

Curriculum Vitae

Jiang Yanan, Sabrina

Personal Information

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Research Interests

- ✧ Water Pollution: Fate, source, pathway, transformation, degradation, and toxicity of metals and organic pollutants (PPCPs, Microplastics) in aquatic environment
- ✧ Atmospheric Chemistry: source appointment, speciation, transformation and reactive oxidative potential of metals and organic compounds in size-segregated particulate matter (PM)
- ✧ Analytical Chemistry: method development and validation, qualitative and quantitative analyses, chromatography and spectrometry

Education

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| 2014-2018 | Ph.D in School of Energy and Environment, City University of Hong Kong
Title of thesis: Characteristics, Sources and Transformation of Metals in Atmospheric Particulate Matter. |
| 2010-2012 | MPhil in Analytical Chemistry, Baptist University of Hong Kong
Title of thesis: Emerging contaminants: Environmental fate of artificial sweeteners. |
| 2006-2010 | Bachelor of Science (Honor) in Environmental Science (Class II Division I), Beijing Normal University-Hong Kong Baptist |

University United International College

Final Year Project II (2010): Effects of Ionic Strength and pH on Phosphate Adsorption by Modified Clay Mineral Waste Material

Final Year Project I (2009-2010): Application of modified waste material as an absorbent for removal of heavy metals from contaminated water.

Work Experience

- 09/2021-present Assistant Professor, Macau Environmental Research Institute, Macau University of Science and Technology
- 08/2019-08/2021 Research Fellow, Beijing Normal University-Hong Kong Baptist University United International College
Major Project: The fate of microplastics and antibiotics in aquatic environment in Pearl River estuary, Greater Bay Area, south China: The occurrence, removal, photodegradation and toxicity.
- 09/2018-08/2019 Postdoctoral fellow, The Hong Kong University of Science and Technology
Major Project: Photo-oxidation of particle phase iron species dominates the generation of reactive oxygen species (ROS) in secondary aerosol.
- 01/2013-08/2014 Research Assistant, City University of Hong Kong
Major Project: Sources, characterization, water solubility of metals in coarse PM and PM_{2.5} in typical urban environment in Hong Kong.

Teaching Experience

- 09/2016-12/2016 Teaching Assistant in course: Thermoscience for Energy Conversion II
- 02/2016-06/2016 Teaching Assistant in course: Introduction to Environmental Energy
- 09/2015-12/2015 Teaching Assistant in course: Data Analysis in Environmental

	Applications
02/2015-06/2015	Teaching Assistant in course: Urban Green City: Pollution and Solution
09/2011-12/2011	Teaching Year III students in Experimental of Analytical Chemistry

Skills of Instruments

- ✧ Ultra-performance liquid chromatography– triple quadrupole mass spectrometry (UPLC-MS-MS)
- ✧ LED-liquid waveguide capillary cell (LWCC)-Spectroscopy
- ✧ Inductively coupled plasma optical emission spectrometry (ICP-OES)
- ✧ Inductively coupled plasma mass spectrometry (ICP-MS)
- ✧ Liquid chromatography-Q star/MS
- ✧ liquid chromatography-time-of-flight-mass spectrometer (UPLC-TOF-MS)
- ✧ Gas chromatography-mass spectrometry (GC-MS)
- ✧ Ion Chromatography (IC)
- ✧ Fourier-transform infrared spectroscopy (FTIR)
- ✧ TOC analyzer
- ✧ HPLC-UV-ELSD; UV/VIS, etc

Language Skills

Mandarin, English, Cantonese

Research Grants

- ✧ Research Platform and Research Project from Guangdong Department of Education (2021-2023), The occurrence and distribution of antibiotics in wastewater in Pearl River Delta area. (Principal Investigator). (¥60,000)
- ✧ 2021-2023, 开发固体废料制备多功能吸附剂技术支持乡村经济振兴, 2020 年度广东省高校重点平台和科研项目. (Participant). (¥200,000)
- ✧ 2021-2023, Modification of Montmorillonite for Fabrication of Multifunctional Adsorbent Leading to Modification of Mineral Solid Waste Material. Beijing Normal University-Hong Kong Baptist University United International College grant, (Participant). (¥70,000)

- ✧ United International College Research Grant (2021-2023, Project No. R202102). “ Social and non-social orienting in depressed and neurotypical individuals.” (Participant). (¥100,000)
- ✧ United International College Research Grant (2020-2022, Project No. R202011). Neurotoxic metals, brain activity, cognitive decline, and their interactions in the degenerative course of Alzheimer's disease. (Co-principal Investigator). (¥200,000)
- ✧ Research Grant of the Council of Hong Kong SAR (GRF) (2016-2019, GRF Project No.11263216) Transformation of water soluble iron speciation in particulate matter: evidence in the atmosphere and implication on particle oxidative potential. (Co-principal Investigator). (HKD 600,000)
- ✧ Research Grant of the Council of Hong Kong SAR (GRF) (Project No. HKBU 201210). Evaluating the environmental impact of artificial sweeteners: A study of their distributions, photodegradation and toxicities. (Co-principal Investigator). (HKD 800,000)

Awards and Honours

2016-2017	Outstanding Academic Performance
2016-2017	Research Tuition Scholarships
2015-2016	Outstanding Academic Performance
2015-2016	Research Tuition Scholarships
2014-2017	Government Funds-University Grants Committee (UGC funds)
2010-2012	HKBU Postgraduate Research Fund
2010	Secondary Class Student Scholarship Award
2010	Top Award of Chinese Culture
2009	Secondary Class Student Scholarship Award
2007	Excellent Award of Chinese Culture Creation
2006	Excellent Award of Chinese Culture Design

Conference Presentations

- ✧ The European Aerosol Conference 2015 in Milan, Italy September 2015. (Poster presentation)
- ✧ The 19th Symposium on Chemistry Postgraduate Research in Hong Kong, Hong Kong April 2012 (Poster presentation)
- ✧ The 18th Symposium on Chemistry Postgraduate Research in Hong Kong, HK April

2011 (Poster presentation)

Publication (Journal articles)
(corresponding author*)

- J.J. Chen, J.Z. Lu, H. D. Ruan, L.C. Su*, C-H. Lee, Z. Cai, **S. Y. Jiang***, (2021).
Enhanced Removal of Methyl Orange by Mongolian Montmorillonite after Aluminum Pillaring. (under review)
- J.Z. Lu, J.J. Chen, **S.Y. Jiang**, L.C. Su, C-H. Lee, Z. Cai and H. D. Ruan.,(2021). Feasibility of Fabricating Superhydrophobic Soil Stabilizers Derived from Solid Waste Applied for Road Construction: A Review. (under review)
- Z.H. He, J.J. Chen, J.J. Lu, **S.Y. Jiang***, Huada Daniel Ruan*.,(2021). Static Adsorption and Dynamic Adsorption of Ammonia and Phosphorus by Kegging Al13 Modified Montmorillonite (Al13-O-MMt). (preparation)
- Y. T. Chuang, J. J. Chen, J.Z. Lu, L.C. Su, **S.Y. Jiang**, Y. Zhao, C-H. Lee, Z. Cai, Z. Wu, H. D. Ruan. (2021). Study on the adsorption conditions of montmorillonite towards Lead(II) removal in aqueous solution (under review)
- Wang D.J, Su L.C, Ruan H.D. *, Chen. J.J., Lu J.Z., Lee C.-H. and **Jiang S.Y.N. ***, (2021). Quantitative and qualitative determination of microplastics in oyster, seawater and sediment from the coastal areas in Zhuhai, China. *Marine Pollution Bulletin*. 164 :112000. Impact Factor : 4.05
- Li, Y., Wang, Y., Jin, X., Niu, D., Zhang, L., **Jiang, S.Y.**, Ruan, H.D., Ho, G.W.* (2020). Sex differences in hemispheric lateralization of attentional networks. *Psychological Research*. Impact Factor : 2.50
- Jiang S.Y.N.**, Gali. N.K., Ruan. H. D., Ning Z., (2020) Photo-oxidation of particle phase iron species dominates the generation of reactive oxygen species in secondary aerosol. *Science of the Total Environment*. 723 : 137994. Impact Factor : 6.55
- Jiang S.Y.N.**, Gali. N.K., Yang F.H., Zhang J.K., Ning Z., (2017) Chemical

characterization of size-segregated PM from different public transport modes and implications of source specific contribution to public exposure. *Environ Sci Pollut Res* 24:20029–20040. Impact Factor : 3.05

Gali. N.K., **Jiang S.Y.N.**, Yang F.H., Sun L., Ning Z., (2017) Redox characteristics of size-segregated PM from different public transport microenvironments in Hong Kong. *Air Qual Atmos Health* , 1–12. Impact Factor :2.87

Chan K.L., **Jiang S.Y.N.**, Ning Z. (2016) Speciation of water soluble iron in size segregated airborne particulate matter using LED based liquid waveguide with a novel dispersive absorption spectroscopic measurement technique. *Analytica Chimica Acta* 914, 100-109. Impact Factor : 5.97

Jiang S.Y.N., Kaul D.S., Yang F.H. Sun L. Zhi N. (2015) Source apportionment and water solubility of metals in size segregated particles in urban environments. *Science of the Total Environment* 533, 347–355. Impact Factor : 6.55

Gali N.K., Yang F.H., **Jiang S.Y.N.** Chan K.L., Sun L., Ho K.F., Ning Z. (2015) Spatial and seasonal heterogeneity of atmospheric particles induced reactive oxygen species in urban areas and the role of water-soluble metals. *Environmental Pollution* 198, 86-96. Impact Factor : 6.79

Wubulihairan M., **Jiang, S.Y.N.** Ning Z. (2015) Prototype Development and Laboratory Evaluation of an Aerosol to Hydrosol Sampler. *Aerosol and Air Quality Research*, (15) 776–785. Impact Factor : 2.73

Jiang, S.Y.N., Yang F.H., Chan K.L., Ning Z. (2014) Water solubility of metals in coarse PM and PM_{2.5} in typical urban environment in Hong Kong. *Atmospheric Pollution Research* (5) 236-244. Impact Factor : 3.52

Sang Z.Y.¹, **Jiang Y.N.**¹ (**Co-first author**, two authors contributed equally to this paper) Tsoi Y.K., Leung K.S.Y.* (2014) Evaluating the environmental impact of artificial sweeteners: A study of their distributions, photodegradation and toxicities. *Water research* 52, 260-274. Impact Factor : 9.13

Jiang, S.Y.N., Su.L.C., Ruan H.D., Zhang G.F., Lai S.Y., Lee C.H., Yu C.F., Wu Z., Chen

X., He S. (2014) Adsorption of phosphorus by modified clay mineral waste material relating to removal of it from aquatic system. *International Journal of Environmental Monitoring and Analysis*, Volume 2, Issue 1, 36-44.

Jiang, Y.N., Ruan, H.D., Lai, S.Y., Lee, C.H., Yu, C.F., Wu, Z., Chen, X., He, S. (2013) Recycling of solid waste material in Hong Kong: I. Properties of modified clay mineral waste material and its application for removal of cadmium in water. *Earth Sci.* 2(2), 40-46.

Publication (Conference)

Jiang, S. Y. N., Yang F.H., Chan K.L., and Ning Zhi N. (2015) Investigation of metals in PM_{2.5} and coarse PM at in typical urban environment in Hong Kong. *The 2015 European Aerosol Conference (EAC 2015)* 6th-11th Sept., 2015. Milan, Italy.

Jiang, Y.N., Ruan, H.D., Zhang, G.F., Lai, S.Y., Lee, C.H., Yu, C.F., Wu, Z., Chen, X., He, S. (2013) Recycling of Solid Waste Material: II. Phosphate Adsorption by Modified Clay Mineral Waste Material Relating to Remediation of Eutrophication in Aquatic Systems. *2013 International Symposium on Engineering and Natural Science (ISEANS)*, August 29-31, Macau.

Jiang, Y.N. and Leung K.S.Y. (2012) Probing the environmental fate of emerging pollutants. *The 19th Symposium on Chemistry Postgraduate Research in Hong Kong*. 14th April, 2012. The Hong Kong University of Science and Technology. AE-14.

Jiang, Y.N., Ruan, H.D., Lai, S.Y., Yu, C.F., Lee, C.H., Wu Z., Chen, X. and He, S. (2011) Effects of ionic strength and pH on phosphate adsorption by modified clay mineral waste material. *International conference on Solid Waste 2011, Moving towards Sustainable Resource Management*. Hong Kong SAR, China, 3-7 May 2011.

Jiang, Y.N., Lin, Z.Q., Ruan, H.D., Lai, S.Y., Yu, C.F., Lee, C.H. and Wu Z. (2011) Application of a modified clay mineral waste material for the removal of cadmium (II) in water. *International conference on Solid Waste 2011, Moving towards Sustainable Resource Management*. Hong Kong SAR, China, 3-7 May 2011.