

2004-2008, 学士, 华中科技大学, 能源与动力工程学院

2008-2014, 博士, 华中科技大学, 煤燃烧国家重点实验室/热能工程

2011-2013, 访学, Chemical and Material Engineering, University of Alberta. Canada

2014-2016, 博士后, 华中科技大学, 物理化学/热能工程

2017-至今, 副教授, 武汉大学, 动力与机械学院

三、主要研究方向

1. 燃煤污染物控制 (颗粒物生成与防治, Hg/As排放与控制, CO₂吸附)
2. 固体燃料热转化 (生物质/污泥热解与高值化利用)
3. 燃烧纳米材料 (颗粒动力学, 火焰动力学)
4. 新能源与可再生能源

四、科研项目

1. “磁性石墨烯基复合吸附剂对脱硫浆液中Hg²⁺还原控制的研究” 国家自然科学基金 (51506066), 2016-2018, 项目负责人。
2. “煤燃烧砷在细颗粒物表面沉积行为及砷化学形态的研究” 中国博士后基金 (2015M582222), 2016-2017, 项目负责人。
3. “煤中微量元素赋存形态及砷迁徙行为的研究”, 中国科学院环境地球化学国家重点实验室开放基金 (SKLEG2015914), 2015-2016, 项目负责人。

4. “燃煤电厂烟气汞排放及控制的基础研究”，中国科学院环境地球化学国家重点实验室开放基金 (SKLEG2016908)，2016-2017，项目负责人。

5. “西部煤中特有污染组分在燃烧过程中迁徙转化行为研究”中国科学院环境地球化学国家重点实验室开放基金 (SKLEG2017914)，2017-2018，项目负责人。

6. “粉煤灰高值利用关键技术与示范”国家重点研发计划 (2017YFB0606100)，2017-2020，子课题负责人。

7. “电厂燃煤有害元素形态演变与污染防治”国家重点基础研究发展计划 (973: 2014CB238904)，2014-2018，主要参加人员。

8. “燃煤电站超细颗粒物生成特性及控制新技术研究”企业委托项目（神华国华三河发电有限责任公司），2015-2016，总体负责。

9. “燃煤细颗粒物化学团聚促进机制的研究”国家自然科学基金(51376074)，2014-2017，主要参与人员。

10. “煤中重矿物组合定量分析及其与微量元素关联性的研究”，国家自然科学基金 (41172140)，2012-2015，主要参与人员。

11. “燃煤飞灰中磁珠对单质汞的定量演化和脱除方法研究”国家自然科学基金 (51176060)，2012-2015，参与。

12. “二氧化碳温室气体矿化隔离的研究”，国家自然科学基金 (40972102)，

2009-2012, 参与人员, 主要参与CO₂矿物碳酸化的实验工作。

13. "Novel Functional Composite Materials for Dusts and Heavy Metals Removal from Combustion Gases", sponsored by Helmholtz-Alberta Initiative-Energy & Environment (HAI-E&E) program and the Natural Science and Engineering Research Council of Canada (NSERC), 主要参与人员。

五、论文、专利、获奖

1.Xuehai Yu, Chong Tian*, Junying Zhang. Investigation of fireside corrosion at water-cooled wall from a coal-fired power plant in China. Applied Thermal Engineering. 2017, 127:1164-1171.

2.Chong Tian, Junying Zhang, Rajender Gupta , Yongchun Zhao. Release behaviors of arsenic in fine particles generated from a typical high-arsenic coal at a high temperature. Energy & Fuels. 2016 , 30:6201-6209.

3.Chong Tian , Hongbo Zeng , Yongchun Zhao , Junying Zhang , Rajender Gupta, et al. Understanding of physicochemical properties and formation mechanisms of fine particular matter generated from Canadian coal combustion. Fuel , 2016, 165: 224-234.

4.Chong Tian, Junying Zhang, Rajender Gupta, Yongchun Zhao, Shuai Wang, Chemistry, mineralogical, and residence of arsenic in a typical high arsenic coal. International Journal of Mineral Processing, 2015,141:61-67

5.Chong Tian, Junying Zhang, Yongchun Zhao, Rajender Gupta, Chuguang Zheng, Understanding of mineralogy and residence of trace elements in coals via a novel method combining low temperature ashing and float-sink technique. International Journal of coal Geology, 2014, 131: 162-171

6.Chong Tian, Junying Zhang ,Yongchun Zhao, Chuguang Zheng, Photocatalytic reduction of CO₂ over sol-gel derived copper-doped Titania catalysts. Cleaner Combustion and sustainable world, 2013, pp 1247-1254

7.Chong Tian, Junying Zhang, Rajender Gupta, Chuguang Zheng, Arsenic Emissions and Speciations in High-temperature Treatment of a Typical High Arsenic Coal. Cleaner Combustion and sustainable world, 2016, pp 229-234

8.Chang Lin, Yongchun Zhao, Hailong Li, Chong Tian, Yi Zhang, Xuehai Yu, and Junying Zhang."Effect of sulfite on divalent

mercury reduction and re-emission in a simulated desulfurization aqueous solution." *Fuel Processing Technology* 165 (2017): 138-144

9.Liu Huan, Jianping Yang, Chong Tian, Yongchun Zhao, and Junying Zhang. "Mercury removal from coal combustion flue gas by modified palygorskite adsorbents." *Applied Clay Science* 147(2017): 36-43.

10.Ni Peng, Zhuo Xiong, Chong Tian, Hailong Li, Yongchun Zhao, Junying Zhang, and Chuguang Zheng. "Influence of carbonation under oxy-fuel combustion flue gas on the leachability of heavy metals in MSWI fly ash." *Waste Management* ×(2017): ×-×.

11.Yuxi Liu, Chong Tian, Hongbo Zeng, Rajender Gupta, Kuznicki, S. M. et.al. Nanocomposites of graphene oxide, Ag nanoparticles, and magnetic ferrite nanoparticles for elemental mercury (Hg⁰) removal. *RSC Advances*, 2015, 5 : 15634-15640.

12.Yongchun Zhao , Junying Zhang , Chong Tian, Hailong Li, Chuguang Zheng. Mineralogy and chemical composition of high-calcium fly ashes and density fractions from a coal-fired power plant in China. *Energy & Fuels*, 2010, 24 : 834–843

13. Gong, B.G., Tian, C., Xiong, Z., Zhao, Y.C., Zhang, J.Y., Mineral changes and trace element releases during extraction of alumina from high aluminum fly ash in Inner Mongolia, China. 2016. International Journal of Coal Geology (Accepted).
14. Yijun Xie, Bin Yan, Chong Tian, Yuxi Liu, Qingxia Liu, Hongbo Zeng. Efficient removal of elemental mercury (Hg⁰) by SBA-15-Ag adsorbents. Journal of Material Chemistry A, 2014, 2(42): 17730-17734.
15. Chen, X.X., Xiong, Z., Qin, Y.D., Gong, B.G., Tian, C., Yong, C.Z., Zhang, J.Y., Zheng, C.G., High-temperature CO₂ sorption by Ca-doped Li₄SiO₄ sorbents. 2016. International Journal of Hydrogen Energy, doi: 10.1016/j.ijhydene.2016.05.267.
16. 田冲, 刘禹希, 张军营, 赵永椿. 氧化石墨烯 (GO) 及复合物制备及其对汞吸附特性的研究, 工程热物理学报, 2017
17. 田冲, 赵永椿, 张军营, 郑楚光. 镍基催化剂对CO-超临界水制氢固碳反应的影响, 动力工程学报, 2011, 31(11), 869-874
18. 田冲, 赵永椿, 张军营, 郑楚光. Cu掺杂纳米TiO₂光催化还原CO₂实验研究, 工程热物理学报, 2012, 33(2), 356-360

19.余学海, 孙平, 田冲*, 等. 神府煤矿物组合特性及微量元素分布特性定量研究, 煤炭学报, 2015,40(11), 2683-2689 (*通讯作者)

20.张凯, 赵永椿, 田冲*, 等. 燃煤细颗粒物排放实验及形成机理, 煤炭学报, 2015,40 (11) : 2696-2701 (*通讯作者)

21.Chong Tian, Junying Zhang, Yongchun Zhao. abrication of silver nano-particles functionalized adsorbents for Hg⁰ adsorption. 13th International Conference on Mercury as a Global Pollutant , July 16-21,2017.Providence,Rhode Island, USA (Oral Presentation)

22.Chong Tian, Xuehai Yu, Junying Zhang, Yongchun Zhao. Physicochemical characteristics of fine particles collected from WESP in a coal-fired power plant. 11th China-Korea Clean Energy Workshop , September 20-23,2016.Nanjing,China (Oral Presentation)

23.Chong Tian, Junying Zhang, Yan Yang , Chao Wei , Wenju Li , Yongchun Zhao , Chuguang Zheng. Mineralogical characteristics and transformation behaviors of silicon bearing minerals during high silicon coal combustion. The International Committee for coal and Organic

Petrology, September 18-

23, 2016, Houston, Texas USA (Poster)

24. Chong Tian, Ganlin Wang,
Yongchun Zhao, Junying Zhang.

Migration and leaching behaviors of
heavy metals in municipal sewage
sludge via thermal hydrolysis
treatment. 6th international

Conference on Engineering for waste
and biomass valorization, May 23-
26, 2016, Albi, France (Oral

presentation)

25. Chong Tian, Junying Zhang,
Rajender Gupta, Chuguang Zheng.

Arsenic emission and speciation in
high temperature treatment of a
typical high arsenic coal. 41th
International Technical conference
on Clean Coal & Fuel Systems. June
5-9, 2016, Clearwater, Florida USA

(Oral presentation)

26. Chong Tian, Junying Zhang,
Rajender Gupta, Chuguang Zheng.

Fabrication of silver nano-particles
functionalized adsorbents for Hg⁰
adsorption. 33th annual

international Pittsburgh coal
conference. August 8-12, 2016. Cape
Town, South Africa (Oral

presentation)

27. Chong Tian, Hen Yang, Junying
Zhang, Yongchun Zhao. Direct

aqueous mineral carbonation under
Low-medium pressure conditions

based on Oxy-firing combustion. 13th China-Japan Symposium on coal and C1 Chemistry, August 31-September 4, 2015. Dunhuang, Gansu China. (Oral presentation)

28.Chong Tian , Junying Zhang , Rajender Gupta. Yongchun Zhao. Vaporization and partition of arsenic in high temperature of a typical high arsenic coal. The 8th International Symposium on Coal Combustion, July 19-22,2015, Beijing, China. (Oral presentation)

29.Chong Tian, Junying Zhang, Rajender Gupta, Hongbo Zeng et. al. Fabrication of novel sorbents for elemental mercury adsorption. The 12th International Conference on Mercury as a Global Pollutant, June 14-19,2015, Chejudo, Korean. (Poster)

30.Chong Tian, Yuxi Liu, Yijun Xie, Junying Zhang, Yongchun Zhao, Hongbo Zeng, Rajender Gupta. Nano-silver functionalized adsorbents development and application for Hg⁰ adsorption. 8th International conference/Exhibition on combustion Incineration/Pyrolysis, Emission and Climate Change (I-CIPEC), October 15-18,2014, Hangzhou, China (Oral presentation)

31.Chong Tian , Junying Zhang , Yongchun Zhao , Rajender Gupta. Arsenic occurrence and its release behavior during thermal treatment of a typical high arsenic coal. 17th International Conference on Heavy Metals in the Environment (ICHMET), September 22-23,2014, Guiyang, China (Oral presentation)

32.Chong Tian , Yuxi Liu , Qingxia Liu , Hongbo Zeng , Mercury Removal from Flue Gases by Metal Oxides Loaded Graphene Oxide. 17th International Conference on Heavy Metals in the Environment (ICHMET), September 22-23,2014, Guiyang, China (Oral presentation)

33.Chong Tian, Junying Zhang, Rajender Gupta, Yongchun Zhao, Arsenic occurrence and enrichment in single pyrite segregated by float-sink in coal sample from Guizhou, China. 13th annual International Pittsburgh coal conference, September 16-19, 2013, Beijing, China (Poster)

34.Chong Tian, Yuxi Liu, Yijun Xie, Qingye Lu, Qingxia Liu, Zhenghe Xu, Steve kuznicki, Rajender Gupta, Hongbo Zeng, Particulate Matter (PM10) Emission in Coal Combustion and Mercury Removal by Novel Sorbents. 3rd Science Forum of the Helmholtz-Alberta Initiative,

September 19-20,2013 , Edmonton,
Alberta, Canada(Poster)

35.Chong Tian, Qingye Lu, Hongbo
Zeng, Junying Zhang, Rajender
Gupta, Particulate Matter (PM10)
Emission during Combustion of a
High Silicon Chinese Coal and a
Canadian Coal. US National
Combustion Meeting, May 19-
22,2013,Utah, U.S. (Oral
presentation)

36.Chong Tian, Junying Zhang,
Yongchun Zhao, Rajender Gupta,
Heavy minerals and trace elements
in Yangquan Anthracite from Shanxi
Province, China. 64th Annual
Meeting of ICCP & 29th Annual
Meeting of TSOP, September 15-
24,2012,Beijing, China(Oral
presentation)

37.Chong Tian, Junying Zhang,
Yongchun Zhao, Chuguang Zheng,
Photocatalytic reduction of CO₂ over
sol-gel derived Copper-doped
Titania catalysts. 7th International
Symposium on coal combustion (7th
ISCC), July 17-20,2011, Harbin, China
(Oral presentation)

38.Chong Tian. Occurrence of
arsenic in coal and its transformation
behaviors during coal combustion.
3rd young scientist forum in
combustion, April 15-16, 2017, Xian,

China. (Oral presentation, In Chinese)

39.Chong Tian , Junying Zhang , Yongcun Zhao , Rajender Gupta. Frabrication of Graphene oxide composites and its application in Hg removal. Annual meeting of Engineering thermophysics , October 21-23, 2016, Anhui, China. (Oral presentation, In Chinese)

40.Chong Tian. Design of recyclable sorbents and application in Hg₀ adsorption in flue gas. 2rd young scientist forum in combustion, April 8-10. 2016, Hefei, China. (Oral presentation, In Chinese)

41.Chong Tian , Junying Zhang , Yongcun Zhao , Rajender Gupta. Investigations on emissions of arsenic contained fine particles in coal utilization in high temperature. Annual meeting of Engineering thermophysics , October 23-25, 2015, Beijing, China. (Oral presentation, In Chinese)

42.Chong Tian, Junying Zhang. Modes of occurrence if arsenic in coal and its release behavior in high temperature. 1st young scientist forum in coal society. December 19-20, 2014. Beijing, China. (Invited oral presentation, In Chinese)

43.Chong Tian , Junying Zhang , Hongbo Zeng , Rajender Gupta.

Fabrication of Nano silver functionalized zeolite derived from fly ash and its application on Hg⁰ adsorption. Annual meeting of Engineering thermophysics , November 1-3, 2014, Shanxi, China. (Oral presentation, In Chinese)

44. Chong Tian, Junying Zhang , Yongchun Zhao, Chuguang Zheng, Experiment study on photoreduction of CO₂ over Copper-doped Titania Catalysts. Annual meeting of Engineering thermophysics , December 3-7, 2010, Guangzhou, China. (Oral presentation, In Chinese)

2. 专利:

1. 一种富氧燃烧电厂烟气中CO₂光催化还原方法与装置, ZL201210029748.5

2. 一种用于电厂脱硫废水的喷雾装置, ZL201420868320.4

3. 煤矿瓦斯低排放催化氧化供热系统, ZL201420673164.6

4. 一种矿用除尘装置, ZL201520757688.8

3. 获奖情况:

华中科技大学优秀本科毕业生/优秀学生干部/三好研究生;

国家留学基金委留学基金;

中国工程热物理年会年度优秀论文 (2016)

六、学术和社会兼职情况

1. 主持 “17th International Conference on Heavy Metals in the

Environment” 国际会议 “Sources, emissions and controls of heavy metals” 专题分会场, 2014;

2.担任国际期刊Fuel、Environmental Science & Technology、Energy and Fuels、Environmental Pollutions等审稿人;

3.受邀参加“中国煤炭学会首届煤炭行业青年科学家论坛”并做口头报告, 2014;

4.参加第二届“全国青年燃烧学术会议”并做口头报告, 2016;

欢迎具有能源, 化工, 材料等相关专业背景, 有志从事清洁能源与利用的学生加入团队!

上一篇: 聂矗

下一篇: 王建梅

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