Samir Kumar Khanal
College of Tropical Agriculture and Human Resources
Department of Molecular Biosciences and Bioengineering
FTE Distribution: 25%I; 75%R; 0%E

Education

Degree	University	Major
PhD	Hong Kong Univ. of Sci. & Tech.	Civil Engineering
MS	Asian Institute of Technology	Environmental Engineering
BS (Hons)	Malaviya National Institute of Tech.	Civil Engineering

Professional Appointments

Title	Employer	Dates Employed
Professor	University of Hawaii	2018 to Present
Associate Professor	University of Hawaii	20012 to 2018
Assistant Professor	University of Hawaii	2008 to 2012
Research Assistant Professor	Iowa State University	2004 to 2007
Post-doctoral Research Associate	Iowa State University	2002 to 2004

Courses Taught

Course ID and name (credits)	
BE 373	Transport Phenomena (3)
BE 410	Bioconversion of Biomass into Bioenergy and Biofuels (3)
BE 491	Sustainable Engineering (3)
BUS 350	Sustainability Green and Global (3)
MBBE 610	Graduate Seminar (1)
BE/MBBE 691	Energy and Environment (3)

Publications (reverse chronological order)

Books

- *Green-Economy: Systems Analysis for Sustainability.* (eds. Ganti Murthy, Edgard Gnansounou, Samir Kumar Khanal, Ashok Pandey). **Elsevier Inc.,** USA (2022; 404pp).

- *Anaerobic Digestion Series - Advances in Bioenergy Vol. 5*. (eds. Yebo Li and Samir Kumar Khanal). **Elsevier Inc**. USA (Jun 2020; 344 pp).

- *Current Developments in Biotechnology and Bioengineering: Sustainable Bioresources for Emerging Bioeconomy*. (eds. Rupam Kataki, Ashok Pandey, Samir Kumar Khanal and Deepak Pant). **Elsevier Inc**. USA (Jul 2020; 536 pp).

- *Current Developments in Biotechnology and Bioengineering: Resource Recovery from Wastes*. (eds. Sunita Varjani, Ashok Pandey, Edgard Gnansounou, Samir Kumar Khanal, Sindhu Raveendran). **Elsevier Inc**. USA Jan 2020; 481 pp).

- *Biofuels: Alternative Feedstocks and Conversion Processes for the Production of Biofuels* (2nd Edition). (eds. Ashok Pandey, Christian Larroche, Claude-Gilles Dussap, Edgard Gnansounou, Samir Kumar Khanal, and Steven Ricke). **Elsevier Inc**. USA (Mar 2019; 867 pp).

- Waste Biorefinery: Potential and Perspectives. (eds. Ashok Pandey, Thallada Bhaskar, Ventaka Mohan, D.-J. Lee and Samir Kumar Khanal). **Elsevier Inc**. USA (2018. 816 pp).

- Bioenergy: Principles and Applications. (Yebo Li and Samir Kumar Khanal). **John-Wiley & Sons**, USA (2017. 600 pp, Textbook).

- Fungal Biorefineries. (eds. Sachin Kumar, Pratibha Dheeran, Mohammad Taherzadeh and Samir Kumar Khanal). **Springer**. (2018. 246 pp).

- Proceedings of the first international conference on "Recent Advances in Bioenergy Research" (eds. Sachin Kumar, Samir Kumar Khanal and Yogender Kumar Yadav). **Springer**. 2016. 358 pp.

- Anaerobic Biotechnology for Bioenergy Production: Principles and Applications. (1st edition, Bestseller, **Wiley-Blackwell Publishing**). (2008. 320 pp).

- Bioenergy and Biofuel from Biowastes and Biomass. (Bestseller, **American Society of Civil Engineers**). (2010. 505 pp).

Book Chapters

1. Wongkiew, S., Hu, Z., Hua, N. T., and Khanal, S.K. 2020. Aquaponics for resource recovery and organic food productions. In Current Developments in Biotechnology and Bioengineering: Sustainable Bioresources for Emerging Bioeconomy. (eds. Rupam Kataki, Ashok Pandey, Samir Kumar Khanal and Deepak Pant). Elsevier Inc., USA. Pp 475-494.
2. Khanal, S.K., Nindhia, T.G.T., and Nitayavardhana, S., Biogas from wastes: processes and applications. 2019. In *Sustainable Resource Recovery and Zero Wastes Approaches*. (eds. Mohammad Taherzedah, Kim Bolton, Jonathan Wong and Ashok Pandey). Elsevier Inc., USA. Pp 165-174.
3. Yasin, M., Chab, M., Chang, I.S., Atiyeh, H., Munasinghe, P.C., and Khanal, S.K. 2019. Syngas fermentation into biofuels and biochemicals. In *Biofuels: Alternative Feedstocks and Conversion Processes for the Production of Biofuels* (2nd Edition). (eds. Ashok Pandey, Christian Larroche, Claude-Gilles Dussap, Edgard Gnansounou, Samir Kumar Khanal, and Steven Ricke). Elsevier Inc., USA. Pp 301-327.
4. Nguyen, D., Saoharit Nitayavardhana, Chayanon Sawatdeenarunat, K.C. Surendra and Khanal, S.K. Biogas production by anaerobic digestion: Current status and perspectives. In *Biofuels: Alternative Feedstocks and Conversion Processes for the Production of Biofuels* (2nd Edition). (eds. Ashok Pandey, Christian Larroche, Claude-Gilles Dussap, Edgard Gnansounou, Samir Kumar Khanal, and Steven Ricke). Elsevier Inc., USA. Pp 763-778.
5. Sawatdeenarunat, C., Wangnai, C., Songkasiri, W., Panichnumsin, P., Saritpongteeraka, K., Boonsawang, P., Khanal, S.K., Chaiprapat, S. Biogas production from industrial effluents. In *Biofuels: Alternative Feedstocks and Conversion Processes for the Production of Biofuels* (2nd Edition). (eds. Ashok Pandey, Christian Larroche, Claude-Gilles Dussap, Edgard Gnansounou, Samir Kumar Khanal, and Steven Ricke). Elsevier Inc., USA. Pp 301-327. Pp 779-816.
6. Rajendran, K., Surendra, K.C., Tomberlin, J.K., and Khanal, S.K. 2018. Insect-based biorefinery for bioenergy and biobased products: A critical review. In *Waste Biorefinery: Potential and Perspectives*. (eds. Ashok Pandey, Thallada Bhaskar, Ventaka Mohan, D.-J. Lee and Samir Kumar Khanal). Elsevier Inc., USA. Pp 657-669.
7. Khanal, S.K. Giri, B., Nitayavardhana, S., and Gadhamshetty, V. 2017. Anaerobic reactor/digester: Design and development. In *Current Developments in Biotechnology and Bioengineering*. (eds. D.-J. Lee, J. Jegatheesan, P. Hallenbeck, H. H. Ngo, and A. Pandey). Elsevier Inc., USA. pp 261-279.
8. Takara, D., and Khanal, S.K. 2012. Biomass pretreatment for biofuel production. In *Sustainable Bioenergy and Bioproducts*. (eds. K. Gopalakrishnan, H. van Leeuwen, and R. Brown). Springer-

Verlag Inc., London, UK. pp 59-70.

9. Shrestha, P., Pometto III. A.L., Khanal, S.K., and Van Leeuwen, J. 2012. Second-generation biofuel production from corn-ethanol industry residues. In *Sustainable Bioenergy and Bioproducts*. (eds. K. Gopalakrishnan, H. van Leeuwen, and R. Brown). Springer-Verlag Inc., London, UK. pp 71-87.
10. Khanal, S.K., and Munasinghe, P. 2011.Biomass-derived syngas fermentation into biofuels. In *Biofuels: Alternative Feedstocks and Conversion Processes*. (eds. A. Pandey, C. Larroche, S.C. Ricke, C.G. Dussap and E. Gnansounou). Elsevier Inc., USA. pp 79-98.
11. Khanal, S.K., and Lamsal, B.P. 2010. Biofuel and bioenergy production: some perspectives. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 1-22.
12. Takara, D., Shrestha, P., and Khanal, S.K. 2010. Lignocellulosic biomass pretreatment. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 158-171.
13. Shrestha, P., Lamsal, B.P., and Khanal, S.K. 2010. Preprocessing of lignocellulosic biomass for biofuel production. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 172-200.
14. Lamsal, B.P., Shrestha, P., and Khanal, S.K. 2010. Enzymatic hydrolysis of lignocellulosic biomass for biofuel production. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 201-224.
15. Gadhamshetty, V., Nirmalakhandan, N., Khanal, S.K., and Johnson, G.R. 2010. Bioreactor systems for biofuel/bioelectricity production. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 275-312.
16. Shrestha, P., Rasmussen, M.R., Nitayavardhana, S., Khanal, S.K., and Van Leeuwen. J. 2010. Bioreactor systems for biofuel/bioelectricity production. In *Biofuel and Bioenergy from Biowastes and Lignocellulosic Biomass*. (eds. Samir K. Khanal et al.). American Society of Civil Engineers. Reston, VA, USA. pp 389-410.
17. Khanal, S.K., Takara, D., Shrestha, P., and Lamsal, B.P. 2010. Ultrasound applications in biofuel and bioenergy production. In *Green Chemistry for Environmental Sustainability* (eds. A. Mudhoo and S. K. Sharma). CRC Press Taylor & Francis Group LLC, Boca Raton, Florida. pp 303-313.

Refereed Journal Publications

1. Khan, A., Wang, W., Ji, J., Ling, Z., Liu, P., Xiao, S., Han, H., Salama, E. S., Khanal, S. K., & Li, X. (2023). Fermented lily bulbs by "Jiangshui" probiotics improves lung health in mice. Food Chemistry. 138270. (In Press)
2. Shitanaka, T., Fujioka, H., Khan, M., Kaur, M., Du, Z. Y., & Khanal, S. K. (2023). Recent advances in microalgal production, harvesting, prediction, optimization, and control strategies. Bioresource Technology. 391: 129924.
3. Luo, L., Mak, K. L., Mal, J., Khanal, S. K., & Pradhan, N. (2023). Effect of zero-valent iron nanoparticles on taxonomic composition and hydrogen production from kitchen waste. Bioresource Technology. 387: 129578.
4. Marcelino, K. R., Wongkiew, S., Shitanaka, T., Surendra, K. C., Song, B., & Khanal, S. K. (2023). Micronanobubble Aeration Enhances Plant Yield and Nitrification in Aquaponic Systems. ACS ES&T Engineering. 3(11): 2081-2096.
5. Shitanaka, T., Higa, L., Bryson, A. E., Bertucci, C., Pol, N. V., Lucker, B., Khanal, S. K., Bonito, G., & Du, Z. Y. (2023). Flocculation of oleaginous green algae with Mortierella alpina fungi. Bioresource Technology. 385: 129391.
6. Jia, M., Farid, M. U., Kharraz, J. A., Kumar, M. N., Chopra, S. S/. Jang, A., Chew, J., Khanal, S.K., Chen, G.H., and An, A.K. (2023). Nanobubbles in water and wastewater treatment systems: small bubbles making a big difference. Water Research. 25: 120613.

7. Wu, Z., Nguyen, D., Shrestha, S., Raskin, L., Khanal, S. K., & Lee, P. H. (2023). Evaluation of nanaerobic digestion as a mechanism to explain surplus methane production in animal rumina and engineered digesters. Environmental Science & Technology. 57 (33): 12302–12314.
8. Wongkiew, S., Polprasert, C., Noophan, P., Koottatep, T., Kanokkantapong, V., Surendra, K.C., and Khanal, S.K. (2023). Effects of vermicompost leachate on nitrogen, phosphorus, and microbiome in a food waste bioponic system. Journal of Environmental Management. 339: 117860.
9. Marcelino, K. R., Li, L., Wongkiew, S., Surendra, K.C., Shitanaka, T., Nhan, H.T, Lv, H., and Khanal, S.K. (2023). Nanobubble Technology Applications in Environmental and Agricultural Systems: Opportunities and Challenges. Critical Reviews in Environmental Science and Technology. 53 (14): 1378-1403.
10. Wang, X., Lei, Z., Zhang, Z., Shimizu, K., Lee, D.J., and Khanal, S.K. (2023). Use of nanobubble water bioaugmented anaerobically digested sludge for high-efficacy energy production from high-solids anaerobic digestion of corn straw. Science of The Total Environment. 863: 160825.
11. Khanal, S. K., Tarafdar, A., & You, S. (2023). Artificial intelligence and machine learning for smart bioprocesses. Bioresource Technology. 375: 128826.
12. Tarafdar, A., Varjani, S., Khanal, S., You, S., & Pandey, A. (2023). Biotechnology for Resource Efficiency, Energy, Environment, Chemicals, and Health. BioEnergy Research. 16(1): 1-3.
13. Ji, M., Wang, J., Khanal, S. K., Wang, S., Zhang, J., Liang, S., Xie, H., Wu, H. & Hu, Z. (2023). Water-energy-greenhouse gas nexus of a novel high-rate activated sludge-two-stage vertical up-flow constructed wetland system for low-carbon wastewater treatment. Water Research. 229: 119491.
14. Khan, M., Chuenchart, W., Surendra, K.C., and Khanal, S.K. (2023). Applications of artificial intelligence in anaerobic co-digestion: Recent advances and prospects. Bioresource Technology. 370: 128501.
15. Guo, Y., Tao, X., Zhu, W., Ji, Y, Khanal, S.K., Surendra, K.C., Li, Guoting. (2023). Effects of straw biochar on heavy metal Cu in soil under different conditions. Communications in Soil Science and Plant Analysis. 54(2): 203-217.
16. Zhou, S., Marcelino, K. R., Wongkiew, S., Sun, L., Huang, J., Khanal, S. K., and Lu, H. (2022). Untapped potential: Applying microbubble and nanobubble technology in water and wastewater treatment and ecological restoration. ACS Environ. Sci. & Technol Eng. 2 (9): 1558–1573.
17. Dana, W.A.R., Lie, D., Adnyana, W.B., Nindhia, T.G.T., Khanal, S.K., and Nindhia, T.S. (2022). Comparison of fuel consumption and emission of small two-stroke engineer of electric generator fueled by methanol, biogas and mixed methanol-biogas. Journal of Applied Engineering Science. 20 (4): 1034-1039.
18. Oberoi, A.S., Surendra, K.C., Wu, D., Lu, H., Wong, J.W.C., and Khanal, S.K. (2022). Anaerobic membrane bioreactors for pharmaceutical-laden wastewater treatment: A critical review. Bioresource Technology. 361: 127667.
19. Xu, J., Khanal, S.K., Kang,Y., Zhu, J., Huang, X., Zong, Y., Pang, W., Surendra, K.C. and Xie, L. (2022). Role of interspecies electron transfer stimulation in enhancing anaerobic digestion under ammonia stress: Mechanisms, advances, and perspectives. Bioresource Technology. 360: 127558.
20. Wells, J.M., Crow, S.E., Khanal, S.K., and Turn, S.Q. (2022). Lignin chemical controls on bioconversion of tropically grown C4 bioenergy grasses to biofuels and biobased products. Bioresource Technology Reports. 18: 101015.
21. Harirchi, S., Wainaina, S., Sar, T., Nojoumi, S.A., Parchami, M., Parchami, M., Varjani, S., Khanal, S.K., Wong, J.W.C., Awasthi, M.K., and Taherzadeh, M.J. 2022. Microbiological insights into anaerobic digestion for biogas, hydrogen or volatile fatty acids (VFAs): a review. Bioengineered. 13 (3): 6521-6557.
22. Aksorn, S., Kanokkantapong,V., Polprasert, C., Noophan, P., Khanal, S.K., and Wongkiew, S. (2022). Effects of Cu and Zn contamination on chicken manure-based bioponics: Nitrogen recovery, bioaccumulation, microbial community, and health risk assessment. Journal of Environmental Management. 311: 114837.

23. Surendra, K.C., Angelidaki, I., and Khanal, S.K. (2022). Bioconversion of waste-to-resources (BWR-2021): Valorization of industrial and agro-wastes to fuel, feed, fertilizer, and biobased products. Bioresource Technology. 347:126739.
24. Siddiqui, M.A., Biswal, B.K., Heynderickx, P.M., Kim, J.H., Khanal, S.K., Chen, G.H., and Wu, D. (2022). Dynamic anaerobic membrane bioreactor coupled with sulfate reduction (SrDMBR) for saline wastewater treatment. Bioresource Technology. 346:126447.
25. He, M., Zhu, X., Dutta, S., Khanal, S.K., Lee, K.T., Masek, O., Tsang. C.W. (2022). Catalytic co-hydrothermal carbonization of food waste digestate and yard waste for energy application and nutrient recovery. Bioresource Technology. 344: 126395.
26. Karki, R., Chuenchart, W., Surendra, K.C., Sung, S., Raskin, L., and Khanal, S.K. (2022). Anaerobic co-digestion of various organic wastes: Kinetic modeling and synergistic impact evaluation. Bioresource Technology. 343:126063.
27. Wongkiew S., Polprasert, C., Koottatep, T., Limpiyakorn, T., Surendra, K.C., and Khanal, S.K. (2022). Chicken manure-based bioponics: Effects of acetic acid supplementation on nitrogen and phosphorus recoveries and microbial communities. Waste Management. 137: 264-274.
28. Cruz, I.A., Chuenchart, W., Long, F., Surendra, K.C., Andrade, R. S. Bilal, M., Liu, H., Figueiredo, R. T., Khanal, S.K., Ferreira, L.F.R. (2022). Application of machine learning in anaerobic digestion: Perspectives and challenges. Bioresource Technology. 345: 126433.
29. Zeng, Q., Zan, F., Hao, T.W., Khanal, S.K., and Chen, G.H. (2022). Sewage sludge digestion beyond biogas: Electrochemical pretreatment for biochemicals. Water Research. 208: 117839.
30. Sharma, P., Ngo, H. H., Khanal, S.K., Larroche, C., Kim, S.-H., and Pandey. A., 2021. Efficiency of transporter genes and proteins in hyperaccumulator plants for metals tolerance in wastewater treatment: Sustainable technique for metal detoxification. Environmental Technology & Innovation. 23: 101725.
31. Zeng, Q., Wang, Y., Zan, F., Khanal, S.K., and Hao T. 2021. Biogenic sulfide for azo dye decolorization from textile dyeing wastewater. Chemosphere. 283: 131158.
32. Khanal, S.K., Lü, F., Wong, J.W.C., Wu, D., and Oechsner, H. 2021. Anaerobic digestion beyond biogas. Bioresource Technology. 337: 125378.
33. Siddiqui, M.A., Biswal, B.K., Saleem, M., Guan, D., Iqbal, A., Wu, D., Khanal, S. K., and Chen, G.H. 2021. Anaerobic self-forming dynamic membrane bioreactors (AnSFDMBRs) for wastewater treatment - Recent advances, process optimization and perspectives. Bioresource Technology. 330:125101.
34. Karki, R., Chuenchart, W., Surendra K.C., Shrestha, S., Raskin, L., Sung, S., Hashimoto, A., and Khanal, S.K. 2021. Anaerobic co-digestion: Current status and perspectives. Bioresource Technology. 330: 125001.
35. Kim, S.H., Kumar, G.P., Chen, W.H., and Khanal, S.K. 2021. Renewable hydrogen production from biomass and wastes (ReBioH2-2020). Bioresource Technology. 319: 125024.
36. Wells, J.M., Crow, S.E., Khanal, S.K., Turn, S., Hashimoto, A., Kiniry, J., and Meki, N. 2021. Anaerobic digestion and hot water pretreatment of tropically grown C4 energy grasses: Mass, carbon, and energy conversions from field biomass to fuels. Agronomy. 11(5): 838 (16 pages)
37. Jamison, J., Khanal, S.K., Nguyen, N.H., and Deenik, J. L. 2021. Assessing the effects of digestates and combinations of digestates and fertilizer on yield and nutrient use of Brassica juncea (Kai Choy). Agronomy. 11(3): 509 (13 pages).
38. Chuenchart, W., Karki, R., Shitanaka, T., Marcelino, K.R., Lu, H., and Khanal, S.K. 2021. Nanobubble technology in anaerobic digestion: A review. Bioresource Technology. 329: 124916.
39. Wongkiew S., Koottatep, T., Polprasert, C., Prombutara, P., Jinsart, W., Khanal, S.K. 2021. Bioponic system for nitrogen and phosphorus recovery from chicken manure: Evaluation of manure loading and microbial communities. Waste Management. 125: 67-76.
40. Wongkiew, S., Hu., Z., Lee, J.W., Chandran, K., Nhan, H.T., and Khanal, S.K. 2021. Nitrogen recovery via aquaponics-bioponics: Current status and perspectives. ACS Environ. Sci. & Technol. Eng. 1 (3): 326–339.

41. Fonoll, X. Shrestha, S., Khanal, S.K., Dosta, J., Mata-Alvarez, J. and Raskin, L. 2021. Understanding the anaerobic digestibility of lignocellulosic substrates using rumen content as a co-substrate and an inoculum. ACS Environ. Sci. & Technol. Eng. 1 (3): 424–435.
42. Fang, H., Oberoi, A.S., He, Z., Khanal, S.K., and Lv. H. 2021. Ciprofloxacin-degrading Paraclostridium sp. isolated from sulfate-reducing bacteria-enriched sludge: Optimization and mechanism. Water Research.191: 116808.
43. Wu, Z, Nguyen, D., Lam, Y.-C, Zhuang, H., Shrestha, S., Raskin, L., Khanal, S.K*. and Lee, P.-H*. 2021. Superior performance of ORP-controlled intermittent microaerobic digestion with of lignocellulosic biomass via synergistic association between cytochrome bd-encoded facultative Proteiniphilum sp. and ROS-scavenging diverse methanogens. Water Research. 190: 116721. (*co-corresponding author)
44. Oberoi, A.S., Huang, H., Khanal, S.K., and Lu, H. 2021. Electron distribution in sulfur-driven autotrophic denitrification under different electron donor and acceptor feeding schemes. Chemical Engineering Journal. 404:126486.
45. Jia, Y., Khanal, S.K., Yin, L., Sun, L., and Lu, H. 2021. Influence of ibuprofen and its biotransformation products on different biological sludge systems and ecosystem. Environment International. 146: 106265.
46. Varjani, S., Taherzadeh, M., Khanal, S.K., Pandey, A. 2020. New horizons in biotechnology: Advances in sustainable industrial and environmental bioprocesses and bioproducts. Industrial Crops and Products. 158: 113000. (Editorial).
47. Khanal, S.K., Wong, J.W.C., Sanchez, A., and Insam, H. 2020. Recent advances in anaerobic digestion. Bioresource Technology. 316: 123955. (Editorial).
48. Khanal, S.K., Varjani, S., Lin, C.S.K., and Awasthi, M. K. 2020. Waste-to-resources: Opportunities and challenges. Bioresource Technology. 317: 123987. (Editorial).
49. Rene, E.R., Bhaskar, T., Sang, B.I., Khanal, S.K., Pandey, A. 2020. Innovations in environmental bioprocesses for sustainable development. Environmental science and pollution research international. (Editorial).
50. Surendra, K. C., Tomberlin, J. K., van Huis A., Cammack, J.A., Heckmann. L-H. L., and Khanal, S.K. 2020. Rethinking organic wastes bioconversion: Evaluating the potential of the black soldier fly (*Hermetia illucens L.*) (Diptera: Stratiomyidae) (BSF). Waste Management. 117: 58-80. (Most-downloaded)
51. Oginni, O., Yakaboylu, G.A., Singh, K., Sabolsky, E.M., Unal-Tosun, G., Jaisi, D., Samir Kumar Khanal, Ajay Shah. 2020. Phosphorus adsorption behaviors of MgO modified biochars derived from waste woody biomass resources. Journal of Environmental Chemical Engineering. 8(2):103723.
52. Oliveira, F.R., Surendra, K.C., Jaisi, D.P., Lu, H., and Khanal, S.K. 2020. Alleviating sulfide toxicity using biochar during anaerobic treatment of sulfate-laden wastewater with simultaneous recovery of sulfur-rich biochar as soil macro-nutrient. Bioresource Technology. 301:122711(Best paper cover page figure)
53. Sebayuana, K, Nindhia, T.G.T., Surata, I. W., Nindhia, T.S., Shukla, S.K., Khanal, S.K. (2020). Performance of 500-liter stainless steel portable biogas anaerobic digester with agitator designed for the tropical developing country. International Journal of Smart Grid and Clean Energy. 9 (2): 466-471.
54. Wells, J.M., Drielak, E., Surendra, K.C., Khanal, S.K. 2020. Hot water pretreatment of lignocellulosic biomass: Modeling the effects of temperature, enzyme and biomass loadings on sugar yield. Bioresource Technology. 300:122593.
55. Zhu, W., He, Q., Gao, H., Nitayavardhana, S., Khanal, S.K., and Xie, L. 2020. Bioconversion of yellow wine wastes into microbial protein via mixed yeast-fungus cultures. Bioresource Technology. 299;122565.

56. Jia, Y*., Yin, L*., Khanal, S.K*., Zhang, H., Oberoi, A., and Lu, H. 2020. Biotransformation of Ibuprofen in biological sludge systems: Investigation of performance and mechanisms. Water Research. 170:115303 (* equal contribution)
57. Nguyen, D., Wu, Z., Shrestha, S., Lee, P.-H., Raskin, L., and Khanal, S.K. 2019. High organic loading rate digestion via bypassing syntrophic acetogenesis though intermittent micro-aeration. *Water Research*. 166:115080.
58. Zhang, H*., Khanal, S.K*., Jia, Y., Song, S., and Lu, H. 2019. Fundamental insights into ciprofloxacin adsorption by sulfate-reducing bacteria sludge: Mechanisms and thermodynamics. *Chemical Engineering Journal.* 378:122103. (* equal contribution)
59. Qiu, L.Q., Zhang, L., Tang, K., Chen, G.H., Khanal, S.K., and Lu, H. Removal of sulfamethoxazole (SMX) in sulfate-reducing flocculent and granular sludge systems. *Bioresource Technology*. 288: 121592.
60. Li, X., Lin, S., Hao, T.W., Khanal, S.K., and Chen. G.H. 2019. Elucidating pyrolysis behaviour of activated sludge in granular and flocculent form: Reaction kinetics and mechanism. *Water Research*. 162. 409-419.
61. Jia, Y., Zhang, H., Khanal, S.K., Yin., L., and Lu, H. 2019. Insights into pharmaceuticals removal in an anaerobic sulfate-reducing bacteria sludge system. *Water Research*. 161:191-20.
62. Oberoi, A.S., Jia, Y., Zhang, H., Khanal, S.K., Lu, H. 2019. Insights into fate and removal of antibiotics in engineered biological treatment systems: A critical review. *Environmental Science & Technology*. 53: 7234−7264.
63. Phuttaro, C., Sawatdeenarunat, C., Surendra, K.C., Boonsawang, P., Chaiprapat, S., and Khanal, S.K. 2019. Anaerobic digestion of hydrothermally-pretreated lignocellulosic biomass: Influence of pretreatment temperatures, inhibitors and soluble organics on methane yield. *Bioresource Technology*. 284: 128-138.
64. Wongkiew, S., Park, M-R., Chandran, K., and Khanal, S.K. 2018. Aquaponic systems for sustainable resource recovery: Linking nitrogen transformations to microbial communities. *Environmental Science & Technology*. 52 (21): 12728-12739.
65. Nguyen, D., and Khanal, S.K. 2018. A little breath of fresh air into an anaerobic system: How micro-aeration facilitates anaerobic digestion process. *Biotechnology Advances*. 36 (7): 1971-1983.
66. Zhang, H., Jia, Y., Khanal, S.K., Lu, H., Fang, H., and Zhao, Q. 2018. Understanding the Role of Extracellular Polymeric Substances on Ciprofloxacin Adsorption in Aerobic Sludge, Anaerobic Sludge, and Sulfate-Reducing Bacteria Sludge Systems. *Environmental Science & Technology*.52: 6476-6486.
67. Wongkiew, S., Popp, B.N., and Khanal, S.K. 2018. Nitrogen recovery and nitrous oxide (N2O) emissions from aquaponic systems: Influence of plant species and dissolved oxygen. *International Biodeterioration & Biodegradation.* 134: 117-126.
68. Dong, N., Bu, F., Xie, L., Khanal, S.K., and Zhou, Q. 2018. Performance and microbial community of hydrogenotrophic methanogenesis under thermophilic and extreme-thermophilic conditions. *Bioresource Technology*. 266: 454-462.
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Leadership Roles (Committees, Boards, Advisory, etc.)

Editor-in-Chief, Bioresource Technology (IF 11.4) (Jan 2024 to continue).
Executive Editor, Bioresource Technology (IF 11.4) (Aug 2023 to Dec 2023).
Editor, Bioresource Technology (IF 11.4) (Jan 2022 to Jul 2023).
Associate Editor, Bioresource Technology (I.F 11.889) (Jan 2018 to 2021).
International Advisor, Environmental Engineering Program, Korea University, Seoul, South Korea (2016 - present).
International Bioprocessing Association (IBA) (General Secretary) (2020-present).
USDA NIFA Multi State Project S1041: The Science and Engineering for a Biobased Industry and Economy, Secretary (2009-2010); Vice-Chair (2010-2011) and Chair (2011-2012).

Graduate Students

Category	Current Number of Students	Number Graduated (Career)
Chair of Master Committees	3	14 (UHM) +7 (Iowa St.)
Chair of PhD Committees	3	9 (UHM) + 3 (Iowa St.)
Member of Master Committees	0	8 (UHM) + 1 (Iowa St.)
Member of PhD Committees	2	10 (UHM)+ 7 (Iowa St.)
External MS Committees	-	5
External PhD Committees (Co-Chair)	1	25 (2 as Co-chair)

Grant Support

Title of Grant: Biodegradable cellulosic bio-polymer to replace plastics for military food packaging and food service
Source of Grant: DoD- DLA via Bioenergy System Inc. (Phase II)
Total Dollar Value (Your share of the grant value): $1.5 million ($350,208)
Dates of Grant: 2024-2025
Role: University Lead Researcher

Title of Grant: Macroalgae cultivation using sewage effluent: from bench-scale to pilot-scale
Source of Grant: Hawaii Department of Agriculture (HDOA)
Total Dollar Value (Your share of the grant value): $150,000
Dates of Grant: 2023-2025
Role: PI

Title of Grant: Scalable black soldier fly (BSF)-based biorefinery for valorization of organic wastes into diverse biobased products/biomaterials
Source of Grant: Hawaii Department of Agriculture (HDOA)
Total Dollar Value (Your share of the grant value): $100,000
Dates of Grant: 2023-2024
Role: PI

Title of Grant: Converting macroalgal biomass into bio-oil via microwave pretreatment and oleaginous yeast fermentation
Source of Grant: Hawaii Department of Agriculture (HDOA)
Total Dollar Value (Your share of the grant value): $35,000
Dates of Grant: 2023-2024
Role: PI

Title of Grant: Macroalgal biomass production for high value product generation with nanobubble technology and phase-change materials: Lab-to-pilot scale study
Source of Grant: Center for Tropical and Sub-tropical Aquaculture
Total Dollar Value (Your share of the grant value): $100,000
Dates of Grant: 2023-2025
Role: PI

Title of Grant: Biomaterial and biofuel potential of Hawaiian native algal species
Source of Grant: Hawaii Department of Agriculture (HDOA)
Total Dollar Value (Your share of the grant value): $100,000
Dates of Grant: 2022-2023
Role: PI

Title of Grant: Developing technologies to ameliorate global climate change
Source of Grant: Bioenergy System Inc.
Total Dollar Value (Your share of the grant value): $110,000
Dates of Grant: 2022-2024
Role: PI

Title of Grant: Industrial hemp anaerobic digestion study
Source of Grant: Agripelago Corporation
Total Dollar Value (Your share of the grant value): $38,847
Dates of Grant: 2022-2023
Role: PI

Title of Grant: Technology-driven climate resilient aquaculture–aquaponic system in coastal region of the United States and the Mekong delta region in Vietnam
Source of Grant: USDA-FAS Scientific Cooperation Research Program (SCRP)
Total Dollar Value (Your share of the grant value): $49,969
Dates of Grant: 2022-2024
Role: PI

Title of Grant: Valorization of organic wastes into high quality feed and organic fertilizer through integration of black soldier fly and earthworm
Source of Grant: USDA-HATCH (CTAHR)
Total Dollar Value (Your share of the grant value): $45,000
Dates of Grant: 2022-2023
Role: PI

Title of Grant: Development of a state-of-the-art aquaculture and aquaponic system: integrating biochar filtration and nanobubble technology
Source of Grant: Center for Tropical and Sub-tropical Aquaculture (CTSA)
Total Dollar Value (Your share of the grant value): $39,964
Dates of Grant: 2022-2023
Role: PI

Title of Grant: Nanobubble technology for enhanced microalgal biomass production for aquatic feed application
Source of Grant: Western Sun Grant Regional Center
Total Dollar Value (Your share of the grant value): $150,000
Dates of Grant: 2021-2023
Role: PI

Title of Grant: Biodegradable cellulosic bio-polymer to replace plastics for military food packaging and food service
Source of Grant: DoD- DLA via Bioenergy System Inc. (Phase 1)
Total Dollar Value (Your share of the grant value): $99,951 ($33,000)
Dates of Grant: 2021-2022
Role: University Lead Researcher

Title of Grant: Instrument Grant for the Purchase of NanoSight NS 300
Source of Grant: USDA-HATCH (CTAHR)
Total Dollar Value (Your share of the grant value): $90,000

Dates of Grant: 2021
Role: PI

Title of Grant: Machine learning in anaerobic co-digestion with micro-aeration
Source of Grant: USDA-HATCH (CTAHR)
Total Dollar Value (Your share of the grant value): $30,000
Dates of Grant: 2021-2022
Role: PI

Title of Grant: Nanobubbles application in aquaculture and aquaponic system
Source of Grant: USDA-AFRI (Foundation Program)
Total Dollar Value (Your share of the grant value): $200,000
Dates of Grant: 2021-2022
Role: PI

Title of Grant: Nanobubble Technology Applications in Aquaculture, Aquaponics, Hydroponics, Environment, Food and Food Safety
Source of Grant: CTAHR (Team Science)
Total Dollar Value (Your share of the grant value): $80,000
Dates of Grant: 2019-2021
Role: PI

Title of Grant: Borlaug Newman Fellow - Vietnam
Source of Grant: USDA
Total Dollar Value (Your share of the grant value): $50,000
Dates of Grant: 2019-2022
Role: PI

Title of Grant: Nanobubble Technology for Aquaculture and Aquaponics
Source of Grant: HDOA
Total Dollar Value (Your share of the grant value): $60,000
Dates of Grant: 2019-2021
Role: PI

Title of Grant: Biological Conversion of Farm Waste/AD Digestate into Biofuel and Animal Feed Via Insect Farming
Source of Grant: Western Sun Grant Regional Center
Total Dollar Value (Your share of the grant value): $150,000
Dates of Grant: 2018-2019
Role: PI

Title of Grant: Anaerobic Digestion of High-solids Feedstock: Evaluation of Microbiome and Bioenergetics
Source of Grant: USDA-ARS Supplemental Research grant
Total Dollar Value (Your share of the grant value): $80,000
Dates of Grant: 2018-2020
Role: PI

Title of Grant: Algal Biomass to Ethanol and Aquatic Feed
Source of Grant: Kuehnle AgroSystems, Inc.
Total Dollar Value (Your share of the grant value): $18,000

Dates of Grant: 2018
Role: PI

Title of Grant: High-yielding Bioenergy Feedstock Production, Characterization and Pretreatment for Bioenergy Production
Source of Grant: USDA-ARS
Total Dollar Value (Your share of the grant value): $65,000
Dates of Grant: 2017-2018
Role: PI

Title of Grant: Novel Bio-Chars Production from Northeastern Forestry Feedstocks and Their Land Application to Enhance Environmental Sustainability of Agricultural Production Systems
Source of Grant: Northeast Regional Sun Grant Center
Total Dollar Value (Your share of the grant value): $360,000 ($65,000)
Dates of Grant: 2018-2019
Role: Co-PI

Title of Grant: Anaerobically-digested Slurry (Digestate) and Digestate-derived Biochar Applications as a Fertilizer for Organic Farming
Source of Grant: USDA-Supplemental Research/ Extension grant
Total Dollar Value (Your share of the grant value): $80,000 ($10,000)
Dates of Grant: 2017-2019
Role: Co-PI

Title of Grant: Utilization of Local Agri-processing By-products to Produce Fungal Protein for Aquatic Feed Production
Source of Grant: Center for Tropical and Sub-tropical Aquaculture (CTSA)
Total Dollar Value (Your share of the grant value): $200,000
Dates of Grant: 2015-2018
Role: PI

Title of Grant: Fundamental Understanding of Anaerobic Digestion of Energy Crops for Bioenergy Production
Source of Grant: USDA-Supplemental Research/ Extension grant
Total Dollar Value (Your share of the grant value): $80,000
Dates of Grant: 2016-2018
Role: PI

Title of Grant: Sustainable Integrated Food Production through Aquaponic Systems
Source of Grant: USDA-Specialty Crops
Total Dollar Value (Your share of the grant value): $32,000
Dates of Grant: 2016-2018
Role: PI

Title of Grant: Developing ORP-based Process Control for High Solids Anaerobic Digestion
Source of Grant: USDA-AFRI (Foundation Program)
Total Dollar Value (Your share of the grant value): $150,000
Dates of Grant: 2013-2016
Role: PI

Title of Grant: Nitrogen Transformations in Aquaponics and its Implications to Climate Change
Source of Grant: USDA-AFRI (Foundation Program)
Total Dollar Value (Your share of the grant value): $500,000
Dates of Grant: 2013-2018
Role: PI

Title of Grant: Conversion of High-Yield Tropical Biomass into Sustainable Biofuels
Source of Grant: USDA-BRDI
Total Dollar Value (Your share of the grant value): $6 million ($575,000)
Dates of Grant: 2012-2018
Role: Co-PI

Title of Grant: Developing Anaerobic Digestion Biorefinery Using High Yield Tropical Feedstocks
Source of Grant: Western Sun Grant Regional Center
Total Dollar Value (Your share of the grant value): $200,000
Dates of Grant: 2013-2015
Role: P

Title of Grant: Can Biologically-derived Nitrogen be Used as a Fertilizer for Organic Farming?
Source of Grant: USDA-Supplemental Research/ Extension grant
Total Dollar Value (Your share of the grant value): $99,847
Dates of Grant: 2013-2015
Role: PI

Title of Grant: Converting Food Waste into Biofuel and Animal Feed through Insect Farming
Source of Grant: HATCH grant
Total Dollar Value (Your share of the grant value): $40,000
Dates of Grant: 2014-2015
Role: PI

Title of Grant: Analytical Instrument for Bioenergy, Aquaculture and Climate Change Research, Instruction and Extension in CTAHR
Source of Grant: CTAHR Instructional, Extension or Research Instrumentation
Total Dollar Value (Your share of the grant value): $40,000
Dates of Grant: 2013
Role: PI

Title of Grant: Enhancing Biodiesel Feedstock and Co-product Production Using Oleaginous Fungi
Source of Grant: Pacific Biodiesel, Inc.,
Total Dollar Value (Your share of the grant value): $10,000
Dates of Grant: 2012-2014
Role: PI

Title of Grant: Green Processing of High Yield Tropical Grass to Biobased Product and Biobutanol
Source of Grant: Western Sun Grant Regional Center
Total Dollar Value (Your share of the grant value): $200,000
Dates of Grant: 2011-2014
Role: PI

Title of Grant: Global Mapping of N_2O Emission from Aquaculture and Its Implications to Climate Change: Fate of N_2O in Water Recirculating Aquaponic System
Source of Grant: National Research Foundation of Korea
Total Dollar Value (Your share of the grant value): $300,000 ($70,000)
Dates of Grant: 2011-2014
Role: Co-PI

Title of Grant: An Integrated BioGas-Solar Dehydration System: Increasing Sustainability through Value-Added Agriculture
Source of Grant: Small Business Innovative Research (SBIR) Phase II-USDA-NIFA
Total Dollar Value (Your share of the grant value): $500,000 ($50,000)
Dates of Grant: 2011-2013
Role: Co-PI

Title of Grant: Nitrogen Transformation in Aquaculture-Aquaponic System and Its Implication to Climate Change
Source of Grant: USDA-Supplemental Research/Extension grant
Total Dollar Value (Your share of the grant value): $61,000
Dates of Grant: 2011-2013
Role: PI

Title of Grant: Lignocellulosic Biomass Conversion into Ethanol Through Syngas Fermentation with Simultaneous Recovery of Acetic Acid using Mesoporous Silica Nanoparticle Materials
Source of Grant: USDA-TSTAR
Total Dollar Value (Your share of the grant value): $147,807
Dates of Grant: 2009-2013
Role: PI

Title of Grant: A Collaborative Effort for Utilizing Regionally-based Feedstocks and Co-Products for Aquaculture Production
Source of Grant: USDA-ARS
Total Dollar Value (Your share of the grant value): $600,000 ($100,000)
Dates of Grant: 2009-2012
Role: Co-PI

Title of Grant: Development of High Yield Feedstocks y for Renewable Energy
Source of Grant: US Dept. of Energy
Total Dollar Value (Your share of the grant value): $6.0 million ($306,449)
Dates of Grant: 2009-2013
Role: Co-PI

Title of Grant: Value-added Processing of Sugarcane-ethanol Vinasse: Production of Protein-rich Fungal Biomass as a Fish Feed Ingredient
Source of Grant: USDA-ARS
Total Dollar Value (Your share of the grant value): $79,987
Dates of Grant: 2008-2013
Role: PI

Title of Grant: Integrated Education and Research in Clean Energy and Island Sustainability
Source of Grant: US Dept. of Energy

Total Dollar Value (Your share of the grant value): $ 2.5 million ($75,000)
Dates of Grant: 2010-2013
Role: Co-PI

Title of Grant: Developing High School Bioenergy Laboratory Manual
Source of Grant: Hawaii Dept. of Education
Total Dollar Value (Your share of the grant value): $ 10,000
Dates of Grant: 2011
Role: PI

Title of Grant: Developing Hawaii Bioenergy Master Plan: Conversion Technology
Source of Grant: State of Hawaii
Total Dollar Value (Your share of the grant value): $ 10,000
Dates of Grant: 2009
Role: PI

Title of Grant: Effect of Ultrasonic Pretreatment on the Biochemical Conversion of Banagrass to Ethanol
Source of Grant: US Dept. of Energy
Total Dollar Value (Your share of the grant value): $ 70,633
Dates of Grant: 2008-2009
Role: PI

Title of Grant: Wood Utilization Research on US Biofuels, Bioproducts, Hybrid Biomaterials Production, and Traditional Forest Products
Source of Grant: USDA-HATCH
Total Dollar Value (Your share of the grant value): $ 40,000
Dates of Grant: 2008-2009
Role: PI

Presentations at Conferences

Refereed conference presentation (podium) (speaker with "*")

Title: Ultrafine bubble technology applications in environmental remediation and agriculture
Authors: Marcelino, K.R. and Khanal, S.K*.
Name of Conference: 18th International Symposium of Fine bubble Technology
Location: Keio University, Tokyo, Japan
Date of Presentation: Dec 21, 2022

Title: Harnessing ultrafine bubble technology to alleviate oxygen deficiencies in production of *Schizochytrium* biomass
Authors: Shitanaka, T*. and Khanal, S.K.
Name of Conference: 18th International Symposium of Fine bubble Technology
Location: Keio University, Tokyo, Japan
Date of Presentation: Dec 21, 2022

Title: Physicochemical properties of air ultrafine bubbles generated using a ceramic membrane
Authors: Lowe, L*., Shitanaka, T. and Khanal, S.K.
Name of Conference: 18th International Symposium of Fine bubble Technology
Location: Keio University, Tokyo, Japan

Date of Presentation: Dec 21, 2022

Title: Application of machine learning on performance prediction of co-digestion with microaeration
Authors: Chuenchart, W*. Surendra, K.C., and Khanal, S.K.
Name of Conference: 17th World Congress on Anaerobic Digestion
Location: Ann Arbor, Michigan, USA
Date of Presentation: June 17-22, 2022

Title: Nanobubble technology in aquaponics (*Awarded Outstanding Oral Presentation Award*)
Authors: Marcelino, K.R*., and Khanal, S.K.
Name of Conference: 2021 International Conference on Sustainable Biowaste Management
Location: Hong Kong, China
Date of Presentation: April 12-14, 2021

Title: Integration approach of anaerobic co-digestion and microaeration as an alternative solution for municipal organic waste management.
Authors: Chuenchart, W*., Karki, R., Surendra, K.C., and Khanal, S.K.
Name of Conference: 2021 International Conference on Sustainable Biowaste Management
Location: Hong Kong, China
Date of Presentation: April 12-14, 2021

Title: Innovative aquaponic system for resource recovery.
Authors: Wongkiew, S., Park, M.R., Chandran, K., and Khanal, S.K*.
Name of Conference: 2019 Innovation Conference on Sustainable Wastewater Treatment and Resource Recovery
Location: Shanghai, China
Date of Presentation: November 16, 2019

Title: High solids anaerobic digestion of lignocellulosic biomass via oxidation-reduction potential-based micro-aeration.
Authors: Nguyen, D., and Khanal, S.K*
Name of Conference: 16th World Congress on Anaerobic Digestion
Location: Delft, The Netherlands
Date of Presentation: June 23-27, 2019

Title: Alleviating sulfide toxicity using biochar during anaerobic treatment of high-sulfate wastewater with sulfur recovery.
Authors: Oliveira, F. and Khanal, S.K.*
Name of Conference: 16th World Congress on Anaerobic Digestion
Location: Delft, The Netherlands
Date of Presentation: June 23-27, 2019

Title: Intermittent micro-aeration for controlling volatile fatty acids accumulation in high loading rate anaerobic digestion.
Authors: Nguyen, D., and Khanal, S.K.*
Name of Conference: 2nd International Conference on Bioenergy, Bioproducts & Environmental Sustainability
Location: Sitges, Spain
Date of Presentation: Sep 16-19, 2018

Title: Innovative decentralized biorefinery for lignocellulosic biomass: Integrating anaerobic

digestion with thermochemical conversion.
Authors: Sawatdeenarunat, C., and Khanal, S.K.*
Name of Conference: 15th World Congress on Anaerobic Digestion
Location: Beijing, China
Date of Presentation: Oct 18-20, 2017

Title: Aquaponic system - An emerging technology for resource recovery.
Authors: Wongkiew, S*., Popp, B.N., Park, M.R., Chandran, K., and Khanal, S.K.
Name of Conference: 2nd International Resource Recovery Conference
Location: Columbia University, New York, NY
Date of Presentation: Aug 5-9, 2017

Title: Natural strategies for enhanced biogas production from lignocellulosic biomass revealed through the synergistic application of microbial and engineering techniques.
Authors: Shrestha, S*., Fonoll, X., Dosta, J., Mata-Alvarez, J., Khanal, S.K., and Lutgarde R.
Name of Conference: 1st Symposium on Microbiological Methods for Waste and Water Resource Recovery
Location: Delft, The Netherlands
Date of Presentation: May 18-19, 2017

Title: High yielding tropical energy crops for bioenergy production: effects of plant components, harvest years, and locations on biomass composition and subsequent biogas production.
Authors: Surendra, K.C., and Khanal, S.K.*
Name of Conference: International Conference on Progress in Biogas IV
Location: University of Hohenheim, Stuttgart, Germany
Date of Presentation: Mar 8-11, 2017

Title: Redox potential-based micro-aeration process control for anaerobic digestion.
Authors: Nguyen, D., and Khanal, S.K.*
Name of Conference: 1st International Conference on Bioenergy, Bioproducts & Environmental Sustainability
Location: Sitges, Spain
Date of Presentation: Oct 23-26, 2016

Title: Enhanced volatile fatty acids production with micro-oxygenation during anaerobic digestion of lignocellulosic biomass.
Authors: Sawatdeenarunat. C, and Khanal, S.K.*
Name of Conference: 1st International Conference on Bioenergy, Bioproducts & Environmental Sustainability
Location: Sitges, Spain
Date of Presentation: Oct 23-26, 2016

Title: Anaerobic co-digestion of lignocellulosic biomass and cow manure using rumen content as inoculum.
Authors: Shrestha, S., Fonoll, X*., Mata-Alvarez, J., Raskin, L., Khanal, S.K.
Name of Conference: 14th World Congress on Anaerobic Digestion
Location: Viña del Mar, Chile
Date of Presentation: Nov 15-18, 2015

Title: Does maturity and size reduction matter on digestibility and methane yield of energy crop?
Authors: Surendra, K.C., Fonoll, X*., and Khanal, S.K.

Name of Conference: 14th World Congress on Anaerobic Digestion
Location: Viña del Mar, Chile
Date of Presentation: Nov 15-18, 2015

Title: Insect farming on organic wastes: A novel strategy to produce biodiesel and animal feed with concurrent waste remediation.
Authors: Surendra, K.C*., Olivier, R., Tomberlin, J.K., and Khanal, S.K.
Name of Conference: 8th International Conference on Challenges in Environmental Science and Engineering, CESE-2015
Location: Sydney, Australia
Date of Presentation: Sep 28-Oct 2, 2015

Title: Effect of crop maturity stage and size reduction on digestibility of energy crop for biomethane production by anaerobic digestion.
Authors: Surendra, K.C.*, and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE) 2014, Annual International Meeting
Location: Montreal, QC, Canada
Date of Presentation: Jul 13-16, 2014

Title: Investigation of acid concentration, retention time and temperature on dilute acid pretreatment of banagrass.
Authors: Drielak, E*., and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE) 2014, Annual International Meeting
Location: Montreal, QC, Canada
Date of Presentation: Jul 13-16, 2014

Title: Biorefining potential of a high-yielding tropical feedstock for biofuel and biobased products.
Authors: Takara, D*., and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE) 2014, Annual International Meeting
Location: Montreal, QC, Canada
Date of Presentation: Jul 13-16, 2014

Title: Bioconversion of sugarcane-to-ethanol wastewater into fungal protein for animal feed applications.
Authors: Nitayavardhana, S*., and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE) 2014, Annual International Meeting
Location: Montreal, QC, Canada
Date of Presentation: Jul 13-16, 2014

Title: Sugarcane-to ethanol biorefinery: Protein-rich fungal biomass production on vinasse for animal feed and organic food production.
Authors: Khanal, S.K.* and Nitayavardhana, S.
Name of Conference: 10th International Conference on Renewable Resources and Biorefineries
Location: Valladolid, Spain
Date of Presentation: Jun 4-6, 2014

Title: Biorefining tropical feedstocks for biofuel and biobased products.

Authors: Khanal, S.K.* and Takara D.
Name of Conference: 1st International Congress on Bioenergy
Location: Portalegre, Portugal.
Date of Presentation: May 23-25, 2013

Title: Ensilage strategy to pretreat green grass for enhanced biomethane production.
Authors: Surendra, K.C., and Khanal, S.K.*
Name of Conference: 27th Annual Biocycle West Coast Conference, 2013
Location: San Diego, CA
Date of Presentation: Apr 9-11, 2013

Title: Green processing: a biorefinery perspective.
Authors: Takara, D., Hashimoto, A.G., and Khanal, S.K.*
Name of Conference: Sun Grant National Conference: Science for Biomass Feedstock Production and Utilization
Location: New Orleans, LA
Date of Presentation: Oct 2-5, 2012

Title: High-yield tropical biomass for advanced biofuels.
Authors: Hashimoto, A.G*., Arnold, J., Ayars, J., Crow, S., Eggeman, T., Jakeway, L., Karkee, M., Khanal, S.K., Kiniry, J., Matsunaga, J., Meki, N., Murthy, G., Nakahata, M., Ogoshi, R., Turano, B., Turn, S., Yanangida, J., and Zhang, Q.
Name of Conference: Sun Grant National Conference: Science for Biomass Feedstock Production and Utilization
Location: New Orleans, LA
Date of Presentation: Oct 2-5, 2012

Title: Green processing of dedicated energy crops for biofuel and biobased products.
Authors: Takara, D*., Hashimoto, A.G. and Khanal, S.K.
Name of Conference: International Conference on Challenges in Environmental Science and Engineering (CESE), 2012
Location: Melbourne, Australia
Date of Presentation: Sep 9-13, 2012

Title: Evaluation and analytical modeling of carbon monoxide mass transfer using a composite hollow fiber (CHF) membrane bioreactor in syngas fermentation.
Authors: Munasinghe, P.C.*, and Khanal, S.K.
Name of Conference: International Conference on Challenges in Environmental Science and Engineering (CESE), 2012
Location: Melbourne, Australia
Date of Presentation: Sep 9-13, 2012

Title: Biofuel residues conversion into aquatic feed via fungal fermentation.
Authors: Nitayavardhana, S*., Kerati, I, Pavasant, P., and Khanal, S.K.
Name of Conference: International Conference on Challenges in Environmental Science and Engineering (CESE), 2012
Location: Melbourne, Australia
Date of Presentation: Sep 9-13, 2012

Title: Wet processing of banagrass: A biorefinery perspective.
Authors: Takara, D.*, and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE), 2011, Annual International Meeting

Location: Louisville, KY
Date of Presentation: Aug 7-10, 2011

Title: Evaluation of hydrogen and carbon monoxide mass transfer and a correlation between myoglobin-protein bio-assay and gas chromatography method for carbon monoxide determination.
Authors: Munasinghe, P.C.*, and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE), 2011, Annual International Meeting
Location: Louisville, KY
Date of Presentation: Aug 7-10, 2011

Title: Biodiesel-derived crude glycerol bioconversion to animal feed: A sustainable option for a biodiesel refinery.
Authors: Nitayavardhana, S.* and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers (ASABE), 2011, Annual International Meeting
Location: Louisville, KY
Date of Presentation: Aug 7-10, 2011

Title: Enhanced sugar release and co-product generation of green banagrass.
Authors: Takara, D.*, and Khanal, S.K.
Name of Conference: Asian Congress on Biotechnology (ACB)
Location: Shanghai, China
Date of Presentation: May 11-15, 2011

Title: Green processing of banagrass (*Pennisetum purpureum*) for enhanced sugar release.
Authors: Takara, D*., and Khanal, S.K.
Name of Conference: Pacific Rim Summit on Industrial Biotechnology and Bioenergy
Location: Honolulu, HI
Date of Presentation: Dec 11-14, 2010

Title: Optimization of chemical pretreatment of banagrass (a variety of Pennisetum purpureum) for enhanced sugar release.
Authors: Takara, D*., and Khanal, S.K.
Name of Conference: Pacific Rim Summit on Industrial Biotechnology and Bioenergy
Location: Honolulu, HI
Date of Presentation: Nov 8-11, 2009

Title: Syngas fermentation to biofuel: evaluation of carbon monoxide mass transfer in different reactors configurations.
Authors: Munasinghe, P.C*., and Khanal, S.K.
Name of Conference: Pacific Rim Summit on Industrial Biotechnology and Bioenergy
Location: Honolulu, HI
Date of Presentation: Nov 8-11, 2009

Title: Simultaneous saccharification and fermentation of ultrasonically treated corn slurry.
Authors: Montalbo-Lomboy, M.*, Khanal, S.K., Van Leeuwen, J., Raman, D.R., Dunn Jr., L., and Grewell, D.
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Reno, NV
Date of Presentation: Jun 21-24, 2009

Title: Ultrasonic pretreatment of corn slurry in batch and continuous systems.
Authors: Montalbo-Lomboy, M., Khanal, S.K., Van Leeuwen, J., Raman, D.R., Dunn Jr., L., and Grewell, D.*
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Reno, NV
Date of Presentation: Jun 21-24, 2009

Title: Ultrasonic enhanced liquefaction and saccharification of corn for biofuel production.
Authors: Khanal, S.K., Montalbo, M*., Van Leeuwen, J., Srinivasan, G., and Grewell, D.
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Minneapolis, MN
Date of Presentation: Jun 17-20, 2007

Title: Ultrasonication in soy processing for enhanced protein and sugar yields and subsequent bacterial nisin production.
Authors: Karki, B*., Lamsal, B.P., Grewell, D., Van Leeuwen, J., and Khanal, S.K.
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Minneapolis, MN
Date of Presentation: Jun 17-20, 2007

Title: Thin stillage treatment from dry grind ethanol plants with fungi.
Authors: Rasmussen, M*., Khanal, S.K., Pometto, A.L., and Van Leeuwen, J.
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Minneapolis, MN
Date of Presentation: Jun 17-20, 2007

Title: Fungal fermentation of corn fiber to enhance ethanol production.
Authors: Shrestha, P*., Vincent, M., Khanal, S.K., Pometto, A.L., and Van Leeuwen, J.
Name of Conference: American Society of Agricultural and Biological Engineers Annual International Meeting
Location: Minneapolis, MN
Date of Presentation: Jun 17-20, 2007

Title: Effect of total solids concentration on ultrasonic disintegration of waste activated sludge.
Authors: Akin, B*., Khanal, S.K., Sung, S., Grewell, D., and Van Leeuwen, J.
Name of Conference: IWA Specialized Conference – Facing Sludge Diversities: Challenges, Risks, and Opportunities
Location: Antalya, Turkey
Date of Presentation: Mar 28-30, 2007

Title: Ultrasound pretreatment of waste activated sludge: evaluation of sludge disintegration and aerobic digestibility.
Authors: Khanal, S.K*., Isik, H., Sung, S., and Van Leeuwen, J.
Name of Conference: IWA World Water Congress and Exhibition
Location: Beijing, China
Date of Presentation: Sep 10-14, 2006

Title: Ultrasonic conditioning of waste activated sludge for enhanced aerobic digestion.
Authors: Khanal, S.K*., Isik, H., Sung, S., and Van Leeuwen, J.

Name of Conference: IWA Specialized Conference - Sustainable Sludge Management: State of the Art, Challenges and Perspectives
Location: Moscow, Russia
Date of Presentation: May 29-31, 2006

Title: Effects of ultrasound pretreatment on aerobic digestibility of thickened waste activated sludge.
Authors: Khanal, S.K*., Isik, H., and Sung, S.
Name of Conference: 7th Specialized Conference on Small Water and Wastewater Systems
Location: Mexico City, Mexico
Date of Presentation: Mar 7-10, 2006

Title: Anaerobic membrane bioreactor for treatment of synthetic municipal wastewater at ambient temperature.
Authors: Ho, J., Khanal, S.K*., and Sung, S.
Name of Conference: 7th Specialized Conference on Small Water and Wastewater Systems
Location: Mexico City, Mexico
Date of Presentation: Mar 7-10, 2006

Title: Biological odor control technology for high sulfate wastes.
Authors: Huang, J.-C*., and Khanal, S.K.
Name of Conference: 4th Symposium on Anaerobic Digestion of Solid Waste
Location: Cohenhagen, Denmark
Date of Presentation: Aug 31-Sept 2, 2005

Title: Attached growth fungal system for food processing wastewater treatment and high value protein recovery.
Authors: Jasti, N*., Khanal, S.K., Pometto, A.L., and Van Leeuwen, J.
Name of Conference: 78th Annual Conference & Exposition (WEFTEC)
Location: Washington, D.C.
Date of Presentation: Oct 29-Nov 2, 2005

Title: Treatment of food processing wastewater using attached growth fungal system.
Authors: Jasti, N*., Khanal, S.K., Pometto, A.L., and Van Leeuwen, J.
Name of Conference: 1st IWA-ASPIRE (Asia Pacific Regional Group) Conference & Exhibition
Location: Singapore
Date of Presentation: Jul 10-15, 2005

Title: Biological hydrogen production potential of cellulose-derived sugars.
Authors: Huang, Y.-T., Chen, S.-Y., Khanal, S.K*., and Sung, S.
Name of Conference: 1st IWA-ASPIRE (Asia Pacific Regional Group) Conference & Exhibition
Location: Singapore
Date of Presentation: Jul 10-15, 2005

Title: Production of aerobic yeast from industrial process stream.
Authors: Wongkarnka, M., Khanal, S.K*., Eliosov, B., Leeuwen, J., and Ellis, T.G.
Name of Conference: 1st IWA-ASPIRE (Asia Pacific Regional Group) Conference & Exhibition
Location: Singapore
Date of Presentation: Jul 10-15, 2005

Title: Treatment of high sulfate wastewater in upflow anaerobic filter.
Authors: Khanal, S. K*., and Huang, J.-C.
Name of Conference: Asian Water Qual, 2003
Location: Bangkok, Thailand
Date of Presentation: Oct 19-23, 2003

Title: Temperature-phased anaerobic digestion (TPAD) of food waste together with wax-coated cardboard.
Authors: Li, C., Ho, J.H., Khanal, S.K., and Sung, S.*
Name of Conference: Asian Water Qual, 2003
Location: Bangkok, Thailand
Date of Presentation: Oct 19-23, 2003

Title: Bioconversion of sulfide to elemental sulfur in trickling filter.
Authors: Sung, S., Khanal, S.K., Chen, W.-H*., and Cao, Q.
Name of Conference: Asian Water Qual, 2003
Location: Bangkok, Thailand
Date of Presentation: Oct 19-23, 2003

Title: Use of ORP to control oxygen dosing for online sulfide oxidation in anaerobic treatment of high sulfate wastewater.
Authors: Khanal, S.K., Shang, C*., and Huang, J.-C.
Name of Conference: IWA 3rd World Water Congress
Location: Melbourne, Australia
Date of Presentation: Apr 7-12, 2002

Title: Anaerobic biotechnology for the treatment of sulfate-laden wastewater.
Authors: Khanal, S.K*., and Huang, J.-C.
Name of Conference: IWA-WISA sponsored conference on Managing Water and Waste in the New Millennium
Location: Midrand, Johannesburg, South Africa
Date of Presentation: May 23-26, 2000

TECHNICAL PRESENTATIONS/POSTERS, MEETINGS AND WORKSHOPS

Title: Application of nanobubble technology in floating-raft aquaponics—Updated findings. (*Awarded 2nd Outstanding Poster Award*)
Authors: Marcelino, K.R*., Wongkiew, S., Surendra, K.C., and Khanal, S.K.
Name of Conference: S-1075 Multistate Annual Meeting and the Symposium on Science and Technology Driving the Bioeconomy
Location: Omaha, Nebraska, USA
Date of Presentation: July 13-14, 2023

Title: Application of biochar and nanobubble technology in aquaponic system.
Authors: Lopchan Lama, S.*, Marcelino, K.R., Surendra, K.C., and Khanal, S.K.
Name of Conference: S-1075 Multistate Annual Meeting and the Symposium on Science and Technology Driving the Bioeconomy
Location: Omaha, Nebraska, USA
Date of Presentation: July 13-14, 2023

Title: Artificial intelligence-based modeling and optimization of anaerobic co-digestion with micro-

aeration
Authors: Khan, M.*, Chuenchart, W., Surendra, K.C., and Khanal, S.K.
Name of Conference: S-1075 Multistate Annual Meeting and the Symposium on Science and Technology Driving the Bioeconomy
Location: Omaha, Nebraska, USA
Date of Presentation: July 13-14, 2023

Title: Optimization of cultivation parameters for R. oligosporus in local agroindustrial wastes for aquafeed application
Authors: Kwon, J.S.*, and Khanal, S.K.
Name of Conference: S-1075 Multistate Annual Meeting and the Symposium on Science and Technology Driving the Bioeconomy
Location: Omaha, Nebraska, USA
Date of Presentation: July 13-14, 2023

Title: Flocculation of oleaginous green algae with Mortierella fungi.
Authors: Shitanaka T.*, Higa, L., Bryson, A., Bertucci, C., VandePol, N., Lucker B., Khanal, S.K., Bonito, G., and Du, Z-Y.
Name of Conference: The International Conference on Algal Biomass, Biofuels, and Bioproducts.
Location: Waikoloa, Hawaii, USA
Date of Presentation: June 14, 2023

Title: Time series machine learning application in anaerobic co-digestion of food waste and sewage sludge with microaeration.
Authors: Chuenchart, W.*, Surendra, K.C., Khan, M., and Khanal, S.K.
Name of Conference: International Conference on Solid Waste 2023: Waste Management in Circular Economy and Climate Resilience (ICSWHK 2023)
Location: Wan Chai, Hong Kong, China
Date of Presentation: May 31-June 03, 2023

Title: Application of nanobubble aeration in floating-raft aquaponics.
Authors: Marcelino, K.R*., Wongkiew, S., Surendra, K.C., and Khanal, S.K.
Name of Conference: 1st International Conference on Bioprocess and Sustainability (ICBS 2023)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: March 27, 2023

Title: Application of biochar and nanobubble technology in aquaponic system.
Authors: Lopchan Lama, S.*, Marcelino, K.R., Surendra, K.C., and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Showcase and Research Symposium (CTAHR SRS 2023)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: March 27, 2023

Title: Artificial intelligence-based modeling and optimization of anaerobic co-digestion process.
Authors: Khan, M.*, Chuenchart, W., Surendra, K.C., and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Showcase and Research Symposium (CTAHR SRS 2023)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: March 27, 2023

Title: Application of artificial intelligence in anaerobic co-digestion with microaeration.
Authors: Chuenchart, W.*, Surendra, K.C., and Khanal, S.K.

Name of Conference: College of Tropical Agriculture and Human Resources Showcase and Research Symposium (CTAHR SRS 2023)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: March 27, 2023

Title: Harnessing nanobubble technology to alleviate oxygen deficiencies in Schizochytrium culture.
Authors: Shitanaka, T.*, Lowe, L., Marcelino, K.R., Kaur, M., Surendra, K.C., and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Showcase and Research Symposium (CTAHR SRS 2023)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: March 27, 2023

Title: Application of nanobubble aeration in floating-raft aquaponics.
Authors: Marcelino, K.R*., Wongkiew, S., Surendra, K.C., and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Showcase and Research Symposium (CTAHR SRS 2023)
Location: University of Tsukuba, Japan
Date of Presentation: March 25-26, 2023

Title: Ultrafine bubble aeration to improve biomass and lipid levels of Schizochytrium.
Authors: Shitanaka, T.*, Lowe, L., Marcelino, K.R., Surendra, K.C., and Khanal, S.K.
Name of Conference: 18th International Symposium of Fine Bubble Technology
Location: Keio University, Japan
Date of Presentation: December 21, 2022

Title: Carbon dioxide nanobubbles as a delivery system to enhance microalgal productivity.
Authors: Shitanaka T*., Marcelino K.R., Surendra K.C., Du Z.-Y., and Khanal S.K.
Name of Conference: S-1075: Science and Engineering for a Biobased Industry and Economy
Location: Houston, Texas, USA
Date of Presentation: July 15-16, 2022

Title: Application of machine learning on performance prediction of co-digestion with microaeration.
Authors: Chuenchart, W*., Surendra K.C., and Khanal S.K.
Name of Conference: S-1075: Science and Engineering for a Biobased Industry and Economy
Location: Houston, Texas, USA
Date of Presentation: July 15-16, 2022

Title: Application of air nanobubbles in floating-raft aquaponics.
Authors: Marcelino K.R*., Shitanaka T., Surendra K.C., and Khanal S.K.
Name of Conference: S-1075: Science and Engineering for a Biobased Industry and Economy
Location: Houston, Texas, USA
Date of Presentation: July 15-16, 2022

Title: Micro-aeration enhances methanogenesis and process stability
Authors: Khanal, S.K*.
Name of Conference: 17th World Congress on Anaerobic Digestion
Location: Ann Arbor, Michigan, USA
Date of Presentation: June 17-22, 2022

Title: Data-driven approaches for modeling anaerobic digestion
Authors: Khanal, S.K*. and Chuenchart, W*.

Name of Conference: 17th World Congress on Anaerobic Digestion
Location: Ann Arbor, Michigan, USA
Date of Presentation: June 17-22, 2022

Title: Anaerobic co-digestion of coffee pulp and cattle manure for enhanced biomethane production. (*Awarded Outstanding Poster Award*)
Authors: Karki, R*., Chuenchart, W., Surendra, K.C., and Khanal, S.K.
Name of Conference: 2021 International Conference on Sustainable Biowaste Management
Location: Hong Kong, China
Date of Presentation: April 12-14, 2021

Title: Nitrogen transformations in floating-raft aquaponic systems.
Authors: Wongkiew, S*., and Khanal, S.K.
Name of Conference: 30th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium (*Poster presentation*)
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 6-7, 2018

Title: Oxidation reduction potential (ORP)-based micro-aeration system for anaerobic digestion.
Authors: Nguyen D*., and Khanal. S.K.
Name of Conference: 30th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 6-7, 2018

Title: Anaerobic treatment of sulfate-laden wastewater with simultaneous removal of sulfide using biochar.
Authors: Oliveira, F*., and Khanal. S.K.
Name of Conference: 30th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 6-7, 2018

Title: Automated micro-aeration system for enhancing the process stability of anaerobic digestion at high organic loading rates. (*Awarded Outstanding Poster Award*)
Authors: Nyugen, D., and Khanal, S.K*
Name of Conference: 15th World Congress on Anaerobic Digestion
Location: Beijing, China
Date of Presentation: Oct 18-20, 2017

Title: Effects of hyperthermophilic temperature on biomethanation efficiency and microbial community during hydrogenotrophic methanogenesis. (*Awarded Outstanding Poster Award*)
Authors: Dong, N*., Bu, F., Khanal, S.K., Xie, L., and Zhou, Q.
Name of Conference: 15th World Congress on Anaerobic Digestion
Location: Beijing, China
Date of Presentation: Oct 18-20, 2017

Title: Natural strategies for enhanced biogas production from anaerobic digestion of lignocellulosic biomass.
Authors: Shrestha, S*., Fonoll, X., Dosta, J., Mata-Alvarez, J., Khanal, S.K., and Lutgarde R.
Name of Conference: 3rd International Conference on Biogas Microbiology (ICBM-3)
Location: May 1-3, 2017

Date of Presentation: Wageningen, The Netherlands

Title: Recovery of high-value fungal protein from agri--processing wastewater with simultaneous water reclamation. (*Poster presentation*)
Authors: Batsaikhan, M*., and Khanal, S.K.
Name of Conference: 29th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 7-8, 2017

Title: Effects of high-pressure pretreatment on anaerobic digestion of Napier grass. (*Poster presentation*)
Authors: Phuttaro, C*., Chaiprapat, S., and Khanal, S.K.
Name of Conference: 29th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 7-8, 2017

Title: Reduction of inhibitory compounds generated from high pressure treatment of Gracilaria Salicornia.
Authors: Wakizawa, B*, and Khanal, S.K.
Name of Conference: 29th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 7-8, 2017

Title: Enhanced volatile fatty acids production with micro-oxygenation during anaerobic digestion of lignocellulosic biomass. (*Poster presentation*)
Authors: Sawatdeenarunat, C*., and Khanal, S.K.
Name of Conference: 28th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 8-9, 2016

Title: Nitrogen transformations in floating-raft aquaponic systems. (*Poster presentation*)
Authors: Wongkiew, S*., and Khanal, S.K.
Name of Conference: 28th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 9-10, 2016

Title: Oxidation reduction potential (ORP)-based micro-aeration system for anaerobic digestion. (*Poster presentation*)
Authors: Nguyen D*., and Khanal. S.K.
Name of Conference: 28th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 8-9, 2016

Title: Anaerobic digestion of lignocellulosic biomass using rumen content as inoculum for enhanced biogas production. (*Poster presentation*)
Authors: Shrestha, S*., Fonoll, X., Mata-Alvarez, J., Raskin, L., and Khanal, S.K.
Name of Conference: S-1041: Science and Engineering for a Biobased Industry and Economy,

Research Meeting
Location: Wooster, OH, USA
Date of Presentation: Aug 10-11, 2015

Title: Oxidation reduction potential (ORP)-based micro-aeration system for anaerobic digestion. (*Poster presentation*)
Authors: Nguyen, D*. and Khanal, S.K.
Name of Conference: S-1041: Science and Engineering for a Biobased Industry and Economy, Research Meeting
Location: Wooster, OH, USA
Date of Presentation: Aug 10-11, 2015

Title: Dilute acid pretreatment: investigation of acid concentration, time, temperature and solid to liquid ratio on total sugar release from Napier grass. (*Poster presentation*)
Authors: Drielak, E*., and Khanal, S.K.
Name of Conference: S-1041: Science and Engineering for a Biobased Industry and Economy, Research Meeting
Location: Wooster, OH
Date of Presentation: Aug 10-11, 2015

Title: Enhanced volatile fatty acids production with oxygenation during anaerobic digestion of lignocellulosic biomass. (*Poster presentation*)
Authors: Sawatdeenarunat, C*., and Khanal, S.K.
Name of Conference: S-1041: Science and Engineering for a Biobased Industry and Economy, Research Meeting
Location: Wooster, OH, USA
Date of Presentation: Aug 10-11, 2015

Title: Enhanced volatile fatty acids production with oxygenation during anaerobic digestion of lignocellulosic biomass. (*Poster presentation*)
Authors: Sawatdeenarunat, C*., and Khanal, S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: Nitrogen transformations in floating-raft aquaponic systems. (*Poster presentation*)
Authors: Wongkiew, S*., and Khanal, S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: Bioconversion of food wastes to biodiesel and animal feed through insect farming. (*Poster presentation*)
Authors: Surendra, K.C*., Olivier, R., Tomberlin, J. K., and Khanal, S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: Oxidation reduction potential (ORP)-based micro-aeration system for anaerobic digestion. (*Poster presentation*)

Authors: Nguyen D*., and Khanal. S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: Anaerobic digestion of lignocellulosic biomass using rumen content as inoculum for enhanced biogas production.
Authors: Shrestha, S*., Fonoll, X., Mata-Alvarez, J., Raskin, L., and Khanal, S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: Hydrogen sulfide (H_2S) removal by using biochar. (*Poster presentation*)
Authors: Kanjanarong, J*., Boonsawang, P., and Khanal, S.K.
Name of Conference: 27th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 10-11, 2015

Title: High-yield tropical feedstocks for bioenergy production. (*Poster presentation*)
Authors: Hashimoto, A*, Ogoshi, R., Takara, D., Khanal, S.K., and Crow, S.
Name of Conference: European Biomass Energy Conference
Location: Hamburg, Germany
Date of Presentation: Jun 23-26, 2014

Title: Examination of factors affecting sugar release from Napier grass during dilute acid pretreatment.
Authors: Drielak, E*., and Khanal, S.K.
Name of Conference: 26th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 13-14, 2014

Title: Co-product potential of biofuel residue streams generated from green processing of Napier grass.
Authors: Martinez, L*., Drielak, E., and Khanal, S.K.
Name of Conference: 26th Annual College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (COE) Student Research Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 13-14, 2014

Title: Green processing of high yield tropical grass for biofuel and biobased products.
Authors: Takara, D., Hashimoto, A.G., and Khanal, S.K*.
Name of Conference: S-1041-The Science and Engineering for a Biobased Industry and Economy Annual Meeting and Symposium
Location: Waterfront Center (USDA), Washington, DC
Date of Presentation: Aug 6-7, 2012

Title: Green processing of tropical feedstocks for biofuel and biobased products.
Authors: Takara, D*. and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Research (CTAHR)

Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 13-14, 2012

Title: Green processing of tropical feedstocks for biofuel and biobased products.
Authors: Nitayavardhana, S*. and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Research (CTAHR) Symposium
Location: U University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 13-14, 2012

Title: Green processing of tropical feedstocks for biofuel and biobased products.
Authors: Munasinghe, P.C*. and Khanal, S.K.
Name of Conference: College of Tropical Agriculture and Human Resources Research (CTAHR) Symposium
Location: University of Hawaii at Manoa, Honolulu, Hawaii, USA
Date of Presentation: Apr 13-14, 2012

DISTINGUISHED/PLENARY/KEYNOTE/INVITED SPEAKER

Title: Application of biochar and nanobubble technology in aquaponic system
Name of Conference: International Conference on New Horizons in Biotechnology (NHBT-2023)
Location: Trivandrum, India
Date of Presentation: Nov 26-29, 2023

Title: Advanced anaerobic digestion for energy resource recovery
Name of Conference: Guangdong Technion-Israel Institute of Technology
Location: Shantou, China
Date of Presentation: Nov 18, 2023

Title: Nanobubble technology applications in environmental remediation and agriculture
Name of Conference: Hubei University of Technology
Location: Wuhan, China
Date of Presentation: Nov 04, 2023

Title: Role of micro-aeration in anaerobic digestion
Name of Conference: Beijing University of Chemical Technology
Location: Beijing, China
Date of Presentation: Oct 17, 2023

Title: Nanaerobic digestion – A new pathway for methane enhancement
Name of Conference: College of Engineering, China Agricultural University
Location: Beijing, China
Date of Presentation: Sep 28, 2023

Title: Nanaerobic digestion for enhanced methane production from biomass
Name of Conference: 4th International Symposium on Biomass/Wastes Energy and Environment (BEE2023)
Location: Nanchang, China
Date of Presentation: Sep 21-23, 2023

Title: Application of artificial intelligence and machine learning in bioprocess
Name of Conference: Mini-symposium on Engineering Microbiology and Biomanufacturing
Location: Wuxi, China
Date of Presentation: Aug 1, 2023

Title: Anaerobic digestion of organic wastes –Opportunities and challenges
Name of Conference: 3rd International Conference on Sustainable Solid Waste Treatment and Management (SWTM-2023)
Location: Yang Ling, China
Date of Presentation: Jul 28-31, 2023

Title: Application of artificial intelligence in anaerobic co-digestion of sewage sludge and food waste with microaeration
Name of Conference: 4th International Conference for Bioresource Technology for Bioenergy, Bioproducts & Environmental Sustainability (BIORESTEC)
Location: Lake Garda, Italy
Date of Presentation: May 14-17, 2023

Title: Anaerobic co-digestion and machine learning application.
Name of Conference: School of Environmental Sciences and Engineering
Location: Tongji, Shanghai
Date of Presentation: Apr 1, 2023

Title: Anaerobic co-digestion of food waste and sewage sludge at high organic loading rate: Application of machine learning.
Name of Conference: School of Environmental Sciences and Engineering
Location: Huazhong University of Science and Technology (HUST)
Date of Presentation: Mar 23, 2023

Title: Anaerobic digestion for renewable energy generation and decarbonization.
Name of Conference: Department of Civil and Environmental Engineering
Location: The George Washington University
Date of Presentation: Mar 3, 2023

Title: Application of ultrafine bubble technology in floating-raft aquaponics.
Name of Conference: 18th International Symposium of Fine Bubble Technology
Location: Keio University, Tokyo, Japan
Date of Presentation: Dec 21, 2022

Title: Nano-bubble technology: An emerging frontier in environment and agriculture.
Name of Conference: Faculty of Science and Technology
Location: University of Macau, Macau, China
Date of Presentation: Dec 15, 2022

Title: Machine learning application in anaerobic co-digestion of food waste and sewage sludge.
Name of Conference: International Conference on Biotechnology for Sustainable Bioresources and Bioeconomy (BSBB-2022)
Location: IIT-Guwahati, India (On-site)
Date of Presentation: Dec 7-10, 2022

Title: Nanobubble technology: An emerging frontier in environmental and agricultural applications.

Name of Conference: International Conference on Emerging Trends in Biosciences and Chemical Technology- 2022 (ETBCT 2022)
Location: Katra, Jammu and Kashmir, India (Virtual)
Date of Presentation: Dec 3, 2022

Title: Anaerobic digestion with ORP-controlled microaeration.
Name of Conference: School of Environmental Sciences and Engineering, Fudan University
Location: Shanghai, China (Virtual)
Date of Presentation: Nov 21, 2022
Title: Anaerobic digestion biorefinery: Some perspectives.
Name of Conference: Advanced Technology for Wastewater Management with Focus on Advanced Oxidation, Membrane and Algal Methodologies (ATWM-2022)
Location: Indian Institute of Technology-Madras (IIT-M) (Virtual)
Date of Presentation: Nov 11, 2022

Title: Nanobubble technology applications in algal production and aquaponics.
Name of Conference: 10th International Forum on Industrial Bioprocess (IBA-IFIBiop)
Location: National Kaohsiung University of Science and Technology Nanzih Campus, Kaohsiung, Taiwan (On-site)
Date of Presentation: Oct 28, 2022

Title: Nanobubble technology in environmental remediation and food production.
Name of Conference: Global Lecture Series, The Biotech Research Society
Location: Trivandrum, India (Virtual)
Date of Presentation: Oct 19, 2022

Title: Microaeration-based anaerobic digestion enhances methanogenesis and process stability.
Name of Conference: School of Environmental Sciences and Engineering, Huazhong University of Science and Technology (HUST)
Location: Wuhan, China (Virtual)
Date of Presentation: Oct 11, 2022

Title: Anaerobic co-digestion of food waste and sewage sludge: Application of micro-aeration and machine learning.
Name of Conference: The 1st International Conference on Food Waste to Food Sustainability 2022
Location: Hong Kong Polytechnic University, Hong Kong (Virtual)
Date of Presentation: Aug 24-25, 2022

Title: Anaerobic digestion for biogas and hydrogen production.
Name of Conference: Consortium for Waste-to-Hydrogen utilization and betterment (C-WtHub)
Location: University of Glasgow, Glasgow, Scotland (Virtual)
Date of Presentation: Aug 9, 2022

Title: Preparing a high-quality journal paper.
Name of Conference: Prince of Songkla University
Location: Prince of Songkla University, Songkhla, Thailand (Virtual)
Date of Presentation: Aug 18, 2022

Title: Machine learning application in anaerobic digestion process: Some perspectives.
Name of Conference: International Symposium on Emerging Trends in Role and Production of Bioenergy for Sustainable Development (ETBSD-2022) (Plenary speaker)

Location: Korea University, Seoul, Republic of Korea (On-site)
Date of Presentation: Jul 4-5, 2022

Title: Anaerobic digestion for bioenergy production.
Name of Conference: Biotechnological Advances Towards Sustainable Development (BIOSPECTRUM-2022)
Location: MACFAST, Tiruvalla; Kerala, India (Virtual)
Date of Presentation: Jun 28, 2022

Title: Anaerobic digestion for waste treatment and bioenergy production.
Name of Conference: Dept. of Environmental Science, Can Tho University
Location: Can Tho University, Can Tho, Vietnam (On-site)
Date of Presentation: May 17, 2022

Title: Nanobubble technology in environmental and aquaculture/aquaponics applications.
Name of Conference: College of Aquaculture and Fisheries, Can Tho University
Location: Can Tho University, Can Tho, Vietnam (On-site)
Date of Presentation: May 17, 2022

Title: Micro-aeration in anaerobic digestion and machine learning – A new paradigm.
Name of Conference: The International Chemical Engineering Symposium (IChES2022), and 87th Society of Chemical Engineers
Location: Tokyo, Japan (Virtual)
Date of Presentation: Mar 16-18, 2022

Title: Bioenergy and biorefinery for sustainable bio-circular-green (BCG) economy.
Name of Conference: Center of Excellence in Innovative Biotechnology for Sustainable Utilization of Bioresources, Faculty of Agro-Industry, Prince of Songkla University
Location: Prince of Songkla University, Songkhla, Thailand (Virtual)
Date of Presentation: Feb 4, 2022

Title: Anaerobic co-digestion of food waste and sewage sludge with micro-aeration.
Name of Conference: International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BREEECH 2021)
Location: CSIR-Indian Institute of Petroleum, Dehradun, India (Virtual)
Date of Presentation: Dec 1- 4, 2021

Title: Anaerobic digestion with oxidation-reduction potential (ORP)-controlled micro-aeration.
Name of Conference: FIST, Fudan University
Location: Shanghai China (Virtual)
Date of Presentation: Nov 11, 2021

Title: Biorefineries.
Name of Conference: Dept of Civil and Environmental Engineering, National University of Singapore
Location: Singapore (Virtual)
Date of Presentation: Oct 26, 2021

Title: Anaerobic digestion.
Name of Conference: IBASC Mini-class
Location: Gajdah Mada University, Yogyakarta, Indonesia (Virtual)

Date of Presentation: Aug 03, 2021

Title: Nanobubbles: An emerging frontier in environmental and agricultural applications.
Name of Conference: International Workshop on Agricultural Waste Reclamation and Utilization (AWRU2021)
Location: University of Tsukuba, Tsukuba, Japan (Virtual)
Date of Presentation: Sep 25-26, 2021

Title: Anaerobic biorefinery: Some perspectives.
Name of Conference: Progress in Biogas V
Location: Hohenheim University, Stuttgart, Germany (Virtual)
Date of Presentation: Sep 24-25, 2021

Title: Nanobubble technology applications in aquaculture and aquaponics.
Name of Conference: 9th International Conference on Bioprocessing (IBA-IFIBiop 2021)
Location: Universidad Autónoma de Coahuila in Saltillo, Coahuila, México (Virtual)
Date of Presentation: Sep 13-15, 2021

Title: Nanobubbles: An emerging frontier in environmental and agricultural applications.
Name of Conference: Dept. of Civil and Environmental Engineering, Hong Kong University of Science and Technology
Location: Hong Kong, China
Date of Presentation: Aug 27, 2021

Title: Anaerobic co-digestion of food waste and sewage sludge with microaeration.
Name of Conference: 2nd International Conference on Sustainable Solid Waste Treatment and Management (SWTM)
Location: Yangling, Shaanxi, China (Virtual)
Date of Presentation: Jul 18, 2021

Title: Nanobubble technology applications in environment and agriculture.
Name of Conference: 3rd International Conference for Bioresource Technology for Bioenergy, Bioproducts & Environmental Sustainability (BIORESTEC)
Location: Virtual
Date of Presentation: May 17, 2021

Title: Biochar application for sulfide toxicity control during anaerobic treatment of high sulfate wastewater with sulfur recovery.
Name of Conference: 5th Asia Pacific Biochar Conference 2021
Location: Hong Kong Polytechnic University, Hong Kong (Virtual)
Date of Presentation: May 11, 2021

Title: Bioconversion of wastes-to-resources: opportunity and challenges.
Name of Conference: International Conference on Sustainable Biowaste Management (SBM 2021)
Location: Hong Kong Baptist University, Hong Kong (Virtual)
Date of Presentation: April 12, 2021

Title: Nanobubble technology applications in agriculture and environment.
Name of Conference: International conference on Biotechnology for Sustainable Agriculture, Environment and Health (BASEH-2021)

Location: Jaipur, India (Virtual)
Date of Presentation: April 4, 2021

Title: Nanobubble technology applications in agriculture and environment.
Name of Conference: Department of Chemical and Biological Engineering, University of Idaho
Location: Moscow, Idaho, USA (Virtual)
Date of Presentation: Mar 31, 2021

Title: Anaerobic digestion for waste treatment and resource recovery.
Name of Conference: Institute of Bioresource and Agriculture, Hong Kong Baptist University - Lecture Series 2020 - Advances in Bioconversion Technology
Location: Virtual
Date of Presentation: Nov 11, 2020

Title: Anaerobic digestion for waste treatment and resource recovery.
Name of Conference: 2020 International Exchange Conference on Value-added Utilization of Agricultural and Animal Husbandry Wastes
Location: Beijing, China (Virtual)
Date of Presentation: Oct 31, 2020

Title: Waste-to-resources: Some perspectives.
Name of Conference: Distinguished Lecture Series, School of Chemical and Energy Engineering, Faculty of Engineering, Universiti Teknologi Malaysia, Johor, Malaysia
Location: Malaysia (Virtual)
Date of Presentation: Oct 13, 2020

Title: Waste-to-resources in the context of circular economy.
Name of Conference: International Webinar on Sustainable Engineering, Department of Civil Engineering, Andhra University
Location: Hyderabad, India (Virtual)
Date of Presentation: Sep 16, 2020

Title: Nanobubble technology applications in environment and agriculture.
Name of Conference: International Conference on New Horizons in Biotechnology
Location: Trivendrum, India
Date of Presentation: Nov 20-23, 2019

Title: Bioenergy and biobased products from biowastes/agri-residues.
Name of Conference: Sun Grant Center Western Regional Center
Location: Oregon State University, Corvallis
Date of Presentation: Aug 21, 2019

Title: Recovery of resources from wastes.
Name of Conference: Invited speaker
Location: Shandong University, Qingdao
Date of Presentation: Jul 9, 2019

Title: Can micro-aeration improve anaerobic digestion process?
Name of Conference: The 3rd International Conference on Bioresources, Energy, Environment and Materials Technology (BEEM 2019)
Location: Hong Kong, SAR

Date of Presentation: Jun 13-15, 2019

Title: Recovery of resources from wastes (water): some perspectives.
Name of Conference: Invited speaker
Location: Hong Kong University of Science and Technology
Date of Presentation: Jun 12, 2019

Title: Organic wastes bioconversion via insect farming: opportunities and challenges.
Name of Conference: International Conference on Sustainable Solid Waste Treatments and Managements
Location: Yangling, China
Date of Presentation: May 6-9, 2019

Title: Waste-to-resources: Some perspectives.
Name of Conference: Invited speaker
Location: Prince of Songkla University, Songkhla, Thailand
Date of Presentation: Apr 19, 2019

Title: Aquaponic system for resource recovery: understanding the role of microbial communities in nitrogen transformations.
Name of Conference: International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)
Location: Hyderabad, India
Date of Presentation: Nov 22-25, 2018

Title: Anaerobic digestion with microaeration for enhanced methane yield at high organic loading rates.
Name of Conference: International Conference on Advanced Technologies in Energy, Environmental and Electrical Engineering (AT3E 2018)
Location: Shandong University, Qingdao, China
Date of Presentation: Oct 26-28, 2018

Title: Micro-aeration-based anaerobic digestion process for enhanced biomethane yield.
Name of Conference: 6th S2NU-K2U Symposium on Waste-to-Energy
Location: Seoul National University, Seoul Korea
Date of Presentation: Sep 28, 2018

Title: Biogas and biorefinery.
Name of Conference: Global Perspectives in Bioresource Technology for Water–Food–Energy Sustainability
Location: Gadjah Mada University, Yogyakarta, Indonesia
Date of Presentation: Aug 7-16, 2018

Title: Bioresources and their utilization.
Name of Conference: Global Perspectives in Bioresource Technology for Water–Food–Energy Sustainability
Location: Gadjah Mada University, Yogyakarta, Indonesia
Date of Presentation: Aug 7-16, 2018

Title: Hypothesis driven research and student mentoring.
Name of Conference: Global Perspectives in Bioresource Technology for Water–Food–Energy Sustainability
Location: Gadjah Mada University, Yogyakarta, Indonesia
Date of Presentation: Aug 7-16, 2018

Title: Anaerobic digestion biorefinery: Integrating biochemical conversion and thermochemical conversion.
Name of Conference: Northwest A & F University
Location: Yangling, China
Date of Presentation: Jun 29, 2018

Title: Bioenergy and Bio-based Products from Bioresources: Energy and Environmental Sustainability.
Name of Conference: In celebration of 150 years of establishment of Oregon State University (Western Regional Sun Grant Center)
Location: Corvallis, OR
Date of Presentation: Apr 16-17, 2018

Title: Anaerobic digestion biorefinery for bioenergy and biobased products.
Name of Conference: International Conference on Alternative Fuels and Energy – ICAFE-2017
Location: Daegu, South Korea
Date of Presentation: Oct 23-25, 2017

Title: Anaerobic digestion process control via oxidation-reduction potential-based micro-aeration.
Name of Conference: International Conference on Emerging Trends in Biotechnology for Waste Conversion (ETBWC-2017) and XIV Convention of the Biotech Research Society, CSIR-National Environmental Engineering Research Institute
Location: Nagpur, India
Date of Presentation: Oct 8-10, 2017

Title: Oxidation-reduction potential (ORP)-based micro-aeration for anaerobic digestion process stability at high organic loading rate.
Name of Conference: Faculty of Engineering, Prince of Songkla University
Location: Hat Yai, Thailand
Date of Presentation: Jul 31, 2017

Title: Anaerobic biorefinery of lignocellulosic feedstock to produce bioenergy and biobased products.
Name of Conference: The 7th International Conference on Fermentation Technology for Value-added Agricultural Products and the 12th Asian Biohydrogen & Biorefinery Symposium
Location: Khon Kaen, Thailand
Date of Presentation: Jul 26-28, 2017

Title: Waste to energy: Current status and perspectives.
Name of Conference: Water Environment Association of the Philippines Convention 2017
Location: Manila, Philippines
Date of Presentation: Jul 19-21, 2017

Title: Anaerobic digestion process control using oxidation-reduction potential (ORP).
Name of Conference: School of Environmental Engineering and Science, Tongji University,
Location: Tongji, China
Date of Presentation: Jun 27, 2017

Title: Biochar application in hydrogen sulfide removal from biogas.
Name of Conference: 2nd International Conference on Biological Waste as Resource (BWR2017)
Location: Hong Kong
Date of Presentation: May 25–28, 2017

Title: Anaerobic digestion of lignocellulosic biomass using horizontal bioreactor with focus on decentralized biorefinery.

Name of Conference: 7th International Industrial Bioprocessing
Location: Wuxi, China
Date of Presentation: May 21-24, 2017

Title: Oxidation-reduction potential (ORP)-based micro-aeration for anaerobic digestion process stability at high organic loading rate.
Name of Conference: Montana Tech of the University of Montana
Location: Butte, MT
Date of Presentation: Apr 28, 2017

Title: Renewable energy and climate change.
Name of Conference: Joint Workshop - University of Hawaii and Tokyo University of Agriculture and Technology
Location: Honolulu
Date of Presentation: Feb 21, 2017

Title: Anaerobic digestion of lignocellulosic biomass using horizontal bioreactor: Evaluation of long-term digester performance.
Name of Conference: International conference on Bioprocessing India 2016, Center of Innovative and Applied Bioprocessing
Location: Mohali, India
Date of Presentation: Dec 15-17, 2016

Title: Waste-to-resources: opportunities and challenges.
Name of Conference: International Conference on Strategies for Environmental Protection and Management and 29th Annual meeting of National Environmental Science Academy, Jawaharlal Nehru University
Location: New Delhi, India
Date of Presentation: Dec 11-13, 2016

Title: Anaerobic digestion of high yield energy crops for bioenergy production.
Name of Conference: International Conference on Current Trends in Biotechnology
Location: Vellore, India
Date of Presentation: Dec 8-10, 2016

Title: Anaerobic digestion of high yield energy crops.
Name of Conference: Department of Environmental Engineering and Science, National University of Singapore
Location: Singapore
Date of Presentation: Dec 5, 2016

Title: Converting biofuel process residues/wastes into protein-rich aquatic feed with simultaneous reclamation of treated effluent.
Name of Conference: 1st International Conference on Bioenergy, Bioproducts & Environmental Sustainability
Location: Sitges, Spain
Date of Presentation: Oct 23-26, 2016

Title: Tips on writing research paper.
Name of Conference: School of Environmental Science and Engineering, Sun Yat-Sen University
Location: Guangzhou, China
Date of Presentation: Aug 2, 2016

Title: Bioconversion of organic wastes into biofuel via insect farming.
Name of Conference: 4th S2NU-K2U Symposium on Waste-to-Energy, Seoul National University
Location: Seoul Korea
Date of Presentation: Jul 1, 2016

Title: Research and development in anaerobic biotechnology.
Name of Conference: College of Environmental Science and Engineering, Tongji University
Location: Shanghai, China
Date of Presentation: Jun 9, 2016

Title: Resource recovery from wastes/residues.
Name of Conference: College of Environmental Science and Engineering, Shandong University
Location: Jinan, China
Date of Presentation: Jun 17, 2016

Title: Research and development: Interfacing energy and environment.
Name of Conference: Shiv Nadar University
Location: Gautam Nagar, India
Date of Presentation: Apr 21, 2016

Title: Resource recovery from wastes/residues.
Name of Conference: Department of Environmental Engineering, National Ilan University
Location: Ilan, Taiwan
Date of Presentation: Apr 19, 2016

Title: Anaerobic waste treatment and bioenergy production.
Name of Conference: Department of Environmental Engineering, National Ilan University
Location: Ilan, Taiwan
Date of Presentation: Apr 19, 2016

Title: Bioenergy and resource recovery.
Name of Conference: Department of International Environmental and Agricultural Science, Tokyo University of Agriculture and Technology
Location: Tokyo, Japan
Date of Presentation: Dec 15, 2015

Title: Anaerobic biorefinery for biofuel and biobased products.
Name of Conference: International Conference on New Horizons in Biotechnology
Location: Trivendrum, India
Date of Presentation: (Nov 23-25, 2015)

Title: Bioconversion of waste/residues into resources.
Name of Conference: Swedish Centre for Resource Recovery, University of Borås
Location: Borås, Sweden
Date of Presentation: Oct 27, 2015

Title: My 12 years of research journey with Thai students and visiting scholars on energy and environment.
Name of Conference: The Sixteenth Royal Golden Jubilee - Ph. D. Congress (RGJ-Ph.D. Congress XVI)
Location: Pattaya, Thailand
Date of Presentation: Jun 11-13, 2015

Title: Environmental biotechnology and anaerobic digestion.

Name of Conference: Faculty of Agro-Industry, Prince of Songkla University
Location: Hat Yai, Thailand
Date of Presentation: Jun 8, 2015

Title: Anaerobic process for waste treatment.
Name of Conference: Department of Environmental Science
Location: Royal University of Phnom Penh
Date of Presentation: Jun 5, 2015

Title: Bioenergy-Anaerobic digestion.
Name of Conference: 3-hr workshop to engineers, scientists and field workers
Location: Ministry of Agriculture, Forestry and Fisheries, Kingdom of Cambodia
Date of Presentation: Jun 5, 2015

Title: Resource recovery from wastes.
Name of Conference: School of Energy and Environment, City University of Hong Kong
Location: Hong Kong
Date of Presentation: Jun 1, 2015

Title: Co-treatment of organic solid wastes in the sewage treatment facilities for waste reduction and energy recovery.
Name of Conference: Leading Edge Technology 2015 (LET-2015), International Water Association, Food Waste Workshop
Location: Hong Kong
Date of Presentation: May 31, 2015

Title: Research interfacing energy and environment.
Name of Conference: Department of Environmental Engineering, Chulalongkorn University
Location: Bangkok, Thailand
Date of Presentation: May 29, 2015

Title: Utilization of local agri-processing by-products to produce fungal protein for aquatic feed production.
Name of Conference: Local Feed Workshop, Aquatic Feeds and Nutrition Department Oceanic Institute of Hawaii Pacific University
Location: Waimanalo, HI
Date of Presentation: Nov 21, 2014

Title: Bioenergy and environment research.
Name of Conference: Department of Civil Engineering, Malaviya National Institute of Technology
Location: Jaipur, India
Date of Presentation: Nov 11, 2014

Title: How can we build a circular society?
Name of Conference: Department of Civil Engineering, Malaviya National Institute of Technology
Location: Jaipur, India
Date of Presentation: Nov 10, 2014

Title: Fractionation of tropical feedstocks for bioenergy and biobased products.
Name of Conference: International Conference on Emerging Trends in Biotechnology (ICETB-2014)
Location: New Delhi, India
Date of Presentation: Nov 6-9, 2014

Title: Resource recovery from wastes/residues.
Name of Conference: Department of Biotechnology, BOKU University of Natural Resources and Life Sciences
Location: Vienna, Austria
Date of Presentation: Aug 29, 2014

Title: Bioconversion of water (water) into resources.
Name of Conference: Department of Civil and Environmental Engineering, Technion University – Israel Institute of Technology
Location: Haifa, Israel
Date of Presentation: Jul 17, 2014

Title: Biotechnology for resource recovery from waste (water).
Name of Conference: School of Biochemical Engineering, Addis Ababa Institute of Technology
Location: Ababa, Ethiopia
Date of Presentation: Jun 27, 2014

Title: Converting waste (water) into value-added products.
Name of Conference: Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology
Location: Hong Kong
Date of Presentation: May 16, 2014

Title: Emerging trends in environmental biotechnology for waste valorization.
Name of Conference: Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology
Location: Hong Kong
Date of Presentation: May 15, 2014

Title: Resource recovery from waste (water).
Name of Conference: Department of Environmental Engineering, Fudan University
Location: Shanghai, China
Date of Presentation: May 13, 2014

Title: Resource recovery from waste (water).
Name of Conference: College of Environmental Science and Engineering, Tongji University
Location: Shanghai, China
Date of Presentation: May 12, 2014

Title: Examine the effects of crop maturity and size reduction on digestibility of energy crop for biomethane production.
Name of Conference: International Conference on Progress on Biogas III
Location: Stuttgart, Germany
Date of Presentation: Sep 10-11, 2014

Title: Green processing of tropical feedstocks for biofuels and high value co-products.
Name of Conference: 10th European Symposium on Biochemical Engineering Sciences
Location: Lille, France
Date of Presentation: Sep 8-10, 2014

Title: Biogas production from tropical crops.
Name of Conference: State Institute of Agricultural Engineering and Bioenergy, Hohenheim University
Location: Stuttgart, Germany

Date of Presentation: Jul 10, 2014

Title: Sustainable bioenergy production: Opportunities and challenges.
Name of Conference: Universidad de Santander
Location: Cucuta, Colombia
Date of Presentation: Apr 4, 2014

Title: Fractionation of tropical feedstocks for bioenergy and biobased products.
Name of Conference: Chonnam National University
Location: Gwanju, South Korea
Date of Presentation: Feb 27, 2014

Title: Sustainability: interfacing energy and environment.
Name of Conference: Sustainability Center
Location: University of Wisconsin
Date of Presentation: Dec 11, 2013

Title: Biorefinery concept for sugarcane-to-ethanol industries: production of protein-rich fungal biomass on vinasse as a protein ingredient for animal feed and organic food production.
Name of Conference: International Conference on Advances in Biotechnology & Bioinformatics. 10th Convention of the Biotech Research Society
Location: Pune, India
Date of Presentation: Nov 25-27, 2013

Title: Technological alternatives for conversion of biomass to energy.
Name of Conference: Centre for Environmental Science and Engineering (CESE)
Location: Indian Institute of Technology Bombay (IIT-B)
Date of Presentation: Nov 21, 2013

Title: International education and research experience.
Name of Conference: Research Internships in Science and Engineering Scholar (RISE) Meeting
Location: Heidelberg University, Heidelberg, Germany
Date of Presentation: Jul 4, 2013

Title: Bioenergy/biobased product and environmental biotechnology research.
Name of Conference: West Virginia State University
Location: Charleston, WV, USA
Date of Presentation: Jun 6, 2013

Title: High-rate anaerobic digestion of energy crops.
Name of Conference: State Institute of Agricultural Engineering and Bioenergy, Hohenheim University
Location: Stuttgart, Germany
Date of Presentation: Jun 4, 2013

Title: Current status of bioenergy research in the United States.
Name of Conference: Center for Energy and Environment Policy
Location: Imperial College London
Date of Presentation: Oct 26, 2012

Title: Green processing of a tropical grass for advanced biofuel and biobased products.
Name of Conference: New Horizons in Biotechnology, Mini Symposia in Biofuels - Current Perspectives and Challenges for Commercialization
Location: Trivendrum, India

Date of Presentation: Nov 21-24, 2011

Title: Biotechnology for energy, environment and food security.
Name of Conference: Malaviya National Institute of Technology (MNIT)
Location: Jaipur, India
Date of Presentation: Nov 25-26, 2011

Title: Biorefinery for Hawaii.
Name of Conference: NC 1023: Engineering for Food Safety and Quality, USDA Multi-state Committee Meeting
Location: Honolulu, HI
Date of Presentation: Oct 3, 2011

Title: Biofuel/bioenergy from renewable bioresources.
Name of Conference: Bioengineering Workshop for Middle Schools
Location: Honolulu, HI
Date of Presentation: Apr 23, 2011

Title: Green growth: energy, environment and food.
Name of Conference: Korea University
Location: Sejong, South Korea
Date of Presentation: Oct 30, 2010

Title: Integrated education and research in renewable energy: biofuel
Name of Conference: 2010 Asian Pacific Clean Energy Summit and Workshop
Location: Honolulu, HI
Date of Presentation: Aug 31, 2010

Title: Ultrasound applications in biofuel and biobased products.
Name of Conference: Bangor University
Location: Gwynedd, United Kingdom
Date of Presentation: Jul 12, 2010

Title: Biomass conversion to biofuels.
Name of Conference: Chonnam National University
Location: Gwanju, South Korea
Date of Presentation: May 4, 2010

Title: Anaerobic biotechnology for bioenergy production: challenges and opportunities.
Name of Conference: National Academy of Agriculture,
Location: Suwon, South Korea
Date of Presentation: Apr 30, 2010

Title: Biomass conversion to biofuels and biobased products.
Name of Conference: Renewable Energy and Island Sustainability (REIS)
Location: University of Hawaii at Manoa, Honolulu, HI
Date of Presentation: Oct 22, 2009

Title: Conversion of biomass into biofuels and biobased products.
Name of Conference: Hawaii Institute of Food Technologists (HIFT)
Location: Honolulu, HI
Date of Presentation: Feb 17, 2009

Title: Conversion of agri-residues to biofuels and biobased products.
Name of Conference: Hawaii Natural Energy Institute, University of Hawaii at Manoa

Location: Honolulu, HI
Date of Presentation: Sep 30, 2008

Title: Ultrasound application in biorenewables for enhanced biofuel/bioenergy production.
Name of Conference: The Hong Kong University of Science and technology
Location: Hong Kong
Date of Presentation: June 23-27, 2008

Title: Fungal process for biobased product recovery and water reclamation.
Name of Conference: Department of Civil and Environmental Engineering
Location: Honolulu, HI
Date of Presentation: Feb 8, 2008

Title: Biofuels from solid, liquid and gaseous feedstocks.
Name of Conference: University of Hawaii at Manoa (Bioenergy Research Group)
Location: Honolulu, HI
Date of Presentation: Feb 28, 2008

Title: Fermentation of solid, liquid and gaseous feedstocks for biofuel, and biochemical recovery.
Name of Conference: Oklahoma State University (Department of Biosytems and Agricultural Engineering)
Location: Stillwater, OK
Date of Presentation: Oct 4, 2007

Title: Microbial systems for bioenergy production and energy balance.
Name of Conference: University of Hawaii at Manoa (Department of Molecular Biosciences and Bioengineering)
Location: Honolulu, HI
Date of Presentation: Oct 18, 2007

Title: Bioproccesing for bioenergy and value-added product recovery from solid, liquid and gaseous feedstocks.
Name of Conference: University of Hawaii at Manoa (Department of Molecular Biosciences and Bioengineering)
Location: Honolulu, HI
Date of Presentation: Oct 19, 2007

Title: Changing paradigm in environmental engineering research: from waste treatment to bioenergy and value-added product recovery.
Name of Conference: Asian Institute of Technology (Environmental Engineering Program)
Location: Bangkok, Thailand
Date of Presentation: Sep 14, 2007

Title: Energy issue.
Name of Conference: The Fifth International Starch Technology Conference, University of Illinois
Location: Urbana-Champaign, IL
Date of Presentation: Jun 3-6, 2007

Title: Renewable energy from agro-based feedstocks: A key to sustainability.
Name of Conference: Cornell University
Location: Ithaca, NY
Date of Presentation: May 10, 2007

Title: Biomass: A renewable energy source.
Name of Conference: Cornell University
Location: Ithaca, NY
Date of Presentation: May 11, 2007

Title: Microbial bioconversion of agro-based feedstocks to bioenergy and biobased products.
Name of Conference: Ohio State University
Location: Columbus, OH
Date of Presentation: Feb 5, 2007

Title: Anaerobic membrane bioreactor (AMBR) for treatment of low strength wastewater.
Name of Conference: University of New Mexico
Location: Albuquerque, NM
Date of Presentation: Mar 6, 2007

Title: Bioenergy and value-added bioproducts from agro-based feedstock: An emerging research frontier.
Name of Conference: Joint Graduate School of Energy and Environment, King Mongkut's University of Technology
Location: Bangkok, Thailand
Date of Presentation: Jan 17, 2007

Title: Bioenergy production from cellulose-to-ethanol plants-derived stillage.
Name of Conference: Biorenewables Meeting, Iowa State University
Location: Iowa
Date of Presentation: Dec 19, 2006

Title: Use of poly-tetrafluoroethylene (PTFE) laminated non-woven filter for municipal wastewater treatment.
Name of Conference: Hong Kong University of Science and Technology
Location: Hong Kong
Date of Presentation: Sep 19, 2006

Title: Ultrasonic pretreatment of waste activated sludge.
Name of Conference: Advanced Science Institute, Hong Kong University of Science and Technology
Location: Hong Kong
Date of Presentation: Sep 20, 2006

Title: Recovery of high-value fungal bio-products from wet corn milling liquid stream.
Name of Conference: Beijing Normal University
Location: Beijing
Date of Presentation: Sep 14, 2006

Title: Alternative energy: Energy engineering
Name of Conference: The Society for Engineering in Agricultural, Food, and Biological Systems, Society of Manufacturing Engineering, Society of Mechanical Engineering, Society of Automotive Engineering
Location: Waterloo, IA
Date of Presentation: Nov 10, 2005

Title: Converting agri-residues to biofuels and bio-products.
Name of Conference: Department of Agricultural and Biosystems Engineering, North Dakota State

University
Location: Fargo, ND
Date of Presentation: Aug 31, 2005

Title: Anaerobic digestion of thin stillage to produce methane and Class-A biosolids.
Name of Conference: Biobased Industry Outlook Conference
Location: Ames, IA
Date of Presentation: Aug 29, 2005

Title: Anaerobic membrane bioreactor for municipal sewage treatment.
Name of Conference: Haceteppe University
Location: Ankara, Turkey
Date of Presentation: Aug 17, 2005

Title: Integrated waste biomass-based biorefinery.
Name of Conference: Asian Institute of Technology
Location: Bangkok, Thailand
Date of Presentation: Aug 11, 2005

Title: Emerging research frontiers: coupling waste treatment with bio-products and bioenergy recovery.
Name of Conference: Malaysia University of Science and Technology
Location: Malaysia
Date of Presentation: Jul 15, 2005

Name of Conference: Department of Civil and Environmental Engineering, Massachusetts Institute of Technology
Location: Cambridge, MA
Date of Presentation: Apr 26, 2005

Title: Bioconversion for sustainability.
Name of Conference: Department of Agricultural and Biosystems Engineering, Iowa State University
Location: Ames, IA
Date of Presentation: Mar 24, 2005

Title: New directions in anaerobic biotechnology.
Name of Conference: Department of Civil, Construction and Environmental Engineering, Iowa State University
Location: Ames, IA
Date of Presentation: Feb 3, 2004

Title: Anaerobic biotechnology for waste treatment and resource recovery.
Name of Conference: Dept. of Civil Engineering, University of Canterbury
Location: Christchurch, New Zealand
Date of Presentation: Dec 6, 2003

Title: Oxygenated anaerobic treatment of high sulfate wastewater.
Name of Conference: Department of Civil and Environmental Engineering, University of Missouri-Columbia
Location: MO
Date of Presentation: Oct 31, 2002