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## 师资队伍

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研究方向: 大气环境科学

## 个人简历

### 教育简历

- 2001-2004, 中国科学院广州地球化学研究所, 有机地球化学国家重点实验室, 博士
- 1998-2001, 中国地质大学 (武汉), 地球科学学院, 硕士

- 1988-1992, 中国地质大学 (武汉), 地球化学系, 学士

## 工作经历

- 2018.09-至今, 复旦大学, 环境科学与工程系, 教授
- 2015.04-2018.08, 同济大学, 环境科学与工程学院, 教授
- 2007.07-2015.03, 中国科学院 烟台海岸带研究所, 副研究员/研究员
- 2005.12-2006.12, 美国佐治亚理工学院, 地球与大气科学系, 博士后
- 2004.07-2007.06, 中国科学院 广州地球化学研究所, 博士后

## 博士生导师/方向

- 燃烧源黑碳和棕碳生成机理、大气PM2.5快速源解析、港口船舶排放及其区域影响、污染源与人体健康

## 硕士生导师/方向

- 燃烧源排放测量、大气PM2.5快速源解析、污染源与人体健康

## 人才培养

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### 本科生课程:

- 《燃烧与文明》

## 科学研究

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### 主持的主要项目/课题

1. 国家自然科学基金委, 面上项目, 基于毒性效应的民用固体燃料燃烧源细颗粒物的排放特征与减排机理研究, 2019.01-2022.12, 在研, 主持
2. 国家自然科学基金委, 重大研究计划“中国大气复合污染的成因与应对机制的基础研究”重点支持项目, 高时间分辨率大气细颗粒物动态来源解析与综合校验方法体系的研究, 2018.01-2021.12, 在研, 主持
3. 国家自然科学基金委, 国际合作与交流项目(中德合作), 长三角及北欧大型港口船舶排放对区域空气质量影响研究, 2018.01-2020.12, 结题, 主持
4. 国家自然科学基金委, 面上项目, 基于煤分子结构的民用燃煤源黑碳和多环芳烃的生成机制研究, 2015.01-2018.12, 结题, 主持
5. 国家自然科学基金委, 面上项目, 基于实测的近海船舶大气污染物排放特征研究, 2013.01-2016.12, 结题, 主持
6. 国家自然科学基金委, 面上项目, 渤海水体中的黑碳总量、输入通量与源解析研究, 2011.01-2013.12, 结题, 主持
7. 国家自然科学基金委, 青年基金项目, 我国民用煤与生物质燃料燃烧的黑碳和有机碳排放特征, 2007.01-2009.12, 结题, 主持

## 教研成果

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### 代表性论文:

1. Zhe Qian, Yingjun Chen,\* Zeyu Liu, Yong Han, Yishun Zhang, Yanli Feng,\* Yu Shang, Hai Guo,\* Qing Li, Guofeng Shen, Jianmin Chen, and Shu Tao. Intermediate Volatile Organic Compound Emissions from Residential Solid Fuel Combustion Based on Field Measurements in Rural China. *Environmental Science & Technology*, 2021, 55, 5689-5700.
2. Min Cui, Yingjun Chen\*, Cheng Li\*, Jin Yin, Jun Li, Junyu Zheng. Parent and methyl polycyclic aromatic hydrocarbons and n-alkanes emitted by construction machinery in China. *Science of the Total Environment*, 2021, 775, 144759.
3. Lingling Lv, Yingjun Chen\*, Yong Han, Min Cui, Peng Wei, Mei Zheng, Jingnan Hu\*, High-time-resolution PM2.5 source apportionment based on multi-model with organic tracers in Beijing during haze episodes. *Science of the Total Environment*, 2021, 772, 144766.

4. Jianzhong Sun#, Yuzhe Zhang#, Guorui Zhi\*, Regina Hitzenberger, Wenjing Jin, Yingjun Chen\*, Lei Wang, Chongguo Tian, Zhengying Li, Rong Chen, Wen Xiao, Yuan Cheng, Wei Yang, Liying Yao, Yang Cao, Duo Huang, Yueyuan Qiu, Jiali Xu, Xiaofei Xia, Xin Yang, Xi Zhang, Zheng Zong, Yuchun Song, Changdong Wu. Brown carbon's emission factors and optical characteristics in household biomass burning: developing a novel algorithm for estimating the contribution of brown carbon. *Atmospheric Chemistry and Physics*, 2021, 21, 2329-2341.
5. Yong Han, Yingjun Chen\*, Yanli Feng, Yu Shang, Jun Li, Qing Li, Jianmin Chen. Fuel aromaticity promotes low-temperature nucleation processes of elemental carbon from biomass and coal combustion. *Environmental Science & Technology*, 2021, 55, 2532-2540.
6. Yin Fang, Yingjun Chen\*, Guopei Huang, Limin Hu, Chongguo Tian, Jingqian Xie, Jun Lin, Tian Lin\*. Particulate and dissolved black carbon in Coastal China Seas: spatiotemporal variations, dynamics, and potential implications. *Environmental Science & Technology*, 2021, 55, 788-796.
7. Fan Zhang, Hai Guo\*, Yingjun Chen\*, Volker Matthias, Yan Zhang, Xin Yang, Jianmin Chen, Size-segregated characteristics of organic carbon (OC), elemental carbon (EC) and organic matter in particulate matter (PM) emitted from different types of ships in China, *Atmospheric Chemistry and Physics*, 2020, 20, 1549-1564.
8. Yong Han, Yingjun Chen\*, Yanli Feng, Wenhui Song, Fang Cao, Yanli Zhang\*, Qing Li, Xin Yang, Jianmin Chen, Different formation mechanisms of PAH during wood and coal combustion under different temperatures, *Atmospheric Environment*, 2020, 222, 117084.
9. Min Cui, Cheng Li, Yingjun Chen\*, Fan Zhang, Jun Li\*, Bin Jiang, Yangzhi Mo, Jia Li, Caiqing Yan, Mei Zheng, Zhiyong Xie, Gan Zhang, Junyu Zheng\*, Molecular characterization of polar organic aerosol constituents in off-road engine emissions using Fourier transform ion cyclotron resonance mass spectrometry (FT-ICR MS): implications for source apportionment, *Atmospheric Chemistry and Physics*, 2019, 19, 13945-13956.
10. Rong Li, Yong Han, Lu Wang, Yu Shang\*, Yingjun Chen\*. Differences in oxidative potential of black carbon from three combustion emission sources in China. *Journal of Environmental Management*, 2019, 240, 57-65.
11. Jing An, Qian Zhou, Meiyang Wu, Lu Wang, Yufang Zhong, Jialiang Feng, Yu Shang\*, Yingjun Chen\*. Interactions between oxidative stress, autophagy and apoptosis in A549 cells treated with aged black carbon. *Toxicology in vitro*, 2019, 54, 67-74.
12. Fan Zhang, Yingjun Chen\*, Min Cui, Yanli Feng, Xin Yang, Jianmin Chen, Yan Zhang, Huiwang Gao, Chongguo Tian, Volker Matthias, Huan Liu\*. Emission factors and environmental implication of organic pollutants in PM emitted from various vessels in China. *Atmospheric Environment*, 2019, 200, 302-311.
13. Caiqing Yan, Mei Zheng\*, Guofeng Shen, Yuan Cheng, Shexia Ma\*, Jianzhong Sun, Min Cui, Fan Zhang, Yong Han, Yingjun Chen\*, Characterization of carbon fractions in carbonaceous aerosols from typical fossil fuel combustion sources, *Fuel*, 2019, 254, 115620, 1-12.
14. Yin Fang, Yingjun Chen\*, Limin Hu, Chongguo Tian, Yongming Luo, Jun Li, Gan Zhang, Mei Zheng, Tian Lin\*. Large-river dominated black carbon flux and budget: A case study of the estuarine-inner shelf of East China Sea, China. *Science of the Total Environment*, 2019, 651, 2489-2496.
15. Min Cui, Yingjun Chen\*, Mei Zheng\*, Jun Li, Jiao Tang, Yong Han, Debin Song, Caiqing Yan, Fan Zhang, Chongguo Tian, Gan Zhang\*. Emissions and characteristics of particulate matter from rainforest burning in the Southeast Asia. *Atmospheric Environment*, 2018, 191, 194-204.
16. Jianzhong Sun, Guorui Zhi\*, Wenjing Jin, Yingjun Chen\*, Guofeng Shen, Chongguo Tian, Yuzhe Zhang, Zheng Zong, Miaomiao Cheng, Xinmin Zhang, Yang Zhang, Chunyu Liu, Jinkui Lu, Hongzhao Wang, Jianmin Xiang, Litao Tong, Xi Zhang. Emission factors of organic carbon and elemental carbon for residential coal and biomass fuels in China-A new database for 39 fuel-stove combinations. *Atmospheric Environment*, 2018, 190, 241-248.
17. Issoufou Mamoudou, Fan Zhang\*, Qi Chen, Panpan Wang, Yingjun Chen\*. Characteristics of PM<sub>2.5</sub> from ship emissions and their impacts on ambient air: a case study in Yangshan harbor, Shanghai. *Science of the Total Environment*, 2018, 640-641, 207-216.

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21. Yin Fang, Yingjun Chen\*, Chongguo Tian\*, Xiaoping Wang, Tian Lin, Limin Hu, Jun Li, Gan Zhang, Yongming Luo. Cycling and budgets of organic and black carbon in coastal Bohai Sea, China: Impacts of natural and human perturbations. *Global Biogeochemical Cycles*, 2018, 32, 971-986.
22. Zheng Zong, Xiaoping Wang, Chongguo Tian\*, Yingjun Chen\*, Shanfei Fu, Lin Qu, Ling Ji, Jun Li, Gan Zhang. PMF and PSCF based source apportionment of PM<sub>2.5</sub> at a regional background site in North China. *Atmospheric Research*, 2018, 203, 207-215.
23. Min Cui, Yingjun Chen\*, Yanli Feng\*, Cheng Li, Junyu Zheng\*, Chongguo Tian, Caiqing Yan, Mei Zheng. Measurement of PM and its chemical composition in real-world emissions from non-road and on-road diesel vehicles. *Atmospheric Chemistry and Physics*, 2017, 17, 6779-6795.
24. Jianzhong Sun, Guorui Zhi\*, Regina Hitzemberger, Yingjun Chen\*, Chongguo Tian, Yayun Zhang, Yanli Feng, Miaomiao Cheng, Yuzhe Zhang, Jing Cai, Feng Chen, Yiqin Qiu, Zhiming Jiang, Jun Li, Gan Zhang, Yangzhi Mo. Emission factors and light absorption properties of brown carbon from household coal combustion in China. *Atmospheric Chemistry and Physics*, 2017, 17, 4769-4780.
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28. Yingjun Chen, Tian Lin\*, Jianhui Tang, Zhiyong Xie, Chongguo Tian, Jun Li, Gan Zhang. Exchange of polycyclic aromatic hydrocarbons across the air-water interface in the Bohai and Yellow Seas. *Atmospheric Environment*, 2016, 141, 153-160.
29. Yue Xu, Yan Wang, Yingjun Chen\*, Chongguo Tian, Yanli Feng, Jun Li, Gan Zhang. Characterization of fine and carbonaceous particles emissions from pelletized biomass-coal blends combustion: Implications on residential crop residue utilization in China. *Atmospheric Environment*, 2016, 141, 312-319.
30. Guopei Huang, Yingjun Chen\*, Chongguo Tian, Hua Zhang, Yongming Luo, Jun Li, Gan Zhang. Spatial Distributions and Seasonal Variations of Dissolved Black Carbon in the Bohai Sea, China. *Journal of Coastal Research*, 2016, 74, 214-227.
31. Yan Wang, Yue Xu, Yingjun Chen\*, Chongguo Tian, Yanli Feng, Tian Chen, Jun Li, Gan Zhang. Influence of different types of coals and stoves on the emissions of parent and oxygenated PAHs from residential coal combustion in China. *Environmental Pollution*, 2016, 212, 1-8.
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34. Yingjun Chen, Guorui Zhi\*, Yanli Feng, Chongguo Tian, Xinhui Bi, Jun Li, Gan Zhang. Increase in polycyclic aromatic hydrocarbon (PAH) emissions due to briquetting: A challenge to the coal briquetting policy. *Environmental Pollution*, 2015, 204, 58-63.
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37. Yin Fang, Yingjun Chen\*, Chongguo Tian\*, Tian Lin, Limin Hu, Guopei Huang, Jianhui Tang, Jun Li, Gan Zhang. Flux and budget of BC in the continental shelf seas adjacent to Chinese high BC emission source regions. *Global Biogeochemical Cycles*, 2015, 29, 957-972.
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44. Guorui Zhi, Yingjun Chen\*, Junying Sun, Laiguo Chen, Wenjuan Tian, Jingchun Duan, Gan Zhang, Fahe Chai, Guoying Sheng, Jiamo Fu. Harmonizing Aerosol Carbon Measurements between Two Conventional Thermal/Optical Analysis Methods. *Environmental Science & Technology*, 2011, 45: 2902-2908.
45. Yingjun Chen\*, Guorui Zhi, Yanli Feng, Dongyan Liu, Gan Zhang, Jun Li, Guoying Sheng, Jiamo Fu. Measurements of black and organic carbon emission factors for household coal combustion in China: Implication for emission reduction. *Environmental Science & Technology*, 2009, 43, 9495-9500.
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49. 陈颖军\*, 姜晓华, 支国瑞, 冯艳丽, 盛国英, 傅家谟. 我国民用燃煤的黑碳排放与控制减排. *中国科学D辑: 地球科学*, 2009, 39(11), 1554-1559.

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53. Yingjun Chen, Xinhui Bi, Bixian Mai, Guoying Sheng\*, Jiamo Fu. Emission characterization of particulate/gaseous phases and size association for polycyclic aromatic hydrocarbons from residential coal combustion. *Fuel*, 2004, 83, 781-790.



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 实验室安全

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 规章制度

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