Avanthi Deshani Igalavithana, PhD
Senior Lecturer
Department of Soil Science
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I have experience in fundamental soil science and remediation of various contaminants in soils and sediments. Furthermore, my research was covered the waste management, bioavailability of emerging contaminants, and bioenergy and value-added products such as biochar. Together with colleagues and graduate students I have published 46 research papers and book chapter, 5 of which were ranked in Web of Science as "Highly Cited Papers".

Education

March 2014 to February 2017	**Doctor of Philosophy in Biological Environment (PhD)**, Korea Biochar Research Center & School of Natural Resources and Environmental Science, Kangwon National University, Korea
October 2008 to January 2010	**Master of science in Environmental Soil Science (MSc)** Post Graduate Institute of Agriculture, University of Peradeniya, Sri Lanka.
April 2004 to March 2008	**Bachelor of science in Agriculture (BSc)**, Soil Science – Faculty of Agriculture, University of Peradeniya, Sri Lanka.

Work Experience

September 2020 up to date	**Senior Lecturer**, Department of Soil Science, Faculty of Agriculture, University of Peradeniya
September 2021 to April 2022	**Carrier Break (Childbirth)**
March 2020 to September 2020	**Carrier Break (COVID-19 impact)**
May 2018 to March 2020	**Post-Doctoral Research Fellow**, Korea Biochar Research Center, O-Jeong Eco-Resilience Institute (OJERI) & Division of Environmental Science and Ecological Engineering, Korea University, Korea
July 2019 to August 2019	**Visiting Research Fellow**, School of Chemistry, Physics and Mechanical Engineering, Science and Engineering Faculty at the Queensland University of Technology, Australia.
February 2017 to May 2018	**Carrier Break (Pregnancy and Childbirth)**
April 2013 to February 2014	**Post-Master Researcher**, Korea Biochar Research Center & School of Natural Resources and Environmental Science, Kangwon National University, Korea
September 2011 to March 2013	**Research Assistant**, Microbial Biotechnology Unit, National Institute of Fundamental Studies, Sri Lanka.
April 2010 to August 2011	**Research Assistant**, National Science and Technology Commission, Sri Lanka
May 2008 to May 2009	**Teaching Assistant**, Department of Soil Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka

Invited talks

2018	Title: Metal(loid) immobilization in soils with biochars pyrolysed in N_2 and CO_2 environments, ARC conference 2018, Resilience and New Leadership in the world, Korea University, Korea, November 26 – 28, 2018.
2020	Title: Trace metal immobilization by biochar in soils, Special symposium of Biochar at 32nd Annual Congress of the Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka, November 19-20, 2020.

2021	Title: Biochar Production, Characterization, and Application for Heavy Metal Immobilization and Soil Quality Improvements, Annual General Meeting, Soil Science Society of Sri Lanka, Sri Lanka, January 30, 2022.

Editorial service

2022	**Guest Editor**, Environmental Pollution, Special Issue "The research of Emerging Contaminants in aqueous environment: detection, toxicity, transformation, fate, remediation and mitigation"
2021 -2022	**Guest Editor**, Canadian Journal of Soil Science, Special Issue "Soil Health Evaluation: Methods and Directions"
2022 up to date	**Review Editor**, Frontiers in Energy Research and Frontiers in Bioengineering and Biotechnology
2022 up to date	**Review Editor**, Frontiers in Nanotechnologies for Environmental Applications

Professional Activities

2021 – Up to date	**Teaching panel member**, Postgraduate Institute of Agriculture, University of Peradeniya, Peradeniya
2021 – 2022	**Executive committee member,** Soil Science Society of Sri Lanka
2019	**PhD Thesis Examiner-External**, University of Queensland, Australia
2019	**Session Chair** (Economic, Social, Climatic and Environmental Issues), Engineering Sustainable Development Conference December 12-13, 2019, Seoul, Korea
2016	**Secretary**, 3rd Asia Pacific Biochar Conference (APBC 2016) conference, A Shifting Paradigm towards Advanced Materials and Energy/Environment Research, Chuncheon, Korea (email communication with international delegates from 31 countries, and assisted in website updates and conference proceeding preparation)
2014	**Secretary**, Contaminated Lands, Ecological Assessment and Remediation (CLEAR 2014) conference, Chuncheon, Korea (email communication with international delegates from 30 countries, and assisted in website updates and conference proceeding preparation)
2010 up to date	**Lifetime Member**, Young Scientist Forum (YSF), Sri Lanka
2008 -2009	Academic Sub Warden, James Peries Hall, University of Peradeniya, Sri Lanka
2008 up to date	**Lifetime Member**, Sri Lanka Soil Science Society
Reviewer	Critical Reviews in Environmental Science and Technology, Environmental Pollution, Environment International, Bioresource Technology, Chemosphere, Journal Hazardous Materials, Journal of Soils and Sediments, Environmental Geochemistry and Health, Ecotoxicology and Environmental Safety, Agriculture, Ecosystems & Environment, Journal of Environmental Management, Canadian Journal of Soil Science, Plant and Soil, Journal of Applied biological Chemistry, Science Asia, Agriculture, Sustainability, Bioresource

Scholarships and Awards

2021	Tier 4* Research Award, University of Peradeniya for excellence research contribution based on the transparent research performance scheme stipulated in the UGC circular 05/2018 Sri Lanka.
2020	Brain to Korea research award for excellence in publications in year 2019
2019	Top reviewer in Environment and Ecology (Top 1% in Field) – September 2019, Global Peer Review Awards, Publons, Web of Science Group
2019	Top reviewer in Cross-Field (Top 1% in Field) – September 2019, Global Peer Review Awards, Publons, Web of Science Group
2019	Recognized Reviewer Award, Ecotoxicology and Environmental Safety
2019	Recognized Reviewer Award, Chemosphere

2018	Excellence in Reviewing award and Top 25 Reviewer Award 2018, Journal of Soils and Sediments,
2018	Recognized Reviewer Award, Bioresource Technology
2018	Outstanding Reviewer Award, Environment International
2018	Recognized Reviewer Award, Environment International
2018	Top 50 Reviewer Award, Environmental Pollution
2018	Outstanding Reviewer Award, Journal of Hazardous Materials
2018	Recognized Reviewer Award, Journal of Hazardous Materials
2018	Recognized Reviewer Award, Agriculture, Ecosystems and Environment
2016	Excellence in Reviewing Award for 2016, Environmental Geochemistry and Health (EGAH), EGAH Top 25 Reviewers 2016, Springer. Editor in Chief: Prof. Ming H Wong, Publishing Editor: Dr. SheresthaSaini
2016	Excellence in Reviewing Award for 2016, The Journal of Soils and Sediments (JSSS), JSSS Top 25 Reviewers 2016, Springer. Editors in Chief: Dr. Philip N. Owens and Dr. ZhihongXu, Publishing Editor: Dr. SheresthaSaini
2016	Outstanding Reviewer Award, Environmental Pollution
2016	Recognized Reviewer Award, Environmental Pollution
2016	Best Student Presentation Award for oral presentation of 'Lead and Arsenic (im)mobilization and microbial community abundance in contaminated agricultural soils using slow pyrolyzedbiochar' at 5th International Conference on Soil Pollution and Remediation, Hangzhou, China held on 24 – 26 September 2016
2016	Brain to Korea travel grant to attend 5th International Conference on Soil Pollution and Remediation. 24-26 September 2016, Hangzhou, China.
2014	Brain to Korea travel grant to attend International Conference on Remediation and Management of Soil and Groundwater Contaminated Site. 26-28 November 2014, Taipei, Taiwan
2014 - 2017	Bring Excellence Students to Kangwon National University (BEST-KNU) scholarship, Kangwon National University, Korea
2013	Merit certificate for the poster presentation of 'Increasing soil N, P and K availabilities with biofilmed biofertilizers' at Young Scientist Forum symposium - 2012 held on 18 January 2013.

Teaching experience

Undergraduate Teaching

2014-2017	Kangwon National University, Korea Subject: Environmental Contaminations
2020-up to date	Faculty of Agriculture, University of Peradeniya, Sri Lanka Subjects: Soil Chemistry; Research Techniques in Soil Science; Scientific Research, and Communication in Soil Science

Graduate teaching

2020-up to date	Postgraduate Institute of Agriculture, University of Peradeniya, Sri Lanka Subjects: Environmental Soil Chemistry; Techniques in Soil, Plant, Water and Fertilizer Analysis; Environmental Impact of Inorganic Pollutants and Radionuclides
	Korea Biochar Research Center, APRU Sustainable Waste Management Program & Division of Environmental Science and Ecological Engineering, Korea University, Republic of Korea Subjects: How to write a scientific paper, Research Techniques in Soil and Biochar Analysis

Highlights of research impact

- Produced and successfully applied biochar produced from vegetable wastes to immobilized trace metals in soils and to improve the soil quality parameters.
- Assessed the most important biochar properties in immobilization of cationic trace metals in soils.
- Reviewed the effects of aging and weathering of biochar on immobilization of trace metals/metalloids in soils.
- Assessed the application of gasification biochar to adsorb CO_2 at industrial emissions.
- Evaluating the impact of biochar on microplastic in soils, and evaluating the possible waste management options to reduce the plastic waste generation.
- Reviewed the sustainable management of plastic wastes in COVID-19 pandemic.

Publications

Citations: 3181; H index: 28

(Google Scholar: https://scholar.google.com/citations?hl=en&user=4t1mRCYAAAAJ&view_op=list_works)

Journal articles (First author papers are highlighted in yellow)

1. **Igalavithana, A.D.**, You, S., Zhang, L., Shang, J., Lehmann, J., Wang, X., Zhu, Y. G., Tsang, D., Park, Y. K., Hou, D., Ok, Y. S. (2022). Progress, barriers, and prospects for achieving a "hydrogen society" and opportunities for biochar technology. ACS ES&T Engineering (Accepted)
2. Palansooriya, K. N., Yoon, I. H., Kim, S. M., Wang, C. H., Kwon, H., Lee, S. H**., Igalavithana, A. D.**, Mukhopadhyay, R., Sarkar, B., Ok, Y. S. (2022). Designer biochar with enhanced functionality for efficient removal of radioactive cesium and strontium from water. Environmental Research, 214, 114072. (IF 8.431, Journal Rank: Environmental Sciences 37/324 Q1)
3. **Igalavithana, A. D.**, Yuan, X., Attanayake, C. P., Wang, S., You, S., Tsang, D. C. W., Nzihou, A., Ok, Y. S. (2022). Sustainable management of plastic wastes in COVID-19 pandemic: The biochar solution. Environmental Research, 113495. (IF 8.431, Journal Rank: Environmental Sciences 37/324 Q1)
4. **Igalavithana, A. D.**, Mahagamage, M. G. Y. L., Gajanayake, P., Abeynayaka, A., Gamaralalage, P. J. D., Ohgaki, M., Takenaka, M., Fukai, T., Itsubo, N. (2022). Microplastics and Potentially Toxic Elements: Potential Human Exposure Pathways through Agricultural Lands and Policy Based Countermeasures. Microplastics, 1, 102-120
5. Dissanayake, P. D., Palansooriya, K. N., Sang, M. K., Oh, D. X., Park, J., Hwang, S. Y., **Igalavithana, A. D.**, Gu, C., Ok, Y. S. (2022). Combined effect of biochar and soil moisture on soil chemical properties and microbial community composition in microplastic-contaminated agricultural soil. Soil Use and Management (In press) (IF 2.95, Journal Rank: Soil Science 16/39 Q2)
6. You, S., Li, W., Zhang, W., Lim, H., Kua, H. W., Park, Y. K., **Igalavithana, A. D.**, Ok, Y. S. (2022). Energy, economic, and environmental impacts of sustainable biochar systems in rural China, Critical Reviews in Environmental Science and Technology, 52, 1063-1091 (IF 12.561, Journal Rank: Environmental Sciences 19/324 Q1)
7. Jien, S. H., Kuo, Y. L., Liao, C. S., Wu, Y. T., **Igalavithana, A. D.**, Tsang, D. C. W., Ok, Y. S. (2021). Effects of field scale in situ biochar incorporation on soil environment in a tropical highly weathered soil. Environmental Pollution, 272, 116009 (IF 8.071, Journal Rank: Environmental Sciences 28/279 Q1)
8. Zhang, M., **Igalavithana, A. D.**, Xu, L., Sarkar, B., Hou, D., Zhang, M., Bhatnagar, A., Cho, W. C., Ok, Y. S. (2021). Engineered/designer hierarchical porous carbon materials for organic pollutant removal from water and wastewater: A critical review. Critical Reviews in Environmental Science and Technology, 1-34 (Co-first author) (IF 12.561, Journal Rank: Environmental Sciences 19/324 Q1)
9. Rizwan, M., Ali, S., ur Rehman, M. Z., Rinklebe, J., Tsang, D. C. W., Tack, F. M. G., Abbasi, G. H., Hussain, A., **Igalavithana, A. D.**, Lee, B. C., Ok, Y. S. (2021). Effects of selenium on the uptake of toxic trace elements by crop plants: A review. Critical Reviews in Environmental

Science and Technology, 51, 2531-2566 (IF 12.561, Journal Rank: Environmental Sciences 19/324 Q1)

10. Palansooriya, K. N., Kim, S., **Igalavithana, A. D.**, Hashimoto, Y., Choi, Y. E., Mukhopadhyay, R., Sarkar, B., Ok, Y. S. (2021). Fe (III) loaded chitosan-biochar composite fibers for the removal of phosphate from water. Journal of hazardous materials, 415, 125464. (IF 14.224, Journal Rank: Environmental Sciences 9/279 Q1)
11. Wu, Y., Xia, Y., Jing, X., Cai, P., **Igalavithana, A. D.**, Tang, C., Tsang, D. C. W., Ok, Y. S. (2020). Recent Advances in Mitigating Membrane Biofouling Using Carbon-based Materials. Journal of Hazardous Materials, 382, 120976. (IF 14.224, Journal Rank: Environmental Sciences 9/279 Q1)
12. Hou, D., O'Connor, D., **Igalavithana, A. D.**, Alessi, D. S., Luo, J., Tsang, D. C. W., Spark, D. L., Yamauchi, Y., Rinklebe, J., Ok, Y. S. (2020). Metal contamination and bioremediation of agricultural soils for food safety and sustainability. Nature Reviews Earth and Environment, 1, 366–381 (IF 37.214, Journal Rank: Geoscience, Multidisciplinary 1/201 Q1) (Highly cited paper in 2022)
13. Zhong, Y., **Igalavithana, A. D.**, Zhang, M., Li, X., Rinklebe, J., Hou, D., Tack, F. M. G., Alessi, D. S., Tsang, D. C. W., Ok, Y. S. (2020). Effects of aging and weathering on immobilization of trace metals/metalloids in soils amended with biochar. Environmental Science: Processes & Impacts, 9, 1790-1808 (Co-first author) (IF 4.238, Journal Rank: Chemistry Analytical 16/87 Q1)
14. **Igalavithana, A. D.**, Choi, S. W., Shang, J., Hanif, A., Dissanayake, P. D., Tsang, D. C. W., Kwon, J. H., Lee, K. B., Ok, Y. S. (2020). Carbon dioxide capture in biochar produced from pine sawdust and paper mill sludge: Effect of porous structure and surface chemistry. Science of the Total Environment, 739, 139845. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1)
15. Dissanayake, P. D., Choi, S. W., **Igalavithana, A. D.**, Yang, X., Tsang, D. C. W., Wang, C. H., Kua, H. W., Lee, K. B., Ok, Y. S. (2020). Sustainable gasification biochar as a high efficiency adsorbent for CO_2 capture: A facile method to designer biochar fabrication. Renewable and Sustainable Energy Reviews, 124, 109785. (IF 16.799, Journal Rank: Green & Sustainable Science & Technology 1/47 Q1)
16. Xia, Y., Zhang, M., Tsang, D. C. W., Geng, N., Lu, D., Zhu, L., **Igalavithana, A. D.**, Dissanayake, P. D., Rinklebe, J., Yang, X., Ok, Y. S. (2020). Recent advances in control technologies for non-point source pollution with nitrogen and phosphorous from agricultural runoff: current practices and future prospects. Applied Biological Chemistry, 63, 1-13. (IF 3.206, Journal Rank: Food Science & Technology 73/143 Q1)
17. Jeon, C., Solis, K. L., An, H. R., Hong, Y., **Igalavithana, A. D.**, Ok, Y. S. (2020). Sustainable Removal of Hg (II) by Sulfur-Modified Pine-Needle Biochar. Journal of Hazardous Materials, 388, 122048. (IF 14.224, Journal Rank: Environmental Sciences 9/279 Q1)
18. Dissanayake, P. D., You, S., **Igalavithana, A. D.**, Xia, Y., Bhatnagar, A., Gupta, S., Kua, H. W., Kim, S., Kwan, J. H., Tsang, D. C. W., Ok, Y. S. (2020). Biochar-based adsorbents for carbon dioxide capture: A critical review. Renewable and Sustainable Energy Reviews, 119, 109582. (IF 16.799, Journal Rank: Green & Sustainable Science & Technology 1/47 Q1)
19. El-Naggar, A., Lee, M. H., Lee, Y. H., **Igalavithana, A. D.**, Shasheen, S. M., Ryu, C., Rinklebe, J., Tsang, D. C. W., Ok, Y. S. (2020). Biochar-induced metal immobilization and soil biogeochemical process: An integrated mechanistic approach. Science of The Total Environment, 698, 134112. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1)
20. Luo, J., He, W., Rinklebe, J., **Igalavithana, A. D.**, Tack, F. M. G., Ok, Y. S. (2019). Distribution characteristics of Cd in different types of leaves of Festuca arundinacea intercropped with Cicer arietinum L.: A new strategy to remove pollutants by harvesting senescent and dead leaves. Environmental Research, 179, Part A, 1088801. (IF 8.431, Journal Rank: Environmental Science 37/324 Q1)
21. Luo, J., Yang, G., **Igalavithana, A. D.**, He, W., Gao, B., Tsang, D. C. W., Ok, Y. S. (2019). Effects of elevated CO_2 on the phytoremediation efficiency of Noccaea caerulescens. Environmental Pollution, 225, Part 1, 113169. (IF 9.988, Journal Rank: Environmental Sciences 28/279 Q1)
22. **Igalavithana, A. D.**, Choi, S. W., Dissanayake, P. D., Shang, J., Wang, C. H., Yang, X., Kim, S., Tsang, D. C. W., Lee, K. B., Ok, Y. S. (2019). Gasification biochar from biowaste (food waste

and wood waste) for effective CO_2 adsorption. Journal of Hazardous Materials, 391, 121147. (IF 14.224, Journal Rank: Environmental Sciences 9/279 Q1)

23. Gunarathne, V., Rajapaksha, A. U., Vithanage, M., Adassooriya, N., Cooray, A., Liyanage, S., Attapattu, B., Rajakaruna, N., **Igalavithana, A. D.**, Hou, D., Alessi, D. S., Ok, Y. S. (2019). Heavy metal dissolution mechanisms from electrical industrial sludge. Science of The Total Environment, 696, 133922. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1)
24. Xiong, X., Yu, I. K. M., Tsang, D. C. W., Bolan, N. S., Ok, Y. S., **Igalavithana, A. D**., Kirkham, M. B., Kim, K. H., Vikrant, K. (2019). Value-added chemicals from food supply chain wastes: State-of-the-art review and future prospects. Chemical Engineering journal, 375, 121983. (IF 16.744, Journal Rank: Engineering, Environment 2/54 Q1) (Highly Cited Paper 2022)
25. Li, X., Zhang, M., Luo, J., Zhang, S., Yang, X., **Igalavithana, A. D.**, Ok, Y. S., Tsang, D. C. W., Lin, C. S. K. (2019). Efficient succinic acid production using a biochar-treated textile waste hydrolysate in an in situ fibrous bed bioreactor. Biochemical Engineering Journal, 149, 107249. (IF 4.446 Journal Rank: Engineering, Chemical 49/142 Q1)
26. Wang, S., Zhao, M., Zhou, M., Li, Y. C., Wang, J., Gao, B., Sato, S., Feng, K., Yin, W., **Igalavithana, A. D.**, Oleszczuk, P., Wang, X., Ok, Y. S. (2019). Biochar-Supported nZVI (nZVI/BC) for Contaminant Removal from Soil and Water: A Critical Review. Journal of Hazardous Materials, 373, 820-834. (IF 14.224, Journal Rank: Environmental Sciences 9/279 Q1) (Highly Cited Paper 2022)
27. **Igalavithana, A. D.**, Kwon, E. E., Vithanage, M., Ok, Y. S. (2019). Soil lead immobilization by biochars in short-term laboratory incubation studies. Environment International, 127, 190-198. (IF 13.352, Journal Rank: Environmental Science 16/279 Q1)
28. **Igalavithana, A. D.**, Jeon, Y. J., Kim, K. H., Ok, Y. S. (2019). Effect of biochars pyrolyzed in N_2 and CO_2, and feedstock on microbial community in metal(loid)s contaminated soils. Environment International, 126, 791-801. (IF 13.352, Journal Rank: Environmental Science 16/279 Q1)
29. Yang, X., **Igalavithana, A. D.**, Oh, S. E., Nam, H., Zhang, M., Wang, C. H., Kwon, E. E., Tsang, D. C. W. Ok, Y. S. (2018) Characterization of bioenergy biochar and its utilization for metal/metalloid immobilization in contaminated soil. Science of the Total Environment, 640-641, 704-713. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1)
30. Awad, Y. M., Wang, J., **Igalavithana, A. D.**, Tsang, D. C. W., Kim, K. H., Lee, S. S., Ok, Y. S. (2018) Biochar effects on rice paddy: Meta-analysis. Advances in Agronomy. 148, 1-32. (IF 9.265, Journal Rank: Agronomy 1/90 Q1)
31. Rajapaksha, A. U., Alam, M. S., Chen, N., Alessi, D. S., Tsang, D. C. W., **Igalavithana, A. D.**, Ok, Y. S. (2018) Removal of hexavalent chromium in aqueous solutions using biochar: chemical and spectroscopic investigations. Science of the Total Environment. 625:1567-1573. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1) (Highly Cited Paper 2022)
32. **Igalavithana, A. D.**, Yang, X., Zahra, H. R., Tack, F. M. G., Tsang, D. C. W., Kwon, E. E., Ok, Y. S. (2018) Metal(loid) immobilization in soils with biochars pyrolyzed in N_2 and CO_2 environments. Science of the Total Environment. 630, 1103-1114. (IF 10.753, Journal Rank: Environmental Sciences 26/279 Q1)
33. Mandal, S., Sarkar, B., **Igalavithana, A. D.**, Ok, Y. S., Lombi, E., Bolan, N. (2017) Mechanistic insights of 2,4-D sorption onto biochar: Influence of feedstock materials and biochar properties. Bioresource Technology. 246:160-167. (IF 11.889, Journal Rank: Agricultural Engineering 1/14 Q1)
34. **Igalavithana, A. D.**, Mandal, S., Niazi, N. K., Vithanage, M., Parikh, S. J., Mukome, F. N. D., Rizwan, M., Oleszczuk, P., Al-Wabel, M., Bolan, N., Tsang, D. C. W., Kim, K. H., Ok. Y. S. (2017) Advances and future directions of biochar characterization methods and applications. Critical Reviews in Environmental Science and Technology. 47(23), 2275-2330. (IF 12.561, Journal Rank: Environmental Sciences 19/324 Q1) (Highly Cited Paper 2022)
35. **Igalavithana, A. D.**, Farooq, M., Kim, K. H., Lee, Y. H., Qayyum, M. F., Al-Wabel, M. I., Lee, S. S., Ok, Y. S. (2017) Determining soil quality in urban agricultural regions by soil enzyme-based index. Environmental Geochemistry and Health. 39(6), 1531–1544. (IF 4.898, Journal Rank: Environmental Science 92/279 Q2)
36. **Igalavithana, A. D.**, Lee, S. S., Niazi, N. K., Lee, Y. H., Kim, K. H., Park, J. H., Moon, D. H., Ok, Y. S. (2017). Assessment of soil health in urban agriculture: Soil enzymes and microbial

properties. Sustainability, 9, 310; doi:10.3390/su9020310. (IF 3.889, Journal Rank: Environmental Science 133/279 Q2)

37. **Igalavithana, A.D.**, Ok, Y. S., Niazi, N. K., Rizwan, M., Al-Wabel, M. I., Usman, A. R. A., Moon, D. H., Lee, S. S. (2017). Effect of corn residue biochar on hydraulic properties of sandy loam soil. Sustainability, 9(2), 266 doi:10.3390/su9020266. (IF 3.889, Journal Rank: Environmental Science 133/279 Q2)
38. **Igalavithana, A. D.**, Park, J., Ryu, C., Lee, Y. H., Hashimoto, Y., Huang, L., Kwon, E. E., Ok, Y. S., Lee, S. S. (2017). Slow pyrolyzed biochars from crop residues for soil metal (loid) immobilization and microbial community abundance in contaminated agricultural soils. Chemosphere, 177, 157-166. (IF 8.943, Journal Rank: Environmental Science 33/279 Q1)
39. **Igalavithana, A. D.**, Lee, S. E., Lee, Y. H., Tsang, D. C. W., Rinklebe, J., Kwon, E. E., Ok, Y. S. (2017). Heavy metal immobilization and microbial community abundance by vegetable waste and pine cone biochar of agricultural soils. Chemosphere, 174, 593-603. (IF 8.943, Journal Rank: Environmental Sciences 33/279 Q1) (Highly cited paper in 2017-2020)
40. Awad, Y. M., Ok, Y. S., **Igalavithana, A. D.**, Lee, Y. H., Sonn, Y. K., Usman, A. R. A., Al-Wabel, M. I., Lee, S. S. (2016). Sulphamethazine in poultry manure changes carbon and nitrogen mineralisation in soils. Chemistry and Ecology, 33(10), 899-918. (IF 2.381, Journal Rank: Ecology 103/173 Q3)
41. Abid, M., Niazi, N. K., Bibi, I., Farooqi, A., Ok, Y. S., Kunhikrishnan, A., Ali, F., Ali, S., **Igalavithana, A. D.**, Arshad, M. (2016). Arsenic(V) biosorption by charred orange peel in aqueous environments. International Journal of Phytoremediation, 18(5):442-449. (IF 4.003, Journal Rank: Environmental Sciences 128/279 Q2)

Book chapters

1. El-Naggar, A., Mosa, A., **Igalavithana, A. D.**, Yang, X., El-Naggar, A. H., Shaheen, S., Chang, S. X., Rinklebe, J. (2022). Potential of Biochar to Immobilize Vanadium in Contaminated Soils. In Vanadium in Soils and Plants (1st edition), CRC Press, 9781003173274.
2. **Igalavithana, A. D.**, Ok, Y. S., Usman, A. R. A., Al-Wabel, M. I., Oleszczuk, P., Lee, S. S. (2016). The Effects of Biochar Amendment on Soil Fertility. In Guo, M., He, Z., Uchimiya, S. M. (eds), Agricultural and Environmental Applications of Biochar: Advances and Barriers, Soil Science Society of America, Madison, WI. pp 123-144.
3. Rajapaksha, A. U., Mohan, D., **Igalavithana, A. D.**, Lee, S. S., Ok, Y. S. (2016). Definitions and Fundamentals of Biochar. In Ok, Y. S., Uchimiya, M., Chang, S. X., Bolan, N. (eds) Biochar: production, characterization and application, Taylor and Francis, Boca Raton, USA. pp 4-16.
4. Buddhika, U. V. A., Seneviratne, G., Ekanayake, E. M. H. G. S., Senanayake, D. M. N., **Igalavithana, A. D.**, Weeraratne, N., Jayasekara, A. P. D. A., Weerakoon, W. L., Indrajith, A., Gunaratne, H. M. A. C., Kumara, R. K. G. K., de Silva, M. S. D. L., Kennedy, I. R. (2016). Biofilmedbiofertilizers: application in agroecosystems. In Gupta, V. K., Sharma, G. D., Tuohy, M. G., Gaur, R. (eds), The handbook of microbial bioresources, CABI, pp 96-106.
5. **Igalavithana, A. D.**, Shasheen, S., Park, J. N., Lee, S. S., Ok, Y. S. (2015). Potentially Toxic Element Contamination and Its Impact on Soil Biological Quality in Urban Agriculture: A Critical Review. In Sherameti, A., Varma, A. (eds), Heavy metal Contamination of Soils, Soil Biology, Springer, Switzerland. pp 81-101.
6. Herath, H. M. L. I., Manikdiwela, K. R., **Igalavithana, A. D.**, Seneviratne, G. (2013). Developed fungal-bacterial biofilms having nitrogen fixers: universal biofertilizers for legumes and non-legumes. In de Bruijn, F. J. (eds), Biological Nitrogen Fixation, John Wiley & Sons, USA. pp 1041-1046.
7. Seneviratne, G., **Igalavithana, A. D.**, Sandamali, H. A. J., Henakaarachchi, M. P. N. K., Jayakody, A. N. (2012). Fungal inoculation with clay improves carbon stabilization of tropical forest floor litter. Environmental Research Journal 6 (3):287-293.

Conference full paper

1. Ahmad, M., **Igalavithana, A. D.**, Lee, S. S., Rajapaksha, A., Ok, Y. S. (2014). SMART Biochar Technology for y for remediation of toxic metals in soils. Proceedings of MARCO-FFTC Joint International Seminar on Management and Remediation Technologies of Rural Soils Contaminated by Heavy Metals and Radioactive Materials. 22-26 September, Taichung, Taiwan.

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Conference Abstracts

1. **Igalavithana, A. D.**, Herath, H. M. L. I., Seneviratne, G., Jayakody. A. N. (2013). Fungal Bacterial Biofilmedbiofertilizers enhanced the Organic Carbon Accumulation in Top Soils of Tea Estates. In International proceeding of the conference "Agrobiotechnology for suistainable development", Oxford Publication Jaipur, India. pp 69-76.
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6. **Igalavithana, A. D.**, Shasheen, S. M., Park, J. N., Lee, S. S., Ok, Y. S. (2014). Potential toxic element contamination and its impact on soil biological quality in urban agriculture: A critical review. Proceedings of 2014 International Conference on Remediation and Management of Soil and Groundwater Contaminated Site. 26-28 November, Taipei, Taiwan.
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