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RESEARCH INTERESTS

Atmospheric carbon cycle; Source and sink of atmospheric trace gases; Anthropogenic emissions and drivers; Climate change and wildfire emissions.

PROFESSIONAL EXPERIENCE

- 2021.01–present Tenure-track assistant professor**
Tsinghua Shenzhen International Graduate School, China
- 2016.11–2020.12 Postdoctoral researcher**
Laboratory for Sciences of Climate and Environment, France
Research topic: global atmospheric carbon cycle
Collaborator: Philippe Ciais & Frederic Chevallier

EDUCATION

- 2016 PhD, Environmental Science and Engineering**
Tsinghua University, Beijing, P. R. China
Dissertation: “High-Resolution Mapping of Anthropogenic Emissions”
Advisor: Kebin He
- 2011 BA, Environmental Science and Engineering**
Tsinghua University, Beijing, P. R. China

RESEARCH EXPERIENCE

- 2013.6–2013.8 Young Scientists Summer Program**
International Institute for Applied Systems Analysis, Austria
Advisor: Jens Borken-Kleefeld
- 2012.12–2013.5 Visiting Scholar**
Department of Marine, Earth, and Atmospheric Sciences
North Carolina State University, Raleigh, USA
Advisor: Yang Zhang

JOURNAL REVIEW

Aerosol and Air Quality Research, Applied Energy, Atmospheric Chemistry and Physics, Atmospheric Environment, Atmospheric Pollution Research, Chemosphere, Environment International, Environmental Monitoring and Assessment, Environmental Pollution, Environmental Research Letters, Earth System Science Data, Environmental Science &

Technology, Journal of Cleaner Production, Journal of Environmental Management, Journal of Geophysical Research: Atmospheres, Nature Communications, Nature Geoscience, One Earth, Resources Conservation & Recycling, Science of the Total Environment, Scientific Reports, The Innovation

JOURNAL PUBLICATIONS

Google Scholar h-index: 40; Google scholar citations: 7336

Published papers (# indicates co-first author and * indicates corresponding author)

(1 ESI Hot Paper, 2 ESI Highly Cited Paper, and 1 ACP Highlight Paper)

- 2020 1. **Zheng, B.**, Zhang, Q.*, Geng, G., Shi, Q., Lei, Y., and He, K.: Changes in China's anthropogenic emissions during the COVID-19 pandemic, Earth Syst. Sci. Data Discuss., doi: 10.5194/essd-2020-355, in review, 2020.
2. **Zheng, B.#**, Geng, G.#, Ciais, P., Davis, S. J., Martin, R. V., Meng, J., Wu, N., Chevallier, F., Broquet, G., Boersma, F., van der A, R., Lin, J., Guan, D., Lei, Y., He, K., and Zhang, Q.*: Satellite-based estimates of decline and rebound in China's CO₂ emissions during COVID-19 pandemic, Science Advances, 6, eabd4998, doi: 10.1126/sciadv.abd4998, 2020.
3. **Zheng, B.**, Cheng, J., Geng, G., Wang, X., Li, M.*, Shi, Q., Qi, J., Lei, Y., Zhang, Q., and He, K.*: Mapping anthropogenic emissions in China at 1 km spatial resolution and its application in air quality modeling, Science Bulletin, doi: 10.1016/j.scib.2020.12.008, 2020.
4. **Zheng, B.***, Chevallier, F., Ciais, P., Broquet, G., Wang, Y., Lian, J., and Zhao, Y.: Observing carbon dioxide emissions over China's cities and industrial areas with the Orbiting Carbon Observatory-2, Atmos. Chem. Phys., 20, 8501–8510, doi: 10.5194/acp-20-8501-2020, 2020.
5. Zhao, Y.*, Saunio, M., Bousquet, P., Lin, X., Berchet, A., Hegglin, M. I., Canadell, J. G., Jackson, R. B., Deushi, M., Jöckel, P., Kinnison, D., Kirner, O., Strode, S., Tilmes, S., Dlugokencky, E. J., and **Zheng, B.***: On the role of trend and variability in the hydroxyl radical (OH) in the global methane budget, Atmos. Chem. Phys., 20, 13011–13022, doi: 10.5194/acp-20-13011-2020, 2020.
6. Sun, Y., Yin, H., Cheng, Y.*, Zhang, Q.*, **Zheng, B.***, Notholt, J., Lu, X., Liu, C., Tian, Y., and Liu, J.: Quantifying variability, source, and transport of CO over the Himalayas and Tibetan Plateau, Atmos. Chem. Phys. Discuss., doi: 10.5194/acp-2020-810, in review, 2020.
7. Huang, X.#, Ding, A.#*, Gao, J.#, **Zheng, B.#**, Zhou, D., Qi, X., Tang, R., Wang, J., Ren, C., Nie, W., Chi, X., Xu, Z., Chen, L., Li, Y., Che, F., Pang, N., Wang, H., Tong, D., Qin, W., Cheng, W., Liu, W., Fu, Q., Liu, B., Chai, F., Davis, S. J., Zhang, Q.*, and He, K.: Enhanced secondary pollution offset reduction of primary emissions during COVID-19 lockdown in China, National Science Review, doi: 10.1093/nsr/nwaa137, 2020.
- 2019 8. **Zheng, B.***, Chevallier, F., Yin, Y., Ciais, P., Fortems-Cheiney, A., Deeter, M. N., Parker, R. J., Wang, Y., Worden, H. M., and Zhao, Y.: Global atmospheric carbon monoxide budget 2000–2017 inferred from multi-species atmospheric inversions, Earth Syst. Sci. Data, 11, 1411–1436, doi: 10.5194/essd-11-1411-2019, 2019.

- 2018 9. **Zheng, B.***, Chevallier, F., Ciais, P., Yin, Y., and Wang, Y.: On the role of the flaming to smoldering transition in the seasonal cycle of African fire emissions, *Geophys. Res. Lett.*, 45, 11,998-912,007, doi: 10.1029/2018GL079092, 2018.
10. **Zheng, B.**, Tong, D., Li, M., Liu, F., Hong, C., Geng, G., Li, H., Li, X., Peng, L., Qi, J., Yan, L., Zhang, Y., Zhao, H., Zheng, Y., He, K., and Zhang, Q.*: Trends in China's anthropogenic emissions since 2010 as the consequence of clean air actions, *Atmos. Chem. Phys.*, 18, 14095-14111, doi: 10.5194/acp-18-14095-2018, 2018. (**ESI Hot Paper, ESI Highly Cited Paper, ACP Highlight Paper**)
11. **Zheng, B.**, Zhang, Q.*, Davis, S. J., Ciais, P., Hong, C., Li, M., Liu, F., Tong, D., Li, H., and He, K.: Infrastructure Shapes Differences in the Carbon Intensities of Chinese Cities, *Environ. Sci. Technol.*, 52, 6032-6041, doi: 10.1021/acs.est.7b05654, 2018.
12. **Zheng, B.***, Chevallier, F., Ciais, P., Yin, Y., Deeter, M., Worden, H., Wang, Y. L., Zhang, Q., and He, K. B.: Rapid decline in carbon monoxide emissions and export from East Asia between years 2005 and 2016, *Environ. Res. Lett.*, 13, 044007, doi: 10.1088/1748-9326/aab2b3, 2018.
13. Li, M.*, Klimont, Z., Zhang, Q., Martin, R. V., **Zheng, B.***, Heyes, C., Cofala, J., Zhang, Y., and He, K.: Comparison and evaluation of anthropogenic emissions of SO₂ and NO_x over China, *Atmos. Chem. Phys.*, 18, 3433-3456, doi: 10.5194/acp-18-3433-2018, 2018.
- 2017 14. **Zheng, B.**, Zhang, Q.*, Tong, D., Chen, C., Hong, C., Li, M., Geng, G., Lei, Y., Huo, H., and He, K.*: Resolution dependence of uncertainties in gridded emission inventories: a case study in Hebei, China, *Atmos. Chem. Phys.*, 17, 921-933, doi: 10.5194/acp-17-921-2017, 2017.
15. Qi, J.#, **Zheng, B.#**, Li, M., Yu, F., Chen, C., Liu, F., Zhou, X., Yuan, J., Zhang, Q., and He, K.*: A high-resolution air pollutants emission inventory in 2013 for the Beijing-Tianjin-Hebei region, China, *Atmos. Environ.*, 170, 156-168, doi: 10.1016/j.atmosenv.2017.09.039, 2017.
- 2015 16. **Zheng, B.**, Zhang, Q., Borken-Kleefeld, J., Huo, H.*, Guan, D., Klimont, Z., Peters, G. P., and He, K.: How will greenhouse gas emissions from motor vehicles be constrained in China around 2030?, *Appl. Energy*, 156, 230-240, doi: 10.1016/j.apenergy.2015.07.018, 2015.
17. **Zheng, B.**, Zhang, Q.*, Zhang, Y., He, K. B.*, Wang, K., Zheng, G. J., Duan, F. K., Ma, Y. L., and Kimoto, T.: Heterogeneous chemistry: a mechanism missing in current models to explain secondary inorganic aerosol formation during the January 2013 haze episode in North China, *Atmos. Chem. Phys.*, 15, 2031-2049, doi: 10.5194/acp-15-2031-2015, 2015. (**ESI Highly Cited Paper**)
- 2014 18. **Zheng, B.**, Huo, H., Zhang, Q.*, Yao, Z. L., Wang, X. T., Yang, X. F., Liu, H., and He, K. B.*: High-resolution mapping of vehicle emissions in China in 2008, *Atmos. Chem. Phys.*, 14, 9787-9805, doi: 10.5194/acp-14-9787-2014, 2014.

Published papers as co-author

(**2 ESI Hot Paper, 14 ESI Highly Cited Paper, and 2 ACP Highlight Paper**)

- 2021 19. Cheng, J., Tong, D., Liu, Y., Bo, Y., **Zheng, B.**, Geng, G., He, K., and Zhang, Q.*: Air quality and health benefits of China's current and upcoming clean air policies, *Faraday Discussions*, doi: 10.1039/D0FD00090F, 2021.

20. Cheng, Y.*, Yu, Q.-q., Liu, J.-m.*, Zhu, S., Zhang, M., Zhang, H., **Zheng, B.**, and He, K.-b.: Model vs. observation discrepancy in aerosol characteristics during a half-year long campaign in Northeast China: The role of biomass burning, *Environ. Pollut.*, 269, 116167, doi: 10.1016/j.envpol.2020.116167, 2021.
21. Cheng, Y., Yu, Q.-q., Liu, J.-m.*, Du, Z.-Y., Liang, L.-l., Geng, G.-n., **Zheng, B.**, Ma, W.-l., Qi, H., Zhang, Q., and He, K.-b.: Strong biomass burning contribution to ambient aerosol during heating season in a megacity in Northeast China: Effectiveness of agricultural fire bans?, *Sci. Total Environ.*, 754, 142144, doi: 10.1016/j.scitotenv.2020.142144, 2021.
22. Li, K., Jacob, D. J.*, Liao, H.*, Qiu, Y., Shen, L., Zhai, S., Bates, K. H., Sulprizio, M. P., Song, S., Lu, X., Zhang, Q., **Zheng, B.**, Zhang, Y., Zhang, J., Lee, H. C., and Kuk, S. K.: Ozone pollution in the North China Plain spreading into the late-winter haze season, *Proc. Natl. Acad. Sci. U.S.A.*, 118, e2015797118, doi: 10.1073/pnas.2015797118, 2021.
23. Santaren, D.*, Broquet, G., Bréon, F.-M., Chevallier, F., Siméoni, D., **Zheng, B.**, and Ciais, P.: A local- to national-scale inverse modeling system to assess the potential of spaceborne CO₂ measurements for the monitoring of anthropogenic emissions, *Atmos. Meas. Tech.*, 14, 403–433, doi: 10.5194/amt-14-403-2021, 2021.
- 2020** 24. Chevallier, F.*, **Zheng, B.**, Broquet, G., Ciais, P., Liu, Z., Davis, S. J., Deng, Z., Wang, Y., Bréon, F.-M., and O'Dell, C. W.: Local Anomalies in the Column-Averaged Dry Air Mole Fractions of Carbon Dioxide Across the Globe During the First Months of the Coronavirus Recession, *Geophys. Res. Lett.*, 47, e2020GL090244, doi: 10.1029/2020GL090244, 2020.
25. Ciais, P.*, Bastos, A., Chevallier, F., Lauerwald, R., Poulter, B., Canadell, P., Hugelius, G., Jackson, R. B., Jain, A., Jones, M., Kondo, M., Lujikx, I., Patra, P. K., Peters, W., Pongratz, J., Petrescu, A. M. R., Piao, S., Qiu, C., Von Randow, C., Regnier, P., Saunois, M., Scholes, R., Shvidenko, A., Tian, H., Yang, H., Wang, X., and **Zheng, B.**: Definitions and methods to estimate regional land carbon fluxes for the second phase of the REgional Carbon Cycle Assessment and Processes Project (RECCAP-2), *Geosci. Model Dev. Discuss.*, doi: 10.5194/gmd-2020-259, in review, 2020.
26. Ciais, P.*, Wang, Y., Andrew, R., Bréon, F. M., Chevallier, F., Broquet, G., Nabuurs, G. J., Peters, G., McGrath, M., Meng, W., **Zheng, B.**, and Tao, S.: Biofuel burning and human respiration bias on satellite estimates of fossil fuel CO₂ emissions, *Environ. Res. Lett.*, 15, 074036, doi: 10.1088/1748-9326/ab7835, 2020.
27. Elguindi, N.*, Granier, C., Stavrakou, T., Darras, S., Bauwens, M., Cao, H., Chen, C., Denier van der Gon, H. A. C., Dubovik, O., Fu, T. M., Henze, D. K., Jiang, Z., Keita, S., Kuenen, J. J. P., Kurokawa, J., Liousse, C., Miyazaki, K., Müller, J.-F., Qu, Z., Solmon, F., and **Zheng, B.**: Intercomparison of magnitudes and trends in anthropogenic surface emissions from bottom-up inventories, top-down estimates and emission scenarios, *Earth's Future*, 8, e2020EF001520, doi: 10.1029/2020ef001520, 2020.
28. Gao, M.*, Liu, Z., **Zheng, B.**, Ji, D., Sherman, P., Song, S., Xin, J., Liu, C., Wang, Y., Zhang, Q., Xing, J., Jiang, J., Wang, Z.*, Carmichael, G. R., and McElroy, M. B.*: China's emission control strategies have suppressed unfavorable influences of climate on wintertime PM_{2.5} concentrations in Beijing since 2002, *Atmos. Chem. Phys.*, 20, 1497–1505, doi: 10.5194/acp-20-1497-2020, 2020.

29. Han, P.*, Lin, X., Zeng, N., Oda, T., Zhang, W.*, Liu, D.*, Cai, Q., Crippa, M., Guan, D., Ma, X., Janssens-Maenhout, G., Meng, W., Shan, Y., Tao, S., Wang, G., Wang, H., Wang, R., Wu, L., Zhang, Q., Zhao, F., and **Zheng, B.**: Province-level fossil fuel CO₂ emission estimates for China based on seven inventories, *Journal of Cleaner Production*, 277, 123377, doi: 10.1016/j.jclepro.2020.123377, 2020.
30. Han, P.*, Zeng, N., Oda, T., Zhang, W.*, Lin, X., Liu, D., Cai, Q., Ma, X., Meng, W., Wang, G., Wang, R., and **Zheng, B.**: A city-level comparison of fossil-fuel and industry processes-induced CO₂ emissions over the Beijing-Tianjin-Hebei region from eight emission inventories, *Carbon Balance and Management*, 15, 25, doi: 10.1186/s13021-020-00163-2, 2020.
31. Han, P.*, Zeng, N.*, Oda, T., Lin, X., Crippa, M., Guan, D., Janssens-Maenhout, G., Ma, X., Liu, Z., Shan, Y., Tao, S., Wang, H., Wang, R., Wu, L., Yun, X., Zhang, Q., Zhao, F., and **Zheng, B.**: Evaluating China's fossil-fuel CO₂ emissions from a comprehensive dataset of nine inventories, *Atmos. Chem. Phys.*, 20, 11371–11385, doi: 10.5194/acp-20-11371-2020, 2020.
32. Lespinas, F., Wang, Y.*, Broquet, G., Bréon, F.-M., Buchwitz, M., Reuter, M., Meijer, Y., Loescher, A., Janssens-Maenhout, G., **Zheng, B.**, and Ciais, P.: The potential of a constellation of low earth orbit satellite imagers to monitor worldwide fossil fuel CO₂ emissions from large cities and point sources, *Carbon Balance and Management*, 15, 18, doi: 10.1186/s13021-020-00153-4, 2020.
33. Lian, J.*, Bréon, F.-M., Broquet, G., **Zheng, B.**, Ramonet, M., and Ciais, P.: Quantitative evaluation of the uncertainty sources for the modeling of atmospheric CO₂ concentration within and in the vicinity of Paris city, *Atmos. Chem. Phys. Discuss.*, doi: 10.5194/acp-2020-540, in review, 2020.
34. Liu, F.*, Page, A., Strode, S. A., Yoshida, Y., Choi, S., **Zheng, B.**, Lamsal, L. N., Li, C., Krotkov, N. A., Eskes, H., van der A, R., Veefkind, P., Levelt, P. F., Hauser, O. P., and Joiner, J.: Abrupt decline in tropospheric nitrogen dioxide over China after the outbreak of COVID-19, *Science Advances*, eabc2992, doi: 10.1126/sciadv.abc2992, 2020.
35. Liu, J., Zheng, Y., Geng, G., Hong, C., Li, M., Li, X., Liu, F., Tong, D., Wu, R., **Zheng, B.**, He, K., and Zhang, Q.: Decadal changes in anthropogenic source contribution of PM_{2.5} pollution and related health impacts in China, 1990–2015, *Atmos. Chem. Phys.*, 20, 7783–7799, doi: 10.5194/acp-20-7783-2020, 2020.
36. Liu, J.-m., Wang, P.-f., Zhang, H.-l., Du, Z.-y., **Zheng, B.**, Yu, Q.-q., Zheng, G.-j., Ma, Y.-l., Zheng, M., Cheng, Y.*, Zhang, Q., and He, K.-b.: Integration of field observation and air quality modeling to characterize Beijing aerosol in different seasons, *Chemosphere*, 242, 125195, doi: 10.1016/j.chemosphere.2019.125195, 2020.
37. Liu, Z.*, Ciais, P.*, Deng, Z., Davis, S. J.*, **Zheng, B.**, Wang, Y., Cui, D., Zhu, B., Dou, X., Ke, P., Sun, T., Guo, R., Zhong, H., Boucher, O., Bréon, F.-M., Lu, C., Guo, R., Xue, J., Boucher, E., Tanaka, K., and Chevallier, F.: Carbon Monitor, a near-real-time daily dataset of global CO₂ emission from fossil fuel and cement production, *Scientific Data*, 7, 392, doi: 10.1038/s41597-020-00708-7, 2020.
38. Liu, Z.*, Ciais, P., Deng, Z., Lei, R., Davis, S. J., Feng, S., Zheng, B., Cui, D., Dou, X., Zhu, B., Guo, R., Ke, P., Sun, T., Lu, C., He, P., Wang, Y., Yue, X., Wang, Y., Lei, Y., Zhou, H., Cai, Z., Wu, Y., Guo, R., Han, T., Xue, J., Boucher, O., Boucher, E., Chevallier, F.,

- Tanaka, K., Wei, Y., Zhong, H., Kang, C., Zhang, N., Chen, B., Xi, F., Liu, M., Bréon, F.-M., Lu, Y., Zhang, Q., Guan, D., Gong, P., Kammen, D. M., He, K., and Schellnhuber, H. J.: Near-real-time monitoring of global CO₂ emissions reveals the effects of the COVID-19 pandemic, *Nature Communications*, 11, 5172, doi: 10.1038/s41467-020-18922-7, 2020.
39. McDuffie, E. E.*, Smith, S. J., O'Rourke, P., Tibrewal, K., Venkataraman, C., Marais, E. A., **Zheng, B.**, Crippa, M., Brauer, M., and Martin, R. V.: A global anthropogenic emission inventory of atmospheric pollutants from sector- and fuel-specific sources (1970–2017): an application of the Community Emissions Data System (CEDS), *Earth Syst. Sci. Data*, 12, 3413–3442, doi: 10.5194/essd-12-3413-2020, 2020.
40. Saunio, M.*, Stavert, A. R., Poulter, B., Bousquet, P., Canadell, J. G., Jackson, R. B., Raymond, P. A., Dlugokencky, E. J., Houweling, S., Patra, P. K., Ciais, P., Arora, V. K., Bastviken, D., Bergamaschi, P., Blake, D. R., Brailsford, G., Bruhwiler, L., Carlson, K. M., Carrol, M., Castaldi, S., Chandra, N., Crevoisier, C., Crill, P. M., Covey, K., Curry, C. L., Etiope, G., Frankenberg, C., Gedney, N., Hegglin, M. I., Höglund-Isaksson, L., Hugelius, G., Ishizawa, M., Ito, A., Janssens-Maenhout, G., Jensen, K. M., Joos, F., Kleinen, T., Krummel, P. B., Langenfelds, R. L., Laruelle, G. G., Liu, L., Machida, T., Maksyutov, S., McDonald, K. C., McNorton, J., Miller, P. A., Melton, J. R., Morino, I., Müller, J., Murguía-Flores, F., Naik, V., Niwa, Y., Noce, S., O'Doherty, S., Parker, R. J., Peng, C., Peng, S., Peters, G. P., Prigent, C., Prinn, R., Ramonet, M., Regnier, P., Riley, W. J., Rosentretter, J. A., Segers, A., Simpson, I. J., Shi, H., Smith, S. J., Steele, L. P., Thornton, B. F., Tian, H., Tohjima, Y., Tubiello, F. N., Tsuruta, A., Viovy, N., Voulgarakis, A., Weber, T. S., van Weele, M., van der Werf, G. R., Weiss, R. F., Worthy, D., Wunch, D., Yin, Y., Yoshida, Y., Zhang, W., Zhang, Z., Zhao, Y., **Zheng, B.**, Zhu, Q., Zhu, Q., and Zhuang, Q.: The Global Methane Budget 2000–2017, *Earth Syst. Sci. Data*, 12, 1561–1623, doi: 10.5194/essd-12-1561-2020, 2020.
41. Su, Y.*, Wang, Y., **Zheng, B.**, Ciais, P., Wu, J., Chen, X., Wang, Y., Wang, C., Ye, Y., Li, Q., Zhang, C., Zhang, H., Huang, G., Huang, N., and Laforzezza, R.: Retrospect driving forces and forecasting reduction potentials of energy-related industrial carbon emissions from China's manufacturing at city level, *Environ. Res. Lett.*, 15, 074020, doi: 10.1088/1748-9326/ab858b, 2020.
42. Sun, Y., Yin, H., Liu, C.*, Zhang, L.*, Cheng, Y.*, Palm, M., Notholt, J., Lu, X., Vigouroux, C., **Zheng, B.**, Wang, W., Jones, N., Shan, C., Tian, Y., Hu, Q., and Liu, J.: Mapping the drivers of formaldehyde (HCHO) variability from 2015–2019 over eastern China: insights from FTIR observation and GEOS-Chem model simulation, *Atmos. Chem. Phys. Discuss.*, doi: 10.5194/acp-2020-544, in review, 2020.
43. Tong, D., Cheng, J., Liu, Y., Yu, S., Yan, L., Hong, C., Qin, Y., Zhao, H., Zheng, Y., Geng, G., Li, M., Liu, F., Zhang, Y., **Zheng, B.**, Clarke, L., and Zhang, Q.*: Dynamic projection of anthropogenic emissions in China: methodology and 2015–2050 emission pathways under a range of socio-economic, climate policy, and pollution control scenarios, *Atmos. Chem. Phys.*, 20, 5729–5757, doi: 10.5194/acp-20-5729-2020, 2020. (**ACP Highlight Paper**)
44. Wang, S., Su, H.*, Chen, C., Tao, W., Streets, D. G., Lu, Z., **Zheng, B.**, Carmichael, G. R., Lelieveld, J., Pöschl, U., and Cheng, Y.*: Natural gas shortages during the “coal-to-

- gas” transition in China have caused a large redistribution of air pollution in winter 2017, *Proc. Natl. Acad. Sci.*, 202007513, doi: 10.1073/pnas.2007513117, 2020.
45. Wang, Y.*, Broquet, G., Bréon, F. M., Lespinas, F., Buchwitz, M., Reuter, M., Meijer, Y., Loescher, A., Janssens-Maenhout, G., **Zheng, B.**, and Ciais, P.: PMIF v1.0: assessing the potential of satellite observations to constrain CO₂ emissions from large cities and point sources over the globe using synthetic data, *Geosci. Model Dev.*, 13, 5813-5831, doi: 10.5194/gmd-13-5813-2020, 2020.
 46. Xu, J., Liu, D., Wu, X., Vu, T. V., Zhang, Y., Fu, P., Sun, Y., Xu, W., **Zheng, B.**, Harrison, R. M.*, and Shi, Z.*: Source Apportionment of Fine Aerosol at an Urban Site of Beijing using a Chemical Mass Balance Model, *Atmos. Chem. Phys. Discuss.*, doi: 10.5194/acp-2020-1020, in review, 2020.
 47. Yin, Y.*, Chevallier, F., Ciais, P., Bousquet, P., Saunois, M., **Zheng, B.**, Worden, J., Bloom, A. A., Parker, R., Jacob, D., Dlugokencky, E. J., and Frankenberg, C.: Accelerating methane growth rate from 2010 to 2017: leading contributions from the tropics and East Asia, *Atmos. Chem. Phys. Discuss.*, doi: 10.5194/acp-2020-649, in review, 2020.
 48. Zhao, Y.*, Saunois, M., Bousquet, P., Lin, X., Berchet, A., Hegglin, M. I., Canadell, J. G., Jackson, R. B., Dlugokencky, E. J., Langenfelds, R. L., Ramonet, M., Worthy, D., and **Zheng, B.**: Influences of hydroxyl radicals (OH) on top-down estimates of the global and regional methane budgets, *Atmos. Chem. Phys.*, 20, 9525–9546, doi: 10.5194/acp-20-9525-2020, 2020.
 - 2019** 49. Li, H., Cheng, J., Zhang, Q.*, **Zheng, B.**, Zhang, Y., Zheng, G., and He, K.: Rapid transition in winter aerosol composition in Beijing from 2014 to 2017: response to clean air actions, *Atmos. Chem. Phys.*, 19, 11485–11499, doi: 10.5194/acp-19-11485-2019, 2019.
 50. Li, M., Zhang, Q.*, **Zheng, B.**, Tong, D., Lei, Y., Liu, F., Hong, C., Kang, S., Yan, L., Zhang, Y.*, Bo, Y., Su, H., Cheng, Y., and He, K.: Persistent growth of anthropogenic non-methane volatile organic compound (NMVOC) emissions in China during 1990–2017: drivers, speciation and ozone formation potential, *Atmos. Chem. Phys.*, 19, 8897-8913, doi: 10.5194/acp-19-8897-2019, 2019.
 51. Lu, X.*, Zhang, L.*, Chen, Y., Zhou, M., **Zheng, B.**, Li, K., Liu, Y., Lin, J., Fu, T.-M., and Zhang, Q.: Exploring 2016–2017 surface ozone pollution over China: source contributions and meteorological influences, *Atmos. Chem. Phys.*, 19, 8339-8361, doi: 10.5194/acp-19-8339-2019, 2019. (*ESI Highly Cited Paper*)
 52. Shen, L.*, Jacob, D. J., Zhu, L., Zhang, Q., **Zheng, B.**, Sulprizio, M. P., Li, K., De Smedt, I., González Abad, G., Cao, H., Fu, T.-M., and Liao, H.: The 2005–2016 Trends of Formaldehyde Columns Over China Observed by Satellites: Increasing Anthropogenic Emissions of Volatile Organic Compounds and Decreasing Agricultural Fire Emissions, *Geophys. Res. Lett.*, 46, 4468-4475, doi: 10.1029/2019gl082172, 2019.
 53. Wang, Y.*, Ciais, P., Broquet, G., Bréon, F.-M., Oda, T., Lespinas, F., Meijer, Y., Loescher, A., Janssens-Maenhout, G., **Zheng, B.**, Xu, H., Tao, S., Gurney, K. R., Roest, G., Santaren, D., and Su, Y.: A global map of emission clumps for future monitoring of fossil fuel CO₂ emissions from space, *Earth Syst. Sci. Data*, 11, 687-703, doi: 10.5194/essd-11-687-2019, 2019.

54. Wu, R., Liu, F.*, Tong, D., Zheng, Y., Lei, Y., Hong, C., Li, M., Liu, J., **Zheng, B.**, Bo, Y., Chen, X., Li, X., and Zhang, Q.*: Air quality and health benefits of China's emission control policies on coal-fired power plants during 2005–2020, *Environ. Res. Lett.*, 14, 094016, doi: 10.1088/1748-9326/ab3bae, 2019.
55. Xue, T., Zheng, Y., Tong, D., **Zheng, B.**, Li, X., Zhu, T., and Zhang, Q.*: Spatiotemporal continuous estimates of PM_{2.5} concentrations in China, 2000–2016: A machine learning method with inputs from satellites, chemical transport model, and ground observations, *Environment International*, 123, 345-357, doi: 10.1016/j.envint.2018.11.075, 2019.
56. Zhang, Q.*, Zheng, Y., Tong, D., Shao, M., Wang, S., Zhang, Y., Xu, X., Wang, J., He, H., Liu, W., Ding, Y., Lei, Y., Li, J., Wang, Z., Zhang, X., Wang, Y., Cheng, J., Liu, Y., Shi, Q., Yan, L., Geng, G., Hong, C., Li, M., Liu, F., **Zheng, B.**, Cao, J., Ding, A., Gao, J., Fu, Q., Huo, J., Liu, B., Liu, Z., Yang, F., He, K.*, and Hao, J.*: Drivers of improved PM_{2.5} air quality in China from 2013 to 2017, *Proc. Natl. Acad. Sci.*, 201907956, doi: 10.1073/pnas.1907956116, 2019. (*ESI Hot Paper, ESI Highly Cited Paper*)
57. Zhang, Y., Li, M., Cheng, Y., Geng, G., Hong, C., Li, H., Li, X., Tong, D., Wu, N., Zhang, X., **Zheng, B.**, Zheng, Y., Bo, Y.*, Su, H., and Zhang, Q.*: Modeling the aging process of black carbon during atmospheric transport using a new approach: a case study in Beijing, *Atmos. Chem. Phys.*, 19, 9663-9680, doi: 10.5194/acp-19-9663-2019, 2019.
58. Zhao, H., Geng, G., Zhang, Q.*, Davis, S. J., Li, X., Liu, Y., Peng, L., Li, M., **Zheng, B.**, Huo, H., Zhang, L., Henze, D. K., Mi, Z., Liu, Z., Guan, D., and He, K.: Inequality of household consumption and air pollution-related deaths in China, *Nature Communications*, 10, 4337, doi: 10.1038/s41467-019-12254-x, 2019.
59. Zhao, Y.*, Saunio, M., Bousquet, P., Lin, X., Berchet, A., Hegglin, M. I., Canadell, J. G., Jackson, R. B., Hauglustaine, D. A., Szopa, S., Stavert, A. R., Abraham, N. L., Archibald, A. T., Bekki, S., Deushi, M., Jöckel, P., Josse, B., Kinnison, D., Kirner, O., Marécal, V., O'Connor, F. M., Plummer, D. A., Revell, L. E., Rozanov, E., Stenke, A., Strode, S., Tilmes, S., Dlugokencky, E. J., and **Zheng, B.**: Inter-model comparison of global hydroxyl radical (OH) distributions and their impact on atmospheric methane over the 2000–2016 period, *Atmos. Chem. Phys.*, 19, 13701–13723, doi: 10.5194/acp-19-13701-2019, 2019.
- 2018** 60. Jackson, R. B., Le Quéré, C., Andrew, R. M., Canadell, J. G., Korsbakken, J. I., Liu, Z., Peters, G. P., and **Zheng, B.**: Global energy growth is outpacing decarbonization, *Environ. Res. Lett.*, 13, 120401, doi: 10.1088/1748-9326/aaf303, 2018.
61. Le Quéré, C., Andrew, R. M., Friedlingstein, P., Sitch, S., Hauck, J., Pongratz, J., Pickers, P. A., Korsbakken, J. I., Peters, G. P., Canadell, J. G., Arneeth, A., Arora, V. K., Barbero, L., Bastos, A., Bopp, L., Chevallier, F., Chini, L. P., Ciais, P., Doney, S. C., Gkritzalis, T., Goll, D. S., Harris, I., Haverd, V., Hoffman, F. M., Hoppema, M., Houghton, R. A., Hurtt, G., Ilyina, T., Jain, A. K., Johannessen, T., Jones, C. D., Kato, E., Keeling, R. F., Goldewijk, K. K., Landschützer, P., Lefèvre, N., Lienert, S., Liu, Z., Lombardozzi, D., Metzl, N., Munro, D. R., Nabel, J. E. M. S., Nakaoka, S.-I., Neill, C., Olsen, A., Ono, T., Patra, P., Peregon, A., Peters, W., Peylin, P., Pfeil, B., Pierrot, D., Poulter, B., Rehder, G., Resplandy, L., Robertson, E., Rocher, M., Rödenbeck, C., Schuster, U., Schwinger, J., Séférian, R., Skjelvan, I., Steinhoff, T., Sutton, A., Tans, P. P., Tian, H., Tilbrook, B., Tubiello, F. N., van der Laan-Luijkx, I. T., van der Werf, G. R., Viovy, N., Walker, A. P., Wiltshire, A. J., Wright, R., Zaehle, S., and **Zheng, B.**: Global Carbon Budget 2018, *Earth*

- Syst. Sci. Data, 10, 2141-2194, doi: 10.5194/essd-10-2141-2018, 2018. (**ESI Hot Paper**, **ESI Highly Cited Paper**)
62. Li, H., Zhang, Q.*, **Zheng, B.**, Chen, C., Wu, N., Guo, H., Zhang, Y., Zheng, Y., Li, X., and He, K.*: Nitrate-driven urban haze pollution during summertime over the North China Plain, Atmos. Chem. Phys., 18, 5293-5306, doi: 10.5194/acp-18-5293-2018, 2018. (**ESI Highly Cited Paper**)
 63. Liu, M., Lin, J.*, Wang, Y., Sun, Y., **Zheng, B.**, Shao, J., Chen, L., Zheng, Y., Chen, J., Fu, T.-M., Yan, Y., Zhang, Q., and Wu, Z.: Spatiotemporal variability of NO₂ and PM_{2.5} over Eastern China: observational and model analyses with a novel statistical method, Atmos. Chem. Phys., 18, 12933-12952, doi: 10.5194/acp-18-12933-2018, 2018.
 64. Shan, Y., Guan, D.*, Hubacek, K., **Zheng, B.**, Davis, S. J.*, Jia, L., Liu, J., Liu, Z., Fromer, N., Mi, Z., Meng, J., Deng, X., Li, Y.*, Lin, J., Schroeder, H., Weisz, H., and Schellnhuber, H. J.: City-level climate change mitigation in China, Science Advances, 4, doi: 10.1126/sciadv.aag0390, 2018. (**ESI Highly Cited Paper**)
 65. Tong, D., Zhang, Q.*, Davis, S. J.*, Liu, F., **Zheng, B.**, Geng, G., Xue, T., Li, M., Hong, C., Lu, Z., Streets, D. G., Guan, D., and He, K.: Targeted emission reductions from global super-polluting power plant units, Nature Sustainability, 1, 59-68, doi: 10.1038/s41893-017-0003-y, 2018. (**ESI Highly Cited Paper**)
 66. Wang, K.*, Zhang, Y.*, Zhang, X., Fan, J., Leung, L. R., **Zheng, B.**, Zhang, Q., and He, K.: Fine-scale application of WRF-CAM5 during a dust storm episode over East Asia: Sensitivity to grid resolutions and aerosol activation parameterizations, Atmos. Environ., 176, 1-20, doi: 10.1016/j.atmosenv.2017.12.014, 2018.
 - 2017** 67. Campbell, P., Zhang, Y.*, Wang, K., Leung, R., Fan, J., **Zheng, B.**, Zhang, Q., and He, K.: Evaluation of a multi-scale WRF-CAM5 simulation during the 2010 East Asian Summer Monsoon, Atmos. Environ., 169, 204-217, doi: 10.1016/j.atmosenv.2017.09.008, 2017.
 68. Geng, G., Zhang, Q.*, Martin, R. V., Lin, J., Huo, H., **Zheng, B.**, Wang, S., and He, K.: Impact of spatial proxies on the representation of bottom-up emission inventories: A satellite-based analysis, Atmos. Chem. Phys., 17, 4131-4145, doi: 10.5194/acp-17-4131-2017, 2017.
 69. He, J., Zhang, Y.*, Wang, K., Chen, Y., Leung, L. R., Fan, J., Li, M., **Zheng, B.**, Zhang, Q., Duan, F., and He, K.: Multi-year application of WRF-CAM5 over East Asia-Part I: Comprehensive evaluation and formation regimes of O₃ and PM_{2.5}, Atmos. Environ., 165, 122-142, doi: 10.1016/j.atmosenv.2017.06.015, 2017.
 70. Hong, C., Zhang, Q.*, He, K., Guan, D., Li, M., Liu, F., and **Zheng, B.**: Variations of China's emission estimates: response to uncertainties in energy statistics, Atmos. Chem. Phys., 17, 1227-1239, doi: 10.5194/acp-17-1227-2017, 2017.
 71. Li, H., Zhang, Q., Zhang, Q.*, Chen, C., Wang, L., Wei, Z., Zhou, S., Parworth, C., **Zheng, B.**, Canonaco, F., Prévôt, A. S. H., Chen, P., Zhang, H., Wallington, T. J., and He, K.*: Wintertime aerosol chemistry and haze evolution in an extremely polluted city of the North China Plain: significant contribution from coal and biomass combustion, Atmos. Chem. Phys., 17, 4751-4768, doi: 10.5194/acp-17-4751-2017, 2017.
 72. Li, M., Liu, H., Geng, G., Hong, C., Liu, F., Song, Y., Tong, D., **Zheng, B.**, Cui, H., Man, H., Zhang, Q.*, and He, K.*: Anthropogenic emission inventories in China: a review,

- National Science Review, 4, 834-866, doi: 10.1093/nsr/nwx150, 2017.
73. Li, M., Zhang, Q.*, Kurokawa, J. I., Woo, J. H., He, K., Lu, Z., Ohara, T., Song, Y., Streets, D. G., Carmichael, G. R., Cheng, Y., Hong, C., Huo, H., Jiang, X., Kang, S., Liu, F., Su, H., and **Zheng, B.**: MIX: a mosaic Asian anthropogenic emission inventory under the international collaboration framework of the MICS-Asia and HTAP, *Atmos. Chem. Phys.*, 17, 935-963, doi: 10.5194/acp-17-935-2017, 2017. *(ESI Highly Cited Paper)*
 74. Liu, F.*, Beirle, S., Zhang, Q.*, van der A, R. J., **Zheng, B.**, Tong, D., and He, K.: NO_x emission trends over Chinese cities estimated from OMI observations during 2005 to 2015, *Atmos. Chem. Phys.*, 17, 9261-9275, doi: 10.5194/acp-17-9261-2017, 2017. *(ESI Highly Cited Paper, ACP Highlight Paper)*
 75. Xue, T., Zheng, Y., Geng, G., **Zheng, B.**, Jiang, X., Zhang, Q.*, and He, K.: Fusing Observational, Satellite Remote Sensing and Air Quality Model Simulated Data to Estimate Spatiotemporal Variations of PM_{2.5} Exposure in China, *Remote Sensing*, 9, 221, doi: 10.3390/rs9030221, 2017.
 76. Zhang, Q.*, Jiang, X., Tong, D., Davis, S. J.*, Zhao, H., Geng, G., Feng, T., **Zheng, B.**, Lu, Z., Streets, D. G., Ni, R., Brauer, M., van Donkelaar, A., Martin, R. V., Huo, H., Liu, Z., Pan, D., Kan, H., Yan, Y., Lin, J.*, He, K.*, and Guan, D.: Transboundary health impacts of transported global air pollution and international trade, *Nature*, 543, 705-709, doi: 10.1038/nature21712, 2017. *(ESI Highly Cited Paper)*
 77. Zhao, H., Li, X., Zhang, Q.*, Jiang, X., Lin, J., Peters, G. P., Li, M., Geng, G., **Zheng, B.**, Huo, H., Zhang, L., Wang, H., Davis, S. J.*, and He, K.: Effects of atmospheric transport and trade on air pollution mortality in China, *Atmos. Chem. Phys.*, 17, 10367-10381, doi: 10.5194/acp-17-10367-2017, 2017.
 - 2016** 78. Cheng, Y.*, Zheng, G., Wei, C., Mu, Q., **Zheng, B.**, Wang, Z., Gao, M., Zhang, Q., He, K.*, Carmichael, G., Pöschl, U.*, and Su, H.*: Reactive nitrogen chemistry in aerosol water as a source of sulfate during haze events in China, *Science Advances*, 2, doi: 10.1126/sciadv.1601530, 2016. *(ESI Highly Cited Paper)*
 79. He, Q.*, Jiang, X., Gouldson, A., Sudmant, A., Guan, D., Colenbrander, S., Xue, T., **Zheng, B.**, and Zhang, Q.: Climate change mitigation in Chinese megacities: A measures-based analysis of opportunities in the residential sector, *Appl. Energy*, 184, 769-778, doi: 10.1016/j.apenergy.2016.07.112, 2016.
 80. Li, H., Zhang, Q.*, Duan, F., **Zheng, B.**, and He, K.: FDATEMOS16 The "Parade Blue": effects of short-term emission control on aerosol chemistry, *Faraday Discussions*, doi: 10.1039/C6FD00004E, 2016.
 81. Liu, F., Zhang, Q.*, van der A, R. J., **Zheng, B.**, Tong, D., Yan, L., Zheng, Y. X., and He, K. B.: Recent reduction in NO_x emissions over China: synthesis of satellite observations and emission inventories, *Environ. Res. Lett.*, 11, 114002, doi: 10.1088/1748-9326/11/11/114002, 2016. *(ESI Highly Cited Paper)*
 82. Pan, Y.*, Tian, S., Liu, D., Fang, Y.*, Zhu, X., Zhang, Q., **Zheng, B.**, Michalski, G., and Wang, Y.: Fossil Fuel Combustion-Related Emissions Dominate Atmospheric Ammonia Sources during Severe Haze Episodes: Evidence from 15N-Stable Isotope in Size-Resolved Aerosol Ammonium, *Environ. Sci. Technol.*, doi: 10.1021/acs.est.6b00634, 2016. *(ESI Highly Cited Paper)*
 83. Pan, Y.*, Tian, S., Liu, D., Fang, Y.*, Zhu, X., Zhang, Q., **Zheng, B.**, Michalski, G., and

- Wang, Y.: Reply to Comment on “Fossil Fuel Combustion-Related Emissions Dominate Atmospheric Ammonia Sources during Severe Haze Episodes: Evidence from ^{15}N -Stable Isotope in Size-Resolved Aerosol Ammonium”, *Environ. Sci. Technol.*, 50, 10767-10768, doi: 10.1021/acs.est.6b04197, 2016.
84. Wang, L.* , Zhang, Y., Wang, K., **Zheng, B.**, Zhang, Q., and Wei, W.: Application of Weather Research and Forecasting Model with Chemistry (WRF/Chem) over northern China: Sensitivity study, comparative evaluation, and policy implications, *Atmos. Environ.*, 124, Part B, 337-350, doi: 10.1016/j.atmosenv.2014.12.052, 2016.
- 2015** 85. Hu, J., Wu, L., **Zheng, B.**, Zhang, Q., He, K., Chang, Q., Li, X., Yang, F., Ying, Q., and Zhang, H.*: Source contributions and regional transport of primary particulate matter in China, *Environ. Pollut.*, 207, 31-42, doi: 10.1016/j.envpol.2015.08.037, 2015.
86. Huo, H.* , **Zheng, B.**, Wang, M., Zhang, Q., and He, K.-B.: Vehicular air pollutant emissions in China: evaluation of past control policies and future perspectives, *Mitigation and Adaptation Strategies for Global Change*, 20, 719-733, doi: 10.1007/s11027-014-9613-0, 2015.
87. Jiang, X., Hong, C., Zheng, Y., **Zheng, B.**, Guan, D., Gouldson, A., Zhang, Q.* , and He, K.: To what extent can China’s near-term air pollution control policy protect air quality and human health? A case study of the Pearl River Delta region, *Environ. Res. Lett.*, 10, 104006, doi: 10.1088/1748-9326/10/10/104006, 2015.
88. Li, X., Zhang, Q.* , Zhang, Y., **Zheng, B.**, Wang, K., Chen, Y., Wallington, T. J., Han, W., Shen, W., Zhang, X., and He, K.: Source contributions of urban $\text{PM}_{2.5}$ in the Beijing–Tianjin–Hebei region: Changes between 2006 and 2013 and relative impacts of emissions and meteorology, *Atmos. Environ.*, 123, Part A, 229-239, doi: 10.1016/j.atmosenv.2015.10.048, 2015.
89. Liu, F., Zhang, Q.* , Tong, D., **Zheng, B.**, Li, M., Huo, H., and He, K. B.: High-resolution inventory of technologies, activities, and emissions of coal-fired power plants in China from 1990 to 2010, *Atmos. Chem. Phys.*, 15, 13299-13317, doi: 10.5194/acp-15-13299-2015, 2015. **(ESI Highly Cited Paper)**
90. Shen, X., Yao, Z., Zhang, Q., Wagner, D. V., Huo, H., Zhang, Y., **Zheng, B.**, and He, K.*: Development of database of real-world diesel vehicle emission factors for China, *Journal of Environmental Sciences*, 31, 209-220, doi: 10.1016/j.jes.2014.10.021, 2015.
91. Zheng, G. J., Duan, F. K., Su, H., Ma, Y. L., Cheng, Y.* , **Zheng, B.**, Zhang, Q., Huang, T., Kimoto, T., Chang, D., Pöschl, U., Cheng, Y. F., and He, K. B.*: Exploring the severe winter haze in Beijing: the impact of synoptic weather, regional transport and heterogeneous reactions, *Atmos. Chem. Phys.*, 15, 2969-2983, doi: 10.5194/acp-15-2969-2015, 2015. **(ESI Highly Cited Paper)**
- 2013** 92. Liu, F., Klimont, Z., Zhang, Q., Cofala, J., Zhao, L., Huo, H., Nguyen, B., Schöpp, W., Sander, R., **Zheng, B.**, Hong, C., He, K.* , Amann, M., and Heyes, C.: Integrating mitigation of air pollutants and greenhouse gases in Chinese cities: development of GAINS-City model for Beijing, *Journal of Cleaner Production*, 58, 25-33, doi: 10.1016/j.jclepro.2013.03.024, 2013.
- 2011** 93. Huo, H., Zhang, Q., He, K.* , Yao, Z., Wang, X., **Zheng, B.**, Streets, D. G., Wang, Q., and Ding, Y.: Modeling vehicle emissions in different types of Chinese cities: Importance of vehicle fleet and local features, *Environ. Pollut.*, 159, 2954-2960, doi:

PRESENTATIONS (*=Oral presentation)

- 2021**
1. **郑博***: 基于卫星遥感的温室气体源汇定量, 生态环境部卫星环境应用中心邀请报告, 2021年2月。
 2. **Zheng, B.***, et al.: Tracing Human and Natural Emissions: Monitoring Strategies for Mitigation Action, Invited talk at webinar of Max Planck Institute for Chemistry, February 2021.
- 2020**
3. **郑博***: 基于多源数据融合的近实时排放清单开发与应用, 第26届中国大气环境科学与技术大会, 2020年12月。
 4. **郑博***: Satellite-based estimates of decline and rebound in China's CO₂ emissions during COVID-19 pandemic, 第二届中国温室气体监测研讨会, 2020年11月。
 5. **郑博***: 新冠疫情前后中国大气污染物和二氧化碳排放动态变化, “新冠肺炎疫情对空气质量影响”学术研讨会, 2020年10月。
 6. **Zheng, B.***, et al.: TROPOMI-based estimates of decline and rebound in China's CO₂ emissions during COVID-19 pandemic, TROPOMI-OMI workshop, October 2020.
 7. **Zheng, B.***, et al.: Satellite-based estimates of decline and rebound in China's CO₂ emissions during COVID-19 pandemic, CHE-VERIFY workshop, July 2020.
 8. **Zheng, B.***, et al.: Observing carbon dioxide emissions over China's cities with the Orbiting Carbon Observatory-2, IWGGMS-16, June 2020.
 9. **Zheng, B.***, et al.: Observing urban CO₂ emissions from space-based CO₂ measurements and Gaussian plume model, CHE WP2-WP5 workshop, May 2020.
 10. **Zheng, B.***, et al.: Observing carbon dioxide emissions over China's cities with the Orbiting Carbon Observatory-2, OCO-2/OCO-3 Science Team Telecon, March 2020.
- 2019**
11. **Zheng, B.***, et al.: Global Carbon Monoxide Budget 2000–2017 Inferred From Multi-species Atmospheric Inversions. AGU 2019 meeting, San Francisco, December 2019.
 12. **Zheng, B.***, et al.: Global atmospheric carbon monoxide budget 2000–2017. IG3IS – Transcom Workshop, Paris, Oct, 2019.
 13. **Zheng, B.***, et al.: Towards understanding China's anthropogenic emissions across scales: recent trends, drivers, and role of cities. 2019 workshop on co-benefits of sustainable energy transition in China, Beijing, June, 2019.
- 2018**
14. **Zheng, B.**, et al.: Infrastructure Shapes Differences in the Carbon Intensities of Chinese cities. AGU 2018 meeting, Washington, D.C., December 2018.
 15. **Zheng, B.**, et al.: Seasonal Shift in Timing of African Fire Emissions: Possible Causes and Drivers. AGU 2018 meeting, Washington, D.C., December 2018.
 16. **Zheng, B.***: On the role of the flaming to smoldering transition in the seasonal cycle of African fire emissions. Sino-French Institute for Earth System Science workshop, Paris, November 2018.
 17. **Zheng, B.***: Bayesian inversion estimate of CO, CH₄, and CO₂ fluxes across scales: from global to urban atmospheric inversions. Invited by Tsinghua University, Beijing, July 2018.
 18. **Zheng, B.***: Multi-species inversion system for CH₄–CH₂O–CO and its applications. IGAC-AMIGO workshop, Toulouse, April 2018.

- 2017** 19. **Zheng, B.***, Chevallier, F., Ciais, P., Yin, Y., Wang, Y. L., Zhang, Q., and He, K. B.: Rapid decline in carbon monoxide emissions and export from East Asia. AGU 2017 meeting, New Orleans, December 2017.
20. **Zheng, B.***, Zhang, Q., Davis, S. J., Ciais, P., Hong, C., Li, M., Liu, F., Tong, D., Li, H., and He, K. B.: Infrastructures shape differences in the carbon intensities of Chinese cities. Workshop on "Carbon Data Development for Next Generation", Norwich, July 2017.
21. **Zheng, B.***: Resolution dependence of uncertainties in gridded emission inventories. Invited by Max Planck Institute for Chemistry, Mainz, July 2017.
- 2015** 22. **Zheng, B.**, Zhang, Q., and He, K. B.: Decoupling resolution of gridded emissions and downscaling spatial proxies: case study for the Jing-Jin-Ji region in China. 17th GEIA conference, Beijing, November 2015.
- 2012** 23. **Zheng, B.**, Zhang, Q., He, K. B., Huo, H., Yao, Z., and Wang, X.: A high-resolution vehicle emission inventory for China. AGU 2012 meeting, San Francisco, December 2012.