

理工实验平台人员介绍

理工实验平台

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简介

高媛博士长期从事大气污染，室内空气污染的研究工作，在大气颗粒物成分分析，黑碳，棕碳的光学性质等研究方面取得了一定成绩。目前，已在 Atmospheric Chemistry and Physics、Science of the Total Environment, Atmospheric Research 等国内外知名 SCI 期刊发表科研论文 22 篇，并担任审稿人。多次参加国内，国际会议，并荣获最佳论文奖。担任香港实验所认可计划(Hong Kong Accreditation Service (HOKLAS))的评审专家，

最高学历

2011.11~2016.09, 香港理工大学, 博士;

近期科研成果

项目经历

主持:

2017-2019	Study on characterization of emission under 3D printing environment	香港珠海学院青年基金
2016-2017	Provision of Service for Measuring Indoor Air Quality before and after applying air cleaner in Hotel rooms	粤海酒店
2016-2017	Programme for the Enhancement of Research Capacity in Sustainable System and Technologies	香港资研局 (部分主持)

作为重要参与者科研项目:

2010-2014	Study of Photochemical Air Pollution in Hong Kong	香港环境及自然保育基金
2011-2013	Cooking Emission Monitoring and Assessment in Residential Kitchens	香港资研局
2012-2016	Air pollution in Green Deck over cross-harbour Tunnel Toll Plaza	香港理工大学建设发展基金

2013-2014	Study on the Optical Properties of Aerosols at Hok Tsui Monitoring Site	企业配对基金
2013-2016	我国 PM _{2.5} 排放源的编研, 烹饪源样品采集和分析	国家科技部专项基金
2014-2016	Evaluating the Implication of Incorporating Short-term IAQ Parameters into the IAQ Objectives,	香港环保局
2015-2016	Provision of Service for Measuring Indoor Air Quality of Smoking Lounge and Non-smoking Area in Casino of Macau	澳门赌场协会
2016-2020	Exposure and source apportionment of indoor PM _{2.5} at residential Homes in Hong Kong, Xi'an, Shanghai Guangzhou.	香港资研局
2018-2020	Review building materials Hong Kong Housing Authority Specification Library,	香港房屋署

发表论文, 专利及著作

主要贡献者:

1. **Yuan Gao**, Senchao Lai., Shun Cheng Lee, Pui.Shan Yau, Yu Huang, Yan Cheng, Tao Wang, Zheng Xu, Chao Yuan, Yingyi Zhang. Optical properties of size-resolved particles at a Hong Kong urban site during winter. *Atmospheric Research*, 2015, 155:1-12.
2. **Yuan Gao**, Shun Cheng Lee, Judith.C.Chow, John.G.Watson, Chemical characterization and source apportionment of size-resolved particles in Hong Kong sub-urban area. *Atmospheric Research* 2016; 170:112-122.
3. Zhang, Z., **Gao, Y.**, Yuan, Q., Tan, Y., Li, H., Cui, L., Huang, Y., Cheng, Y., Xiu, G., Lai, S., Chow, J. C., Watson, J. G., Lee, S.-C. (2020). Effects of indoor activities and outdoor penetration on PM_{2.5} and associated organic/elemental carbon at residential homes in four Chinese cities during winter. *Science of the Total Environment* 2020,739.
4. Li, Haiwei, Dongfang Wang, Long Cui, **Yuan Gao**, Juntao Huo, Xinning Wang, Zhuozhi Zhang, Yan Tan, Yu Huang, Junji Cao, Judith C. Chow, Shun-cheng Lee, and Qingyan Fu. 2019. "Characteristics of atmospheric PM_{2.5} composition during the implementation of stringent pollution control measures in shanghai for the 2016 G20 summit." *Science of The Total Environment* no. 648:1121-1129.
5. Cui, L.; Wang, X. L.; Ho, K. F.; **Gao, Y.**; Liu, C.; Ho, S. S. H.; Li, H. W.; Lee, S. C.; Wang, X. M.; Jiang, B. Q., Decrease of VOC emissions from vehicular emissions in Hong Kong from 2003 to 2015: Results from a tunnel study. *Atmospheric Environment* 2018.

6. Jiaping Wang, Virkkula Aki, Yuan Gao, Shun Cheng Lee, Yicheng Shen, Xuguang Chi, Wei Nie, Qiang Liu, Zheng Xu, Xin Huang, Tao Wang, Long Cui, Aijun Ding, Observations of aerosol optical properties at a coastal site in Hong Kong, South China. *Atmospheric Chemistry and Physics*, 2017: 2653-2671.
7. Xiaojia Chen, Senchao Lai, Yuan Gao, Yingyi Zhang, Yan Zhao, Duohong Chen, Junyu Zheng, Liuju Zhong, Shun-Cheng Lee, Bing Chen, Reconstructed Light Extinction Coefficients of Fine Particulate Matter in Rural Guangzhou, Southern China. *Aerosol and Air Quality Research*, 2016, 16: 1981-1990
8. Yan Cheng, Shun Cheng Lee, Yuan Gao, Long Cui, Wenting Deng, Junji Cao, Zhenxing Shen, Jian Sun. Real-time measurements of PM_{2.5}, PM_{10-2.5}, and BC in an urban street canyon. *Particuology* 2014, 20:134-140.

其他论文:

9. Yang, X.; Wang, T.; Xia, M.; Gao, X.; Li, Q.; Zhang, N.; Gao, Y.; Lee, S.; Wang, X.; Xue, L.; Yang, L.; Wang, W., Abundance and origin of fine particulate chloride in continental China. *Science of The Total Environment* 2018, 624, 1041-1051.
10. Song, J.; Zhang, Y.; Huang, Y.; Ho, K. F.; Yuan, Z.; Ling, Z.; Niu, X.; Gao, Y.; Cui, L.; Louie, P. K. K.; Lee, S.-c.; Lai, S., Seasonal variations of C1-C4 alkyl nitrates at a coastal site in Hong Kong: Influence of photochemical formation and oceanic emissions. *Chemosphere* 2018, 194, 275-284.
11. Lijuan Li, Steven Sai Hang Ho, Judith C. Chow, John G. Watson, Shun Cheng Lee, Long Cui, Yuan Gao, Wenting Dai, Kin Fai Ho, Yu Huang, Junji Cao, Characterization and health risk assessment of PM_{2.5} -bound organics inside and outside of Chinese smoking lounges. *Chemosphere*, 2017 186: 438-445.
12. Long Cui, Zhou Zhang, Yu Huang, Shun Cheng Lee, Donald Ray Blake, Kin Fai Ho, Bei Wang, Yuan Gao, Xin Ming Wang, Peter Kwok Keung Louie, Measuring OVOCs and VOCs by PTR-MS in urban roadside microenvironment of Hong Kong: relative humidity and temperature dependence, and field intercomparisons. *Atmospheric Measurement Technology*, 2016, 9, 5763-5779
13. Likun Xue, Rongrong Gu, Tao Wang, Xinfeng Wang, Sandra Saunders, Donald R. Blake, Peter K. K. Louie, Connie W.Y. Luk, Isobel Simpson, Zheng Xu, Zhe Wang, Yuan Gao, Shun Cheng Lee, Abdelwahid Mellouki, and Wenxing Wang, Oxidative capacity and radical chemistry in the polluted atmosphere of Hong Kong and Pearl River Delta region: analysis of a severe photochemical smog episode. *Atmospheric Chemistry and Physics*, 2016,
14. Fan Yang, Kimitaka Kawamura, Jing Chen, Kin Fai Ho, Shun Cheng Lee, Yuan Gao, Long Cui, Tieguan Wang, Pingqing Fu, Anthropogenic and biogenic organic compounds in summertime fine aerosols (PM_{2.5}) in Beijing, China. *Atmospheric Environment*, 2016, 124:

15. Yu Huang, Zhenhao Ling, Shun Cheng Lee, Steven Sai Hang Ho, Junji Cao, Donald R. Blake, Yan Cheng, Senchao Lai, Kin Fai Ho, **Yuan Gao**, Long Cui, Peter K.K. Louie., Characterization of volatile organic compounds at a roadside environment in Hong Kong: An investigation of influences after air pollution control strategies. *Atmospheric Environment*, 2015, 122: 809-818.
16. Jia Guo, Andreas Tilgner, Chungpong Yeung, Zhe Wang, Peter K. K. Louie, Connie W. Y. Luk, Zheng Xu, Chao Yuan, **Yuan Gao**, Steven Poon, Hartmut Herrmann, Shuncheng Lee, Ka Se Lam, and Tao Wang, Atmospheric Peroxides in a Polluted Subtropical Environment: Seasonal Variation, Sources and Sinks, and Importance of Heterogeneous Processes, *Environmental Science & Technology*, 2013. 48, 3, 1443-1450
17. Weijun Li, Tao Wang, Shengzhen Zhou, Shun Cheng Lee, Yu Huang, **Yuan Gao**, Wenxing Wang. Microscopic Observation of Metal-Containing Particles from Chinese Continental Outflow Observed from a Non-Industrial Site. *Environmental Science & Technology*, 2013, 47: 9124-913.
18. Yan Cheng, Kin Fai Ho, Wenjing Wu, Steven Sai Hang Ho, Shun Cheng Lee, Yu Huang, Yunwei Zhang, Pui Shan Yau, **Yuan Gao**, Chi Sing Chan. Real-Time Characterization of Particle-Bound Polycyclic Aromatic Hydrocarbons at a Heavily Trafficked Roadside Site. *Aerosol and Air Quality Research*, 2012, 12: 1181-1188.
19. Yu Huang, Shun Cheng Lee, Kin Fai Ho, Steven Sai Hang Ho, Nanying Cao, Yan Cheng, **Yuan Gao**. Effect of ammonia on ozone-initiated formation of indoor secondary products with emissions from cleaning products. *Atmospheric Environment*, 2012, 59: 224-231.
20. Yu Huang, Steven Sai Hang Ho, Kin Fai Ho, Shun Cheng Lee, **Yuan Gao** and Natale Sin Yau Feng. Optimization of solid-phase microextraction (SPME) to determine airborne biogenic volatile organic compounds (BVOCs): An application for measurement of household cleaning products. *Analytical Methods*, 2012, 4: 277-283.
21. Yan Cheng, Chuck Wah Francis Yu, Yu Huang, Yunwei Zhang, **Yuan Gao**, Pui Shan Yau, Chi Seng Chan, Shun Cheng Lee, Particle Counts and Size Distributions in the Roadside Environment. *Indoor and Built Environment*, 2012, 21:633-641.
22. Yu Huang, Steven Sai Hang Ho, Kin Fai Ho, Shun Cheng Lee, **Yuan Gao**, Yan Cheng, Chi Seng Chan, Characterization of Biogenic Volatile Organic Compounds (BVOCs) in Cleaning Reagents and Air Fresheners in Hong Kong. *Atmospheric Environment*, 2011, 45(34): 6191-6196.

仪器管理

主要负责高效液相色谱，气相质谱等仪器和显微镜的运行维护和管理。