

Prof. Yong Sik Ok has been felicitated as a Highly Cited Researcher (HCR) in three fields, namely Environment and Ecology, Engineering, and Biology and Biochemistry in 2022, which places his name among 32 influential scientists worldwide.



Yong Sik Ok, Full Professor, Research Director (Global)
Director, APRU Sustainable Waste Management Program
Director, Korea Biochar Research Center
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Korea University, Seoul 02841, Korea
Co-president, International ESG Association, Korea

H Index: 134 (Total citations: 66,244)
<https://scholar.google.com/citations?hl=en&user=xL2ME-IAAAAJen>
<http://yongsikok.korea.ac.kr/>
<https://koreauniv.pure.elsevier.com/en/persons/yong-sik-ok-2>
<https://apru.org/our-work/pacific-rim-challenges/sustainable-waste-management/>
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Prof. Yong Sik Ok is a Full Professor and the Global Research Director at Korea University, Seoul, Korea. He currently serves as the Director of the Sustainable Waste Management Program for the Association of Pacific Rim Universities (APRU), and he is the Co-President of the International ESG (Environmental, Social and Governance) Association. Prof. Ok has been felicitated as a Highly Cited Researcher (HCR) in three fields, namely Environment and Ecology, Engineering, and Biology and Biochemistry for the year 2022. Web of Science (WoS) developed by Clarivate Analytics evaluates 21 Essential Science Indicators (ESI) to identify scientists and social scientists who have had a significant impact in their fields of research on an annual basis. These HCRs have consistently demonstrated their influence via publication of multiple highly cited academic papers over the past decade. In fact, on the day that the HCR statement was released, Prof. Ok's publication profile included 107 highly cited articles (HCP), the highest ever by a South Korean researcher. As much as 95% of his papers are the result of international collaborative research programs, and 91.4% of his publications have been accepted by the top 10% of journals in each research category.

A total of 3981 researchers were declared HCRs in the year 2022 by Clarivate Analytics in 21 ESI fields. Among them, 219 (5.5%) scientists were present in two ESI fields, and only 32 (0.8%) including Prof. Ok were listed in three or more fields. As per WoS data, 303, 153, and 202 researchers across the globe received the honor of being named HCRs in the fields of Biology and Biochemistry, Engineering, and Environment and Ecology, respectively, in 2022. Prof. Ok has made history by being the only HCR in all three of these three ESI fields till date, which is abundant evidence of his outstanding contribution to research. Notably, he was declared an HCR in Cross Fields in 2018, and became the first Korean HCR in Environment and Ecology in 2019.

Additionally, he was also ascertained as the first Korean HCR in Environment and Ecology as well as Engineering in 2021.

Prof. Ok has served on the Scientific Organizing Committee of the P4G Nature Forum: Climate Change and Biodiversity, and the Nature Forum: Plastics and Sustainability. He has also chaired several major conferences, including the Engineering Sustainable Development series (ESD series), organized by the APRU and the American Institute of Chemical Engineers (AIChE). Prof. Ok hosted the first Nature conference in Seoul that was attended by representatives from several South Korean universities, on waste management and valorization for a sustainable future, in collaboration with the Chief Editors of Nature Sustainability, Nature Electronics, and Nature Nanotechnology in 2021. Further, he also partnered with Nature journal to host the first Nature Forum on Environmental, Social & Governance (ESG) for Global Sustainability: The “E” Pillar for Sustainable Business in August 2022.

Prof. Ok is working at the vanguard of global efforts for the development of sustainable waste management strategies and technologies that will address the rising crises of electronic and plastic waste, as well as soil and air pollution by particulate matter. He has served in several prestigious positions worldwide, including as honorary professor at the University of Queensland (Australia), visiting professor at Tsinghua University (China), adjunct professor at the University of Wuppertal (Germany), and guest professor at Ghent University (Belgium). He maintains a worldwide professional network by serving as Co-Editor-in-Chief of Critical Reviews in Environmental Science and Technology (CREST, five-year IF:13.2) at Taylor and Francis, an extremely distinguished and highly ranked international journal that publishes leading research on UN Sustainable Development Goals (SDGs) and ESG. Further, he is a member of the editorial advisory board of Environmental Science & Technology, as well as an editorial board member of Renewable and Sustainable Energy Reviews and Environmental Science: Water Research & Technology among several other journals of repute.

Selected Publications

1. Palansooriya, K. N., Li, J., Dissanayake, P. D., Suvarna, M., Li, L., Yuan, X., Sarkar, B., Tsang, D.C., Rinklebe, J., Wang, X. & Ok, Y. S. (2022). Prediction of Soil Heavy Metal Immobilization by Biochar Using Machine Learning. *Environmental Science & Technology*.
2. Yuan, X., Wang, J., Deng, S., Suvarna, M., Wang, X., Zhang, W., Hamilton, S.T., Alahmed, A., Jamal, A., Park, A.H.A. and Bi, X. (2022). Recent advancements in sustainable upcycling of solid waste into porous carbons for carbon dioxide capture. *Renewable and Sustainable Energy Reviews*, 162:112413
3. Yuan, X., Bank, M.S., Sonne, C., Ok, Y.S.* (2021). Dual closed-loop chemical recycling support sustainable mitigation of plastic pollution. *Matter*, 4 (4): 1095-1097(*Corresponding author).
4. Bank, M.S., Swarzenski, P.W., Bianchi, G., Metian, M., Ok, Y.S., Duarte, C.M. (2021) Reimagining aquaculture in the Global South. *Science*. 372(6539): 247-248
5. Bolan, N., Hoang, S.A., Beiyuan, J., Gupta, S., Hou, D., Karakoti, A., Joseph, S., Jung, S., Kim, K-H., Kirkham, M.B., Kua, H.W., Kumar, M., Kwon, E.E., Ok, Y.S., Perera, V., Rinklebe, J., Shaheen, S.M., Sarkar, B., Sarmah, A.K., Singh, B.P., Singh, G., Tsang, D. C. W., Vikrant, K., Vithanage, M., Vinu, A., Wang, H., Wijesekara, H., Yan, Y., Younis, S.A., Zwieter, L.V.

- (2021). Multifunctional applications of biochar beyond carbon storage, *International Materials Reviews*, Published online: 07 May 2021
6. Yuan, X., Wang, X., Sarkar, B., Ok, Y.S. (2021). The COVID-19 pandemic necessitates a shift to a plastic circular economy. *Nature Reviews Earth & Environment*, 2: 659-660 (*Corresponding Author)
 7. Yuan, X., Suvarna, M., Low, S., Dissanayake, P.D., Lee, K.B., Li, J., Wang, X., Ok, Y.S. (2021). Applied Machine Learning for Prediction of CO₂ Adsorption on Biomass Waste-Derived Porous Carbons, *Environmental Science & Technology*, 55(17): 11925-11936
 8. Bank, M.S., Ok, Y.S., Swarzenski, P.W. (2020). Microplastic's role in antibiotic resistance. *Science*, 369 (6509): 1315
 9. You, S., Sonne, C., Ok, Y.S.* (2020). COVID-19's unsustainable waste management. *Science*. 368 (6498): 1438. (*Corresponding Author)
 10. Hou, D., O'Connor, D., Igalavithana, A.D., Alessi, D.S., Luo, J., Tsang, D.C.W., Sparks, 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 & Environment*, 1: 366-381 (*Corresponding Author)
 11. Lim, H., Kani, K., Henzie, J., Nagaura, T., Nugraha, A. S., Iqbal, M., Ok, Y.S., Hossain, Md. S. A., Bando, Y., Wu, K.C.W, Kim, H.-J., Rowan, A.E., Na, J., Yamauchi, Y. (2020). A Universal Approach for the Synthesis of Mesoporous Gold, Palladium and Platinum Films for Applications in Electrocatalysis. *Nature Protocols*, 15:2980-3008
 12. O'Connor, D., Hou, D., Ok, Y. S., & Lanphear, B. P. (2020). The effects of iniquitous lead exposure on health. *Nature Sustainability*, 3(2), 77-79.
 13. Sonne, C., Alstrup, A.K.O., Ok, Y.S., Dietz, R., Kanstrup, N. (2019). Time to ban lead hunting accumulation. *Science*, 366 (6468): 961-962.
 14. Hou, D., O'Connor, D., Sonne, C., Ok, Y.S.* (2019). Trade war threatens sustainability. *Science*, 364 (6447): 1242-1243. (*Corresponding Author)
 15. Hou, D. and Ok, Y.S.*(2019). Speed up mapping of soil pollution. *Nature*, 566, 455. (*Corresponding Author)
 16. Shaheen, S. M., Niazi, N. K., Hassan, N. E. E., Bibi, I., Wang, H., Tsang, D. C. W., Ok, Y. S., Bolan, N., & Rinklebe, J. (2019). Wood-based biochar for the removal of potentially toxic elements in water and wastewater: a critical review. *International Materials Reviews*, 64(4), 216-247.
 17. Kankala, R.K., Han, Y.H., Na, J., Lee, C.H., Sun, Z., Wang, S.B., Kimura, T., Ok, Y.S., Yamauchi, Y., Chen, A.Z., Wu, K.C.W. (2020). Nanoartitected Structure and Surface Biofunctionality of Mesoporous Silica Nanoparticles. *Advanced Materials*. 1907035.
 18. Kumar, A. N.K., Dissanayake, P.D., Masek, O., Priya, A., Lin, C. S. K., Ok, Y.S.*, Kim, S-H. (2021). Recent Trends in biochar integration with anaerobic fermentation: Win-win strategies in a closed-loop. *Renewable and Sustainable Energy Reviews*. 149: 111371 (*Corresponding Author)
 19. 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 CO₂ capture: A facile method to designer biochar fabrication. *Renewable and Sustainable Energy Reviews*, 124, 109785. (*Corresponding author).
 20. Zhang M., Song G., Gelardi D.L., Huang L., Khan E., Mašek O., Parikh S.J., Ok Y.S.* (2020). Evaluating biochar and its modifications for the removal of ammonium, nitrate, and phosphate in water. *Water Research*, 186: 116303 (*Corresponding Author)

21. Zhao W., Chen Z., Yang X., Qian X., Liu C., Zhou D., Sun T., Zhang M., Wei G., Dissanayake P.D., Ok Y.S.* (2020). Recent advances in photocatalytic hydrogen evolution with high-performance catalysts without precious metals. *Renewable and Sustainable Energy Reviews*, 132: 110040 (*Corresponding Author)
22. Dissanayake, P. D., You, S., Igalavithana, A. D., Xia, Y., Bhatnagar, A., Gupta, S., Kua, H. W., Kim, S., Kwon, 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. (*Corresponding author).
23. Cao, L., Dai, P., Tang, J., Li, D., Chen, R., Liu, D., Gu, X., Li, L., Bando, Y., Ok, Y.S., Zhao, X. (2020). Spherical Superstructure of Boron Nitride Nanosheets Derived from Boron-Containing Metal-Organic Framework. *Journal of American Chemical Society*. (Published online: 28 March 2020)
24. Yu, I.K.M., Tsang, D.C.W., Yip, A.C.K., Hunt, A.J., Sherwood, J., Shang, J., Song, H., Ok, Y.S.*, Poon, C.S. (2018). Propylene carbonate and γ -valerolactone as green solvents enhance Sn (IV)-catalysed hydroxymethylfurfural (HMF) production from bread waste. *Green Chemistry*, 20: 2064-2074. (*Corresponding author).
25. Qin, Y., Li, G., Gao, Y., Zhang, L., Ok, Y. S., & An, T. (2018). Persistent free radicals in carbon-based materials on transformation of refractory organic contaminants (ROCs) in water: A critical review. *Water Research*, 137, 130-143.
26. Alam, M. S., Gorman-Lewis, D., Chen, N., Flynn, S. L., Ok, Y. S., Konhauser, K. O., & Alessi, D. S. (2018). Thermodynamic Analysis of Nickel(II) and Zinc(II) Adsorption to Biochar. *Environmental Science and Technology*, 52(11), 6246-6255.
27. Rajapaksha, A. U., Vithanage, M., Ok, Y. S., & Oze, C. (2013). Cr(VI) formation related to Cr(III)-muscovite and birnessite interactions in ultramafic environments. *Environmental Science and Technology*, 47(17), 9722-9729.
28. Van Ginkel, S. W., Hassan, S. H. A., Ok, Y. S., Yang, J. E., Kim, Y. S., & Oh, S. E. (2011). Detecting oxidized contaminants in water using sulfur-oxidizing bacteria. *Environmental Science and Technology*, 45(8), 3739-3745.

Professional Experience

2021- Present	Chairperson, International ESG Association, Korea
01/2019 - Present	Honorary Visiting Professor, School of Environmental Science and Engineering, Southern Queensland of Science and Technology, Australia
01/2019 - Present	Honorary Professor, The University of Queensland, Australia
05/2019 - Present	Visiting Professor, Henan Agricultural University, China
12/2018 - Present	Visiting Professor, Tsinghua University, China
03/2019 - Present	Research Director (Global), Korea University, Seoul, Korea
09/2017 - Present	Full Professor, Division of Environmental Science and Ecological Engineering, Korea University, Seoul, Korea
07/2016 - Present	Guest Professor, Ghent University Global Campus, Belgium
03/2016 - Present	Adjunct Professor, University of Wuppertal, Germany
12/2016 - 02/2017	Academic Visitor, Department of Chemical & Biomolecular Engineering, National University of Singapore, Singapore

06/2015 - 07/2015 Visiting Scholar, Department of Applied Analytical and Physical Chemistry, Ghent University, Belgium

12/2014 - 02/2015 Visiting Professor, Department of Civil and Environmental Engineering, Hong Kong Polytechnic University, Hong Kong

06/2013 - 06/2014 Visiting Professor, Department of Renewable Resources, University of Alberta, Canada

05/2013 - 08/2017 Guest Professor, College of Quality and Safety Engineering, China Jiliang University, China

01/2011 - Present Director, Korea Biochar Research Center, Republic of Korea

03/2007 - 08/2017 Full Professor, School of Natural Resources and Environmental Science, Kangwon National University, Korea

03/2006 - 02/2007 Research Associate, Department of Renewable Resources, University of Alberta, Canada

Editorship

Co-Editor-in Chief (former Co-Editor), *Critical Reviews in Environmental Science and Technology* (2018 to present) (<https://www.tandfonline.com/journals/best20>)

Editor, *Environmental Pollution* (2018 to present) (<https://www.sciencedirect.com/journal/environmental-pollution>)

Editor-in-Chief, *Sustainable Environment* (2020 to present) (<https://www.tandfonline.com/toc/oaes20/current>)

Associate Editor, *Biochar* (2018 to present) (<https://www.springer.com/journal/42773>)

Editorial Board Member, *Renewable & Sustainable Energy Reviews* (2019 to present) (<https://www.journals.elsevier.com/renewable-and-sustainable-energy-reviews>)

Editorial Board Member, *Chemosphere* (2016 to present) (<https://www.sciencedirect.com/journal/chemosphere>)

Editorial Advisory Board Member, *Journal of Analytical and Applied Pyrolysis* (2017 to present) (<https://www.journals.elsevier.com/journal-of-analytical-and-applied-pyrolysis>)

Editorial Board Member, *Environmental Pollutants and Bioavailability* (2015 to present) (<https://www.tandfonline.com/loi/tcsb21>)

Editorial advisory board member, *Environmental Science & Technology* (January, 2021 to present)

Advisory board member, *Environmental Science: Water Research & Technology* (February, 2021 to present)

Associate Editor, *Fuel Processing Technology* (2022 to present) (<https://www.sciencedirect.com/journal/fuel-processing-technology>)

Editorship (Past)

Editor (former Co-Editor in Chief), *Journal of Hazardous Materials* (2019 to 2020) (<https://www.journals.elsevier.com/journal-of-hazardous-materials>)

Associate Editor, *Bioresource Technology* (2019-2020) (<https://www.journals.elsevier.com/bioresource-technology>)

Associate Editor, *Environmental Geochemistry and Health* (<https://www.springer.com/journal/10653>)

Associate Editor, *Environmental Pollution* (2016-2018) (<https://www.sciencedirect.com/journal/environmental-pollution>)

Associate Editor, *Canadian Journal of Soil Science* (2013-2017) (<https://cdnsiencepub.com/journal/cjss>)

Associate Editor, *Heliyon* (2019-2020) (<https://www.cell.com/heliyon/home>)

Subject Editor, *Journal of Soils and Sediments* (2013-2019) (<https://www.springer.com/journal/11368>)

Editorial Board Member, *Chemical Engineering Journal* (<https://www.sciencedirect.com/journal/chemical-engineering-journal>)

Editorial Board Member, *Applied Biological Chemistry* (2016-2017) (<https://apblbiolchem.springeropen.com/>)

Editorial Board Member, *Environmental Geochemistry and Health* (<https://www.springer.com/journal/10653/editors>)

Editorial Board Member, *Environmental Technology* (<https://www.tandfonline.com/journals/tent20>)

Guest Editor

Guest Editor, *Journal of Hazardous Materials* (Micro(nano)plastics in the environment) (<https://www.sciencedirect.com/journal/journal-of-hazardous-materials/special-issue/10VHC741S76>)

Guest Editor, *Environment International*, (Greener and cleaner methods for remediation and risk management of contaminated land) (<https://www.journals.elsevier.com/environment-international/call-for-papers/greener-and-cleaner-methods-for-remediation-risk-management>)

Guest Editor, *Cogent Environmental Science*, (Production and Application of Biochar to Underpin Select Sustainable Development Goals) (<https://www.tandfonline.com/toc/oaes20/3/1>)

Guest Editor, *Critical Reviews in Environmental Science and Technology* (Advanced Site Characterization and Sustainable Remediation Technologies) (<https://www.tandfonline.com/loi/best20>)

Guest Editor, *Environmental Pollution* (Emerging contaminants, concerns, and characterization methods in addressing global soil pollution issues) (<https://www.journals.elsevier.com/environmental-pollution>)

Guest Editor, *Applied Energy* (Waste-to-hydrogen New Development and Direction) (<https://www.sciencedirect.com/journal/applied-energy/special-issue/107L40LK4K8>)

Guest Editor, *Critical Reviews in Environmental Science and Technology* (Advanced Site Characterization and Sustainable Remediation Technologies) (<https://www.tandfonline.com/loi/best20>)

Guest Editor, *Critical Reviews in Environmental Science and Technology* (Biomass valorization) (<https://www.tandfonline.com/loi/best20>)

Guest Editor, *Environment International*, (Waste to Resources: Emergent Materials for Environmental Applications) (<https://www.journals.elsevier.com/environment-international>)

Guest Editor, *Environment International* (Waste to Resources: Detoxification and Functionalization for Oceans and Human Health) (<https://www.journals.elsevier.com/environment-international>)

Guest Editor, *Chemical Engineering Journal* (Designer/Engineered Biochar for Sustainable Waste Management) (<https://www.journals.elsevier.com/chemical-engineering-journal>)

Guest Editor, *Journal of Hazardous Materials* (Nanomaterials in the Environment: Recent Advances in Metrology, Applications, and Fate & Transport Assessment) (<https://www.journals.elsevier.com/journal-of-hazardous-materials>)

Guest Editor, *Journal of Hazardous Materials* (Emerging applications of biochar: A way forward to attenuate environmental pollution and contaminant toxicity) (<https://www.journals.elsevier.com/journal-of-hazardous-materials>)

Guest Editor, *Bioresource Technology* ((Advances in Algal Biochar: Production, Characterization and Applications) (<https://www.journals.elsevier.com/bioresource-technology/call-forpapers/advances-in-algal-biochar-production-characterization>)

Guest Editor, *Applied Energy* (Waste-to-hydrogen New Development and Direction) (<https://www.journals.elsevier.com/applied-energy>)

Guest Editor, *Environment International* Environment International (Waste to Resources: Emergent Materials for Environmental Applications) (<https://www.sciencedirect.com/journal/environment-international/special-issue/10PV1J3XSXJ>)

Guest Editor, *Journal of CO₂ Utilization* (Innovative and Effective CO₂ Conversion and Utilization Practices) (<https://www.sciencedirect.com/journal/journal-of-co2utilization/special-issue/10RFQLL2V63>)

Guest Editor, *Science of the Total Environment* (Sustainable remediation and revival of brownfields) (<https://www.sciencedirect.com/journal/science-of-the-totalenvironment/special-issue/10TS90Z3CKR>)

Guest Editor, *Journal of Cleaner Production* (Biowaste Valorization for Biofuel, Chemical, and Biochar Production) (<https://www.sciencedirect.com/journal/journal-of-cleaner-production/special-issue/10NTP88F189>)

Guest Editor, *Bioresource Technology* (Advance Biological Treatment Technologies for Sustainable Waste Management) (<https://www.sciencedirect.com/journal/bioresource-technology/vol/168/suppl/C>)

Guest Editor, *Journal of Soils and Sediments* (Biochar for a Sustainable Environment) (<https://link.springer.com/journal/11368/17/3/page/1>)

Guest Editor, *Bioresource Technology* (Biochar: Production, Characterization and Applications - Beyond Soil Applications) (<https://www.sciencedirect.com/journal/bioresourcetechnology/vol/246/suppl/C>)

Guest Editor, *Geoderma* (Integrated Management Strategies for Arsenic and Cadmium in Rice Paddy Environments) (<https://www.sciencedirect.com/journal/geoderma/vol/270/suppl/C>)

Guest Editor, *Chemosphere* (Biochars Multifunctional Role as a Novel Technology in the Agricultural, Environmental, and Industrial Sectors) (<https://www.sciencedirect.com/journal/chemosphere/vol/142/suppl/C>)

Guest Editor, *Chemosphere* (Thermodynamics and Kinetics of Emerging Contaminants in the Environment) (<https://www.sciencedirect.com/journal/chemosphere/specialissue/10Q6MBT PWM6>)

Guest Editor, *Journal of Environmental Management* (Biogeochemistry of Trace Elements in the Environment) (<https://www.sciencedirect.com/journal/journal-of-environmentalmanagement/vol/186/part/P2>)

Guest Editor, *Process Safety and Environmental Protection* (Biowaste for Energy Recovery and Environmental Remediation) (<https://www.sciencedirect.com/journal/process-safety-and-environmental-protection/vol/115/suppl/C>) (<https://www.journals.elsevier.com/process-safety->

and-environmental-protection/call-for-papers/special-issue-biowaste-for-energy-recovery-and-environmental)

Guest Editor, *Environmental Geochemistry and Health* (Contaminated Land, Ecological Assessment and Remediation) (<http://link.springer.com/journal/10653/37/6/page/1>)

Guest Editor, *Environmental Geochemistry and Health* (Persistent Toxic Substances (PTSs) in Agroecosystems) (<http://link.springer.com/journal/10653/37/6/page/1>)

Guest Editor, *Environmental Science and Pollution Research* (Environmental Pollution and Remediation) (<http://link.springer.com/journal/11356/23/2/page/1>)

Guest Editor, *Environmental Science and Pollution Research* (Biological Waste as Resource, with a Focus on Food Waste) (<http://link.springer.com/journal/11356/23/8/page/1>)

Guest Editor, *Biodegradation* (Bioremediation of contaminated soil and water: GeoTrop 2017) (<https://link.springer.com/article/10.1007/s10532-018-9842-0>)

Guest Editor, *Journal of Chemistry* (Occurrence and Remediation of Pollutants in the Environment) (<http://www.hindawi.com/journals/jchem/si/912871/>)

International Conference Organization

- 10/2022 Chair, The 6th Asia Pacific Biochar Conference (APBC 2022), Korea
- 09/2022 Chair, APRU SWM Forum 2022, Korea
- 08/2022 Chair, 2022 Global ESG Forum
- 10/2021 Organizing Committee, Nature Conferences 2021, Seoul, Korea
- 08/2021 Co-Chair, 3rd Sustainable Waste Management Conference (Virtual)
- 06/2021 Co-Chair, The 5th International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2021), London, UK
- 05/2021 Chair, The 5th Asia Pacific Biochar Conference 2021, Hong Kong
- 05/2021 Chair of the Scientific Committee, 3rd Tsinghua Forum on Environmental Remediation, China
- 12/2020 Country Chair, PYRO ASIA 2020 E-Symposium, Singapore
- 12/2020 Chair, Engineering Sustainable Development 2020 (Virtual)
- 11/2020 Chair, Food Innovation and Engineering (FOODIE) Asia Conference, Seoul, Korea
- 10/2020 Chair, 20th International Conference on Heavy Metals in the Environment (ICHMET 2020), Seoul, Korea
- 09/2020 Co-chair, Sustainable Waste Management Conference, Glasgow, UK
- 09/2020 4th International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2020), Incheon, Korea
- 05/2020 Co-chair, 5th International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2020), London, UK
- 01/2020 Chair, Sustainable Waste Management Conference, Singapore
- 12/2019 Chair, CleanUp Korea 2019, Seoul, Korea
- 12/2019 Chair, Engineering Sustainable Development 2019, Seoul, Korea
- 11/2019 Chair, IBI Biochar World Congress 2019, Seoul, Korea
- 11/2019 Chair, 3rd IIES Workshop and Graduate Student Forum 2019, Seoul, Korea

- 11/2019 Director, Asia resilience Center Conference (ARC 2019), Korea University, Seoul, South Korea
- 07/2019 Co-chair, 9th International Conference on Geochemistry in the Tropics & Sub-Tropics (GEOTROP 2019), Queensland, Australia
- 06/2019 Co-Chair, 3rd International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2019), The Hong Kong Polytechnic University, Hong Kong
- 04/2019 Co-Chair, International Harmful Organisms Symposium 2019 (Harmful Organisms 2019), Busan, Korea
- 03/2019 Co-Chair, E2S2-CREATE and AIChE Waste Management Conference, Singapore
- 12/2018 Co-Chair, 3rd International Conference on Biological Waste as Resource (BWR2018), Hong Kong
- 11/2018 Director, Asia resilience Center Conference (ARC 2018), Korea University, Seoul, South Korea
- 11/2018 Co-Chair, 4th Asia Pacific Biochar Conference (APBC 2018), Foshan, China
- 08/2018 Co-Chair, 4th International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2018), Hung Hom, Hong Kong
- 07/2018 Session Chairs, 19th International Conference on Heavy Metals in the Environment (ICHMET 2018), Athens, USA
- 06/2018 Co-Chair, 2nd International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2018), Technology Nexus for the Resonance of Nature and Humans, Hongcheon, Korea
- 12/2017 Co-Chair & International Advisory Committee, 8th International Conference on Geochemistry in the Topics & Sub-Tropics, Ecotoxicology of Persistent Toxic Substances In Food Production (GeoTrop2017), Shenzhen, China
- 11/2017 Symposia Organizer, O-jeong Eco-Resilience Institute (OJERI) 3rd Anniversary Symposium, Seoul, Republic of Korea
- 09/2017 Session coordinator, The 7th International Contaminated Site Remediation Conference incorporating the 1st International PFAS Conference (CleanUp 2017), Melbourne, Australia
- 07/2017 Symposia Organizer, Special Symposium on Interactions between Biochars and Trace Elements (TEs) in the Environment, The International Conference on the Biogeochemistry of Trace Elements (ICOBTE 2017), Zurich, Switzerland
- 05/2017 Co-Chair, The 2nd International Conference on Biological Waste as Resource (BWR2017), Hung Hom, Hong Kong
- 04/2017 Co-Organizer, Division of Geochemistry, 253rd American Chemical Society National Meeting & Exposition: Advanced Materials, Technologies, Systems & Processes, San Francisco, United States
- 11/2016 Key International Organizing Committee Member, 3rd International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2016), Taipei, Taiwan
- 10/2016 Chair, 3rd Asia Pacific Biochar Conference (APBC 2016): A Shifting Paradigm towards Advanced Materials and Energy/Environmental Research, Chuncheon, Korea
- 10/2016 Convener, 3rd Asia Pacific Biochar Conference (APBC 2016): A Shifting Paradigm towards Advanced Materials and Energy/Environmental Research, Chuncheon, Republic of Korea

- 09/2016 Co-Organizer & International Organizing Committee Member, 5th International Conference on Soil Pollution and Remediation (SOILREM 2016), Hangzhou, China
- 09/2016 Co-Chair, Session (Application of Biochar in Soil Remediation), 5th International Conference on Soil Pollution and Remediation (SOILREM 2016), Hangzhou, China
- 09/2016 Co-Organizer & International Organizing Committee Member, 13th International Phytotechnologies Conference (PHYTOTECH 2016): Plant-Based Solutions for Environmental Problems from Lab to Field, Hangzhou, China
- 08/2016 Co-Organizer, Joint International Conference on Environment, Health, GIS and Agriculture (ISEH 2016 & Geoinformatics 2016), Galway, Ireland
- 09/2015 Convener, Session (From Biochar and Black Carbon to Stable SOM), 5th International Symposium on Soil Organic Matter (SOM 2015), Göttingen, Germany
- 08/2015 Co-Chair, International Symposium on Risk Assessment and Management of Contaminated Site, Daejeon, Republic of Korea
- 07/2015 Chair, Special Symposia (Biochar as a Sorbent for Contaminant Management in Soil and Water), 13th International Conference on the Biogeochemistry of Trace Elements (ICOBTE 2015), Fukuoka, Japan
- 01/2015 Co-Chair, Session (Eco-friendly Materials for Pollution Control), 2nd International Conference on Sustainable Urbanization (ICSU 2015), Hunghom, Hong Kong
- 12/2014 Co-Organizer, International Conference on Biological Waste as Resource, with a Focus on Food Waste, Taipo, Hong Kong
- 11/2014 International Organizing Committee, International Conference on Remediation and Management of Soil and Groundwater Contaminated Sites, Taipei, Taiwan
- 10/2014 Organizer, 2nd International Conference on Contaminated Land Ecological Assessment and Remediation (CLEAR 2014), Chuncheon, Republic of Korea
- 06/2014 Organizing Committee, 20th World Congress of Soil Science-Soils Embrace Life and Universe, Jeju, Korea
- 06/2014 Organizer and Convener, International Symposium on Biochar Soil Amendment for Environmental and Agronomic Benefits, 20th World Congress of Soil Science-Soils Embrace Life and Universe, Jeju, Republic of Korea
- 06/2014 Convener, International Symposium on Integrated Management Strategies for As and Cd in Rice Paddy Environments, 20th World Congress of Soil Science-Soils Embrace Life and Universe, Jeju, Republic of Korea
- 06/2014 Convener, International Symposium on Soil Health-Key to Food Security, 20th World Congress of Soil Science-Soils Embrace Life and Universe, Jeju, Republic of Korea
- 04/2013 Organizer, Biochar Session, International Conference on Solid Waste 2013-Innovation in Technology and Management, Wanchai, Hong Kong
- 11/2012 Organizer, International Symposium on Heavy Metal Remediation in Agricultural Ecosystems-Bioavailability-Based Soil Management Technology for Safer Food Crop Production, Chuncheon, Republic of Korea
- 11/2012 International Organizing Committee, 1st International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2012), Hangzhou, China
- 12/2011 Organizer, 1st International Symposium on Biochar for Climate Change Mitigation and Soil and Environmental Management, Chuncheon, Republic of Korea

International Scientific Committee

11/2022	Scientific Committee, MICRO 2022
10/2021	Scientific Organizing Committee, Nature Conference, Korea University, South Korea
05/2021	Scientific Organizing Committee, P4G Nature Forum, South Korea
05/2021	International Scientific Committee, Tsinghua Forum on Environmental Remediation, Beijing, China
12/2020	Scientific Organizing Committee, Nature Forum, South Korea
11/2020	Scientific Committee, MICRO 2020
12/2020	Technical Committee, PYRO ASIA 2020 E-Symposium, Singapore
03/2019	International Scientific Committee, E2S2-CREATE and AIChE Waste Management Conference, Singapore
12/2016	International Scientific Committee, Asia-Pacific Conference on Biotechnology for Waste Conversion 2016 (BioWCHK 2016), Hong Kong, China
09/2016	International Program Committee, International Conference on Heavy Metals in the Environment (ICHMET 2016), Ghent, Belgium
08/2016	Scientific and Organizing Committee Member (ISEH 2016 & ISEG 2016), Joint International Conference on Environment, Health, GIS and Agriculture (ISEH 2016, ISEG 2016 & Geoinformatics 2016), Galway, Ireland
09/2015	Scientific Committee, 5 th International Symposium on Soil Organic Matter (SOM 2015), Göttingen, Germany
05/2015	International Scientific Committee, International Conference on Solid Waste-Knowledge Transfer for Sustainable Resource Management, Wanchai, Hong Kong
06/2014	International Scientific Committee, 20 th World Congress of Soil Science-Soils Embrace Life and Universe, 2014, Jeju, Republic of Korea
07/2013	Advisory Committee, International Biochar Initiative (IBI)
05/2013	International Scientific Committee, International Conference on Solid Waste 2013-Innovation in Technology and Management, Wanchai, Hong Kong
09/2012	Scientific Committee Member, 4 th International Biochar Congress-Road to Richer Food and Safer Environment, Beijing, China
2011-Present	Scientific Committee Member, The Working Group on Remediation for Soil and Groundwater Pollution of Asian Countries
01/2019- 12/2020	Member, International Bioprocessing Association (IBA-IFIBiop)

Plenary, Keynote and Invited Speech

12/2022	Plenary Speech, International Conference on Biotechnology, Sustainable Bioresources and Bioeconomy (BSBB – 2022), Guwahati, India
11/2022	Keynote Speech, International Conference on Sustainable Waste Management and Resource Recovery (SWMR-2022), Changsha, China

10/2022 Plenary Speech, 10th International conference of IBA-IFIBiop 2022, Taiwan, China

10/2022 Plenary Speech, The 10th International Symposium on Forest Soils (ISFS 2022), Hangzhou, China

09/2022 APRU Special Session Chair and Speexh, ISWA World Congress 2022, Singapore

09/2022 Plenary Speech, 2nd International Conference on Materials for Humanity (MH 22), Singapore

09/2022 Plenary Speech, PRES 2022, Croatia

08/2022 Keynote Speech, 14th International Conference on Applied Energy (ICAE 2022), Germany

07/2022 Keynote Speech, Taipei International Conference on Catalysis (TICC-2022), Taiwan

06/2022 Plenary Speech, WasteEng 2022, Copenhagen, Denmark

06/2022 Plenary Speech, The 16th International Conference on Inorganic Membranes, Taiwan

06/2022 Plenary Speech, 8th International Symposium on Soil Organic Matter (SOM 2022), Seoul, Korea

06/2022 Plenary Speech, The 2022 Industrial Ecology Gordon Research Conference - Advancing the Circular Economy for Human and Planetary Wellbeing, USA

06/2022 Plenary Speech, The 17th International Conference on Waste Management and Technology, China

05/2022 Keynote Speech, Canadian Soil Science Society Annual Meeting 2022, Canada

05/2021 Speaker, P4G Nature Forum, South Korea

05/2021 Invited Speach, Tsinghua Forum on Environmental Remediation, Beijing, China

12/2020 Speaker, Nature Forum, Korea

12/2020 Plenary Speech, PYRO ASIA 2020 E-Sysposium, Singapore

12/2020 Invited Speach, Engineering Sustainable Development 2020, Bangkok, Thailand

11/2020 Invited Speach, Food Innovation and Engineering (FOODIE) Asia Conference, Seoul, Korea

10/2020 Plenary Speach, 20th International Conference on Heavy Metals in the Environment (ICHMET 2020), Seoul, Korea

09/2020 Keynote Speech, “Sustainable Remediation Technologies of Heavy Metals and Metalloids in Contaminated Agricultural Soils: Bioavailability and Food Security”, 4th International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2020), Incheon, Korea

10/2019 Plenary Speach, Academic Forum by Editors of International Renowned Journals and Web of Science 2018 Highly Cited Researchers, Henan Agricultural University, China

07/2019 Invited Speech, Trade war threatens sustainability, GeoTrop 2019, Griffith University, Australia

06/2018 Invited Speech, Australia-Korea Collaboration in Environment/Ecology, Korea

11/2017 Invited Speech, “SMART Biochar for Resilience-A shifting paradigm towards Environmental Research”, Invited Research Seminar, Institute of Environment and Ecology, Korea University, Republic of Korea

- 01/2017 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials”, Invited Research Seminar, Department of Building, National University of Singapore, Singapore
- 01/2017 Invited Speech, “SMART biochar technology: A shifting paradigm towards advanced materials and energy/environment research”, 2nd Renewable Energy and Biochar Workshop, National University of Singapore, Singapore
- 01/2017 Invited Speech, “SMART biochar technology: A shifting paradigm towards advanced materials and energy/environment research”, Invited Research Seminar, Nanyang Polytechnic, Singapore
- 01/2017 Invited Speech, “SMART biochar technology: A shifting paradigm towards advanced materials and energy/environment research”, Invited Research Seminar, School of Civil and Environmental Engineering, Nanyang Technological University, Singapore
- 01/2017 Invited Speech, “SMART biochar technology: A shifting paradigm towards advanced materials and energy/environment research”, Invited Research Seminar, Nanyang Environment & Water Research Institute (NEWRI), Singapore
- 01/2017 Plenary Speech, “Engineered biochar for environmental remediation and sustainable energy production”, International Conference on Materials Engineering and Nano Sciences 2017 (ICMENS 2017), Nanyang Executive Centre, Singapore
- 12/2016 Invited Speech, “Pyrolysis process of agricultural waste using CO₂ for waste management, energy recovery, and biochar fabrication”, Asia-Pacific Conference on Biotechnology for Waste Conversion 2016 (BioWC 2016), Hong Kong Baptist University, Hong Kong SAR, China
- 11/2016 Invited Speech, “Removal of hexavalent chromium in aqueous solutions using biochars: Chemical and spectroscopic investigations”, 3rd International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2016), Taipei, Taiwan
- 09/2016 Invited Speech, “Impacts of vegetable waste and pine cone biochars on microbial communities and heavy metal immobilization in contaminated soils”, 5th International Conference on Soil Pollution and Remediation (SOILREM 2016), Hangzhou, China
- 08/2016 Keynote Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and healthcare research”, Joint International Conference on Environment, Health, GIS and Agriculture (ISEH 2016 & Geoinformatics 2016), Galway, Ireland
- 07/2016 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and healthcare research”, 15th International Conference on Sustainable Energy Technologies (SET 2016), National University of Singapore, Singapore
- 10/2015 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and healthcare research”, Zhejiang University, Hangzhou, China
- 07/2015 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and energy/environment research”, Ghent University, Ghent, Belgium
- 07/2015 Invited Speech, “How to write and publish a scientific paper”, Ghent University, Ghent, Belgium

- 06/2015 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and energy/environment research”, Wuppertal University, Wuppertal, Germany
- 05/2015 Invited Speech, “SMART biochar for management of veterinary antibiotics in the environment”, International Conference on Solid Waste 2015, Wanchai, Hong Kong
- 04/2015 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and energy/environment research”, 2nd International Conference on Biochar and Green Agriculture (BioGra 2015), Nanjing, China
- 03/2015 Invited Speech, “Green remediation by biochar”, Department of Environmental Science, Zhejiang University, Hangzhou, China
- 01/2015 Invited Speech, “SMART biochar for contaminant management in soil and water, department of engineering, civil”, The University of Hong Kong, Pokfulam, Hong Kong
- 01/2015 Invited Speech, “SMART biochar for contaminant management in soil and water, school of energy and environment”, City University of Hong Kong, Tatcheave, Hong Kong
- 01/2015 Invited Speech, “SMART Biochar Technology-A shifting paradigm towards advanced materials and healthcare research”, Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University, Pokfulam, Hong Kong
- 01/2015 Invited Speech, “SMART biochar for management of veterinary antibiotics in the environment”, Department of Biology, Hong Kong Baptist University, Kowloontong, Hong Kong
- 01/2015 Invited Speech, “SMART biochar for management of veterinary antibiotics in the environment”, 2nd International Conference on Sustainable Urbanization (ICSU 2015), The Hong Kong Polytechnic University, Pokfulam, Hong Kong
- 12/2014 Keynote Speech, “SMART biochar technology for management of soil metals”, International Conference on Biological Waste as Resource, with a Focus on Food Waste, Wanchai, Hong Kong
- 11/2014 Invited Speech, “The role of biochar, natural iron oxides and nanomaterials as soil amendments for immobilizing metals in shooting range soil”, International Conference on Remediation and Management of Soil and Groundwater Contaminated Sites, Taipei, Taiwan
- 09/2014 Invited Speech, “SMART biochar technology for remediation of toxic metals in soils”, MARCO-FFTC Joint International Seminar on Management and Remediation Technologies of Rural Soils Contaminated by Heavy Metals and Radioactive Materials, Taichung, Taiwan

Education

- Ph.D. 2003** Division of Environmental Science and Ecological Engineering (formerly, Department of Agricultural Chemistry), Korea University, Seoul, Republic of Korea (Title: *Empirical and mechanistic approach to adsorption and bioavailability of cadmium in soils and plants: implications in phytoremediation*)

- M.S. 2000** Division of Environmental Science and Ecological Engineering, Korea University, Seoul, Republic of Korea (Title: *The evaluation of the hybrid model for the measurement of surface charge characteristics of clay, organic matter, oxides and composites*)
- B.S. 1998** Division of Environmental Science and Ecological Engineering, Korea University, Seoul, Republic of Korea

Publications (Journal Articles)

Highly Cited Papers (Data from Essential Science Indicators. As of 5th December 2022, these highly cited papers received enough citations to place them in the top of the academic fields of engineering, environment/ ecology, biology and biochemistry, and agricultural science based on a highly cited threshold for the field and publication year)

1. Ahmad, M., Rajapaksha, A.U., Lim, J.E., Zhang, M., Bolan, N., Mohan, D., Vithanage, M., Lee, S.S. and Ok, Y.S.* (2014). Biochar as a sorbent for contaminant management in soil and water: A review. *Chemosphere*, 99:19-33 (*Corresponding Author)
2. Mohan, D., Sarswat, A., Ok, Y.S. and Pittman, C.U. (2014). Organic and inorganic contaminants removal from water with biochar, a renewable, low cost and sustainable adsorbent-A critical review. *Bioresource Technology*, 160:191-202
3. Choppala, G., Saifullah., Bolan, N., Bibi, S., Iqbal, M., Rengel, Z., Kunhikrishnan, A., Ashwath, N., Ok, Y.S. (2014). Cellular Mechanisms in Higher Plants Governing Tolerance to Cadmium Toxicity. *Critical Reviews in Plant Sciences*. 33(5): 374-391
4. Ahmad, M., Lee, S.S., Dou, X., Mohan, D., Sung, J.K., Yang, J.E. and Ok, Y.S.* (2012). Effects of pyrolysis temperature on soybean stover- and peanut shell-derived biochar properties and TCE adsorption in water. *Bioresource Technology*, 118:536-544 (*Corresponding Author)
5. Ok, Y.S., Chang, S.X., Gao, B., Chung, H.J. (2015). SMART biochar technology-A shifting paradigm towards advanced materials and healthcare research. *Environmental Technology & Innovation*. 4: 206-209
6. Rajapaksha, A.U., Vithanage, M., Ahmad, M., Seo, D.C., Cho, J.S., Lee, S.E., Lee, S.S., Ok, Y.S. (2015). Enhanced sulfamethazine removal by steam-activated invasive plant-derived biochar. *Journal of Hazardous Materials*, 290:43-50
7. Yang, Y., Ok, Y.S., Kim, K.H., Kwon, E.E., Tsang, Y.F. (2017). Occurrences and removal of pharmaceuticals and personal care products (PCPPs) in drinking water and water/sewage treatment plants: A Review. *Science of the Total Environment*, 596: 303-320.
8. Inyang, M.I., Gao, B., Yao, Y., Xue, Y., Zimmerman, A., Mosa, A., Pullammanappallil, P., Ok, Y.S. and Cao, X. (2016). A review of biochar as a low-cost adsorbent for aqueous heavy metal removal. *Critical Reviews in Environmental Science and Technology*, 46(4):406-433
9. Rajapaksha, A.U., Chen, S.S., Tsang, D.C.W., Zhang, M., Vithanage, M., Mandal, S., Gao, B., Bolan, N.S. and Ok, Y.S.* (2016). Engineered/designer biochar for contaminant removal/immobilization from soil and water: Potential and implication of biochar modification. *Chemosphere*, 148:276-291 (*Corresponding Author)
10. Stefaniuk, M., Oleszczuk, P. and Ok, Y.S. (2016). Review on nano zerovalent iron (nZVI): From synthesis to environmental applications. *Chemical Engineering Journal*, 287:618-632
11. Park, J.H., Ok, Y.S., Kim, S.H., Cho, J.S., Heo, J.S., Delaune, R.D. and Seo, D.C. (2016). Competitive adsorption of heavy metals onto sesame straw biochar in aqueous solutions. *Chemosphere*, 142:77-83
12. Rizwan, M., Ali, S., Abbas, T., Zia-ur-Rehman, M., Hannan, F., Keller, C., Al-Wabel, M.I., Ok, Y.S. (2016). Cadmium minimization in wheat: A critical review. *Ecotoxicology and Environmental Safety*, 130: 43-53
13. Ahmad, M., Ok, Y.S., Rajapaksha, A.U., Lim, J.E., Kim, B.Y., Ahn, J.H., Lee, Y.H., Al-Wabel, M.I., Lee, S.E., Lee, S.S. (2016). Lead and copper immobilization in a shooting range

- soil using soybean stover- and pine needle-derived biochars: Chemical, microbial and spectroscopic assessments. *Journal of Hazardous Materials*, 301: 179-186
14. Lu, K., Yang, X., Gielen, G., Bolan, N., Ok, Y.S., Niazi, N.K., Xu, S., Yuan, G., Chen, X., Zhang, X., Liu, D., Song, Z., Liu, X. and Wang, H. (2017). Effect of bamboo and rice straw biochars on the mobility and redistribution of heavy metals (Cd, Cu, Pb and Zn) in contaminated soil. *Journal of Environmental Management*, 186(2):285-292
 15. Antoniadis, V., Levizou, E., Shaheen, S.M., Ok, Y.S., Sebastian, A., Baum, C., Prasad, M.N.V., Wenzel, W.W., Rinklebe, J. (2017). Trace Elements in the soil-plant interface: Phytoavailability, translocation, and phytoremediation-A Review. *Earth Science Reviews* 171: 621-645.
 16. Yang, X., Wan, Y., Zheng, Y., He, F., Yu, Z., Huang, J., Wang, H., Ok, Y., Jiang, Y. and Gao, B. (2019). Surface functional groups of carbon-based adsorbents and their roles in the removal of heavy metals from aqueous solutions: A critical review. *Chemical Engineering Journal*, 366:608-621
 17. Xiong, X., Yu, I.K.M., Cao, L., Tsang, D.C.W., Zhang, S. and Ok, Y.S.* (2017) A review of biochar-based catalysts for chemical synthesis, biofuel production, and pollution control. *Bioresource Technology*, 246:254-270 (*Corresponding Author)
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 19. El-Naggar, A', Lee, S.S., Rinklebe, J., Farooq, M., Song, H., Sarmah, A.K., Zimmerman, A.R., Ahmad, M., Shaheen, S.M. and Ok, Y.S.* (2019). Biochar application to low fertility soils: A review of current status, and future prospects. *Geoderma*, 337: 536-554. (*Corresponding author)
 20. Rizwan, M., Ali, S., Qayyum, M.F., Ok, Y.S., Adrees, M., Ibrahim, M, Zia-ur-Rehman, M., Farid, M. and Abbas, F. (2017). Effect of metal and metal oxide nanoparticles on growth and physiology of globally important food crops: A critical review. *Journal of Hazardous Materials*, 322:2-16
 21. Sun, Y., Yu, I.K.M., Tsang, D.C.W., Cao, X., Lin, D., Wang, L., Graham, N.J.D., Alessi, D.S., Komarek, M., Ok, Y.S.*, Feng, Y. and Li, X.D. (2019). Multifunctional iron-biochar composites for the removal of potentially toxic elements, inherent cations, and heterochloride from hydraulic fracturing wastewater. *Environment International*, 124:521-532. (*Corresponding Author)
 22. Abbas, T., Rizwan, M., Ali, S., Zia-ur-Rehman, M., Qayyum, M.F., Abbas, F., Hannan, F., Rinklebe, J. and Ok, Y.S. (2017). Effect of biochar on cadmium bioavailability and uptake in wheat (*Triticum aestivum* L.) grown in a soil with aged contamination. *Ecotoxicology and Environmental Safety*, 140:37-47
 23. Rizwan, M., Ali, S., Adrees, M., Ibrahim, M., Tsang, D.C.W., Zia-ur-Rehman, M., Zahir, Z.A., Rinklebe, J., Tack, F.M.G. and Ok, Y.S.* (2017). A critical review on effects, tolerance mechanisms and management of cadmium in vegetables. *Chemosphere*, 182:90-105 (*Corresponding Author)
 24. Rajapaksha, A.U., Vithanage, M., Ahmad, M., Seo, D.C., Cho, J.S., Lee, S.E., Lee, S.S. and Ok, Y.S.* (2015). Enhanced sulfamethazine removal by steam-activated invasive plant-derived biochar. *Journal of Hazardous Materials*, 290:43-50 (*Corresponding Author)

25. Hussain, M., Farooq, M., Nawaz, A., Al-Sadi, A.M., Solaiman, Z.M., Alghamdi, S.S., Ammara, U., Ok, Y.S. and Siddique, K.H.M. (2017) Biochar for crop production: Potential benefits and risks. *Journal of Soils and Sediments*, 17:685-716
26. Fang, J., Zhan, L., Ok, Y.S. and Gao, B. (2017) Minireview of potential applications of hydrochar derived from hydrothermal carbonization of biomass. *Journal of Industrial and Engineering Chemistry*, 57: 15-21
27. Choppala, G., Saifullah, Bolan, N., Bibi, S., Iqbal, M., Rengel, Z., Kunhikrishnan, A., Ashwath, N. and Ok, Y.S. (2014). Cellular mechanisms in higher plants governing tolerance to cadmium toxicity. *Critical Reviews in Plant Sciences*, 33:374-391
28. Vikrant, K., Kim, K.H., Ok, Y.S.*, Tsang, D.C.W., Tsang, Y.F., Giri, B.S. and Singh, R.S. (2017) Engineered/designer biochar for the removal of phosphate in water and wastewater. *Science of The Total Environment*, 616-617:1242-1260 (*Corresponding Author)
29. Ali, S., Rizwan, M., Qayyum, M.F., Ok, Y.S., Ibrahim, M., Riaz, M., Arif, M.S., Hafeez, F., Al-Wabel, M.I. and Shahzad, A.N. (2017). Biochar soil amendment on alleviation of drought and salt stress in plants: a critical review. *Environmental Science and Pollution Research*, 24(14):12700-12712
30. Yuan, Y., Bolan, N., Prevotau, A., Vithanage, M., Biswas, J.K., Ok, Y.S., Wang, H.L. (2017) Applications of biochar in redox-mediated reactions. *Bioresource Technology*, 246: 271-281
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32. Igalavithana, A.D., Lee, S.E., Lee, Y.H., Tsang, D.C., Rinklebe, J., Kwon, E.E. and 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 (*Corresponding Author)
33. Vithanage, M., Herath, I., Joseph, S., Bundschuh, J., Bolan, N., Ok, Y.S., Kirkham, M.B., Rinklebe, J. (2017). Interaction of arsenic with biochar in soil and water: A critical review. *Carbon*. 113: 219-230
34. Ok, Y.S., Chang, S.X., Gao, B. and Chung, H.J. (2015) SMART biochar technology-A shifting paradigm towards advanced materials and healthcare research. *Environmental Technology & Innovation*, 4:206-209
35. Chen, S.S., Maneerung, T., Tsang, D.C.W., Ok, Y.S. and Wang, C.H. (2017). Valorization of biomass to hydroxymethylfurfural, levulinic acid, and fatty acid methyl ester by heterogeneous catalysts. *Chemical Engineering Journal*, 328:246-273
36. Beiyan, J., Awad, Y.M., Beckers, F., Tsang, D.C.W., Ok, Y.S. and Rinklebe, J. (2017) Mobility and phytoavailability of As and Pb in a contaminated soil using pine sawdust biochar under systematic change of redox conditions. *Chemosphere*, 178:110-118.
37. Sarkar, B., Mandal, S., Tsang, Y.F., Kumar, P., Kim, K.H. and Ok, Y.S.* (2018) Designer carbon nanotubes for contaminant removal in water and wastewater: A critical review. *Science of the Total Environment*, 612:561-581 (*Corresponding author)
38. Wang, L., Cho, D.-W., Tsang, D.C.W., Cao, X., Hou, D., Shen, Z., Alessi, D.S., Ok, Y.S., Poon, C.S. (2019). Green remediation of As and Pb contaminated soil using cement-free clay-based stabilization/solidification. *Environment International*. 126:336-345

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41. Ahmad, M., Lee, S.S., Lee, S.E., Al-Wabel, M.I., Tsang, D.C.W., Ok, Y.S. (2017). Biochar-induced changes in soil properties affected immobilization/mobilization of metals/metalloids in contaminated soils. *Journal of Soils and Sediments*, 17(3): 717-730
42. Cao, L.C., Yu, I.K.M., Liu, Y.Y., Ruan, X.X., Tsang, D.C.W., Hunt, A.J., Ok, Y.S., Song, H., Zhang, S.C. (2018). Lignin Valorization for the production of renewable chemicals: State-of-the-art review and future prospects. *Bioresource Technology*, 269: 465-475.
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44. Ahmad, M., Ok, Y.S.*, Rajapaksha, A.U., Lim, J.E., Kim, B.Y., Ahn, J.H., Lee Y.H., Al-Wabel, M.I., Lee S.E. and Lee S.S. (2016) Lead and copper immobilization in a shooting range soil using soybean stover- and pine needle-derived biochars: Chemical, microbial and spectroscopic assessments. *Journal of Hazardous Materials*, 301:179-186
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Year 2020

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1. Wijesekara, H., Bolan, N.S., Vithanage, M., Xu, Y., Mandal, S., Brown, S.L., Hettiarachchi, G.M., Pierzynski, G.M., Huang, L., Ok, Y.S., Kirkham, M. B., Saint, C. and Surapaneni, A. (2016) Utilization of biowaste for mine spoil rehabilitation. In: Sparks, D.L. (Ed.), *Advances in Agronomy*, pp. 97-177, Academic Press, Elsevier. ISBN: 9780128046913
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Materials and Waste: Resource Recovery and Pollution Prevention, pp. 687-705, Academic Press, Elsevier. ISBN: 9780128038376

3. Vithanage, M., Rajapaksha, A.U., Ahmad, M., Shinogi, Y., Kim, K.H., Kim, G. and Ok, Y.S. (2016) Biochar for waste management and environmental sustainability. In: Wong, J.W.C., Surampalli, R.Y., Zhang, T.C., Tyagi, R.D., Selvam, A. (Ed.), Sustainable Solid Waste Management. American Society of Civil Engineers. ISBN: 9780784414101
4. Shaheen, S.M., Tsadilas, C.D., Ok, Y.S. and Rinklebe, J. (2016) Potential mobility, bioavailability, and plant uptake of toxic elements in temporary flooded soils. In: Rinklebe, J., Knox, A., Paller, M. (Ed.), Trace Elements in Waterlogged Soils and Sediments, pp. 287-312, CRC Press, Taylor and Francis Group. ISBN: 9781482240511

Year 2015

1. Igalavithana, A.D., Shaheen, S.M., Park, J.N., Lee, S.S and Ok, Y.S.* (2015) Potentially toxic element contamination and its impact on soil biological quality in urban agriculture: A critical review. In: Sherameti, I., Varma, A. (Ed.), Heavy Metal Contamination of Soils, pp. 81-101, Springer. ISBN: 9783319145259 (*Corresponding Author)
2. Rajapaksha, A.U., Mohan, D., Igalavithana, A.D., Lee, S.S. and Ok, Y.S.* (2015) Definitions and fundamentals of biochar. In: Ok, Y.S., Uchimiya, S.M., Chang, S.X., Bolan, N., Biochar: Production, Characterization, and Applications. CRC Press, Taylor and Francis Group. ISBN: 9781482242294 (*Corresponding Author)
3. Kunhikrishnan, A., Bibi, I., Bolan, N., Seshadri, B., Choppala, G., Niazi, N.K., Kim, W. and Ok, Y.S. (2015) Biochar for Inorganic Contaminant Management in Waste and Wastewater. In: Ok, Y.S., Uchimiya, S.M., Chang, S.X., Bolan, N., Biochar: Production, Characterization, and Applications. CRC Press, Taylor and Francis Group. ISBN: 9781482242294
4. Igalavithana, A.D., Ok, Y.S.* , Usman, A.R.A., Al-Wabel., M.I., Oleszczuk, P. and Lee, S.S. (2015) The effect of biochar amendment on soil fertility. In: Guo, M., He, Z., Uchimiya, S.M. (Ed.), Agricultural and Environmental Applications of Biochar: Advances and Barriers. SSSA Special Publication 63, pp. 101-122, Soil Science Society of America, Inc. ISBN: 9780891189640 (*Co-first Author)

Year 2014

1. Vithanage, M., Wijesekara, S.S.R.M.D.H.R., Siriwardana, A.R., Mayakaduwa, S.S. and Ok, Y.S.* (2014) Management of municipal solid waste landfill leachate: A global environmental issue. In: Malik, A., Grohmann, E., Akhtar, R. (Ed.), Environmental Deterioration and Human Health, pp. 263-288. Springer. ISBN 9789400778900 (*Corresponding Author)

Year 2012

1. Ahmad, M., Lee, S.S., Moon, D.H., Yang, J.E. and Ok, Y.S.* (2012) A review of environmental contamination and remediation strategies for heavy metals at shooting range soils. In: Malik, A., Grohmann, E. (Ed.), *Environmental Protection Strategies for Sustainable Development*, pp. 437-451, Springer. ISBN: 9789400715905 (*Corresponding Author)

Year 2009

1. Ok, Y.S., Chang, S.X. and Feng, Y. (2009) The role of atmospheric N deposition in soil acidification in forest ecosystems. In: Muñoz, S.I. (Ed.), *Ecology Research Progress*, pp. 47-77. Nova Science Publishers, Inc. ISBN: 9781606925607

Year 2008

1. Yang, J.E., Ok, Y.S., Kim, W.I. and Lee, J.S. (2008) Heavy metal pollution, risk assessment and remediation in paddy soil environment: Research experiences and perspectives in Korea. In: Sánchez, M.L. (Ed.), *Causes and Effects of Heavy Metal Pollution*, pp. 341-369. Nova Science Publishers. ISBN: 9781608762552

Teaching Experience

Undergraduate

Environmental remediation, soil conservation, environmental and ecological engineering, environmental contamination and remediation, environmental ecology, risk assessment, environment and bioenergy experiment, plant and environmental sciences, environmental stress and plant responses, agriculture and information, instrumental analysis, intellectual property right in agroindustry, introduction to biological environment, capstone design, career development skills, internship, advice on goal setting and career planning, soil and groundwater remediation, bio-based products engineering etc.

Graduate

Environmental remediation, ecological engineering, bioremediation, soil pollution, special Topics on Environmental Remediation cycles of chemicals in soil, biogeochemistry, phytoremediation, environmental pollution assessment methodology, environmental pollution and plant response, risk assessment, current topics in environmental remediation, thesis advising, seminar, etc.

Supervision of Personnel

Current postdoctoral fellows, visiting scientists, and graduate students: >10 persons.

Postdoctoral fellows and visiting scientists supervised: >10 persons.

Graduate students supervised: >15 persons.

Graduate supervisory committees served: >30 persons.

Patents

Pending Patents

1. Ok, Y.S., Vithanage, M., Rajapaksha, A., Lee, S.S., Park, J.N. and Chung, Y.S. (2016) Method of inhibiting transport of antibiotics in soil using biochars. 2016-0001832, Korea
2. Ok, Y.S., Rajapaksha, A., Lim, J.E., Zhang, M., Lee, S.S., Park, J.N. and Chung, Y.S. (2015) Method of inhibiting absorption of antibiotics in plants using biochars. 2015-0139152, Korea
3. Ok, Y.S., Vithanage, M., Rajapaksha, A., Lee, S.S. and Park, J.N. (2015) Method for biochar activating using by steam treatment, steam activated biochar for being settled steam treatment and manufacturing method thereof. 2015-0139145, Korea
4. Ok, Y.S., Park, J.N., Lim, J.E. and Ahn, J.H. (2014) Manufacturing method of biochar using sewage sludge and its effect on Pb immobilization in soil. 2014-0115019, Korea
5. Ok, Y.S., Lim, J.E., Seong, J.G., Lee H.Y. and Jeong, Y.S. (2010) Method for stabilization of heavy metals in soils using heat-treated livestock wastes and soil conditioner. 2010-0137227, Korea
6. Ok, Y.S., Lim, J.E., Lee, H.Y. and Kwon, O.G. (2010) Method for stabilization of heavy metals in soils using heat-treated livestock and fisheries wastes. 2010-0131266, Korea
7. Ok, Y.S., Yang, J.E. and Ju, J.H. (2010) Gold recovering method in solution by chestnut shell. 2010-0086816, Korea
8. Yang, J.E. and Ok, Y.S. (2010) Method for treating soils contaminated by heavy metals using *equisetum arvense* L. 2010-0034902, Korea
9. Ok, Y.S., Lim, J.E. and Yang, J.E. (2010) Method for treating soils contaminated by heavy metals using oystershell and soil treatment agent. 2010-0029410, Korea
10. Ok, Y.S., Lim, J.E. and Yang, J.E. (2010) Method for stabilization of heavy metals in soils using eggshell powder. 2010-0027395, Korea
11. Yang, J.E. and Ok, Y.S. (2008) Composition comprising zerovalent iron for remediation of rice paddy soils contaminated with heavy metals and a method using the same. 2008-0112753, Korea
12. Ok, Y.S., Lee, K.B., Kwon, J.H., Choi, S.W., Igalavithana, A.D., Dissanayake, D.M.P.D., Ura, C. (2020). Sustainable gasification biochar as a high efficiency adsorbent for CO₂ capture: A facile method to designer biochar fabrication. 10-2020-0066045, Korea
13. Ok, Y.S., Lee, K.B., Choi, S.W., Igalavithana, A.D., Dissanayake, D.M.P.D., Kwon, J.H., Ura, C. (2020). Sustainable gasification biochar: Method of preparing biochar using pine sawdust and paper mill sludge and method of adsorbing carbon dioxide using the same prepared thereby. 10-2020-0109560, Korea
14. Ok, Y. S., Cho, Y., Choi, Y. E., Palansooriya, K., Kim, S. (2020). Novel chitosan biochar composite fibers for the removal of phosphorus from water, method of manufacturing and adsorbent composition for removing phosphorus. 10-2021-0011291, Korea

Registered Patents

1. Ok, Y.S., Zhang, M., Xu, L.H. and Lee, S.S. (2016) The dietary fiber extracted from wheat bran for adsorption of polycyclic aromatic hydrocarbons. 10-1681646. Korea
2. Ok, Y.S., Rajapaksha, A., Vithanage, M., Lee, S.S. and Park, J.N. (2016) Activation method of biochar using acid treatment, acid activated biochar and preparing method thereof. 10-1638822. Korea.
3. Seo, D.C., Park, J.H., Kim, S.H., Heo, J.S., Kang, S.W., Park, J.W., Joo, J.S. and Ok, Y.S. (2015) An apparatus and method of impregnating sulfur impregnated on biochar for wastewater processing. 10-1547430. Korea.
4. Ok, Y.S., Rajapaksha, A., Vithanage, M. and Lim, J.E. (2015) Method for removal of antibiotics in water using steam activated biochar derived from burcucumber (*Sicyos angulatus* L.). 10-1536937. Korea.
5. Kim, S.W. and Ok, Y.S. (2014) Installation case for laying a mine and installation method using it in winter. 10-1480222. Korea.
6. Ok, Y.S., and Jeong, S.H. (2014) Method for purifying veterinary antibiotics in water using biochar derived from burcucumber (*Sicyos angulatus* L.). 10-1428553. Korea.
7. Ok, Y.S., Jeong, S.H. and Lee, S.S. (2014) Method for reduction for carbon dioxide from soils using biochar derived from corn residue. 10-1428552. Korea.
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9. Ok, Y.S. (2014) The method of TCE adsorption using soybean stover or peanut shells carbonized at high temperature. 10-1376278. Korea.
10. Oh, S.E., Joo, J.H. and Ok, Y.S. (2011) The method and system for salt removal from vinyl house soil. 10-1064368. Korea.
11. Ok, Y.S., Lee, H.Y., Joo, J.H. and Yang, J.E. (2011) Chestnut shell contained absorbent and absorbing method of heavy metal ions from aqueous solution by using them. 10-1055661. Korea.
12. Ok, Y.S., Choi, B.S., Hur, S.O. and Ha, S.K. (2011) Waste nutrient solution Treatment and reuse for agriculture application. 10-1049202. Korea.
13. Kim, J.G., Cho, N.H., Kim, N.B., Cho, H.I, Yoon, Y.M., Ok, Y.S., Kim, D.Y. and Kim, S.H. (2005) New plant variety of *Artemisia princeps* var. *orientalis* 'Korea'. 10-0472095. Korea.
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15. Kim, J.G., Cho, N.H., Kim, N.B., Cho, H.I, Yoon, Y.M., Ok, Y.S., Kim, D.Y. and Kim, S.H. (2004) Method of biological remediation for heavy metal contaminated soil. 10-0465452. Korea.