科研队伍

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院士风采

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副教授

讲师&博士后

研究助理

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一 基本信息

韩兰芳，1990年生，广东工业大学“青年百人计划”A+层次人才，特聘教授，硕导。主要从事天然有机碳以及生物碳和微塑料等人为有机碳的环境地球化学行为方面的研究工作。在*Environmental Science & Technology*、*SoilBiology & Biochemistry*等环境领域权威期刊发表论文50余篇。

二 研究方向

元素环境地球化学行为、土壤环境化学、生物质废弃物资源化

三 教育经历

2015.09-2019.06，北京师范大学，环境学院，获博士学位；

2016.10-2018.10，美国麻省大学University of Massachusetts-Amherst，土壤与环境化学，联合培养博士；

2012.09-2015.07，北京师范大学，环境学院，获硕士学位；

2008.09-2012.06，安庆师范大学，资源与环境学院，获学士学位。

四 工作经历

2021.07-至今，广东工业大学环境生态工程研究院，特聘教授、硕导；

2019.06-2021.06，广东工业大学环境生态工程研究院，博士后。

五 学术兼职

1.American Chemical Society (ACS)会员；

2.中国环境科学学会会员；

3.Environmental Science & Technology等环境领域主流学术期刊审稿人。

六 主要荣誉

1.北京师范大学优秀博士学位论文奖；

2.博士研究生国家奖学金（2016、2017年）；

3.唐孝炎环境科学创新奖学金一等；

4.通鼎奖学金一等；

5.第五届青年地学论坛、第五届纳米颗粒环境效应国际研讨会等会议最佳报告奖。

七 科研项目

1.典型金属离子对生物质炭稳定性的影响及驱动机制研究，国家自然科学基金青年基金项目，主持，2021-2023；

2.高效去除水中放射性核素U（VI）的生物质炭材料设计及作用机制，博士后科学基金特别资助，主持，2019-2021；

3.生物质炭中溶解性有机碳与典型土壤矿物作用的分子机制，博士后科学基金面上项目一等资助，主持，2019-2021；

4.天然和火成有机质组分与典型土壤矿物的相互作用机制，博士后国（境）外交流项目，主持，2020-2021；

5.高效钝化红壤稻田中镉的改性生物质炭材料设计及作用机制研究，广东省自然科学基金面上项目，主持，2021-2023；

6.畜禽粪便生物质炭对红壤性水稻土有机碳分子结构和矿化的影响机制，广东省粤穗联合基金，主持，2020-2022；

7.金属盐对生物质炭吸附固定水中POPs的影响机制，国家重点实验室开放课题，主持，2020-2022；

8.厌氧还原条件下水铁矿-有机碳复合体结构的稳定性，北京师范大学自主科研基金，主持，2018-2019。

八 科研成果

1.**Han, L.,**Sun H., Sun, K., Biao, Zhang., Yang, Y., Fang, L., Xing, B.,. 2021. Effect of Fe and Al ions on the production of biochar from agricultural biomass: Properties, stability and adsorption efficiency of biochar. Renewable and Sustainable Energy Reviews 145, 111133**(IF$_{2020}$：14.98)**

2.**Han, L.,**Ro, K.S., Sun, K., Sun, H., Wang, Z., Libra, J.A., Xing, B., 2016. New Evidence for High Sorption Capacity of Hydrochar for Hydrophobic Organic Pollutants. Environmental Science & Technology 50, 13274-13282.

3.**Han, L.,**Sun, K., Jin, J., Wei, X., Xia, X., Wu, F., Gao, B., Xing, B., 2014. Role of Structure and Microporosity in Phenanthrene Sorption by Natural and Engineered Organic Matter. Environmental Science & Technology 48, 11227-11234.

4.Sun, K*.,**Han, L*.,**Yang, Y., Xia, X., Yang, Z., Wu, F., Li, F., Feng, Y., Xing, B., 2020. Application of Hydrochar Altered Soil Microbial Community Composition and the Molecular Structure of Native Soil Organic Carbon in a Paddy Soil. Environmental Science & Technology 54, 2715-2725.

5.**Han, L.,**Sun, K., Jin, J., Xing, B., 2016. Some concepts of soil organic carbon characteristics and mineral interaction from a review of literature. Soil Biology & Biochemistry 94, 107-121.**(ESI高被引论文)**

6.**Han, L.,**Sun, K., Yang, Y., Xia, X., Li, F., Yang, Z., Xing, B., 2020. Biochar's stability and effect on the content, composition and turnover of soil organic carbon. Geoderma 364, 114184**(ESI高被引论文)**

7.Zheng, X., Dong, J., Zhang, W., Xiang, J., Yin, X.,**Han, L*.,**2021. Biogas residue biochar shifted bacterial community, mineralization, and molecular structure of organic carbon in a sandy loam Alfisol. Global Change Biology Bioenergy 13(5), 838-848.

8.**Han, L.,**Sun, K., Keiluweit, M., Yang, Y., Yang, Y., Jin, J., Sun, H., Wu, F., Xing, B., 2019. Mobilization of ferrihydrite-associated organic carbon during Fe reduction: Adsorption versus coprecipitation. Chemical Geology 503, 61-68.

9.**Han, L.,**Sun, H., Ro, K.S., Sun, K., Libra, J.A., Xing, B., 2017. Removal of antimony (III) and cadmium (II) from aqueous solution using animal manure-derived hydrochars and pyrochars. Bioresource Technology 234, 77-85.

10.**Han, L.,**Gao, B., Wei, X., Gao, L., Xu, D., Sun, K., 2015. The characteristic of Pb isotopic compositions in different chemical fractions in sediments from Three Gorges Reservoir, China. Environmental Pollution 206, 627-635.

11.**Han, L.,**Ro, K.S., Wang, Y., Sun, K., Sun, H., Libra, J.A., Xing, B., 2018. Oxidation resistance of biochars as a function of feedstock and pyrolysis condition. Science of the Total Environment 616, 335-344.

12.**Han, L.,**Zhang, E., Yang, Y., Sun, K., Fang, L., 2020. Highly efficient U(VI) removal by chemically modified hydrochar and pyrochar derived from animal manure. Journal of Cleaner Production 264, 121542.

13.**Han, L.,**Gao, B., Hao, H., Lu, J., Xu, D., 2019. Arsenic pollution of sediments in China: An assessment by geochemical baseline. Science of the Total Environment 651, 1983-1991.

14.**Han, L.,**Gao, B., Hao, H., Zhou, H., Lu, J., Sun, K., 2018. Lead contamination in sediments in the past 20 years: A challenge for China. Science of the Total Environment 640, 746-756.

15.**Han, L.,**Zhao, X., Jin, J., Gao, B., Yang, Y., Sun, K., Li, F., 2019. Using sequential extraction and DGT techniques to assess the efficacy of plant- and manure-derived hydrochar and pyrochar for alleviating the bioavailability of Cd in soils. Science of the Total Environment 678, 543-550.

16.**Han, L.,**Zhang, B., Chen, L., Feng, Y., Yang, Y., Sun, K., 2020. Impact of biochar amendment on soil aggregation varied with incubation duration and biochar pyrolysis temperature. Biochar (In press)

17.**Han, L.,**Gao, B., Lu, J., Zhou, Y., Xu, D., Gao, L., Sun, K., 2017. Pollution characteristics and source identification of trace metals in riparian soils of MiyunReservoir, China. Ecotoxicology and Environmental Safety 144, 321-329.

18.**Han, L.,**Wang, Z., Keiluweit, M., Yang, Y., Sun, K., Zhang, Z., Xing, B., 2018. Effect of simulated diagenesis on the compositions, chemical stability and sorption properties of natural and engineered organic matter with different mineral contents. Organic Geochemistry 120, 1-11.

19.**Han, L.,**Gao, B., Wei, X., Xu, D., Gao, L., 2016. Spatial distribution, health riskassessment, and isotopic composition of lead contamination of street dusts in different functional areas of Beijing, China. Environmental Science and Pollution Research 23(4), 3247-3255.

20.**Han, L.,**Gao, B., Zhou, H., Xu, D., Wei, X., Gao, L., 2015. The spatial distribution, accumulation and potential source of seldom monitored trace elements in sediments of Three Gorges Reservoir, China. Scientific Reports 5, 16170.

21.**Han, L.,**Gao, B., Zhou, Y., Xu, D., Gao, L., Yu, H., Wang, S., 2016. Comprehensive assessment of seldom monitored trace elements pollution in the riparian soils of the Miyun Reservoir, China. Environmental Science and Pollution Research 23, 20772-20782.

22.**韩兰芳**，孙可，康明洁，吴丰昌，Baoshan, Xing.有机质官能团及微孔特性对疏水性有机污染物吸附的影响机制.环境化学2014, 33 (11), 1811-1820.**(封面文章)**

23.**韩兰芳**，杨妍，孙可，2021.共沉淀引发的溶解性有机质在水铁矿/水界面的分子分馏特性.土壤学报.

24.张标，陈丽莹，**韩兰芳***，蔡宴朋，2021.改性生物质炭钝化修复土壤重金属污染的研究进展.环境化学.

九 我的团队

欢迎具有环境化学、环境地学、微生物学等相关背景的学生报考硕士研究生；欢迎相关专业博士毕业生进站从事博士后研究！

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