Supplementary Information

Assessing indoor gas phase oxidation capacity through real-time measurements of HONO, and NOx in Guangzhou, China

Jiangping Liu¹,², Sheng Li¹,², Jiafa Zeng³, Majda Mekic¹,², Zhujun Yu³, Wentao Zhou¹,², Gwendal Loisel¹, Adrien Gandolfo⁴, Wei Song¹, Xinning Wang¹, Zhen Zhou³, Hartmut Herrmann⁵,⁶,⁷, Xue Li³*, Sasho Gligorovski¹*,

¹State Key Laboratory of Organic Geochemistry, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou 510 640, China
²University of Chinese Academy of Sciences, Beijing 10069, China
³Institute of Mass Spectrometry and Atmospheric Environment, Jinan University, Guangzhou 510632, China
⁴Aix Marseille Univ, CNRS, LCE, UMR 7376, 13331, Marseille, France
⁵School of Environmental Science and Engineering, Shandong University, Qingdao, 266237, China
⁶School of Environmental Science and Engineering, Fudan University, 200433, Shanghai, China
⁷Leibniz-Institute for Tropospheric Research (TROPOS), Atmospheric Chemistry Department (ACD), Permoserstr. 15, 04318 Leipzig, Germany

The first three authors contribute equally
*Corresponding authors: gligorovski@gig.ac.cn
tamylee@jnu.edu.cn

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Figure S2: Actinic flux of the fluorescence lamps in the lab room measured at 1 m distance from the lamps in the middle of the room.

Figure S3: The plot of $c_0/c_i$ versus time obtained from the decay of CO$_2$.

Figure S4: The background mixing ratios of NO$_2$ (red line) and HONO (black line) at December 12 2018 in the lab room on the campus at JNU, Guangzhou, China.
Figure S5: The mixing ratio of HONO during a cooking event at December 05 2018 in the lab room on the campus at JNU, Guangzhou, China

**Estimation of error on HONO measurements**

The instrument runs for 6 hours with 0.5 h high purity N\(_2\) as blank (zero). The detection limit is obtained by the deviation of the zero value, the calculation is as follows:

Detection limits \( MDL = \sqrt{[2 \times STDEV(ch1 - zero)]^2 + [2 \times STDEV(ch2 - zero)]^2} \)

Where \( MDL \) is method detection limits; \( STDEV \) is the standard deviation; \( ch1\)-zero and \( ch2\)-zero are the measured value when high purity \( N_2 \) was inlet for channel 1 and channel 2, respectively.

\[ Error( + / - ) = c(\text{HONO}) \times 10\% + MDL \]

Where \( c(\text{HONO}) \) is the concentrations of HONO, we select 10\% as the relative error.