

[欢迎访问深圳大学土木与交通工程学院](#)[加入收藏](#) [设为首页](#) [English](#)

# 深圳大学 土木与交通工程学院

College of Civil and Transportation Engineering, Shenzhen University

[用户登录](#)[提交查](#)[首页](#) [学院概况](#) [教师风采](#) [党群工作](#) [本科生教育](#) [研究生教育](#) [学术研究](#) [国际交流](#) [学生工作](#) [招生招聘](#) [校友工作](#)[首页](#) > [教师风采](#) > [副教授](#) > 正文

## 段华波

编辑：马睿 发布时间：2020-04-22 17:04 浏览次数：1961

### 联系方式：

办公地址：深圳大学土木与交通工程学院A520（沧海校区致工楼）  
办公电话：(0755) 86674644  
电子邮箱：[huabo@szu.edu.cn](mailto:huabo@szu.edu.cn)

### 个人简介：

段华波，副教授，硕士生导师，中共党员，深圳市孔雀计划海外高层次人才B类，深大荔园优青学者，霍英东基金获得者。清华大学博士，麻省理工学院系统工程系博士后。中国环境科学学会循环经济分会副秘书长、委员；中国管理科学学会环境管理分会青年委员。

曾获国家生态环境部环境保护科技技术奖二等奖2次，第十五届霍英东优秀青年教师基金（2016年）。负责国家重点研发计划（子课题）、自然科学基金等多个多项纵向课题、以及深圳市住建局、ICA、顺丰科技等资助横向课题。在Nature, Renewable & Sustainable Energy Reviews, Environmental Science & Technology、中国环境等本领域TOP期刊发表学术论文100余篇，被引次数超过1500次，单篇引用最高230次。授权国家发明专利6项。先后承担6门本科生课程的教学任务。

教育背景：

2006年9月—2010年7月，清华大学 环境学院 博士，导师李金惠教授。校优秀博士论文。  
2003年9月—2006年7月，中国环境科学研究院 硕士，导师王琪研究员和黄启飞研究员，院优秀硕士论文。  
1999年9月—2003年7月，武汉科技大学 本科，环境工程专业，校优秀毕业生。

工作经历：

2014年1月-至今，深圳大学，土木工程学院，副教授  
2011年4月-2013年10月，麻省理工学院，系统工程系 (ESD,MSL) ，博士后。  
2007年4月-7月，苏黎世联邦理工学院-瑞士材料科学与工程研究所 (ETH-EMPA) ，项目研究助理, Switzerland, St.Gallen

主讲课程：

可持续建设，环境保护与可持续发展概述，城市化与城市环境

研究方向及兴趣：

1) 城市环境管理与可持续发展研究，侧重城市资源与能源效率评价、城市固体废物资源利用与管理；2) 环境系统分析与应用研究，侧重可持续建设、绿色交通与物流系统分析与评估。

科研项目：

- 1、深圳市科创委基础研究项目，项目负责人，2020，在研
- 2、国家重点研究计划-可再生能源专项，子课题负责人，2019，在研
- 3、广东省重点基础研究项目，子课题负责人，2019，在研
- 4、ICA (国际铜业协会) ，项目负责人，2018，在研
- 5、生态环境部对外合作中心，项目负责人，2018，结题
- 6、深圳市住房和建设局，项目负责人，2018，结题
- 7、顺丰科技有限公司，项目负责人，2018，结题
- 8、广东省自然科学基金，项目负责人，2016，结题
- 9、霍英东优秀青年教师基金，项目负责人，2016，结题
- 10、深圳市科创委基础研究项目，项目负责人，2016，结题

## 11、国家自然科学基金（青年基金项目），项目负责人，2015，结题

代表性学术论文：

【2020, March】

1.Zhang, N., Duan, H.\*, Miller, T. R., Tam, V. W., Liu, G., & Zuo, J\*. (2020). Mitigation of carbon dioxide by accelerated sequestration in concrete debris. *Renewable & Sustainable Energy Reviews*, 117, 109495(SCI, IF: 10.556) 【JCR-1区, TOP期刊】

2.Sun, P., Zhang, N., Zuo, J., Mao, R., Gao, X., & Duan, H\*. (2020). Characterizing the generation and flows of building interior decoration and renovation waste: A case study in Shenzhen City. *Journal of Cleaner Production*, 249, 121077(SCI, IF: 6.395) 【JCR-1区, TOP期刊】

3.Singh, N., Duan, H., & Tang, Y\*. (2020). Toxicity evaluation of E-waste plastics and potential repercussions for human health. *Environment International*, 137, 105559.(SCI, IF: 7.94) 【JCR-1区, TOP期刊】

4.Zhang, N., Duan, H.\*, Sun, P., Li, J., Zuo, J., Mao, R., ... & Niu, Y. (2020). Characterizing the generation and environmental impacts of subway-related excavated soil and rock in China. *Journal of Cleaner Production*, 248, 119242(SCI, IF: 6.395) 【JCR-1区, TOP期刊】

5.Kang, P., Zhang, H., & Duan, H\*. (2020). Characterizing the implications of waste dumping surrounding the Yangtze River economic belt in China. *Journal of Hazardous Materials*, 383, 121207(SCI, IF: 7.65) 【JCR-1区, TOP期刊】

6.Zhang, N., Wang, H., Gallagher, J., Song, Q., Tam, V. W., & Duan, H. (2020). A dynamic analysis of the global warming potential associated with air conditioning at a city scale: an empirical study in Shenzhen, China. *Environmental Impact Assessment Review*, 81, 106354(SCCI, IF: 3.749) 【Q1】

7.Kang, P., Song, G., Chen, D., Duan, H.\*, & Zhong, R. (2020). Characterizing the generation and spatial patterns of carbon emissions from urban express delivery service in China. *Environmental Impact Assessment Review*, 80, 106336(SCCI, IF: 3.749) 【Q1】

【2019】

8.Huang, Y., Duan, H. \*, Dong, D., Song, Q., Zuo, J., & Jiang, W. (2019). How to evaluate the efforts on reducing CO<sub>2</sub> emissions for megacities? Public building practices in Shenzhen city. *Resources Conservation and Recycling*, 427-434.(SCI, IF: 7.04) 【JCR-2区】

9.Liu, Q., Cao, Z., Liu, X., Liu, L., Dai, T., Duan, H., ... & Liu, G\*. (2019). Product and Metal Stocks Accumulation of China' s Megacities: Patterns, Drivers, and Implications. *Environmental Science & Technology*, 53(8), 4128-4139.(SCI, IF: 7.15) 【JCR-1区, TOP期刊】

10.Wang, H., Chen, D., Duan, H.\*, Yin, F., & Niu, Y. (2019). Characterizing urban building metabolism with a 4D-GIS model: A case study in China. *Journal of Cleaner Production*, 1446-1454.(SCI, IF: 6.395) 【JCR-1区, TOP期刊】

11.Zhang, N., Zheng, L., Duan, H.\*, Yin, F., Li, J., & Niu, Y. (2019). Differences of methods to quantify construction and demolition waste for less-developed but fast-growing countries: China as a case study. *Environmental Science and Pollution Research*, 26(25), 25513-25525.(SCI, IF: 2.9) 【JCR-3区】

12.Cao, Z., Liu, G.\*, Duan, H., Xi, F., Liu, G., & Yang, W. (2019). Unravelling the mystery of Chinese building lifetime: A calibration and verification based on dynamic material flow analysis. *Applied Energy*, 442-452(SCI, IF: 8.43) 【JCR-1区, TOP期刊】.

13.Singh, N., Duan, H.\*, Ogunseitan, O. A., Li, J., & Tang, Y. (2019). Toxicity trends in E-Waste: A comparative analysis of metals in discarded mobile phones. *Journal of Hazardous Materials*, 380, 120898(SCI, IF: 7.65) 【JCR-1区, TOP期刊】

- 14.Duan, H.\*, Song, G., Qu, S., Dong, X., & Xu, M\*. (2019). Post-consumer packaging waste from express delivery in China. *Resources Conservation and Recycling*, 137-143. (SCI, IF: 7.04) 【JCR-2区】
- 15.Duan, H. \*, Miller, T. R., Liu, G., & Tam, V. W. (2019). Construction debris becomes growing concerns of growing cities. *Waste Management*, 83, 1-5. (SCI, IF: 4.02) 【JCR-2区】
- 16.Zhao, S., Song, Q.\*, Duan, H.\*, Wen, Z., & Wang, C. (2019). Uncovering the lifecycle GHG emissions and its reduction opportunities from the urban buildings: A case study of Macau. *Resources Conservation and Recycling*, 214-226.(SCI, IF: 7.04) 【JCR-2区】  
【2018】
- 17.Duan, H.\*, Miller, T. R., Liu, G.\*, Zeng, X., Yu, K., Huang, Q.\*, ... & Li, J. Chilling Prospect: Climate change effects of mismanaged refrigerants in China. *Environ Sci & Technol.* 2018. 52, 6350-6356 (SCI, IF: 6.20) 【JCR-1区, Top期刊】
- 18.Singh, N., Duan, H. \*, Yin, F., Song, Q., & Li, J. (2018). Characterizing the materials composition and recovery potential from waste mobile phones: A comparative evaluation of cellular and smart phones. *ACS Sustainable Chemistry & Engineering*, 6(10), 13016-13024. (SCI, IF: 5.95) 【JCR-1区, Top期刊】
- 19.Song, Q.\*, Duan, H., Yu, D., Li, J., Wang, C., & Zuo, J. (2018). Characterizing the essential materials and energy performance of city buildings: A case study of Macau. *Journal of Cleaner Production*, 194, 263-276. (SCI, IF:5.72) 【JCR-2区】
- 20.Song, G., Zhang, H., Duan, H.\*, & Xu, M.\* Packaging waste from food delivery in China' s mega cities. *Resour. Conserv. Recy.* 2018, 130, 226-227. (SCI, IF: 3.28) 【JCR-3区】
- 21.Wang, J., Wu, H.\*, Duan, H.\*, Zillante, G., Zuo, J., & Yuan, H. Combining Life Cycle Assessment and Building Information Modelling to account for carbon emission of building demolition waste: A case study. *J. Clean. Prod.* 2018, 172, 3154-3166.(SCI, IF:5.72) 【JCR-2区】
- 22.Song, Q.\*, Wang, Z., Li, J., Duan, H.\*, Yu, D., & Liu, G. Comparative life cycle GHG emissions from local electricity generation using heavy oil, natural gas, and MSW incineration in Macau. *Renew. Sust. Energ. Rev.* 2018, 81, 2450-2459 (SCI, IF: 8.05) 【JCR-1区, Top期刊】
- 23.Song, Q., Wang, Z., Wu, Y., Li, J., Yu, D., Duan, H.\*, & Yuan, W. Could urban electric public bus really reduce the GHG emissions: A case study in Macau? *J. Clean. Prod.* 2018, 172, 2133-2142. (SCI, IF:5.72) 【JCR-2区】
- 24.Dong, D., Duan, H.\*, Mao, R., Song, Q., Zuo, J., Zhu, J.\* , ... & Liu, G. Towards a low carbon transition of urban public transport in megacities: A case study of Shenzhen, China. *Resour. Conserv. Recy.* 2018, 134, 149-155.(SCI, IF: 3.28) 【JCR-3区】
- 25.Yu, D., Duan, H.\*, Song, Q.\*, Li, X., Zhang, H., Zhang, H., ... & Wang, J. Characterizing the environmental impact of metals in construction and demolition waste. *Environ. Sci. Poll. Res.* 2018, 25, 13823-13832. (SCI, IF:2.74) 【JCR-3区】
- 26.Chen, MJ., Ogunseitan, OA., Duan, H. et al. China E-waste management: Struggling for future success. *Resour. Conserv. Recy.* 2018, 139, 48-49. (SCI, IF: 3.28) 【JCR-3区】
- 27.Tan, Q., Duan, H., Liu, L., J Yang, J., Li, J. Rethinking residential consumers' behavior in discarding obsolete mobile phones in China. *J Clean. Prod.* 2018, 195, 1228-1236. (SCI, IF:5.72) 【JCR-2区】
- 28.Zhang, H., Duan, H.\*, Song, M.\* , & Guan, D.\* The dynamics of carbon accumulation in Eucalyptus and Acacia plantations in the Pearl River delta region. *Annals of Forest Science*, 2018, 75(2), 40.(SCI, IF:2.10) 【JCR-2区】  
【2017】

- 29.Duan, H., Li, J., Liu, G. Developing countries: Growing threat of urban waste dumps. *Nature*. 2017, 546(7660), 599. (SCI, IF:42.35) 【JCR-1区, Top期刊】
- 30.Yu, D., Song, Q.\*, Wang, Z., Li, J., Duan, H.\*, Wang, J., ... & Wang, X. Quantifying the potential export flows of used electronic products in Macau: a case study of PCs. *Environ. Sci. Poll. Res.* 2017. 24(36), 28197-28204. (SCI, IF:2.74) 【JCR-3区】
- 31.Yu, D., Duan, H.,\* Song, Q., Liu, Y., ...& Wang, J. Characterization of brominated flame retardants from e-waste components in China. *Waste Manage.* 2017, 68, 498-507. (SCI, IF: 4.02) 【JCR-2区】
- 32.Song, Q.\*, Wu, Y., Li, J., Wang, Z., Yu, D., & Duan, H.\* Well-to-wheel GHG emissions and mitigation potential from light-duty vehicles in Macau. *Int J. Life Cycle Assess.* 2017, 1-12. (SCI, IF: 3.17) 【JCR-2区】
- 33.Mao, R., Duan, H.,\* Dong, D., ...& Dong, B. Quantification of carbon footprint of urban roads via life cycle assessment: Case study of a megacity-Shenzhen, China. *J. Clean. Prod.* 2017, 166, 40-48. (SCI, IF:5.72) 【JCR-2区】
- 34.Song, Q. \*, Wang, Z., Duan, H. \*, Li, J. Characterizing the transboundary movements of UEEE/WEEE: Is Macau a regional transfer center? *J. Clean. Prod.* 2017, 157, 243-253. (SCI, IF:5.72) 【JCR-2区】
- 35.Zhang, H., Duan, H. \*, Song, M., Zhang, Y., Huang, Q., Yang, B., Niu, Y. \* Characterization of Post-disaster Environmental Management for Hazardous Materials Incidents: Learning from the Tianjin Warehouse Explosion, China. *J. Environ. Manage.* 2017, 199, 21-30. (SCI, IF: 4.01) 【JCR-3区】
- 36.Duan, H.\*, Hu, M., Zuo, J., Zhu, J., Mao, R., Huang, Q. Assessing the carbon footprint of the transport sector in mega cities via streamlined life cycle assessment: a case study of Shenzhen, South China. *Int J. Life Cycle Assess.* 2017, 22, 683-693. (SCI, IF: 3.17) 【JCR-2区】
- 37.Zeng, X. \*, Duan, H., Wang, F., et al. Examining environmental management of e-waste: China's experience and lessons. *Renew. Sust. Energ. Rev.* 2017, 72, 1076-1082. (SCI, IF:8.05) 【JCR-1区, Top期刊, 高引论文】
- 38.Song, Q. \*, Li, J., Duan, H., Yu, D., & Wang, Z. Towards to sustainable energy-efficient city: A case study of Macau. *Renew. Sust. Energ. Rev.* 2017, 75, 504-514. (SCI, IF:8.05) 【JCR-1区, Top期刊】
- 39.Zuo, J. \*, Pullen, S., Rameezdeen, R., Bennetts, H., Wang, Y., Mao, G., ... & Duan, H. Green building evaluation from a life-cycle perspective in Australia: A critical review. *Renew. Sust. Energ. Rev.* 2017, 70, 358-368. (SCI, IF:8.05) 【JCR-1区, Top期刊, 高引论文】
- 40.Zheng, L., Wu, H., Duan, H.\*, Dong, B. Characterizing the generation and flows of construction and demolition waste in China. *Constr. Build. Mater.* 2017, 136, 405-413. (SCI, IF: 3.17) 【JCR-2区】
- 【2016】
- 41.Miller, T. R.\*, Duan, H., Gregory, J., et al. Quantifying Domestic Used Electronics Flows using a Combination of Material Flow Methodologies: A US Case Study. *Environ. Sci. & Technol.* 2016, 50(11), 5711-5719. (SCI, IF:5.39) 【JCR-1区, Top期刊】
- 42.Duan, H.\*, Yu, D., Zuo, J., Yang, B., & Niu, Y. Characterization of brominated flame retardants in construction and demolition waste components: HBCD and PBDEs. *Sci. Total Environ.* 2016, 572, 77-85. (SCI, IF: 3.98) 【JCR-2区】
- 43.Duan, H.\*, Zhang, H., Huang, Q.\*, Zhang, Y., Hu, M., Niu, Y., Zhu, J. Characterization and environmental impact analysis of sea land reclamation activities in China. *Ocean Coast. Manage.* 2016, 130, 128-137. (SCI, IF:1.75) 【JCR-3区】
- 44.Duan, H.; Li, J\*. Construction and demolition waste management: China' s lessons. *Waste Manage. Res.* 2016, 34(5), 397-398. (SCI, IF:1.35) 【JCR-4区】

- 45.Wu, H., Duan, H.\*., Zheng, L., Wang, J., Niu, Y., Zhang, G. Demolition waste generation and recycling potentials in a rapidly developing flagship megacity of South China: Prospective scenarios and implications. *Constr. Build. Mater.* 2016, 113, 1007-1016. (SCI, IF:2.265) 【JCR-2区】
- 46.Wu, H., Wang, J.\*., Duan, H.\*., Ouyang, L., Huang, W., Zuo, J. An innovative approach to managing demolition waste via GIS: A case study in Shenzhen city, China. *J. Clean. Prod.* 2016, 112, 494-593. (SCI, IF:4.96) 【JCR-2区】
- 47.Duan, H.\*., Hu, J., Yuan, W., Wang, Y., Yu, D., Song, Q., Li, J. Characterizing the environmental implications of the recycling of non-metallic fractions from waste printed circuit boards. *J. Clean. Prod.* 2016, 137, 546-554. (SCI, IF:4.96) 【JCR-2区】
- 48.Duan, H., Wang, J., Liu, L., Huang, Q., Li, J\*. Rethinking China's Strategic Mineral Policy on Indium: Implication for the Flat Screens and Photovoltaic Industries. *Progress in Photovoltaics: Research and Applications (Prog. Photovolt.: Res. Appl.)*. 2016, 24, 83-93. (SCI, IF:7.37) 【JCR-1区, Top期刊】
- 49.Duan, H.\*., Hu, J., Tan, Q., Liu, L., Wang, Y., Li, J\*. Systematic characterization of generation and management of e-waste in China. *Environ. Sci. Poll. Res.* 2016, 23, 1929-1943. (SCI, IF:2.757) 【JCR-3区】
- 【2015】
- 50.Duan, H.\*., Wang, J. Encouraging the environmentally sound management of C&D wastes in China: An integrative review and research agenda. *Renew. Sust. Energ. Rev.* 2015, 43, 611-620. (SCI, IF:6.80) 【JCR-1区, Top期刊】
- 51.Wu, H., Duan, H.\*., Wang, J.\*., Wang, T., Wang, X. Quantification of carbon emission of construction waste by using streamlined LCA: a case study of Shenzhen, China. *J. Mater. Cycl. Waste Manag.* 2015, 3, 1-9. (SCI, IF:0.95) 【JCR-4区】
- 52.Zeng, X., Song, Q., Li, J.\*., Yuan, W., Duan, H., Liu, L. Solving e-waste problem using an integrated mobile recycling plant. *J. Clean. Prod.* 2015, 90, 55-59. (SCI, IF: 4.96) 【JCR-2区】
- 53.Song, Q., Zeng, X., Li, J.\*., Duan, H., Yuan, W. Environmental risk assessment of CRT and PCB workshops in a mobile e-waste recycling plant. *Environ. Sci. Poll. Res.* 2015, 22, 1-8. (SCI, IF:2.757) 【JCR-3区】
- 54.Duan, H., Hu, M.\*., Zhang, Y., Wang, J., Jiang, W., Huang, Q\*. Quantification of carbon emissions for the transport service sector in China by using streamlined LCA. *J. Clean. Prod.* 2015, 95, 109-116. (SCI, IF: 4.96) 【JCR-2区】
- 【2014】
- 55.Duan, H.\*., Miller, T.R., Gregory, J., Kirchain, R. A Methodology for quantifying export flows of used electronics from the United States. *Environ. Sci. Technol.* 2014, 48(6), 3263-3271. (SCI, IF:5.39) 【JCR-1区, Top期刊】
- 【2014 and before】
- ...

### 奖励与荣誉:

- 1、国家环保部环境保护科技技术奖二等奖，排名第7， 2008年
- 2、国家环保部环境保护科技技术奖二等奖，排名第6， 2011年
- 3、第十五届霍英东优秀青年教师基金， 2016年
- 4、广东省优秀青年教师（培养计划项目）， 2016年

学术/社会兼职：

- 1、中国环境科学学会循环经济分会副秘书长、委员
- 2、中国管理科学学会环境管理分会青年委员

招聘与招生：

招收以下课题方向的博士后、博士研究生和硕士研究生等：

- 1) 城市建筑可持续性评价方法与应用研究；
- 2) 城市资源与能源效率（资源环境承载力）研究；
- 3) 城市固废资源化利用与环境影响评价研究；
- 4) 物质流与生命周期评价方法及其应用研究。

---

上一条：丁志坤

下一条：付艳斌

【关闭】

地址：深圳大学沧海校区致工楼 管理员信箱：[450410031@qq.com](mailto:450410031@qq.com)

Copyright © 深圳大学土木与交通工程学院 粤ICP备11018045号-7 深公网安备案4403300900556