

Curriculum Vitae

Name: Ru-Jin Huang, Prof. Dr. (Chinese Academy of Sciences, Institute of Earth Environment)

Date of Birth: 18 Dec 1979

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Academic Qualifications

2006.06-2009.05, PhD, Atmospheric Analytical Chemistry, University of Mainz, Germany, Mentor: Prof. Dr. Thorsten Hoffmann

2002.09-2005.07, Master, Analytical Chemistry, Xiamen University, China, Mentor: Prof. Dr. Xiaoru Wang/Prof. Zhixia Zhuang

1998.09-2002.07, Bachelor, Analytical Chemistry, Xiamen University, China, Mentor: Prof. Zhixia Zhuang

Professional Experience

2015.01-to date, Professor, Key Laboratory of Aerosol Chemistry and Physics, Institute of Earth Environment, Chinese Academy of Sciences

2013.01-2016.12, PSI Fellow/visiting Scientist, Laboratory of Atmospheric Chemistry, Paul Scherrer Institute, Switzerland, Dr. Andre Prevot/Prof. Dr. Urs Baltensperger group

2012, Three months Visiting Scientist, Department of Atmospheric Sciences, Center for Atmospheric Chemistry and Environment, Texas A&M University, USA, Prof. Dr. Renyi Zhang group

2011.01-2012.12, Government of Ireland Research Fellow, Centre for Climate & Air Pollution Studies, National University of Ireland, Galway, Prof. Dr. Colin O'Dowd group

2010.01-2010.12, Postdoctoral, Institute for Atmospheric and Environmental Science, University of Frankfurt, Prof. Dr. Andreas Engel group

2009.06-2009.12, Postdoctoral, Institute for Inorganic and Analytical Chemistry, University of Mainz, Prof. Dr. Thorsten Hoffmann group

2005-2006, Research Assistant, Key lab of Analytical Sciences of the Ministry of Education, China, Prof. Dr. Xiaoru Wang group

Research Experience

- Chemical characterization and source apportionment of atmospheric aerosol
- Formation and aging of secondary organic aerosol
- Brown carbon and black carbon
- New particle formation
- Marine and urban atmosphere
- Air pollution and health
- Analytical chemistry and mass spectrometry

Honor, Awards and Professional Service

2020 **China Youth Science and Technology Award (Distinguished)**

2019 **National Science Fund for Distinguished Young Scholars**

2019 **National Leading Scientists for the Ten-Thousand Talents Program**

2019 "Excellence" in the final review of the CAS Hundred Talents Program

2019 Awardee of the “from 0 to 1” innovation program (10-year excellence) of the Chinese Academy of Sciences

2018 **Young Scientist Award of the Chinese Academy of Sciences**

2018 **Schmauss Award (GAeF)**

2017 **Asian Young Aerosol Scientist Award**

2016 China Young Scientist Award of Particology

2016 Awardee of the one-hundred talents program of Shannxi province

2015 **Awardee of the One-Thousand Young Talents Program of China**

2015 China Young Aerosol Scientist Award

2010 rated 1st in the IRC EMPOWER Fellowship Award in Earth/Environment (2009-2010 call, success rate <8%)

2009 Chinese Government Award for Outstanding Student Abroad

2006-2009 3-year scholarship awarded by the German Research Foundation (DFG)

Peer reviewer of journal papers for *Science, Nature, Nature Geoscience, Nature Communications, Atmospheric Chemistry and Physics, Atmospheric Measurement Techniques, Environmental Science & Technology, Geophysical Research Letters, Journal of Geophysical Research-Atmospheres, Journal of Aerosol Science, Atmospheric Environment, Atmospheric Research, Environmental International, Environmental Pollution, Urban Climate, Science of the Total Environment, etc.*

Peer reviewer of proposals from the Research Grants Council (RGC) of Hong Kong, the National Natural Science Foundation of China (NSFC), Poland National Science Center, European Research Council (ERC).

Projects (PI and Co-PI, > 30 M CNY)

1. “Organic aerosol” National Science Fund for Distinguished Young Scholars, National Scientific Foundation of China (NSFC), 4.0 M CNY, 2020.01-2025.12 (PI).
2. “Formation of secondary organic aerosol in the air pollution complex in northern China”, from 0 to 1 innovation program (10-year excellence) of the Chinese Academy of Sciences, 6.0 M CNY, 2019.09-2028.12 (PI).
3. “Study of Chemical composition and sources of brown carbon using ultra high-resolution mass spectrometry”, NSFC, 0.61 M CNY, 2019.01-2022.12 (PI).
4. “Development and application of isotope-based approaches for aerosol source apportionment” the National Key Research and Development Plan, 3.58 M CNY, 01.2018-12.2020 (PI).
5. “Field studies for constraining the sources and atmospheric processes of particulate air pollution in Guanzhong basin, China, Priority Program of the Chinese Academy of Sciences, 6.0 M CNY, 07. 2017-12. 2019 (PI).
6. “Identifying the source, formation mechanism and health effect of reactive oxygen species in Xi’an, China” the program of research fellowship for international young scientists of the National Scientific Foundation of China (NSFC), 0.34 M CNY, 01.2018-12.2019 (Co-PI).
7. “Development of an online source apportionment approach for dynamic quantification of atmospheric particulate organic matter”, National Scientific Foundation of China (NSFC), 2.9 M CNY, 01.2017-12.2020 (PI).
8. “Physicochemical characteristics, sources and environmental effects of brown carbon aerosol in Qinghai-Tibet Plateau”, National Scientific Foundation of China (NSFC), 0.2 M CNY, 01.2017-12.2017 (PI).
9. “Quantifying the role of biomass-burning to haze pollution in Guanzhong basin, China” the program of research fellowship for international young scientists of the National Scientific Foundation of China (NSFC), 0.34 M CNY, 01.2017-12.2018 (Co-PI).
10. “Network on aerosol processes in China”, the Danish Agency for Science, Technology and Innovation, 01.2017-12.2017 (Co-PI).
11. “Air pollution in China-using radiocarbon to discover crucial sources”, Gratama Stichting, 07.2016-06.2017 (Co-PI).
12. “Using size resolved measurements to determine regional and local sources of carbonaceous aerosol during haze pollution in China”, the China exchange programme of the Royal Netherlands Academy of Arts and Sciences, 06.2016-06.2018 (Co-PI).
13. 1000 Young talent program of China, Aerosol Chemistry, 3.0 M CNY, 2015-2018 (PI).
14. “Spatial-temporal distribution, sources and health impact of nitrogen-containing aerosols in the Guanzhong region, China”, National Scientific Foundation of China (NSFC), 0.25 M CNY, 01.2015-12.2017 (PI).

15. "The key formation mechanisms of SOA and effects on haze pollution", Priority Program of the Chinese Academy of Sciences, 2.0 M CNY, 2014-2015 (Co-PI).
16. The Ubbo Emmius Programme for joint PhD student (The Netherlands), 2014 (Co-PI).
17. "Aircraft exhaust: Primary emissions and secondary aerosol production potential", European Commission-PSI COFUND, 01.2013-12.2014 (PI).
18. "Particle precursor gases in the coastal atmosphere", IRC Foundation, Ireland, 01.2011-12.2012 (PI).
19. "Atmospheric inorganic and organic halogen compounds from surface seawater", the EU-FP7 "ASSEMBLE" short-term visiting grant, 2012.
20. "Reaction cycling of particulate iodine in the marine boundary layer-a chamber study", the EU COST-735 "short term scientific missions", 02.2011-04.2011.
21. "Activated halogen compounds release from seaweed", the EU-FP7 "ASSEMBLE" short-term visiting grant, 2010.

Publication (H-index 48, cites >9800)

High profile

1. **Huang, R. J.**, Zhang, Y. L., Bozzetti, C., Ho, K. F., Cao, J. J., Han, Y. M., Dällenbach, K. R., Slowik, J. G., Platt, S. M., Canonaco, F., Zotter, P., Wolf, R., Pieber, S. M., Bruns, E. A., Crippa, M., Ciarelli, G., Piazzalunga, A., Schwikowski, M., Abbaszade, G., Schnelle-Kreis, J., Zimmermann, R., An, Z. S., Szidat, S., Baltensperger, U., El Haddad, I., Prévôt, A. S. H.: High secondary aerosol contribution to particulate pollution during haze events in China, *Nature*, 514, 218-222, 2014. (cites >2100)
2. Lin, C., **Huang, R. J.***, Ceburnis, D., Buckley, P., Preissler, J., Wenger, J., Rinaldi, M., Facchini, M. C., O'Dowd, C.*, Ovadnevaite, J.: Extreme air pollution from residential solid fuel burning, *Nature Sustainability*, 1, 512-517, DOI:10.1038/s41893-018-0125-x, 2018.
3. Platt, S. M., El Haddad, I., Pieber, S. M., **Huang, R. J.**, Zardini, A. A., Clairotte, M., Suarez-Bertoa, R., Barmet, P., Pfaffenberger, L., Wolf, R., Slowik, J. G., Fuller, S. J., Kalberer, M., Chirico, R., Dommen, J., Astorga, C., Zimmermann, R., Marchand, N., Hellebust, S., Temime-Roussel, B., Baltensperger, U., Prévôt, A. S. H.: Two-stroke scooters are a dominant source of air pollution in many cities, *Nature Commun.*, 5, 3749, DOI: 10.1038/ncomms4749, 2014.
4. An, Z. S., **Huang, R. J.**, Zhang, R. Y., Tie, X. X., Li, G. H., Cao, J. J., Zhou, W. J., Shi, Z. G., Han, Y. M., Gu, Z. L., Ji, Y. M.: Severe haze in Northern China: A synergy of anthropogenic emissions and atmospheric processes, *PNAS*, 116, 8657-8666, 2019.

Year 2021

5. Ni, H. Y., **Huang, R. J.***, Pieber, S., Corbin, J., Stefenelli, G., Pospisilova, V., Klein, F., Gysel-Beer, M., Yang, L., Baltensperger, U., El Haddad, I., Slowik, J., Cao, J. J., Prevot, A., Dusek, U.: Brown carbon in primary and aged coal combustion emission, *Environ. Sci. Technol.*, 55, 5701-5710, 2021.
6. Ni, H. Y., **Huang, R. J.***, Yao, P., Cosijn, M. M., Kairys, N., Zhong, H. B., Dusek, U.*: Organic aerosol formation and aging processes in Beijing constrained by size-resolved measurements of radiocarbon and stable isotopic ¹³C, *Environ. Int.*, DOI: 10.1016/j.envint.2021.106890, 2021.
7. Lin, C. S., **Huang, R. J.***, Duan, J., Xu W.: Primary and secondary organic nitrate in northwest China: A case study, *Environ. Sci. Technol. Lett.*, <https://doi.org/10.1021/acs.estlett.1c00692>, 2021.
8. Wang, K., **Huang, R. J.***, Brüggemann, M., Zhang, Y., Yang, L., Ni, H., Guo, J., Wang, M., Han, J., Bilde, M., Glasius, M., Hoffmann, T.*: Urban organic aerosol composition in Eastern China differs from North to South: Molecular insight from a liquid chromatography-Orbitrap mass spectrometry study, *Atmos. Chem. Phys.*, 21, 9089-9104, 2021.
9. Yuan, W., **Huang, R. J.***, Yang, L., Wang, T., Duan, J., Guo, J., Ni, H., Chen, Y., Chen, Q., Li, Y., Dusek, U., O'Dowd, C., Hoffmann, T.: Measurement report: PM_{2.5}-bound nitrated aromatic compounds in Xi'an, Northwest China: Seasonal variations and contributions to optical properties of brown carbon, *Atmos. Chem. Phys.*, 21, 3685-3697, 2021.
10. Xu, W., Fossom, K. N., Ovadnevaite, J., Lin, C., **Huang, R. J.***, O'Dowd, C.*, Ceburnis, D.: The impact of aerosol size-dependent hygroscopicity and mixing state on the cloud condensation nuclei potential over the north-east Atlantic. *Atmos. Chem. Phys.*, 21, 8655-8675, 2021.

11. Yuan, W., **Huang, R. J.***, Yang, L., Ni, H. Y., Wang, T., Cao, W. J., Duan, J., Guo, J., Huang, H. B., Hoffmann, T.: Concentrations, optical properties and sources of humic-like substances (HULIS) in fine particulate matter in Xi'an, Northwest China, *Sci. Total Environ.*, 789, 147902, 2021
12. Duan, J., **Huang, R. J.***, Gu, Y. F., Lin, C. S., Zhong, H. B., Wang, Y., Yuan, W., Ni, H. Y., Yang, L., Chen, Y., Worsnop, D. R., O'Dowd, C.: The formation and evolution of secondary organic aerosol during summer in Xi'an: Aqueous phase processing in fog-rain days, *Sci. Total Environ.*, 756, 144077, 2021
13. Duan, J., **Huang, R. J.***, Chang, Y. H., Zhong, H. B., Gu, Y. F., Lin, C. S., Hoffmann, T., O'Dowd, C.: Measurement report of the change of PM_{2.5} composition during the COVID-19 lockdown in urban Xi'an: enhanced secondary formation and oxidation, *Sci. Total Environ.*, 791, 148126, 2021
14. Zhong, H. B., **Huang, R. J.***, Chang, Y. H., Duan, J., Lin, C. S., Chen, Y.: Enhanced formation of secondary organic aerosol from photochemical oxidation during the COVID-19 lockdown in a background site in Northwest China, *Sci. Total Environ.*, 778, 144947, 2021.
15. **Huang, R. J.***, Yuan, W., Wang, T., Cao, W., Wang, Y., Lin, C., Yang, L., Guo, J., Ni, H., Wu, F.: Chemical signature and fractionation of trace elements in fine particles from anthropogenic and natural sources. *J. Environ. Sci.*, 2021.
16. Yao, P., Ni, H. Y., Paul, D., Masalaite, A., **Huang, R. J.***, Meijer, H. A. J., Dusek, U.*: An automated method for thermal-optical separation of aerosol organic/elemental carbon for ¹³C analysis at the sub- μ gC level: A comprehensive assessment, *Sci. Total Environ.*, 804, 150031, 2021.
17. Zhang, Y., Wang, K., Tong, H. J., **Huang, R. J.**, Hoffmann, T.: The maximum carbonyl ratio (MCR) as a new index for the structural classification of secondary organic aerosol components, *Rapid Commun. Mass Spectrom.*, <https://doi.org/10.1002/rcm.9113>, 2021.
18. Zhu, C. S., Qu, Y., Huang, H., Chen, J., Dai, W. T., **Huang, R. J.**, Cao, J. J.: Black carbon and secondary brown carbon, the dominant light absorption and direct radiative forcing contributors of the atmospheric aerosols over the Tibetan Plateau, *Geophys. Res. Lett.*, 48, e2021GL092524. <https://doi.org/10.1029/2021GL092524>, 2021.
19. Wu, Y. F., Xia, Y. J., Zhou, C., Tian, P., Tao, J., **Huang, R. J.**, Liu, D. T., Wang, X., Xia, X. G., Han, Z. W., Zhang, R. J.: Effect of source variation on the size and mixing state of black carbon aerosol in urban Beijing from 2013 to 2019: Implication on light absorption, *Environ. Pollut.*, 270, 116089, 2021.
20. Wu, Y. F., Li, J. W., Jiang, C., Xia, Y. J., Tao, J., Tian, P., Zhou, C., Wang, C. Y., Xia, X. G., **Huang, R. J.**, Zhang, R. J.: Spectral absorption properties of organic carbon aerosol during a polluted winter in Beijing, China, *Sci. Total Environ.*, 755, 142600, 2021.
21. Wang, L. W., Slowik J. G., Yandong Tong, Y., Gu, Y. F., Rai, P., Qi, L., Stefenelli, G., Baltensperger, U., **Huang, R. J.**, Cao, J. J., Prévôt, A. S. H.: Characteristics of wintertime VOCs in urban Beijing: Composition and source apportionment, *Atmos. Environ.*, 9, 100100, 2021.
22. Canonaco, F., Tobler, A., Chen, G., Sosedova, Y., Slowik, J. G., Bozzetti, C., Daellenbach, K. R., ElHaddad, I., Crippa, M., **Huang, R. J.**, Furger, M., Baltensperger, U., Prévôt, A. S. H.: A new method for long-term source apportionment with time-dependent factor profiles and uncertainty assessment using SoFi Pro: application to one year of organic aerosol data, *Atmos. Meas. Tech.*, 14, 923-943, 2021.
23. Rai, P., Slowik, J. G., Furger, M., El Haddad, I., Visser, S., Tong, Y., Singh, A., Wehrle, G., Kumar, V., Tobler, A. K., Bhattu, D., Wang, L., Ganguly, D., Rastogi, N., **Huang, R. J.**, Necki, J., Cao, J., Tripathi, S. N., Baltensperger, U., Prévôt, A. S. H.: Highly time-resolved measurements of element concentrations in PM₁₀ and PM_{2.5}: Comparison of Delhi, Beijing, London, and Krakow, *Atmos. Chem. Phys.*, 21, 717-730, 2021.
24. Rai, P., Furger, M., Slowik, J. G., Zhong, H., Tong, Y., Wang, L., Duan, J., Gu, Y. F., Qi, L., **Huang, R. J.**, Cao, J. J., Prévôt, A. S. H.: Characteristics and sources of hourly elements in PM₁₀ and PM_{2.5} during wintertime in Beijing, *Environ. Pollut.*, 278, 116865, 2021.
25. Peng, C., Razafindrambinina, P. N., Malek, K. A., Chen, L., Wang, W., **Huang, R. J.**, Zhang, Y., Ding, X., Ge, M., Wang, X., Asa-Awuku, A. A., Tang, M.: Interactions of organosulfates with water vapor under sub- and supersaturated conditions, *Atmos. Chem. Phys.*, 21, 7135-7148, 2021.
26. Liao, K. R., Chen, Q., Liu, Y., Li, Y. J., Lambe, A. T., Zhu, T., **Huang, R. J.**, Zheng, Y., Cheng, X., Miao, R. Q., Huang, G. C., Khuzestani, R. B., Jia, T. J.: Secondary organic aerosol formation of fleet vehicle emissions in China: Potential seasonality of spatial distributions, *Environ. Sci. Technol.*, 55, 7276-7286, 2021.
27. Tong, Y., Pospisilova, V., Qi, L., Duan, J., Gu, Y., Kumar, V., Rai, P., Stefenelli, G., Wang, L., Wang, Y., Zhong, H., Baltensperger, U., Cao, J., **Huang, R. J.**, Prevot, A. S. H., Slowik, J. G.: Quantification of solid fuel combustion and

aqueous chemistry contributions to secondary organic aerosol during wintertime haze events in Beijing, *Atmos. Chem. Phys.*, 21, 9859-9886, 2021.

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28. **Huang, R. J.***, Yang, L., Shen, J. C., Yuan, W., Gong, Y. Q., Guo, J., Cao, W. J., Duan, J., Ni, H. Y., Zhu, C. S., Dai, W. T., Li, Y. J., Chen, Y., Chen, Q., Wu, Y. F., Zhang, R. J., Dusek, U., O'Dowd, C., Hoffmann, T.: Water-insoluble organics dominate brown carbon in wintertime urban aerosol of China: Chemical characteristics and optical properties, *Environ. Sci. Technol.*, 54, 7836-7847, 2020.
29. **Huang, R. J.***, He, Y., Duan, J., Li, Y. J., Chen, Q., Zheng, Y., Chen, Y., Hu, W. W., Lin, C. S., Ni, H. Y., Dai, W. T., Cao, J. J., Wu, Y. F., Zhang, R. J., Xu, W., Ovadnevaite, J., Ceburnis, D., Hoffmann, T., O'Dowd, C. D.: Contrasting sources and processes of particulate species in haze days with low and high relative humidity in winter time Beijing, *Atmos. Chem. Phys.*, 20, 9101-9114, 2020.
30. **Huang, R. J.***, Duan, J., Li, Y. J., Chen, Q., Chen, Y., Tang, M., Yang, L., Ni, H. Y., Lin, C. S., Xu, W., Liu, Y., Chen, C. Y., Yan, Z., Ovadnevaite, J., Ceburnis, D., Dusek, U., Cao, J. J., Hoffmann, T., O'Dowd, C. D.: Effects of NH₃ and alkaline metals on the formation of particulate sulfate and nitrate in wintertime Beijing, *Sci. Total Environ.*, 717, 137190, 2020.
31. Duan, J., **Huang, R. J.***, Li, Y. J., Chen, Q., Zheng, Y., Chen, Y., Lin, C., Ni, H., Wang, M., Ovadnevaite, J., Ceburnis, D., Chen, C., Worsnop, D. R., Hoffmann, T., O'Dowd, C., Cao, J. J.: Summertime and wintertime atmospheric processes of secondary aerosol in Beijing, *Atmos. Chem. Phys.*, 20, 3793-3807, 2020.
32. Yuan, W., **Huang, R. J.***, Yang, L., Guo, J., Chen, Z., Duan, J., Wang, T., Ni, H., Han, Y., Li, Y. J., Chen, Q., Chen, Y., Hoffmann, T., O'Dowd, C.: Characterization of the light absorbing properties, chromophores composition and sources of brown carbon aerosol in Xi'an, Northwest China, *Atmos. Chem. Phys.*, 20, 5129-5144, 2020.
33. Gu, Y. F., **Huang, R. J.***, Li, Y. J., Duan, J., Chen, Q., Hu, W. W., Zheng, Y., Lin, C. S., Ni, H. Y., Dai, W. T., Cao, J. J., Liu, Q., Chen, Y., Chen, C. Y., Ovadnevaite, J., Ceburnis, D., O'Dowd, C.: Chemical nature and sources of fine particles in urban Beijing: Seasonality and formation mechanisms, *Environ. Int.* 140, 105732, 2020.
34. Zhong, H. B., **Huang, R. J.***, Duan, J., Lin, C. S., Gu, Y. F., Wang, Y., Li, Y. J., Zheng, Y., Chen, Q., Chen, Y., Dai, W. T., Ni, H. Y., Chang, Y. H., Worsnop, D. R., Xu, W., Ovadnevaite, J., Ceburnis, D., O'Dowd, C.: Seasonal variations in the sources of organic aerosol in Xi'an, Northwest China: The importance of biomass burning and secondary formation, *Sci. Total Environ.*, 737, 139666, 2020.
35. Wang, T., **Huang, R. J.***, Li, Y. J., Chen, Q., Chen, Y., Yang, L., Guo, J., Ni, H. Y., Hoffmann, T., Wang, X. M., Mai, B. X.: One-year characterization of organic aerosol markers in urban Beijing: Seasonal variation and spatiotemporal comparison, *Sci. Total Environ.*, 743, 140689, 2020.
36. Lin, C. S., **Huang, R. J.***, Xu, W., Duan, J., Zheng, Y., Chen, Q., Hu, W. W., Li, Y. J., Ni, H. Y., Wu, Y. F., Zhang, R. J., Cao, J. J., O'Dowd, C.: Comprehensive source apportionment of submicron aerosol in Shijiazhuang, China: secondary aerosol formation and holiday effects, *ACS Earth Space Chem.*, 4, 947-957, 2020.
37. Lin, C. S., Ceburnis, D., Xu, W., Heffernan, E., Hellebust, S., Gallagher, J., **Huang, R. J.***, O'Dowd, C., Ovadnevaite, J.: The impact of traffic on air quality in Ireland: insights from simultaneous kerbside and sub-urban monitoring of submicron aerosols, *Atmos. Chem. Phys.*, 20, 10513-10529, 2020.
38. Wang, K., **Huang, R. J.***, Brüggemann, M., Zhang, Y., Yang, L., Ni, H., Guo, J., Wang, M., Han, J., Bilde, M., Glasius, M., Hoffmann, T.: Urban organic aerosol composition in Eastern China differs from North to South: Molecular insight from a liquid chromatography-Orbitrap mass spectrometry study, *Atmos. Chem. Phys.*, 20, 2020.
39. Xu, W., Ovadnevaite, J., Fossom, K. N., Lin, C., **Huang, R. J.***, O'Dowd, C., Ceburnis, D.: Aerosol hygroscopicity and its link to chemical composition in coastal atmosphere of Mace Head: marine and continental air masses, *Atmos. Chem. Phys.*, 20, 3777-3791, 2020.
40. Chang, Y. H., **Huang, R. J.***, Ge, X. L., Huang, X. P., Hu, J. L., Duan, Y. S., Zou, Z., Liu, X. J., Lehmann, M. F.: Puzzling haze events in China during the Coronavirus (COVID-19) shutdown, *Geophys. Res. Lett.*, 47, e2020GL088533, 2020.
41. Lian, X. B., Huang, J. P., **Huang, R. J.***, Liu, C. W., Wang, L. N., Zhang, T. H.: Impact of city lockdown on the air quality of COVID-19-hit of Wuhan city, *Sci. Total Environ.*, 742, 140556, 2020.
42. Ni, H., **Huang, R. J.***, Cosijn, M. M., Yang, L., Guo, J., Cao, J., Dusek, U.: Measurement report: Dual-carbon isotopic characterization of carbonaceous aerosol in Beijing and Xi'an: distinctions in primary versus secondary sources, *Atmos. Chem. Phys.*, 20, 16041-16053, 2020.

43. Chen Y., Zhang, S. M., Peng, C., Shi, G. M., Tian, M., **Huang, R. J.**, Guo, D. M., Wang, H. B., Yao, X. J., Yang, F. M.: Impact of COVID-19 pandemic and control measures on air quality and aerosol light absorption in Southwestern China, *Sci. Total Environ.*, 749, 141419, 2020.
44. Fossum, K.N., Ovadnevaite, J., Ceburnis, D., Preißler, J., Snider, J. R., **Huang, R. J.**, Zuend, A., O'Dowd, C. D.: Sea-spray regulates sulfate cloud droplet activation over oceans, *npj Clim. Atmos. Sci.*, 3, 14, 2020.
45. Peng, C., Yang, F. M., Tian, M., Shi, G. M., Li, L., **Huang, R. J.**, Yao, X. J., Luo, B., Zhai, C. Z., Chen, Y.: Brown carbon aerosol in two megacities in the Sichuan Basin of southwestern China: Light absorption properties and implications, *Sci. Total Environ.*, 719, 137483, 2020.
46. Peng C., Tian, M., Wang, X. L., Yang, F. M., Shi, G. M., **Huang, R. J.**, Yao, X. J., Wang, Q. Y., Zhai, C. Z., Zhang, S. M., Qian, R. Z., Cao, J. J., Chen, Y.: Light absorption of brown carbon in PM_{2.5} in the three gorges reservoir region, southwestern China: Implications of biomass burning and secondary formation, *Atmos. Environ.*, 229, 117409, 2020.
47. Qian, R. Z., Zhang, S. M., Peng, C., Zhang, L. Y., Yang, F. M., Tian, M., **Huang, R. J.**, Wang, Q. Y., Chen, Q. C., Yao, X. J., Chen, Y.: Characteristics and potential exposure risks of environmentally persistent free radicals in PM_{2.5} in the three gorges reservoir area, Southwestern China, *Chemosphere*, 252, 126425, 2020.
48. Xia, Y. J., Wu, Y. F., **Huang, R. J.**, Xia, X. G., Tang, J., Wang, M., Zhang, R. J.: Variation in black carbon concentration and aerosol optical properties in Beijing: Role of emission control and meteorological transport variability, *Chemosphere*, 254, 126849, 2020.
49. Zheng, Y., Cheng, X., Liao, K., Li, Y., Li, Y. J., **Huang, R. J.**, Hu, W., Liu, Y., Zhu, T., Chen, S., Zeng, L., Worsnop, D. R., Chen, Q.: Characterization of anthropogenic organic aerosols by TOF-ACSM with the new capture vaporizer, *Atmos. Meas. Tech.*, 13, 2457–2472, 2020.
50. Xu, H. M., He, K. L., Feng, R., Shen, Z. X., Cao, J. J., Liu, S. X. Ho, K. F., **Huang, R. J.**, Guinot, B., Wang, Q. Y., Zhou, J. M., Shen, M. X., Xiao, S., Zhou, B. H., Sonke, J. E.: Metallic elements and Pb isotopes in PM_{2.5} in three Chinese typical megacities: spatial distribution and source apportionment, *Environ. Sci. Proc. Impacts*, 22, 1718-1730, 2020.
51. Peng, C., Wang, Y., Wu, Z., Chen, L., **Huang, R. J.**, Wang, W., Wang, Z., Hu, W., Zhang, G., Ge, M., Hu, M., Wang, X., Tang, M.: Tropospheric aerosol hygroscopicity in China, *Atmos. Chem. Phys.*, 20, 13877-13903, 2020.
52. Zhu, C. S., Li, L. J., Huang, H., Dai, W. T., Lei, Y. L., Qu, Y., **Huang, R. J.**, Wang, Q. Y., Shen, Z. X., Cao J.J., n-Alkanes and PAHs in the Southeastern Tibetan Plateau: Characteristics and Correlations with Brown Carbon Light Absorption, *J Geophys. Res.-Atmos.*, 125, e2020JD032666, 2020.

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