

PERSONAL PARTICULARS	Date of Birth: Nov., 10 th , 1982	Place of Birth: Guangdong Province, China
	Rm E11-3017 Department of Civil and Environmental Engineering Faculty of Science and Technology University of Macau, Taipa, Macau, China	(853) 8822-4943 yongjieli@um.edu.mo livinglake@gmail.com homepage , google scholar page
RESEARCH INTERESTS	Aerosol Chemistry: Lab simulation of secondary aerosol formation and transformation Aerosol Microphysics: Characterization of hygroscopicity, optical property, and phase state Aerosol Characterization: Real-time measurements and source analysis of atmospheric aerosols	
EDUCATION	The Hong Kong University of Science and Technology (HKUST), Hong Kong, China Ph.D., Environmental Engineering Obtained in: 2010 Thesis: Characterization of products in secondary organic aerosol formation using mass spectrometric techniques Advisor: Prof. Chak K. Chan	
	Peking University (PKU), Beijing, China B.Sc., Analytical Chemistry Obtained in: 2004 Thesis: Determination of sulfite in food products (in Chinese) Advisor: Prof. Meiping Zhao	
HONORS AND AWARDS	2022/2023 Incentive Scheme for Outstanding Academic Staff, University of Macau	2023
	Asian Young Aerosol Scientist Award, Asian Aerosol Research Assembly	2022
	Research Excellence Award, Faculty of Science and Technology, University of Macau	2020
	China Aerosol Young Scientist Award, Chinese Society of Particuology	2019
	Research Excellence Award, Faculty of Science and Technology, University of Macau	2017
	Best Young Researcher Award, The 4 th International Workshop on Regional Air Quality in Rapidly Economic Developing Regions (4RAQM), Hong Kong	2014
	Young Scientist Support and Young Scientist Poster Award, International Global Atmospheric Chemistry (IGAC) Science Conference, Beijing	2012
	Overseas Research Award, The Hong Kong University of Science and Technology	2008
ACADEMIC EXPERIENCE	University of Macau, Macau, China. <i>Associate Professor</i>	Aug., 2021 - present
	University of Macau, Macau, China. <i>Assistant Professor</i>	Aug., 2015 - Aug., 2021
	Harvard University, Cambridge, MA, USA. <i>Postdoctoral Fellow</i>	Apr., 2014 - Jul., 2015
	HKUST, Hong Kong, China. <i>Post-doc Fellow and Research Associate</i>	Sep., 2010 - Mar., 2014
	Harvard University, Cambridge, MA, USA. <i>Visiting Scholar</i>	Jan., 2009 - May, 2009
	Peking University, Beijing, China. <i>Research Assistant</i>	Sep., 2004 - Jul., 2005

Table 1: Citation Metrics

Source	Total Publications	Total Citations	h-index
Google Scholar	114	4400+	41
Web of Science	108	3500+	36
Scopus	94	3400+	36

Note: student/post-doc; * = corresponding author

1. Gong Y., Huang R.J.*, Yang L., Wang T., Yuan W., Xu W., Cao W., Wang Y., **Li Y.J.**, Measurement report: Brown carbon aerosol in polluted urban air of the North China Plain – day–night differences in the chromophores and optical properties, *Atmos. Chem. Phys.*, **2023**, 23: 15197-15207.
2. Jian T., Ge Y. Liu B., Sun J., Wu W., Ye J., Wu C., **Li Y.J.**, Fu T.M., Chen Q.*, Pollution characteristics of volatile organic compounds above subtropical forest canopy in Lingnan and the influence of regional anthropogenic emissions, *Journal of Environmental Engineering Technology*, **2023**, 13: 473-482.
3. Tian X., Zhang R., Wei B., Wang Y., **Li Y.J.**, Chan C.K.*, Monoethanolamine decay mediated by photolysis of nitrate in atmospheric particles: a brown carbon and organic phase formation pathway, *Environ. Sci.: Atmos.*, **2023**, 3: 1541-1551.
4. Wang Y., Qiu T., Zhang C., Hao T., Mabato B.R.G., Zhang R., Gen M., Chan M.N., Huang D.D., Ge X., Wang J., Du L., Huang R.J., Chen Q., Hoi K.I., Mok K.M., Chan C.K., **Li Y.J.***, Co-photolysis of mixed chromophores affects atmospheric lifetimes of brown carbon, *Environ. Sci.: Atmos.*, **2023**, 3: 1145-1158.
5. Li, F., Huang D.D., Nie W., Tham Y.J., Lou S., Li Y., Tian L., Liu Y., Zhou M., Wang H., Qiao L., Wang H., Wang Z.*, Huang C.* , **Li Y.J.***, Observation of nitrogen oxide-influenced chlorine chemistry and source analysis of Cl₂ in the Yangtze River Delta, China, *Atmos. Environ.*, **2023**, 306: 119829; DOI: 10.1016/j.atmosenv.2023.119829.
6. Gu Y., Huang R.J.*, Duan J., Xu W., Lin C., Zhong H., Wang Y., Ni H., Liu Q., Xu R., Wang L., **Li Y.J.**, Multiple pathways for the formation of secondary organic aerosol in the North China Plain in summer, *Atmos. Chem. Phys.*, **2023**, 23: 5419–5433.
7. Shen T., **Li Y.J.**, Hu H., Lu X., Wang L., Tang Y.*, P/Pb transport at the interface of water and Al-substituted ferrihydrite: Effect of P/Pb loading sequence, *Chemosphere*, **2023**, 325: 138374; DOI: 10.1016/j.chemosphere.2023.138374.
8. Mabato B.R.G., **Li Y.J.**, Huang D.D., Wang Y., Chan C.K.*, Comparison of aqueous secondary organic aerosol (aqSOA) product distributions from guaiacol oxidation by non-phenolic and phenolic methoxybenzaldehydes as photosensitizers in the absence and presence of ammonium nitrate, *Atmos. Chem. Phys.*, **2023**, 23: 2859-2875.
9. Tian L., Huang D.D.* , Wang Q.Q., Zhu S.H., Wang Q., Yan C., Nie W., Wang Z., Qiao L.P., Liu Y.L., Qiao X.H., Guo Y.S., Zheng P.G., Jing S., Lou S.R., Wang H.L., Yu J.Z., Huang C., **Li Y.J.***, Underestimated Contribution of Heavy Aromatics to Secondary Organic Aerosol Revealed by Comparative Assessments Using New and Traditional Methods, *ACS Earth Space Chem.*, **2023**, 7: 110-119.
10. Tian L., Huang D.D.* , **Li Y.J.***, Yan C., Nie W., Wang Z., Wang Q., Qiao L., Zhou M., Zhu S., Liu Y., Guo Y., Qiao X., Zheng P., Jing S., Lou S., Wang H., Huang C., Enigma of Urban Gaseous Oxygenated Organic Molecules: Precursor Type, Role of NO(x), and Degree of Oxygenation, *Environ. Sci. Technol.*, **2023**, 57: 64-75.

11. Liang Y., Wu C.*, Wu D., Liu B., Li Y.J., Sun J., Yang H., Mao X., Tan J., Xiao R., Deng T., Li M., Zhou Z., Vertical distributions of atmospheric black carbon in dry and wet seasons observed at a 356-m meteorological tower in Shenzhen, South China, *Sci. Total Environ.*, **2022**, 853: 158657; DOI: 10.1016/j.scitotenv.2022.158657.
12. Zeng L., Huang D.D.*, Zhu S., Li F., Zhou M., Qiao L., Wang Q., Wang Q., Ma Y., Lou S., Shi H., Hoi K.I., Mok K.M., Ge X., Wang H., Yu J.Z., Huang C., Li Y.J.*, The interplays among meteorology, source, and chemistry in high particulate matter pollution episodes in urban Shanghai, China, *Sci. Total Environ.*, **2022**, 853: 158347; DOI: 10.1016/j.scitotenv.2022.158347.
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14. Yu Y., Cheng P.*, Li Y.J.*, Gu J., Gong Y., Han B., Yang W., Sun J., Wu C., Song W., Li M., The association of chemical composition particularly the heavy metals with the oxidative potential of ambient PM2.5 in a megacity (Guangzhou) of southern China, *Environ. Res.*, **2022**, 113489; DOI: 10.1016/j.envres.2022.113489.
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16. Wang Y., Huang W., Tian L., Wang Y., Li F., Huang D.D., Zhang R., Mabato B.R.G., Huang R.J., Chen Q., Ge X., Du L., Ma Y.G., Gen M., Hoi K.I., Mok K.M., Yu J.Z., Chan C.K., Li X., Li Y.J.*, Decay Kinetics and Absorption Changes of Methoxyphenols and Nitrophenols during Nitrate-Mediated Aqueous Photochemical Oxidation at 254 and 313 nm, *ACS Earth Space Chem.*, **2022**, 6: 1115–1125.
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18. Qin Y.*, Ye J., Ohno P., Liu P., Wang J., Fu P., Zhou L., Li Y.J., Martin, S.T., Chan C.K.*, Assessing the Nonlinear Effect of Atmospheric Variables on Primary and Oxygenated Organic Aerosol Concentration Using Machine Learning, *ACS Earth Space Chem.*, **2022**, 6: 1059–1066.
19. Zhang R., Gen M., Liang Z., Li Y.J., Chan C.K.*, Photochemical reactions of glyoxal during particulate ammonium nitrate photolysis: Brown carbon formation, enhanced glyoxal decay, and organic phase formation, *Environ. Sci. Technol.*, **2022**, 56: 1605–1614.
20. Mabato B.R.G., Lyu Y., Ji Y., Li Y.J., Huang D.D., Li X., Nah T., Lam C.H., Chan C.K.*, Aqueous secondary organic aerosol formation from the direct photosensitized oxidation of vanillin in the absence and presence of ammonium nitrate, *Atmos. Chem. Phys.*, **2022**, 22: 273–293.
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BOOKS AND BOOK CHAPTERS

- Li Y.J.**, Hoi K.I., Mok K.M., Yuen K.V., Air Quality Monitoring and Advanced Bayesian Modeling, Elsevier, **2023**, ISBN: 9780323902670, DOI: 10.1016/C2020-0-03496-1.
- Zhang Y., Liu P., Han Y., **Li Y.J.**, Chen Q., Kuwata M., Martin S.T., Aerosols in Atmospheric Chemistry, American Chemical Society, **2022**, ISBN: 9780841299290, DOI: 10.1021/acsinfo-cus.7e5020.

CONFERENCE PRESENTATIONS

Note: student/post-doc; * = corresponding author

- Li Y.J.***, Reaction mechanisms and relative contributions of aromatic precursors to urban secondary organic aerosols, The 12th National Conference on Environmental Chemistry (NCEC), Wuhan, China, Nov., 2023.
- Li Y.J.***, Wang Y., Co-photolysis of mixed chromophores affects atmospheric lifetime of brown carbon by sensitizing and shadowing, The 12th National Conference on Environmental Chemistry (NCEC), Wuhan, China, Nov., 2023.
- Jiang S., Wang Y., Huang X., Nie D., Ge Y., Zhang Y., Shu Z., **Li Y.J.**, Chen Q., Ye J.*., Influence of Nighttime Stable Boundary Layer Dynamics on the Transport and Fate of Biogenic Volatile Organic Compounds Over a Sub-tropical Forest, The 20th Annual Meeting of the Asia Oceania Geosciences Society (AOGS2023), Singapore, Aug., 2023.
- Cheng X., Chen Q.*., **Li Y.J.**, Zheng Y., Liao K., Highly Oxygenated Organic Molecules Produced by Photooxidation of Aromatic Compounds Under Various NOx Conditions, The 20th Annual Meeting of the Asia Oceania Geosciences Society (AOGS2023), Singapore, Aug., 2023.
- Li Y.J.***, Interactive Photolysis of Nitrate and Brown Carbon, Young Scientist Workshop on Photochemical Air Pollution in Hong Kong and Greater Bay Area, Hong Kong SAR, China, May, 2023.
- Li Y.J.***, Secondary organic aerosol (SOA) formation from aromatic volatile organic compounds (VOCs): A perspective from oxygenated organic molecules (OOMs) measured with nitrate chemical ionization mass spectrometry (CIMS), The 7th International Symposium of Environmental Health, Seoul, Korea, Feb., 2023.
- Li Y.J.***, Applications of Multi copter Unmanned Aerial Vehicle (UAV) for Atmospheric Measurements in South China, The 28th China Atmospheric Environment Science and Technology Conference, Beijing, China, Nov., 2022.
- Li Y.J.***, The Interplays among Meteorology, Source, and Chemistry in High Particulate Matter Pollution Episodes in Urban Shanghai, China, The 2nd International Association of Meteorological Education and Sciences (IAMES), Nanjing, China, Nov., 2022.

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10. Wang Y., Huang D.D., Gen M., Chan C.K., Hoi K.I., Mok K.M., **Li Y.J.***, Enhanced Nitrite Production from Aqueous Photolysis of Nitrate in the Presence of Vanillic Acid, Asian Aerosol Conference, Taipei, China, Jun., 2022.
11. **Li Y.J.***, Huang W., Tian L., Wang Y., Huang D.D., Ma Y., Gen M., Yu J.Z., Chan C.K., Nitrate enhances near-UV/visible absorption of brown carbon (BrC) model compounds during aqueous-phase photolysis. European Aerosol Conference, Gothenburg, Sweden, Aug., 2019.
12. Chen X., Chu Y., Lee A.K.Y., Chan C.K., **Li Y.J.***, Relative humidity (RH) history affects hygroscopicity of reactive mixed particles of glyoxal and ammonium sulfate or amino acids. Asian Aerosol Conference, Hong Kong, China, May, 2019.
13. Liu B., Wu C., Sun J., Liang Y., Yao T., **Li Y.J.***, Vertical Measurements of black carbon (BC) and ozone (O_3) using miniature devices onboard an unmanned aerial vehicle at a suburban site in Guangzhou, China. Asian Aerosol Conference, Hong Kong, China, May, 2019.
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15. **Li Y.J.***, Huang W., Tian L., Wang Y., Huang D.D., Ma Y., Gen M., Yu J.Z., Chan C.K., Nitrate enhances near-UV/visible absorption of brown carbon (BrC) model compounds during aqueous-phase photolysis. Asian Aerosol Conference, Hong Kong, China, May, 2019.
16. Huang W., Tian L., **Li Y.J.***, Effects of nitrate and H_2O_2 on the aqueous-phase photochemical reactions of brown carbon (BrC) model compounds. American Geophysical Union Joint International Network in Geoscience, Xi'an, China, Oct., 2018.
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18. **Li Y.J.***, Liu P., Chen Q., Martin S.T., Real-time and off-line applications of oxidative flow reactor (OFR) for chemical and physical characterization of secondary organic aerosols (SOA). International Aerosol Conference. St. Louis, MO, U.S., Sep., 2018.
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20. Liu B., He M., Hoi K.I., Mok K.M., **Li Y.J.***, Potential exposure to fine particulate matter ($PM_{2.5}$) and black carbon on jogging trails in Macau. The 5th International Symposium on Regional Air Quality Management in Rapidly Developing Economic Regions, Guangzhou, China, Nov., 2017.
21. **Li Y.J.***, Liu P., Martin S.T., Heterogeneous uptake of ammonia by secondary organic aerosol (SOA): Effect of phase state and formation of organonitrogen species. The 5th International Symposium on Regional Air Quality Management in Rapidly Developing Economic Regions, Guangzhou, China, Nov., 2017.
22. Choi J.W.C., He M., Lau N.T., Chan C.K., **Li Y.J.***, Ultrafine particles (UFP) at suburban and roadside sites and their relationships with primary and secondary pollutants. The 13th National Conference for Aerosol Science and Technology, Shijiazhuang, China, Nov., 2017.
23. **Li Y.J.***, Liu P.F., Bergoend C., Bateman A.P., Martin S.T., Phase state of inorganic and organic aerosol particles and the effects on gas-to-particle conversion. Asian Aerosol Conference, Jeju Island, Korea, Jul., 2017.

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27. Qin Y.M., **Li Y.J.***, Wang H., Lee B.P., Huang D.D., Chan C.K.*, Particulate matter (PM) episodes at a suburban site in Hong Kong: Evolution of PM characteristics and role of photochemistry in secondary aerosol formation. AAAR 35th Annual Conference, Portland, OR, U.S., Oct., 2016.
28. **Li Y.J.**, Liu P.F., Gong Z.H., Wang Y., Bergoend C., Bateman A.P., Bertram A., Martin S.T.*, Reactive uptake of ammonia and formation of organic nitrogen species for non-Liquid/Liquid secondary organic material. AGU Fall Meeting, San Francisco, CA, U.S., Dec., 2015.
29. Liu P.F., **Li Y.J.**, Wang Y., Bateman A., Zhang Y., Gong Z.H., Gilles M., Martin S.T.*, How glassy states affect brown carbon production? AGU Fall Meeting, San Francisco, CA, U.S., Dec., 2015.
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31. Martin S.T.*, **Li Y.J.**, Liu P.F., Gong Z.H., Wang Y., Bateman A.P., What is the Meaning of “non-liquid” or “liquid” applied to secondary organic material? highlighting differences in the effects of absorbed water on physical properties compared to chemical reactivity. AAAR 34th Annual Conference, Minneapolis, MN, U.S., Oct., 2015.
32. **Li Y.J.**, Lee B.Y.L., Yu J.Z., Ng N.L., Chan C.K.*, Evaluating the degree of oxygenation of organic aerosols during foggy days and hazy days in springtime in Hong Kong using high-resolution time-of-flight aerosol mass spectrometry (HR-ToF-AMS). The 4th International Workshop on Regional Air Quality in Rapidly Economic Developing Regions (4RAQM), Hong Kong, Jan., 2014.
33. **Li Y.J.**, Huang D.D., Cheung H.Y., Lee A.K.Y., Chan C.K.*, Aqueous-phase photochemical oxidation and direct photolysis of vanillin—a model compound of methoxy-phenols from biomass burning. 4RAQM, Hong Kong, Jan., 2014.
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35. Cheng W.J., Weng L.T., **Li Y.J.**, Lau A.P.S., Chan C.K., Chan C.M.*, Surface chemical composition of size-fractionated urban walkway aerosols determined by XPS and ToF-SIMS. European Geosciences Union (EGU) General Assembly, Vienna, Austria, Apr., 2013.
36. **Li Y.J.**, Lee B.Y.L., Chan C.K.*, Evaluating the degree of oxygenation of organic aerosols during foggy days and hazy days in springtime in Hong Kong using high-resolution time-of-flight aerosol mass spectrometry (HR-ToF-AMS). AAAR 31st Annual Conference, Minneapolis, MN, U.S., Oct., 2012.
37. Lee B.Y.L., **Li Y.J.**, Chan C.K.*, Yu J.Z., Louie P., Characteristics of ambient aerosol at a suburban site in Hong Kong during springtime using Aerosol Mass Spectrometry. AAAR 31st Annual Conference, Minneapolis, MN, U.S., Oct., 2012.

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39. Chan K.M, Huang D.D., **Li Y.J.**, Chan M.N., Seinfeld J. H., Chan C.K.*, Characterization of oligomers products from heterogeneous acid-catalyzed reaction of methyl vinyl ketone and their formation reaction mechanisms. AAAR 31st Annual Conference, Minneapolis, MN, U.S., Oct., 2012.
40. **Li Y.J.**, Lee B.Y.L., Chan C.K.*, Evaluating the degree of oxygenation of organic aerosols during foggy and hazy days in Hong Kong using high-resolution time-of-flight aerosol mass spectrometry. International Global Atmospheric Chemistry (IGAC) Science Conference, Beijing, China, Sep., 2012.
41. Chen Q., **Li Y.J.**, McKinney K., Kuwata M., Martin S.T*, Particle-phase chemistry of secondary organic material: Modeled compared to measured O:C and H:C elemental ratios provide constraints. AGU Fall Meeting, San Francisco, CA, U.S., Dec., 2011.
42. **Li Y.J.**, Chan C.K.*, Multi-generation and multi-phase reactions in SOA formation: Oxidation and acid-catalyzed reactions as examples. the 3rd International Workshop on Regional Air Quality in Rapidly Economic Developing Regions, Guangzhou, China, Nov., 2011.
43. **Li Y.J.**, Chan C.K.*, Characterization of organic particles from incense burning using an Aerodyne high-resolution time-of-flight aerosol mass spectrometer. AAAR 30th Annual Conference, Orlando, FL, U.S., Oct., 2011.
44. Lee B.Y.L., **Li Y.J.**, Chan C.K.*, Laboratory study of collection efficiency of mixed organic-inorganic particles by the Aerodyne HR-ToF-AMS. AAAR 30th Annual Conference, Orlando, FL, U.S., Oct., 2011.
45. **Li Y.J.**, Chan C.K.*, Characterization of organic particles from incense burning using an Aerodyne high-resolution time-of-flight aerosol mass spectrometer. Asian Aerosol Conference, Xi'an, China, Aug., 2011.
46. **Li Y.J.**, Chan C.K.*, Characterization of particles from incense and mosquito coil burning with aerosol mass spectrometry. Pacificchem 2010, Honolulu, Hawaii, U.S., Dec., 2010.
47. **Li Y.J.**, Chan C.K.*, Acid-catalyzed reactions of volatile organic compounds in the formation organic aerosols. The 17th National Conference on Atmospheric Environmental Science and Technology, Shanghai, China, Oct., 2010.
48. **Li Y.J.**, Cheong G.Y.L., Lau A.P.S., Chan C.K.*, Relative humidity as a critical parameter in reactive uptake of limonene and terpineols by acidic particles. International Aerosol Conference, Helsinki, Finland, Sep., 2010.
49. **Li Y.J.**, Cheong G.Y.L., Lee A.K.Y., Lau A.P.S., Chan C.K.*, Acid-catalyzed reactions of limonene and terpineol and their implication in secondary organic aerosol (SOA) formation. European Aerosol Conference, Karlsruhe, Germany, Sep., 2009.
50. **Li Y.J.**, Lee A.K.Y., Lau A.P.S., Chan C.K.*, Accretion reactions of octanal catalyzed by sulfuric acid: Product identification, reaction pathways and atmospheric implications. AAAR 27th Annual Conference, Orlando, FL, U.S., Oct., 2008.
51. Lee A.K.Y., **Li Y.J.**, Lau A.P.S., Chan C.K.*, Uptake of octanal vapor in the presence of acidic seed particles. AAAR 27th Annual Conference, Orlando, FL, U.S., Oct., 2008.

INVITED TALKS

Shandong University, Qingdao, China

Introduction to Secondary Organic Aerosol

July, 2019

Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou, China

Introduction to Secondary Organic Aerosol

November, 2018

Shandong University, Qingdao, China

<i>Real-time Chemical Characterization of Particulate Matter in China</i>	July, 2018
Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou, China	
<i>Real-time Chemical Characterization of Particulate Matter in China</i>	January, 2018
City University of Hong Kong, Hong Kong, China	
<i>Aerosol Mass Spectrometric Characterization of Fine Particulate Matters</i>	July, 2016
The Hong Kong Polytechnic University, Hong Kong, China	
<i>Aerosol Mass Spectrometric Characterization of Fine Particulate Matters</i>	July, 2016
Jinan University, Guangzhou, China	
<i>Semi-solidity and Reactivity of Aerosol Particles</i>	March, 2016
The Hong Kong University of Science and Technology, Hong Kong, China	
<i>Semi-solidity and Reactivity of Aerosol Particles</i>	August, 2015

GRANTS

Note: 1 USD ≈ 8 MOP ≈ 7 RMB

External

- **National Natural Science Foundation of China (NSFC) and Science and Technology Development Fund (FDCT)**, Macau SAR joint project: *Laboratory and field investigations on aqueous-phase oxidation of atmospheric organic compounds based on bulk-solution, single-particle, and suspended-aerosol experiments*, 2023.12-2026.11, MOP 2,039,000, PI.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Investigations of brown carbon and aerosol and sea spray aerosol photolysis by single-particle levitation coupled with Raman spectroscopy and mass spectrometry*, 2023.12-2026.12, MOP 1,919,000, PI.
- **Environmental Protection Bureau (DSPA)**, Macau SAR: *An assessment study on the efficiency of air quality improvement*, 2023.06-2023.12, MOP 378,000, PI.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Impacts of different commercial silane coatings to algal toxicity of metal nanoparticle mixtures*, 2023.04-2026.04, MOP 670,000, Co-I.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Modification of an electrodynamic balance and application to study hygroscopic behavior and phase state of saccharides in marine aerosols*, 2021.10-2024.09, MOP 1,775,000, PI.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Effects of anthropogenic and marine aerosol inorganic salts on the aqueous-phase photolysis of atmospheric nitrophenolic compounds*, 2020.09-2023.08, MOP 1,855,000, PI.
- **Environmental Protection Bureau (DSPA)**, Macau SAR: *An assessment study on the control policies for stationary air pollution sources*, 2020.07-2020.12, MOP 380,000, PI.
- **Environmental Protection Bureau (DSPA)**, Macau SAR: *Study on effectiveness of air quality improvement policies and site selection of air pollutants monitoring*, 2018.06-2018.12, MOP 360,000, PI.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Effects of phase state of atmospheric particulate matter (PM) on gas-particle conversion of glyoxal and formation of secondary organic aerosols (SOA)*, 2017.08-2020.09, MOP 1,035,000, PI.
- **Science and Technology Development Fund (FDCT)**, Macau SAR: *Effects of secondary organic aerosol formed via nitrate-mediated aqueous-phase oxidation on the physical properties of atmospheric particulate matter*, 2017.03-2020.04, MOP 1,178,000, PI.
- **National Natural Science Foundation of China (NSFC)**: *Laboratory studies on the effects*

of nitrate on secondary organic aerosol formation, 2017.01-2020.12, RMB 710,000, PI.

Internal

- **Multi-year Research Grant (MYRG)**, University of Macau Research Council: *Effects of light-absorbing organic components on nitrous acid (HONO) production from nitrate photolysis on simulated urban grime*, 2024.01-2025.12, MOP 640,000, PI.
- **Multi-year Research Grant (MYRG)**, University of Macau Research Council: *Co-photolysis of atmospheric particulate nitrate and brown carbon (BrC) chromophores and implications on atmospheric chemistry and health effects*, 2023.01-2024.12, MOP 432,500, PI.
- **Multi-year Research Grant (MYRG)**, University of Macau Research Council: *Chemical constituents in atmospheric fine particulate matter (PM) and health-related reactive oxygen species (ROS) generation*, 2019.01-2021.12, MOP 1,497,500, PI.
- **Multi-year Research Grant (MYRG)**, University of Macau Research Council: *Measurement of vertical profiles for particulate matters in suburban and pristine environments using an unmanned aerial vehicle platform*, 2017.09-2020.082, MOP 733,700, PI.
- **Start-up Research Grant (SRG)**, University of Macau Research Council: *A pilot test of an unmanned aerial vehicle (UAV) system for vertical distribution measurements of atmospheric particulate matter (PM)*, 2016.01-2018.12, MOP 150,000, PI.

TEACHING

Course

- Undergrad: *Environmental Engineering I* (Fall, 2015-present, student rating: average 4.1/5.0)
- Postgrad: *Air Pollution Chemistry and Meteorology* (Fall, 2015-present, average 4.5/5.0)
- Postgrad: *Air Pollution Control* (Spring, 2016-2019, average 4.5/5.0)

Supervision

PhD

- Qianying Liu (on-going)
- Lulu Zeng (on-going)
- Yue Liang (on-going)
- Fangbing Li (on-going)
- Yalin Wang (graduated 05/2023)
- Xi Chen (graduated 12/2022)
- Linhui Tian (graduated 12/2022)
- Ben Liu (graduated 11/2020)
- Tingting Shen (graduated 11/2020)

- Wanyi Wang (graduated 06/2020)

- Jacky Weng Chun Choi (graduated 12/2018)
- Mandy Minle He (graduated 12/2018)
- Wanjin Li (graduated 12/2018)
- Da Lei (graduated 12/2018)
- Karen Ka Wan Lai (graduated 04/2018)

FYP

- Yuya Xia (on-going)
- Haoming Sun (on-going)
- Iok Kit Hoi (graduated 2023)
- Kin Chit Wong (graduated 2023)
- Sio I Ip (graduated 2023)
- Wan Chi Lok (graduated 2022)
- Hung Tun Man (graduated 2022)
- Seng Hei Che (graduated 2021)

MSc

- Jingwen Wu (on-going)
- Tian Qiu (on-going)
- Xuyang Zhang (on-going)
- Lulu Zeng (graduated 07/2022)
- Qianying Liu (graduated 07/2022)

- Hong Chao Li (graduated 2021, Dean's List)
- Raul Quishor Lotlicar (graduated 2021)
- Seng Fong Ip (co-supervised, graduated 2021)
- Ka Lok Wong (co-supervised, graduated 2021)
- Chi Sim Wong (graduated 2020)
- Sung-yuan Huang (graduated 2020)
- Lok Him Chao (graduated 2020)
- Pui Sang Ku (co-supervised, graduated 2020)
- Shumeng Wang (graduated 2019, Dean's List)
- Ka Meng Choi (graduated 2019)
- Chong Neng U (graduated 2019)
- Sin Mei Leong (graduated 2018, Dean's List)
- Ching Ching Wu (graduated 2018)
- Kin Tak Tam (graduated 2018)
- Wei Sen Fang (graduated 2018)
- Jinquan Huang (graduated 2017, Dean's List)
- Weng Sang Iao (graduated 2017)
- Bofei Li (graduated 2017)
- Chi Hou Fok (graduated 2017)
- Chan Tong Tang (graduated 2017)
- Tek Nga Choi (graduated 2016)
- Kam Cheong Leong (graduated 2016)

SERVICE

Professional Service

- Chair of Local Organizing Committee, The 17th International Symposium on Persistent Toxic Substances & Health (ISPTS), 2023
- Advisory Board member, *Environmental Science: Advances*, Royal Society of Chemistry
- Guest Editor for *Atmospheric Environment* (2022 - 2023)
- Guest Editor for *Atmos. Chem. Phys.* and *Atmos. Meas. Tech.* joint Special Issue (2017 - 2021)
- Technical Committee member for Asian Aerosol Conference 2019
- Session Chairing in the 13th National Conference for Aerosol Science and Technology (2018), International Aerosol Conference (2018), Asian Aerosol Conference (2019), China Atmospheric Environment Science and Technology Conference (2022) etc.
- Reviewer (>15 journals; >150 articles) for *Chem., Trends Anal. Chem., Environ. Sci. Technol.*, *J. Geophys. Res.-Atmos.*, *Atmos. Chem. Phys.*, *J. Phys. Chem. A*, *Atmos. Environ.*, *Environ. Int.*, *Environ. Sci. Atmos.* etc.
- Reviewer for Best Papers for *Environ. Sci. Atmos.* (2023)
- Reviewer for Qatar National Research Fund (2022 and 2023), Swiss National Science Fund (2021), Hong Kong Research Grant Council (2021 and 2022), and Chinese State Key Laboratory grants (2019)

University Service

- Associate Head, Department of Civil and Environmental Engineering (2022 - present)
- Faculty Research Affair Committee member (2019 - present)
- Faculty Graduate Studies Committee member (2019 - 2022)
- Departmental representative for Honours College (2019 - 2022)
- Affiliate of residential college: Henry Fok Pearl Jubilee College (2017 - present)
- Faculty Advisor of UM ASCE International Student Group (2016 - 2019)
- Departmental Advisor for student exchange program (2016 - present)

Community Service

- Examination committee member for Environmental Engineer license, Macau SAR (2022-present)
- Referee for competitions by Macau Innovation and Invention Association (MIIA) (2019-present)
- Referee for competitions by The Macau Institute of Engineers (AEM) (2019-present)
- Referee for competitions on STEM by Macau Life Science Institute (MLSI) (2019)
- Referee for the China Adolescents Science and Technology Innovation Contest (CASTIC) (2019)
- Referee for Environmental Teaching Plan Competition by DSPA, Macao SAR (2016 - present)
- Seminar on air pollution in The Macau Institute of Engineers (AEM) (2020)
- Seminar on air pollution in Macau Life Science Institute (MLSI) (2019)
- Seminar on air pollution in Macau Laboratory Technologist Association (MLTA) (2018)