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## 师资队伍

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### 个人简历

出生年月：1984.10

任职年月：2012.01

职称：教授、博导

党政职务：热能工程系主任

技术职务：教授

所在学科：动力工程及工程热物理

导师：博导

最高学位：工学博士/东南大学

学术任职：国际SCI期刊《Process Safety and Environmental Protection》Subject Editor (Elsevier出版社)

国际SCI期刊《Environmental Chemistry Letters》Associate Editor (Springer出版社)

国际SCI期刊《Science of the Total Environment》Editorial Board Member (Elsevier出版社)

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### 研究领域

1. 电厂锅炉/内燃机燃烧污染物绿色减排技术
2. 生物质/固体废弃物资源化利用
3. 自由基高级氧化技术
4. 脱硫/脱硝/脱汞（一体化）和碳捕获技术
5. 太阳能/氢能利用

### 科研项目

1. 国家自然科学基金联合基金项目（2018-2020），项目负责人
2. 国家自然科学基金面上项目（2017-2019），项目负责人
3. 国家自然科学基金青年基金项目（2013-2015），项目负责人
4. 江苏省“六大人才高峰”高层次人才培养对象资助项目（2017-2019），项目负责人
5. 中国博士后科学基金特别资助项目（2014-2016），项目负责人
6. 中国博士后科学基金面上项目（61批）（2017-2019），项目负责人
7. 教育部博士点新教师基金项目（2013-2015），项目负责人
8. 中国博士后科学基金面上项目（53批）（2013-2016），项目负责人
9. 江苏省“企业博士集聚计划”资助项目（2013-2016），项目负责人
10. 江苏大学“青年骨干教师培养工程”青年学术带头人项目（2014-2017），项目负责人
11. 重点实验室开放基金3项（2013-2019），项目负责人

### 主要论文（代表性论文/第一作者/通讯作者）

1. **Liu Yangxian\***, Wang Yan. Gaseous Elemental Mercury Removal Using Combined Metal Ions and Heat Activated Peroxymonosulfate/H<sub>2</sub>O<sub>2</sub> Solutions. **AIChE Journal**, 2019, 1, 161–174.
2. **Liu Yangxian\***, Wang Yan. Simultaneous Removal of NO and SO<sub>2</sub> Using Aqueous Peroxymonosulfate with Coactivation of Cu<sup>2+</sup>/Fe<sup>3+</sup> and High Temperature. **AIChE Journal**, 2017, 63, 1287–1302.
3. **Liu Yangxian\***, Jun Zhang. Removal of NO from Flue Gas Using UV/S<sub>2</sub>O<sub>8</sub><sup>2-</sup> Process in A Novel Photochemical Impinging Stream Reactor. **AIChE Journal**, 2017, 63, 2968–2980.
4. **Liu Yangxian\***, Zhang Jun, Yin Yanshan. Removal of Hg<sup>0</sup> from Flue Gas Using Two Homogeneous Photo-Fenton- Like Reactions. **AIChE Journal**, 2015, 61, 1322–1333.
5. **Liu Yangxian\***, Pan Jianfeng, Wang Qian. Removal of Hg<sup>0</sup> from Containing-SO<sub>2</sub>/NO Flue Gas by Ultraviolet/H<sub>2</sub>O<sub>2</sub> Process in A Novel Photochemical Reactor. **AIChE Journal**, 2014, 6, 2275–2285.
6. **Liu Yangxian\***, Wang Yan, Liu Ziyang and Wang Qian. Oxidation Removal of Nitric Oxide from Flue Gas Using UV Photolysis of Aqueous Hypochlorite. **Environmental Science & Technology**, 2017, 51, 11950–11959.

7. **Liu Yangxian\***, Qian Wang, Jianfeng Pan. Novel Process on Simultaneous Removal of Nitric Oxide and Sulfur Dioxide Using Vacuum Ultraviolet (VUV)-Activated  $O_2/H_2O/H_2O_2$  System in A Wet VUV-Spraying Reactor. **Environmental Science & Technology**, **2016**, 50, 12966–12975.
8. **Liu Yangxian\***, Wang Qian. Removal of Elemental Mercury from Flue Gas by Thermally Activated Ammonium Persulfate in A Bubble Column Reactor. **Environmental Science & Technology**, **2014**, 20, 12181–12189.
9. **Liu Yangxian\*** and Yan Wang. Gaseous Elemental Mercury Removal Using VUV and Heat Coactivation of Oxone/ $H_2O/O_2$  in A VUV- Spraying Reactor. **Fuel**, **2019**, 243, 352–361.
10. **Liu Yangxian\***, Li Ying, Xu Hui, Xu Jinjin. Oxidation Removal of Gaseous  $Hg^0$  Using Enhanced-Fenton System in A Bubble Column Reactor. **Fuel**, **2019**, 246, 358–364.
11. **Liu Yangxian\***, Xu Wen, Zhao Liang, Wang Yan, Zhang Jun. Absorption of NO and Simultaneous Absorption of  $SO_2/NO$  Using Vacuum Ultraviolet Light/Ultrasound/ $KHSO_5$  System. **Energy&Fuels**, **2017**, 31, 12364–12375.
12. Yang Wei, Xu Wen, Liu Ziyang, **Liu Yangxian\***. Removal of Elemental Mercury from Simulated Flue Gas Using Sargassum Chars Modified by  $NH_4Br$  Reagent. **Fuel**, **2018**, 214, 196–206.
13. Wang Yan, Xu Hui, **Liu Yangxian\***. Oxidative Absorption of Elemental Mercury from Flue Gas Using Modified Fenton-Like Wet Scrubbing System. **Energy&Fuels**, **2019**, 31, 12364 – 12375.
14. **Liu Yangxian\***, Wang Yan. Elemental mercury removal from flue gas using heat and  $Co^{2+}/Fe^{2+}$  coactivated oxone oxidation system. **Chemical Engineering Journal**, **2018**, 348, 464–475.
15. Yang Wei, **Liu Yangxian\***, Wang Qian, Pan Jianfeng. Removal of elemental mercury from flue gas using wheat straw chars modified by Mn-Ce mixed oxides with ultrasonic-assisted impregnation. **Chemical Engineering Journal**, **2017**, 326, 169–181.
16. Yang Wei, Arshad Hussain, Zhang Jun, **Liu Yangxian\***. Removal of Elemental Mercury from Flue Gas Using Red Mud Impregnated by KBr and KI Reagent. **Chemical Engineering Journal**, **2018**, 341, 483–494.
17. Xu Wen, Hussain Arshad, **Liu Yangxian\***. A Review on Modification Methods of Adsorbents for Elemental Mercury from Flue Gas. **Chemical Engineering Journal**, **2018**, 346, 692–711.
18. Xu Wen, Adewuyi Yusuf G., **Liu Yangxian\***, Wang Qian. Removal of Elemental Mercury from Flue Gas Using CuOx and  $CeO_2$  Modified Rice Straw Chars Enhanced by Ultrasound. **Fuel Processing Technology**, **2018**, 170, 21–31.
19. Liu Ziyang, Yang Wei, Xu Wen, **Liu Yangxian\***. Removal of Elemental Mercury by Bio-chars Derived from Sargassum and Enteromorpha Impregnated with Potassium Iodine. **Chemical Engineering Journal**, **2018**, 339, 468–478.
20. Liu Ziyang, Adewuyi Yusuf G., Shi Shuo, Chen Hui, Li Ying, Liu Dongjing, **Liu Yangxian\***. Removal of Gaseous  $Hg^0$  Using Novel Seaweed Biomass-based Activated Carbon. **Chemical Engineering Journal**, **2019**, 366, 41–49.
21. **Liu Yangxian\***, Wang Yan, Zhao Liang, Pan Jianfeng\*, Wang Qian and Jun Zhang. Removal of NO in Flue Gas Using Vacuum Ultraviolet Light/Ultrasound/Chlorine in A VUV-US Coupled Reactor. **Fuel Processing Technology**, **2018**, 169, 226–235.

22. Wang Yan, Wang Zhuliang, Pan Jianfeng, **Liu Yangxian\***. Removal of Hydrogen Sulfide Using Fenton Reagent in A Spraying Reactor. **Fuel**, **2019**, 239, 70–75.
23. Xu Wen, Pan Jianfeng, Fan Baowei, **Liu Yangxian\***. Removal of Gaseous Elemental Mercury Using Seaweed Chars Impregnated by  $\text{NH}_4\text{Cl}$  and  $\text{NH}_4\text{Br}$ . **Journal of Cleaner Production**, **2019**, 216, 277–287.
24. **Liu Yangxian\*** and Wang Yan. Removal of  $\text{Hg}^0$  from Simulated Flue Gas by Ultraviolet Light/Heat/ Persulfate Process in an UV-Impinging Stream Reactor. **Energy&Fuels**, **2018**, 32, 12416–12425. 2018.11.18
25. Wang Yan, Wang Zhuliang, **Liu Yangxian\***. Oxidation Absorption of Gaseous  $\text{H}_2\text{S}$  Using Fenton-Like Advanced Oxidation Systems. **Energy&Fuels**, **2018**, 11, 11289–11295.
26. **Liu Yangxian\***, Wen Xu, Jianfeng Pan, Qian Wang. Oxidative Removal of NO from Flue Gas Using Ultrasound,  $\text{Mn}^{2+}/\text{Fe}^{2+}$  and Heat Coactivation of Oxone in An Ultrasonic Bubble Reactor. **Chemical Engineering Journal**, **2017**, 326, 1166–1176.
27. **Liu Yangxian\***, Liu Ziyang, Wang Yan, Yin Yanshan, Pan Jianfeng, Zhang Jun, Wang Qian. Simultaneous Absorption of  $\text{SO}_2$  and NO from Flue Gas Using Ultrasound/ $\text{Fe}^{2+}$ /Heat Coactivated Persulfate System. **Journal of Hazardous Materials**, **2018**, 342, 326–334.
28. **Liu Yangxian\***, Wang Yan, Wang Qian, Pan Jianfeng, Jun Zhang. Simultaneous Removal of NO and  $\text{SO}_2$  Using Vacuum Ultraviolet Light (VUV)/Heat/Peroxymonosulfate (PMS). **Chemosphere**, **2018**, 190, 431– 441.
29. **Liu Yangxian\***, Wang Yan, Yin Yanshan, Pan Jianfeng and Zhang Jun. Oxidation Removal of Nitric Oxide from Flue Gas Using Ultraviolet Light (UV) and Heat Coactivated Oxone System. **Energy&Fuels**, **2018**, 32, 1999–2008.
30. **Liu Yangxian\***, Zhang Jun, Pan Jianfeng. Photochemical Oxidation Removal of  $\text{Hg}^0$  from Containing  $-\text{SO}_2/\text{NO}$  Flue Gas by UV(Ultraviolet)/ $\text{H}_2\text{O}_2$  Process. **Energy&Fuels**, **2014**, 28, 2135– 2143.
31. **Liu Yangxian\***, Zhou Jianfei, Zhang Yongchun, Pan Jianfeng, Wang Qian, Zhang Jun. Removal of  $\text{Hg}^0$  and Simultaneous Removal of  $\text{Hg}^0/\text{SO}_2/\text{NO}$  in Flue Gas Using Two Fenton- Like Reagents in a Spray Reactor. **Fuel**, **2015**, 145, 180–188.
32. **Liu Yangxian\***, Zhang Jun, Yin Yanshan. Study on absorption of elemental mercury from flue gas by UV/ $\text{H}_2\text{O}_2$ : Process parameters and reaction mechanism. **Chemical Engineering Journal**, **2014**, 249, 72–78.
33. **Liu Yangxian\***, Pan Jianfeng\*, Tang Aikun, Wang Qian. A Study on Mass Transfer–Reaction Kinetics of NO Absorption by Using UV/ $\text{H}_2\text{O}_2$ /NaOH Process. **Fuel**, **2013**, 108, 254–260.
34. **Liu Yangxian\***, Pan Jianfeng\*, Zhang Jun, Tang Aikun and Liu Yong. Study on Mass Transfer-Reaction Kinetics of NO Removal from Flue Gas by Using UV/Fenton-Like Reaction. **Ind. Eng. Chem. Res.**, **2012**, 51, 12065–12072.
35. **Liu Yangxian\***, Zhang Jun, Pan Jianfeng\*, Tang Aikun. Investigation on Removal of NO from  $\text{SO}_2$ - Containing Simulated Flue Gas by UV/Fenton-Like Reaction. **Energy & Fuels**, **2012**, 26, 5430 – 5436.
36. **Liu Yangxian\***, Zhang Jun, Wang Zhuliang. A Study on Kinetics of NO Absorption from Flue Gas by Using UV/Fenton Wet Scrubbing. **Chemical Engineering Journal**, **2012**, 197, 468– 474.

37. Liu Yangxian, Zhang Jun. Photochemical Oxidation Removal of Nitric Oxide and Sulfur Dioxide from Simulated Flue Gas of Coal-fired Power Plants by Wet Scrubbing using UV/H<sub>2</sub>O<sub>2</sub> Advanced Oxidation Process. **Ind. Eng. Chem. Res.** **2011**, 50, 3836–3841.

38. Liu Yangxian, Zhang Jun, Sheng Changdong. Study on Kinetics of NO Removal from Simulated Flue Gas by Wet UV/H<sub>2</sub>O<sub>2</sub> Advanced Oxidation Process. **Energy&Fuels**, **2011**, 25, 1547–1552.

39. Liu Yangxian, Zhang Jun, Sheng Changdong. Kinetic Model of NO Removal from SO<sub>2</sub>-Containing Simulated Flue Gas by Wet UV/SO<sub>2</sub> Advanced Oxidation Process. **Chemical Engineering Journal**, **2011**, 168, 183–189.

40. Liu Yangxian, Zhang Jun, Sheng Changdong, ZhangYongchun and Zhao Liang. Simultaneous removal of NO and SO<sub>2</sub> from coal-fired flue gas by UV/H<sub>2</sub>O<sub>2</sub> advanced oxidation process. **Chemical Engineering Journal**, **2010**, 162, 1006–1011.

### 获奖情况

1. 2016年度江苏省第十三批“六大人才高峰”高层次人才培养对象
2. 2016年度《中国博士后科学基金资助者选介》（全国99名）
3. 江苏省优秀博士学位论文奖
4. 东南大学优秀博士学位论文奖
5. 2013年江苏大学“青年骨干教师”青年学术带头人培养对象
6. 2012-2015江苏大学优秀学业导师

### 授权专利（代表性发明专利/第一发明人）

1. 刘杨先, 张军, 王燕, 张永春. 一种光激发电解同时脱硫脱硝脱汞的方法及装置. 2018. 授权号: ZL201610605185.8
2. 刘杨先, 潘剑锋. 一种光辐射电解耦合脱汞的方法及装置. 2018. 授权号: ZL 201610605948.9
3. 刘杨先, 张军, 潘剑锋. 一种光解次氯酸同时脱硫脱硝脱汞的方法及装置. 2018. 授权号: ZL201610606789.4
4. 刘杨先, 潘剑锋, 张军, 唐爱坤. 一种光辐射氯原子和羟基脱除烟气汞的方法及装置. 2018. 授权号: ZL201610241277.2
5. 刘杨先, 张军, 潘剑锋, 张永春. 一种光辐射次氯酸钠同时脱硫脱硝脱汞脱碳的方法及装置. 2018. 授权号: ZL201610239826.2
6. 刘杨先. 草木灰浆液对尾气中多污染物一体化脱除的方法及装置. 2018. 授权号: ZL 2016102 25317.4
7. 刘杨先, 王燕, 邵霞. 一种光辐射臭氧双氧水同时脱硫脱硝脱汞方法. 2017. 授权号: ZL20151019 1175.X
8. 刘杨先, 王燕, 唐爱. 一种臭氧联合光激发过氧化物的VOCs净化系统及方法. 2017. 授权号: 201510190236.0

9. 刘杨先, 潘剑锋, 潘振华. 一种基于自由基高级氧化的VOCs脱除方法. 2017. 授权号: 2015 10191214.6
10. 刘杨先, 张军, 潘剑锋. 一种基于光活化过硫酸铵的脱硫脱硝脱汞的系统. 2016. 授权号: ZL2013 10683135.8
11. 刘杨先, 潘剑锋, 唐爱坤. 利用烟气余热高温活化过硫酸钠的脱硫脱硝的系统及方法. 2015. 授权号: ZL201310683163.X
12. 刘杨先, 潘剑锋, 唐爱坤. 一种基于紫外灯耦合烟道脱汞的方法及系统. 2016. 授权号: ZL201310683054.8
13. 刘杨先, 张军, 潘剑锋. 一种带有空气冷却装置的光学烟道脱汞的系统. 2015. 授权号: ZL2013 10684668.8
14. 刘杨先, 潘剑锋, 唐爱坤. 一种基于超声波激发过硫酸钠脱除烟气汞的方法及系统. 2016. 授权号: ZL201310687780.7
15. 刘杨先, 王燕, 张军. 一种臭氧活化过硫酸盐的烟气净化方法及装置. 2016. 授权号: ZL20141024 0142.5
16. 刘杨先, 王燕, 张军. 一种臭氧过氧化氢诱导自由基的烟气净化方法及系统. 2016. 授权号: ZL201 410214503.9
17. 刘杨先, 王燕, 张军, 阮小娇. 基于羟基和硫酸根自由基氧化的同时脱硫脱硝脱汞方法. 2016. 授权号: ZL201510190593.7
18. 刘杨先, 王燕, 潘剑锋. 一种基于海藻焦脱硫脱硝脱汞的方法及海藻焦的制备方法. 2016. 授权号: ZL201410655509.X
19. 刘杨先, 张军, 盛昌栋, 张永春, 赵亮, 丁启忠. 一种基于光化学高级氧化的同时脱硫脱硝系统. 2012. 授权号: ZL201010296492.5
20. 刘杨先, 张军, 盛昌栋, 张永春, 赵亮, 丁启忠. 一种基于光化学高级氧化作用的烟气脱汞系统. 2012. 授权号: ZL201010296592.8

#### 其他

1. 每年拟招收博士生1名;
2. 硕士研究生3名。



相关链接: [国家自然科学基金委中科院热物理所江苏省科技厅 江苏大学科技处中科院期刊分区在线平台信息公告学习强国Web Of ScienceEngineering Village](#)

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