5-Trimethylbenzene	39	59	
n-Heptane	60	147	1,2,4-Trimethylbenzene	73	167	
n-Octane	32	53	1,2,3-Trimethylbenzene	24	60	
1,3-Butadiene	6	26	Biogenic			
2,2-Dimethylbutane	113	147	Isoprene	37	53	
2,3-dimethylbutane	178	215	α-pinene	43	51	
2-Methylhexane	279	471	β-pinene	4.8	5	
3-Methylhexane	228	459	DMS	44	33	
Cyclohexane (B)	68	127	Others			
Alkenes						
Ethene	1733	1401	OCS	610	593	
Propene	127	195	Ethyne	2637	2081	
1-Butene	29	80				
i-Butene	94	164				
cis-2-Butene	23	53				
trans-2-Butene	17	60				
1-Pentene	18	70				
trans-2-Pentene	40	44				
cis-2-Pentene	33	60				
2-Methyl-1-butene	38	51				
2-Methyl-2-butene	29	36				