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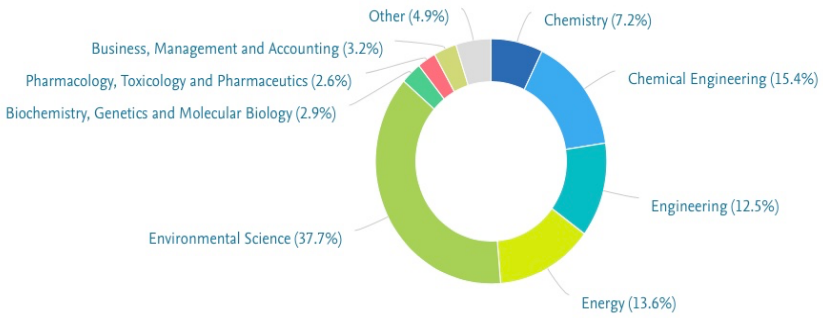
Eilhann Kwon, Ph.D.



Publication Statistics

1. Total Number of Publication: 340 (2021. 11)

Criteria	Type of Contribution		JCR Ranking			
Class	**Correspondence (CA) & First Author (FA)**	**Coauthor**	**Top 5%**	**Top 10%**	**Top 20%**	**Others (Book Chapter, Editorial, Proceedings)**
No.	269	71	156	76	70	38
Percentage	79%	21%	44%	23%	21%	12%

- Percentage of JCR 10%: 97.34% from my own research outcomes (FA and CA)
- H-Index: 54 (Google Scholar)

2. Annual Citations (Expected citations in 2021: 6,000)

Year	< 2016	2016	2017	2018	2019	2020	2021
No.	470	220	633	946	1665	2966	3638
Percentage	4.67	2.19	6.29	9.40	16.54	29.46	36.13

Research Area (Keywords)

Hydrolysis, ***Biofuel Production***, ***Renewable Energy Technologies***, ***Biomass***, ***Pyrolysis***, ***Gasification***, ***Biodiesel***, *Transesterification*, *Biomass Conversion*, ***Energy Engineering***, ***Energy Conversion***, *Biomass Burning*, *Biomass Torrefaction*, *Fluidization*, *Lignocellulosic Conversion*, ***Green Chemistry***, ***Emission Control***, ***Plastic Valorization***, ***Microplastic***, *Hydrothermal Treatment*, *Fluid Bed Processing*, ***Chemical Reaction Engineering***, ***Renewable Energy and Environment Protection***, *Algal Biotechnology*, *Odors*, *Livestock environment*, ***Waste-to-Energy***, ***Resource Recovery***, ***Carbon Dioxide***, ***Catalysis***, ***Hydrogen***, ***MOFs***, ***Photocatalysis***

Education

Sep 2003 – May 2008 **Columbia University in the City of New York**
Ph.D., Earth and Environmental Engineering
New York City, United States

May 2001 – May 2003 **Johns Hopkins University**
MS, Environmental Engineering
Baltimore, United States

Mar 1994 – Feb 1990 **Hong-Ik University**
BS, Chemical Engineering
Seoul, South Korea

Research Experience

Mar 2022 -Present **Professor**
Hanyang University
Department of Earth Resources and Environmental Engineering, South Korea

Sep 2020 -Feb 2022 **Professor**
Sejong University
Department of Environment and Energy Seoul, South Korea

Sep 2016 – Aug 2020 **Associate Professor**
Sejong University
Department of Environment and Energy Seoul, South Korea

Sep 2013 – Aug 2016 **Assistant Professor**
Sejong University
Department of Environment and Energy Seoul, South Korea

Aug 2010 – Jul 2013 **Scientist**
Research Institute of Industrial Science and Technology
Bioenergy Research Team, South Korea

Jun 2008 – Jun 2010 **Research Associate**
Earth Institute, Columbia University, United States

Academic Activities

1. **Co-Chair:** 4th International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2020)
2. **Co-Chair:** 3rd International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2019)
3. **Co-Chair:** 3rd International Conference on Biological Conference on Biological Waste as Resources 2019 (BWR 2019)
4. **Co-Chair:** 2nd International Conference on Biological Conference on Biological Waste as Resources 2018 (BWR 2018)
5. **Co-Chair:** 2nd International Conference on Bioresources, Energy, Environment, and Materials Technology (BEEM 2018)
6. **Associate Editor:** Chemical Engineering Journal (Elsevier)
7. **Associate Editor:** Material Science for Energy Technologies (Elsevier)
8. **Associate Editor:** Environmental Engineering Research (EER)
9. **Associate Editor:** Environmental Geochemistry and Health (Springer)
10. **Editorial Board:** Biochar (Springer)
11. ***Guest Editor:*** *Chemical Engineering Journal, Journal of CO_2 Utilization, Process Safety and Environmental Protection, Journal of Environmental Management, Environmental Geochemistry & Health, Sustainability, etc.*

Awards

Aug.2021 ***Top 10 Best Researcher in College of Engineering School***
Dec.2019 ***Prestigious Doosan Yonkang Environmental Science Award***
May.2019 ***Sejong Aejiheon Award for Excellence in Research***
Nov.2021 ***Highly Cited Researcher (HCR)***

International collaborations

Collaboration ⓘ

Scholarly Output of Kwon, Eilhann E., by amount of international, national and institutional collaboration

Metric		Scholarly Output	Citations	Citations per Publication	Field-Weighted Citation Impact
International collaboration	68.1%	109	2,909	26.7	3.23
Only national collaboration	30.0%	48	605	12.6	1.77
Only institutional collaboration	1.9%	3	19	6.3	1.10
Single authorship (no collaboration)	0.0%	0	0	0.0	-

Book Chapters

Jechan Lee, Ajit K. Sarmah, Eilhann E. Kwon: *Production and Formation of Biochar*. Biochar from Biomassand Waste, 2019, ISBN: 978-0-12-811729-3

Sungyup Jung, Young-Kwon Park, Eilhann E. Kwon: *Catalytic hydrodeoxygenation for upgrading of lignin-derived bio-oils*. Biomass, Biofuels, Biochemicals Lignin Biorefinery 2021, ISBN: 978-0-12-820294-4

Journal Publications

1. Yang, H., X. Yang, Z. Ning, S. Y. Kwon, M. L. Li, F. M. G. Tack, E. E. Kwon, J. Rinklebe and R. Yin (2022). "The ben eficial and hazardous effects of selenium on the health of the soil-plant-human system: An overview." *Journal of Hazardo us Materials* **422**.

2. Tuan, D. D., W. J. Liu, E. Kwon, B. X. Thanh, V. S. Munagapati, J. C. Wen, G. Lisak, C. Hu and K. Y. A. Lin (2022). " Ultrafine cobalt nanoparticle-embedded leaf-like hollow N-doped carbon as an enhanced catalyst for activating monopers ulfate to degrade phenol." *Journal of Colloid and Interface Science* **606**: 929-940.

3. Tsai, Y. C., E. Kwon, Y. K. Park, N. Nhat Huy, G. Lisak, P. S. Hsu, C. Hu and K. Y. A. Lin (2022). "Broccoli-like CeO $_2$ with Hierarchical/Porous Structures, and promoted oxygen vacancy as an enhanced catalyst for catalytic diesel soot elim ination." *Separation and Purification Technology* **281**.

4. Sungyup Jung, S. L., Sanghyuk Park, Kyungjung Kwon, Yiu Fai Tsang, Wei-Hsin Chen, Young-Kwon Park, and Eilha nn E. Kwon* (2022). "Upgrading Spent Battery Separator into Syngas and Hydrocarbons Through CO_2-Assisted Thermo chemical Platform." *Energy* ***In press.***

5. Rezania, S., S. Mahdinia, B. Oryani, J. Cho, E. E. Kwon, A. Bozorgian, H. Rashidi Nodeh, N. Darajeh and K. Mehran zamir (2022). "Biodiesel production from wild mustard (Sinapis Arvensis) seed oil using a novel heterogeneous catalyst o f $LaTiO_3$ nanoparticles." *Fuel* **307**.

6. Minyoung Kim, H.-B. K., Sungyup Jung, Jong-Min Jung, Kun-Yi Andrew Lin, Jörg Rinklebe, Kitae Baek, and Eilhan n E. Kwon* (2022). "Dual productions of biodiesel and biochar from krill." *Journal of Cleaner Production* ***In revision.***

7. Liu, W. J., H. Yang, Y. K. Park, E. Kwon, C. W. Huang, B. X. Thanh, T. C. Khiem, S. You, F. Ghanbari and K. Y. A. Li n (2022). "Enhanced degradation of ultra-violet stabilizer Bis(4-hydroxy)benzophenone using oxone catalyzed by hexago nal nanoplate-assembled CoS_3-dimensional cluster." *Chemosphere* **288**.

8. Lee, T., S. Jung, K. Baek, Y. F. Tsang, K. Y. A. Lin, Y. J. Jeon and E. E. Kwon* (2022). "Functional use of CO_2 to miti gate the formation of bisphenol A in catalytic pyrolysis of polycarbonate." *Journal of Hazardous Materials* **423**.

9. Lee, D. J., M. Kim, S. Jung, Y. K. Park, Y. Jang, Y. F. Tsang, H. Kim, K. H. Park and E. E. Kwon* (2022). "Direct con version of yellow mealworm larvae into biodiesel via a non-catalytic transesterification platform." *Chemical Engineering Journal* **427**.

10. Jung, S., J. M. Jung, Y. F. Tsang, A. Bhatnagar, W. H. Chen, K. Y. A. Lin and E. E. Kwon* (2022). "Biodiesel product ion from black soldier fly larvae derived from food waste by non-catalytic transesterification." *Energy* **238**.

11. Jung, J.-M., M. Kim, S. Jung, Y. J. Jeon, Y. F. Tsang, Y.-K. Park, A. Bhatnagar, W.-H. Chen and E. E. Kwon* (2022). "Direct conversion of Camellia japonica seed into biodiesel through non-catalytic transesterification." *Industrial Crops an d Products* ***In press.***

12. Jee Young Kim, J.-M. J., Sungyup Jung, Young-Kwon Park, Yiu Fai Tsang, Kun-Yi Andrew Lin, Yoon-E Choi, Eilha nn Kwon*, (2022). "A review on biodiesel production from Microalgae: The recent progress and perspective." *Progress i*

n Energy and Combustion Science ***In revision***.

13. Yin, J. Y., W. D. Oh, E. Kwon, B. X. Thanh, S. You, H. Wang and K. Y. A. Lin (2021). "Cobalt sulfide nanofilm-asse mbled cube as an efficient catalyst for activating monopersulfate to degrade UV filter, 4,4′-dihydroxybenzophenone, in w ater." *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **625**.

14. Yin, J. Y., E. Kwon, B. X. Thanh, G. Lisak, W. D. Oh and K. Y. A. Lin (2021). "Cobalt sulfide nanosheets derived fro m sulfurization of Prussian blue analogue as an enhanced catalyst for activating monopersulfate to degrade caffeine." *Jou rnal of the Taiwan Institute of Chemical Engineers*.

15. Wang, Q., S. M. Shaheen, Y. Jiang, R. Li, M. Slaný, H. Abdelrahman, E. Kwon, N. Bolan, J. Rinklebe and Z. Zhang (2021). "Fe/Mn- and P-modified drinking water treatment residuals reduced Cu and Pb phytoavailability and uptake in a m ining soil." *Journal of Hazardous Materials* **403**.

16. Vikrant, K., E. E. Kwon, K. H. Kim, C. Sonne, M. Kang and Z. H. Shon (2021). "Air pollution and its association wit h the greenland ice sheet melt." *Sustainability (Switzerland)* **13**(1): 1-12.

17. Tuan, D. D., H. Yang, N. N. Huy, E. Kwon, T. C. Khiem, S. You, J. Lee and K. Y. A. Lin (2021). "Enhanced reduction of bromate in water by 2-dimensional porous Co_3O_4 via catalytic hydrogenation." *Journal of Environmental Chemical E ngineering* **9**(5).

18. Tuan, D. D., E. Kwon, J. Y. Lin, X. Duan, Y. F. Lin and K. Y. A. Lin (2021). "Prussian blue analogues as heterogeneo us catalysts for hydrogen generation from hydrolysis of sodium borohydride: a comparative study." *Chemical Papers* **75**(2): 779-788.

19. Tuan, D. D., F. C. Chang, P. Y. Chen, E. Kwon, S. You, S. Tong and K. Y. A. Lin (2021). "Covalent organic polymer d erived carbon nanocapsule-supported cobalt as a catalyst for activating monopersulfate to degrade salicylic acid." *Journal of Environmental Chemical Engineering* **9**(4).

20. Tsai, Y. C., J. Lee, E. Kwon, C. W. Huang, N. N. Huy, S. You, P. S. Hsu, W. Da Oh and K. Y. A. Lin (2021). "Enhance d catalytic soot oxidation by ce-based MOF-derived ceria nano-bar with promoted oxygen vacancy." *Catalysts* **11**(9).

21. Trang, N. H., E. Kwon, G. Lisak, C. Hu and K. Y. Andrew Lin (2021). "Cobalt ferrite nanoparticle-loaded nitrogen-d oped carbon sponge as a magnetic 3D heterogeneous catalyst for monopersulfate-based oxidation of salicylic acid." *Chem osphere* **267**.

22. Szulejko, J. E., E. E. Kwon and K. H. Kim (2021). "Is mass-scale electrocatalysis of aqueous methanol an energetical ly and economically viable option for hydrogen production?" *Journal of Industrial and Engineering Chemistry*.

23. Srivastava, R. K., N. P. Shetti, K. R. Reddy, E. E. Kwon*, M. N. Nadagouda and T. M. Aminabhavi (2021). "Biomass utilization and production of biofuels from carbon neutral materials." *Environmental Pollution* **276**.

24. Rajput, H., E. E. Kwon*, S. A. Younis, S. Weon, T. H. Jeon, W. Choi and K. H. Kim (2021). "Photoelectrocatalysis as a high-efficiency platform for pulping wastewater treatment and energy production." *Chemical Engineering Journal* **412**.

25. Park, C., H. Choi, K. Y. Andrew Lin, E. E. Kwon* and J. Lee (2021). "COVID-19 mask waste to energy via thermoc

hemical pathway: Effect of Co-Feeding food waste." *Energy* **230**.

26. Oh, S., J. Lee, S. S. Lam, E. E. Kwon, J. M. Ha, D. C. W. Tsang, Y. S. Ok, W. H. Chen and Y. K. Park (2021). "Fast h ydropyrolysis of biomass Conversion: A comparative review." *Bioresource Technology* **342**.

27. Nguyen, H. T., J. Lee, E. Kwon, G. Lisak, B. X. Thanh, W. D. Oh and K. Y. A. Lin (2021). "Metal-complexed covale nt organic frameworks derived N-doped carbon nanobubble–embedded cobalt nanoparticle as a magnetic and efficient cat alyst for oxone activation." *Journal of Colloid and Interface Science* **591**: 161-172.

28. Nguyen, H. T., J. Lee, E. Kwon, G. Lisak, B. X. Thanh, F. Ghanbari and K. Y. A. Lin (2021). "Bamboo-like N-doped carbon nanotube–confined cobalt as an efficient and robust catalyst for activating monopersulfate to degrade bisphenol A. " *Chemosphere* **279**.

29. Liu, W. J., H. Wang, J. Lee, E. Kwon, B. X. Thanh, S. You, Y. K. Park, S. Tong and K. Y. A. Lin (2021). "Investigatin g crystal plane effect of Co_3O_4 with various morphologies on catalytic activation of monopersulfate for degradation of ph enol in water." *Separation and Purification Technology* **276**.

30. Lin, X. R., E. Kwon, C. Hung, C. W. Huang, W. D. Oh and K. Y. A. Lin (2021). "Co_3O_4 nanocube-decorated nitrogen -doped carbon foam as an enhanced 3-dimensional hierarchical catalyst for activating Oxone to degrade sulfosalicylic aci d." *Journal of Colloid and Interface Science* **584**: 749-759.

31. Lin, K. Y. A., W. D. Oh, M. W. Zheng, E. Kwon, J. Lee, J. Y. Lin, X. Duan and F. Ghanbari (2021). "Aerobic oxidatio n of 5-hydroxymethylfurfural into 2,5-diformylfuran using manganese dioxide with different crystal structures: A compar ative study." *Journal of Colloid and Interface Science* **592**: 416-429.

32. Lin, J. Y., H. Wang, W. D. Oh, J. Lee, E. Kwon, S. You, C. H. Lin and K. Y. A. Lin (2021). "Integrated MOF-mesh an d TEMPO-grafted carbon fiber as a sandwich-like catalytic system for selective valorization of lignin-derived compound under microwave irradiation." *Chemical Engineering Journal* **411**.

33. Lin, J. Y., J. Lee, W. D. Oh, E. Kwon, Y. C. Tsai, G. Lisak, S. Phattarapattamawong, C. Hu and K. Y. A. Lin (2021). " Hierarchical ZIF-decorated nanoflower-covered 3-dimensional foam for enhanced catalytic reduction of nitrogen-containi ng contaminants." *Journal of Colloid and Interface Science* **602**: 95-104.

34. Lin, J. Y., P. Y. Chen, E. Kwon, W. D. Oh, S. You, C. W. Huang, F. Ghanbari, T. Wi-Afedzi and K. Y. A. Lin (2021). " One-step synthesized 3D-structured MOF foam for efficient and convenient catalytic reduction of nitrogen-containing aro matic compounds." *Journal of Water Process Engineering* **40**.

35. Li, B. C., H. Yang, E. Kwon, D. Dinh Tuan, T. Cong Khiem, G. Lisak, B. Xuan Thanh, F. Ghanbari and K. Y. A. Lin (2021). "Catalytic reduction of bromate by Co-embedded N-doped carbon as a magnetic Non-Noble metal hydrogenation catalyst." *Separation and Purification Technology* **277**.

36. Li, B. C., J. Y. Lin, J. Lee, E. Kwon, B. X. Thanh, X. Duan, H. H. Chen, H. Yang and K. Y. A. Lin (2021). "Size-cont rolled nanoscale octahedral HKUST-1 as an enhanced catalyst for oxidative conversion of vanillic alcohol: The mediating effect of polyvinylpyrrolidone." *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **631**.

37. Li, B. C., J. Lee, E. Kwon, B. X. Thanh, J. Y. Lin, S. You, C. H. Lin and K. Y. A. Lin (2021). "2-dimensional nanolea f-like porous copper nitrate hydroxide as an effective heterogeneous catalyst for selective oxidation of hydroxymethylfurf ural to diformylfuran." *Journal of the Taiwan Institute of Chemical Engineers* **126**: 189-196.

38. Lee, T., S. Jung, K. Y. A. Lin, Y. F. Tsang and E. E. Kwon* (2021). "Mitigation of harmful chemical formation from p yrolysis of tobacco waste using CO_2." *Journal of Hazardous Materials* **401**.

39. Lee, T., S. Jung, K. H. Kim and E. E. Kwon* (2021). "Catalytic pyrolysis of pine bark over Ni/SiO_2 in a CO_2 atmosp here." *Energy* **220**.

40. Lee, J., Y. Lee, S. Kim, E. E. Kwon and K. Y. A. Lin (2021). "Catalytic production of hexamethylenediamine from re newable feedstocks." *Korean Journal of Chemical Engineering* **38**(6): 1079-1086.

41. Lee, J., E. E. Kwon*, S. S. Lam, W. H. Chen, J. Rinklebe and Y. K. Park (2021). "Chemical recycling of plastic waste via thermocatalytic routes." *Journal of Cleaner Production* **321**.

42. Lee, D. J., J. H. Yim, S. Jung, M. S. Jang, G. T. Jeong, K. H. Jeong, D. H. Lee, J. K. Kim, Y. F. Tsang, Y. J. Jeon and E. E. Kwon* (2021). "Valorization of animal manure: A case study of bioethanol production from horse manure." *Chemic al Engineering Journal* **403**.

43. Kwon, D., S. Yi, S. Jung and E. E. Kwon* (2021). "Valorization of synthetic textile waste using CO_2 as a raw materia l in the catalytic pyrolysis process." *Environmental Pollution* **268**.

44. Kwon, D., S. Jung, K. Y. A. Lin, Y. F. Tsang, Y. K. Park and E. E. Kwon* (2021). "Synergistic effects of CO_2 on com plete thermal degradation of plastic waste mixture through a catalytic pyrolysis platform: A case study of disposable diape r." *Journal of Hazardous Materials* **419**.

45. Kumar, V., V. Singh, K. H. Kim, E. E. Kwon* and S. A. Younis (2021). "Metal-organic frameworks for photocatalyti c detoxification of chromium and uranium in water." *Coordination Chemistry Reviews* **447**.

46. Kumar, V., S. M. Majhi, K. H. Kim, H. W. Kim and E. E. Kwon* (2021). "Advances in In_2O_3-based materials for the development of hydrogen sulfide sensors." *Chemical Engineering Journal* **404**.

47. Kim, S., H. B. Kim, E. E. Kwon* and K. Baek (2021). "Mitigating translocation of arsenic from rice field to soil pore solution by manipulating the redox conditions." *Science of the Total Environment* **762**.

48. Kim, M., D. J. Lee, S. Jung, S. X. Chang, K. Y. A. Lin, A. Bhatnagar, E. E. Kwon* and Y. F. Tsang (2021). "Valorizat ion of peanut wastes into a catalyst in production of biodiesel." *International Journal of Energy Research*.

49. Kim, J. H., S. Jung, K. Y. A. Lin, J. Rinklebe and E. E. Kwon* (2021). "Comparative study on carbon dioxide-cofed catalytic pyrolysis of grass and woody biomass." *Bioresource Technology* **323**.

50. Kim, J. H., S. Jung, J. O. Kim, Y. J. Jeon and E. E. Kwon* (2021). "Valorization of carbon dioxide and waste (Derive d from the site of Eutrophication) into syngas using a catalytic thermo-chemical platform." *Bioresource Technology* **341**.

51. Kim, J. G., H. B. Kim, D. H. Shin, D. S. Alessi, E. Kwon and K. Baek (2021). "In-situ generation of reactive oxygen species using combination of electrochemical oxidation and metal sulfide." *Science of the Total Environment* **789**.

52. Kim, J., E. E. Kwon*, J. E. Lee, S. H. Jang, J. K. Jeon, J. Song and Y. K. Park (2021). "Effect of zeolite acidity and st ructure on ozone oxidation of toluene using Ru-Mn loaded zeolites at ambient temperature." *Journal of Hazardous Mater*

ials **403**.

53. Kannapu, H. P. R., J. Yadagiri, S. Moogi, E. E. Kwon*, S. S. Lam and Y. K. Park (2021). "Natural marble powder-mo dified SBA-15 as an efficient catalyst for the selective production of 2-methyl-2-pentenal from n-propanal self-aldol cond ensation." *Journal of Industrial and Engineering Chemistry* **94**: 448-456.

54. Kamali, M., L. Appels, E. E. Kwon, T. M. Aminabhavi and R. Dewil (2021). "Biochar in water and wastewater treat ment - a sustainability assessment." *Chemical Engineering Journal* **420**.

55. Jung, S., N. P. Shetti, K. R. Reddy, M. N. Nadagouda, Y. K. Park, T. M. Aminabhavi and E. E. Kwon* (2021). "Synth esis of different biofuels from livestock waste materials and their potential as sustainable feedstocks – A review." *Energy Conversion and Management* **236**.

56. Jung, S., T. Lee, J. Lee, K. Y. A. Lin, Y. K. Park and E. E. Kwon* (2021). "Catalytic pyrolysis of plastics derived fro m end-of-life-vehicles (ELVs) under the CO_2 environment." *International Journal of Energy Research* **45**(11): 16781-167 93.

57. Jung, S., S. Lee, X. Dou and E. E. Kwon* (2021). "Valorization of disposable COVID-19 mask through the thermo-c hemical process." *Chemical Engineering Journal* **405**.

58. Jung, S., J. Lee, D. H. Moon, K. H. Kim and E. E. Kwon* (2021). "Upgrading biogas into syngas through dry reform ing." *Renewable and Sustainable Energy Reviews* **143**.

59. Jung, S., D. Kwon, S. Park, K. Kwon, Y. F. Tsang and E. E. Kwon* (2021). "Valorization of a spent lithium-ion batter y electrolyte through syngas formation using CO_2-assisted catalytic thermolysis over a battery cathode material." *Journal of CO_2 Utilization* **50**.

60. Jung, S., M. Kim, K. Y. A. Lin, Y. K. Park and E. E. Kwon* (2021). "Biodiesel synthesis from bio-heavy oil through thermally induced transesterification." *Journal of Cleaner Production* **294**.

61. Jung, S., M. Kim, Y. J. Jeon, Y. F. Tsang, A. Bhatnagar and E. E. Kwon* (2021). "Valorization of aflatoxin contamina ted peanut into biodiesel through non-catalytic transesterification." *Journal of Hazardous Materials* **416**.

62. Jung, S., J. H. Kim, D. J. Lee, K. Y. A. Lin, Y. F. Tsang, M. H. Yoon and E. E. Kwon* (2021). "Virtuous utilization of biochar and carbon dioxide in the thermochemical process of dairy cattle manure." *Chemical Engineering Journal* **416**.

63. Jung, S., J. M. Jung, K. H. Lee and E. E. Kwon* (2021). "Biodiesels from non-catalytic transesterification of plant oi ls and their performances as aviation fuels." *Energy Conversion and Management* **244**.

64. Jung, S., S. H. Cho, K. H. Kim and E. E. Kwon* (2021). "Progress in quantitative analysis of microplastics in the env ironment: A review." *Chemical Engineering Journal* **422**.

65. Jung, J. M., J. Y. Kim, S. Jung, Y. E. Choi and E. E. Kwon* (2021). "Quantitative study on lipid productivity of *Eugl ena gracilis* and its biodiesel production according to the cultivation conditions." *Journal of Cleaner Production* **291**.

66. Joo, J., E. E. Kwon* and J. Lee (2021). "Achievements in pyrolysis process in E-waste management sector." *Environ*

mental Pollution **287**.

67. Jeyasundar, P. G. S. A., A. Ali, M. Azeem, Y. Li, D. Guo, A. Sikdar, H. Abdelrahman, E. Kwon, V. Antoniadis, V. M. Mani, S. M. Shaheen, J. Rinklebe and Z. Zhang (2021). "Green remediation of toxic metals contaminated mining soil usi ng bacterial consortium and Brassica juncea." *Environmental Pollution* **277**.

68. Islam, M. S., J. H. Kwak, C. Nzediegwu, S. Wang, K. Palansuriya, E. E. Kwon, M. A. Naeth, M. G. El-Din, Y. S. Ok and S. X. Chang (2021). "Biochar heavy metal removal in aqueous solution depends on feedstock type and pyrolysis purg ing gas." *Environmental Pollution* **281**.

69. Hsiao, C. Y., H. Wang, E. Kwon, B. X. Thanh, S. You, C. Hu and K. Y. A. Lin (2021). "Degradation of an imidazoliu m-based ionic liquid in water using monopersulfate catalyzed by Dahlia flower-like cobalt oxide." *Separation and Purific ation Technology* **274**.

70. Hsiao, C. Y., C. Hung, E. Kwon, C. W. Huang, C. F. Huang and K. Y. A. Lin (2021). "Electrospun nanoscale iron oxi de-decorated carbon fiber as an efficient heterogeneous catalyst for activating percarbonate to degrade Azorubin S in wate r." *Journal of Water Process Engineering* **40**.

71. Guan, Z. Y., E. E. Kwon, J. Lee, Y. F. Lin and K. Y. A. Lin (2021). "Electrospun cobalt ferrite nanofiber as a magnetic and effective heterogeneous catalyst for activating peroxymonosulfate to degrade sulfosalicylic acid." *Separation and Pu rification Technology* **259**.

72. Farooq, A., S. Moogi, E. E. Kwon*, J. Lee, Y. M. Kim, J. Jae, S. C. Jung and Y. K. Park (2021). "Catalytic upgrading of Quercus Mongolica under methane environment to obtain high yield of bioaromatics." *Environmental Pollution* **272**.

73. Choi, D., S. Jung, S. S. Lee, K. Y. A. Lin, Y. K. Park, H. Kim, Y. F. Tsang and E. E. Kwon* (2021). "Leveraging carb on dioxide to control the H_2/CO ratio in catalytic pyrolysis of fishing net waste." *Renewable and Sustainable Energy Revi ews* **138**.

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