

## English 教学工作

## 基本信息



高宁博, 博士生导师, 副教授

## 联系方式

邮编: 710049

邮箱: [nbogao@xjtu.edu.cn](mailto:nbogao@xjtu.edu.cn)

办公电话: 0086 29 82668572

办公地点: 兴庆教学二区化工楼422室

## 社会兼职

1. 国家自然科学基金函评专家;
2. 陕西省科技厅评审专家;
3. 国际期刊 Biomed Research International 责任编辑, Journal of Chemistry 客座编辑;
4. Applied Energy, Environment Science & Technology, Fuel, Journal of Cleaner Production, Thermochimica Acta, Industrial & Engineering Chemistry Research, Energy Conversion and Management, Fuel Processing Technology, Journal of Analytical and Applied Pyrolysis, Waste Management, The Canadian Journal of Chemical Engineering, 化工学报, 环境科学, Chinese Science Bulletin 等期刊审稿人。

## 我的新闻

学术论文获得ESI高被引	2020-09-12
课题组参加科技计划重点项目获批	2020-09-04
学术论文被国际权威期刊Fuel (SCI/EI, IF= 5.578) 录用出版	2020-08-21
学术论文被国际期刊Journal of Chemistry (SCI/EI, IF= 1.79) 录用出版	2020-07-12
发明专利获得授权	2020-07-04
祝贺三位硕士研究生顺利毕业	2020-07-04
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## 研究领域

1. 固体废物处理及资源化;
2. 生活垃圾处理及资源化利用;
3. 含油污泥无害化与资源化利用;
4. 生物质/煤气化、热解及污染物控制;
5. 焦油催化重整制氢;
6. 市政/工业污泥处理及资源化;
7. 有机固体废物生物处理技术

## 教育、工作经历

- 2016/06-至今 西安交通大学能动学院, 博士生导师
- 2016/08-2017/07 英国赫尔大学化工学院, 访问学者
- 2015/12-至今 西安交通大学能动学院, 副教授, 硕士生导师
- 2011/04-2015/12 大连理工大学环境学院, 讲师, 硕士生导师
- 2009/03-2011/04 大连理工大学环境学院, 讲师, 师资博士后
- 2005/03-2009/02 大连理工大学能源与动力学院, 热能工程, 工学博士

## 负责的科研项目

## 近年主持的部分科研课题

25. 陕西省联合基金项目-陕煤联合基金项目重点项目, 2019JLZ-12
24. 欧盟EU-RISE 2020 Horizon Project, 项目号: 823745 — BIOMASS-CCU — H2020-MSCA-RISE-2018, 2019-2022
23. 中国博士后科学基金特别资助, 项目号: 2018T111070, 2018-2020
22. 陕西省博士后基金一等资助, 2018-2019
21. 企业委托技术开发课题, 2017-2018
20. 石油石化污染控制与处理国家重点实验室技术开发合同, 2017-2019
19. 陕西省科技计划项目-工业攻关, 2017-2020
18. 中国博士后基金一等资助, 2017-2019

## 招聘/招生信息

1. 招聘：常年招聘环境、热能、化工、生物领域教授、副教授、讲师、博士后。提供科研办公面积200m<sup>2</sup>，远低于市场价购住房，年薪18万-45万不等，小孩入交大附校。特别优秀的急需人才，相关待遇和支持条件面议。

要求：40岁以下，具有海内外知名大学博士学位，在固体废物处理及相关领域取得较好成绩或具有较大发展潜力的海内外优秀青年人才。

2. 招生：每年招收博士生、硕士生若干名，欢迎具有环境、热能、催化、化工等背景的同学加入。

## 站点计数器



17. 西安交通大学本科教学改革项目, 2016-2018
16. 中央高校基本科研业务费学科交叉项目, 2016-2018
15. 教育部一流大学建设 - 环境工程学科创新平台建设, 2016-2017
14. 西安交通大学教师支持计划, 2016-2019
13. 国家自然科学基金面上项目, 项目号: 51476023, 2015-2018
12. 国家自然科学基金青年基金, 项目号: 51006018, 2010-2013
11. 国家自然科学基金国际(地区)合作与交流项目, 项目号: 51011140584, 2011-2012
10. 中国博士后科学基金特别资助, 项目号: 201003616, 2010-2014
9. 中国博士后基金面上资助, 项目号: 20090451264, 2009-2012
8. 辽宁省教育厅科学技术研究项目, 项目号: L2013027, 2013-2015

## 获奖

12. 2020年学术论文获得陕西省第十四届自然科学优秀学术论文二等奖, 高宁博, 全翠, 刘宝玲, 李宗阳, 吴春飞, 基于螺旋反应器的污泥连续热解: 产物特性和重金属的生态风险评估 (Continuous pyrolysis of sewage sludge in a screw-feeding reactor: products characterization and ecological risk assessment of heavy metals) .
11. 2019, Janpan-China-Korea Joint Symposium, Development of activated biochar supported Ni catalyst for enhancing tar steam reforming, 2019.9.4-7, Tokyo, Japan. 优秀墙报奖;
10. 2018年, The 6th International Symposium on Gasification and its Application (ISGA-6), 2018.10.25-28, Chengdu, China. 优秀墙报奖;
9. 2014年, 学术论文“Characteristics of hydrogen-rich gas production of biomass gasification with porous ceramic reforming”, 获辽宁省自然科学学术成果一等奖;
8. 2010年, 学术论文“上吸式固定床生物质水蒸气气化多孔陶瓷重整制氢研究”获辽宁省自然科学学术成果二等奖;
7. 2010年, 学术论文“Modeling and simulation of combined pyrolysis and reduction zone for a downdraft biomass gasifier”, 获大连市自然科学优秀学术论文三等奖;
6. 2014年获大连理工大学优秀本科毕业论文指导教师奖;
5. 2014年获大连理工大学校工作量考核优秀教师;
4. 2013年获大连理工大学化工环境与生命学部优秀教师;
3. 2012年大连理工大学创新创业训练计划“优秀指导教师”称号;
2. 2012年指导的本科生获得“辽宁省第十一届“挑战杯”辽宁省大学生课外学术科技作品竞赛”省二等奖;
1. 2012年指导的本科生获得“第四届高校环保科技创意设计大赛”, 银奖。

## 专利

38. 高宁博, 陈凯轮, 全翠, 一种高含水率有机物的水热脱水处理反应装置及其操作方法, 发明, 实审
37. 高宁博, 程丽杰, 全翠, 一种高氯酸铵废水的处理方法, 2019113206024, 2019-12-19, 发明, 实审
36. 高宁博, 段一航, 全翠, 一种废弃含能材料的处理方法, 2019113205888, 2019-12-19, 发明, 实审
35. 高宁博, 王凤超, 全翠, 一种有机固体废物两级还原热解制备改性活性炭的方法、系统和应用, 201910943536X, 2019-09-30, 发明, 实审
34. 高宁博, 李家琦, 全翠, 有机固体燃料热解、气化及焚烧一体化装置及处理方法, 2019102493646, 2019-03-29, 发明, 授权
33. 高宁博, 李宗阳, 全翠, 一种含尘油气的除尘装置及除尘方法, 2019101810668, 2019-03-11, 2020-04-28, 发明, 授权
32. 高宁博, 段一航, 全翠, 一种旋风除尘装置及其操作方法, 2019101810916, 2019-03-11, 2020-03-17, 发明, 授权
31. 高宁博, 李宗阳, 全翠, 一种用于高含水率有机物处理的装置及方法, PCT/CN2018/115440, 2018-11-14, 发明, 已递交
30. 高宁博, 李宗阳, 全翠, 一种用于高含水率有机物处理的装置及方法, 2018108479760, 2018-07-27, 发明, 授权
29. 高宁博, 李宗阳, 全翠, 水热脱水处理高含水率有机物的反应釜及连续式系统, 201621310662X, 2016-12-01, 2017-08-01, 实用新型, 授权
28. 高宁博, 李宗阳, 全翠, 水热脱水处理高含水率有机物的反应釜、连续式系统及方法, 2016110912578, 2016-12-01, 发明, 已递交
27. 高宁博, 韩映, 全翠, 一种陶瓷膜氧化还原反吹系统, 2016204741303, 2016-05-23, 2016-11-30, 实用新型, 授权

26. **高宁博**,韩映,全翠,一种陶瓷膜氧化还原反吹系统及方法, 2016103483173, 2016-05-23, 2018-08-10, 发明, 授权
25. 全翠,苏瑞瑞,**高宁博**,一种耦合处理高浓度有机废水和重金属废水的方法, 2018116427452, 2018-12-29,发明,授权
24. **高宁博**;李宗阳;全翠,一种有机固体燃料内除尘式热解气化装置与方法,发明, (201510381567.2) , 已授权.
23. **高宁博**,郝乔,尹志凡,一种磁稳定催化重整方法与装置 (201210326137.7) , 已授权.
22. **高宁博**,刘爽,李爱民,张雷,一种有机液体燃料雾化催化重整方法及装置, (201310025747.8) 已授权.
21. **高宁博**,刘保玲,李爱民,一种催化陶瓷膜反应装置,发明/实用新型, 201410492167.4/201420549511.4, 已授权.
20. 多孔陶瓷高温带压水蒸气制备装置 (200610200415.9) , 已授权.
19. 超绝热部分氧化焦油焦炭清除及气体重整方法与装置(200810012601.9), 已授权.
18. 一种有机废物制取活性炭一体化装置及方法 (200910310173.2) , 已授权.
17. 一种有机物两级干燥与气化一体化的装置及方法 (201110062338.6) , 已授权.
16. 一种有机固体燃料干燥、热解焚烧一体化方法与装置, (201210387495.9) ,已授权.
15. 一种连续式制备活性炭的一体化装置 (ZL 201320434911.6) , 中国, 实用新型, 2013-11, 已授权.
14. 一种除尘、催化一体化装置 (201410490544.0), 发明, 已授权.
13. 一种连续式制备活性炭的一体化装置及方法, 201310306054.6, 已授权.
12. Method for preparation of active carbon by pyrolysis of organics. 2013, PAT US8563467 (US9650254-B2), 已授权, (美国专利) .
11. 一种有机固体废物气化焚烧一体化方法及装置. 发明专利, 2014. 201410069870.4, 已授权.
10. 一种堆叠式换热器, 实用新型, 2014, 201410491310.8/201420549623.X, 已授权.
9. 一种整体式换热器及其加工方法, 发明, 201410490710.7, 已授权.
7. 一种隧道窑的制砖方法, 发明, 201410491306.1, 已授权.
6. 一种垃圾压制成型方法及切削式造粒装置, 发明/实用新型, 201410490543.6/201420549345.8, 已授权.
5. 一种有机固体废物焚烧一体化装置及方法, 发明/实用新型, 201410490545.5/201420550004.2, 已授权.
4. 一种有机物热解制取活性炭方法, 201110083062.X, 已授权.
3. 一种翻转床热固载体热解析装置(200910304367.1) , 已授权.
2. 一种采用多孔陶瓷的消泡方法, (201010152892.9) , 已授权.
1. 一种利用熔融盐活化制备活性炭的方法, 201410350867.X, 已授权.

#### 代表性学术论文

- [92] **Ningbo Gao\***, Kamran Kamran, Zhengzhao Ma, Cui Quan. Investigation of product distribution from co-pyrolysis of side wall waste tire and off-shore oil sludge. *Fuel*, 2021, 285: 119036. <https://doi.org/10.1016/j.fuel.2020.119036>. (SCI, IF=5.578, Top).
- [91] Zeeshan Hameed, Dr.Salman Naqvi, Muhammad Naqvi, Imtiaz Ali, Syed Ali Taqvi, **Ningbo Gao**, Syed Azfar Hussain and Sadiq Hussain. A comprehensive review on thermal co-conversion of biomass, sludge, coal and their blends using thermogravimetric analysis. *Journal of Chemistry*, 2020, <https://doi.org/10.1155/2020/5024369>. (SCI/EI, IF=1.79)
- [90] Yuanting Qiao, Shuming Zhang, Cui Quan\*, **Ningbo Gao**, Chris Johnston, Chunfei Wu. One-pot synthesis of digestate-derived biochar for carbon dioxide capture, *Fuel*, 2020, Doi: <https://doi.org/10.1016/j.fuel.2020.118525> (SCI, IF=5.578, Top).
- [89] **Ningbo Gao\***, Ayesha Tariq Sipra, Cui Quan. Thermogravimetric analysis and pyrolysis product characterization of municipal solid waste using sludge fly ash as additive, *Fuel*, 2020, Doi: <https://doi.org/10.1016/j.fuel.2020.118572>. (SCI, IF=5.578, Top).
- [88] **高宁博\***, 陈凯轮, 全翠. 固体废物处理与处置课程创新教学与实践. *环境工程*, 2020. 出版中.
- [87] 宁永安, 段一航, **高宁博\***, 全翠. 煤气化渣组分回收与利用技术研究进展. *洁净煤技术*, 2020. 出版中.
- [86] Janka Bobek-Nagy, **Gao Ningbo\***, Cui Quan, Norbert Miskolczi\*, Dóra Rippel-Pethő, Kristóf Kovács. Catalytic co-pyrolysis of packaging plastic and wood waste to achieve H<sub>2</sub> rich syngas. *International Journal of Energy Research*, 2020, <http://dx.doi.org/10.1002/er.5741>. (SCI, IF= 3.741, Top).
- [85] **高宁博\***, 陈凯轮, 全翠. 废锂离子电池回收与综合利用研究进展. *环境工程*, 2020. 出版中.

- [84] 84] **Ningbo Gao\***; Jiaqi Li; Cui Quan; Xiao Wang; Yang Yang, Oily sludge catalytic pyrolysis combined with fine particle removal using a Ni-ceramic membrane, *Fuel*, 2020, Doi:<http://dx.doi.org/10.1016/j.fuel.2020.118134>. (SCI, IF= 5.578, Top).
- [83] **Ningbo Gao\***; Xiangyu Jia; Guanqun Gao; Zhengzhao Ma; Cui Quan; Salman R Naqvi, Modeling and simulation of coupled pyrolysis and gasification of oily sludge in a rotary kiln, *Fuel*, 2020, Doi: <https://doi.org/10.1016/j.fuel.2020.118152> (SCI, IF= 5.578, Top).
- [82] Shuming Zhang; **Ningbo Gao\***; Cui Quan; Fengchao Wang; Chunfei Wu\*. Autothermal CaO looping biomass gasification to increase process energy efficiency and reduce ash sintering, *Fuel*, 2020, Doi: <https://doi.org/10.1016/j.fuel.2020.118199>. (SCI, IF= 5.578, Top).
- [81] Yue Chai, Meihong Wang, **Ningbo Gao\***, Yihang Duan, Jiaqi Li. Experimental Study on Pyrolysis/Gasification of Biomass and Plastics for H<sub>2</sub> Production under New Dual-support Catalyst, *Chemical Engineering Journal*, 2020, Doi: <https://doi.org/10.1016/j.cej.2020.125260>. (SCI, IF= 10.652, Top).
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- [74] 全翠, 王惠惠, **高宁博**, 煤热解条件因素与油气产物改性提质技术研究, *煤炭科学与技术*, 2020, 录用.
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- [70] Yue Chai, **Ningbo Gao\***, Meihong Wang\*, Chunfei Wu, H<sub>2</sub> Production from Co-pyrolysis/gasification of Waste Plastics and Biomass under Novel Catalyst Ni-CaO-C, *Chemical Engineering Journal*, 2019.<https://doi.org/10.1016/j.cej.2019.122947> (SCI, IF= 10.652, Top).
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- [68] **Ningbo Gao\***, Zongyang Li, Cui Quan, Norbert Miskolczi, Attila Egedy, A new method combining hydrothermal carbonization and mechanical compression in-situ for sewage sludge dewatering: Bench-scale verification, *Journal of Analytical and Applied Pyrolysis*, 2019, 139: 187-195. <https://doi.org/10.1016/j.jaap.2019.02.003>. (SCI, IF= 3.905, Top).
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