
Curriculum Vitae

Name: Dr. Augustine Chioma Affam

List of Research:

Internal Grant

1. Organic and Inorganic Contaminants Removal from Rajang River Water (Sibu Downstream) using Physico-Chemical Process (UCTS Internal Grant) (2016-2018) (Project Leader). UCTS/RESEARCH/1/2016/10
2. Evaluation of the Long-term variations in stream flow regime over a 50-year period of Rajang River basin (UCTS Internal Grant) (2016-2018)(Member) UCTS/RESEARCH/3/2016/01
3. Modelling and Statistical Analysis for Removal of Boron from Wastewater: A Comparison of the Performance of Different Sorbent Materials and Adsorption-Flocculation Process. (UCTS Internal Grant) (2017 – 2019) (Member) UCTS/RESEARCH/2/2017/06
4. Treatment of Palm Oil Mill Effluent (POME) Wastewater by Integration of Advanced Oxidation and Aerobic Sequencing Batch Reactor Process. (UCTS Internal Grant) (2017 – 2019) (Project Leader) UCTS/RESEARCH/2/2017/07
5. Investigation of Modified Ultrasonic cavitation for Treatment of Palm Oil Mill Effluent Wastewater. (UCTS Internal Grant)(2017–2019)(Member) UCTS/RESEARCH/4/2017/10
6. Study on Desludging Frequency of Septic Tanks at Residential and Commercial Area: A Sibu Case Study (UCTS Internal Grant) (2017 – 2019) (Member) UCTS-RESEARCH/4/2017/05

7. Train Wash Wastewater Treatment Using Membrane Filtration System and Advanced Oxidation Process. (UCTS Internal Grant) (2018 – 2020) (Project Leader) UCTS/RESEARCH/3/2018/09
8. Ultra Sonication and Hydrodynamic Cavitation (HC) coupled with Advanced Oxidation Process (AOP) for Railway Wash Wastewater (RWW) Treatment. (UCTS Internal Grant) (2018 – 2020) (Member) UCTS/RESEARCH/3/2018/08
9. Water supply for Kampung Abit, Balai Ringin, Sarawak Malaysia. (UCTS Internal Grant) (2018 – 2020) (Member) UCTS/RESEARCH/ 4/2018/21
10. Enhanced Sibu Peat by Monovalent, Divalent and Trivalent Cationic Reagent Grout Methods with biochar addition for Wetland Soil Development. UCTS-Universiti Teknologi Petronas Matching Grant Fund. UCTS/RESEARCH/4/2019/10 (2019 – 2021) (Leader) UCTS/RESEARCH/ 4/2019/10
11. Constructed wetland system for peat soil ecosystem restoration and water quality analysis. UCTS-Universiti Teknologi Petronas Matching Grant Fund. (2019 – 2021) (Leader) UCTS/RESEARCH/ 4/2019/11
12. Decision support systems development for water monitoring for peat soil management. UCTS-Universiti Teknologi Petronas Matching Grant Fund. (2019 – 2021) (Leader) UCTS/RESEARCH/ 4/2019/09

External Grant

1. Investigating the Mechanical Properties of Waste Tyre as Peat Soil Reinforcement (PSR) for Carriageway Construction Applications. Fundamental Research Grant Scheme (FRGS) Ministry of Higher Education (2020 – 2023) (Member) FRGS/1/2019/ TK06/ HWUM/02/1
Amount: RM 120,000

List of Publications: APA Style

1. Ahmad Hussaini Jagaba, Shamsul Rahman Mohamed Kutty, Azmatullah Noor, Abdullahi Haruna Birniwa, **Augustine Chioma Affam**, Ibrahim Mohammed Lawal, Mubarak Usman Kankia, Abdullahi Usman Kilaco. A systematic literature review of biocarriers: Central elements for biofilm formation, organic and nutrients removal in sequencing batch biofilm reactor, *Journal of Water Process Engineering*, Vol. 42 (2021) 102178, <https://doi.org/10.1016/j.jwpe.2021.102178>. **(WOS & SCOPUS INDEXED). Q1**
2. **Augustine Chioma Affam**, Wong Chee Chung, Poh Lin Lau, Olufemi Adebayo Johnson, Khor Cheng Seong Lavania Baloo, Bryan Wong Lee Peng, Fung Xinru. Lecture Notes in Civil Engineering book series (LNCE, volume 132) (2021) 93-102. **(WOS & SCOPUS INDEXED). Q4**
3. Mohammed Seyam, Jawad Alagha, Taher Abunama, **Augustine Chioma Affam**, Khaled Alramlawi. Investigation the influence of the excess pumping on the groundwater salinity in the coastal aquifers using predicted future scenarios. *Water*, 12, 2218; doi: 10.3390/w12082218 (Switzerland) (2020) **(WOS & SCOPUS INDEXED). Q1**
4. Wong Mei Fong, **Augustine Chioma Affam** and Wong Chee Chung. Synthesis of Ag/Fe/CAC for Colour and COD Removal from Methylene Blue Dye Wastewater. *International Journal of Environmental Science and Technology* 17: 3485-3494 (2020) **(WOS & SCOPUS INDEXED). Q2**
5. Bryan Wong Peng Lee*, **Augustine Chioma Affam**, Wong Chee Chung. Nano Zero Valent Iron and Ozonation for Selected Recalcitrant Wastewater: Review. *IOP Conference Series: Earth and Environmental Science* 476, 012095 (2020) **(SCOPUS INDEXED).**
6. XinRu Fung*, **Augustine Chioma Affam**, Wong Chee Chung. Review of Combined Nano zero valent metal Oxidation and Ozone for Degradation of Wastewater. *IOP Conference Series: Earth and Environmental Science* 476, 012094 (2020) **(SCOPUS INDEXED).**

7. Augustine Chioma Affam and Abdul Rahman Bin Bistar. Oxidation of Palm Oil Mill Effluent Using Hydrogen Peroxide and Catalysed by UV Light/Zinc Oxide. *Journal of Physics: Conference Series* 736, 042025, 2019. **(SCOPUS INDEXED)**.
8. Poh Lin Lau, **Augustine Chioma Affam**, Modelling and optimization of the removal of chlorpyrifos and organics reduction from wastewater by Ag/AgBr/TiO₂ using central composite design (CCD). **Desalination and Water Treatment**. 175: 90-98 (2020) **(WOS & SCOPUS INDEXED)**. Q2
9. Muda Khalida, Omar Ahmad, Majid Zaiton, **Affam Augustine**, Ezechi Ezerie, Effect of Magnetic Activated Carbon on the Surface Hydrophobicity for Initial Biogranulation via Response Surface Methodology. **Water Environment Research**, **92 (1), 73-83 (2020)** DOI: 10.1002/wer.1177 **(WOS & SCOPUS INDEXED)**. Q2
10. Fung XinRu, **Augustine Chioma Affam**, Wong Chee Chung. Review of Nano Zero Valent Iron Oxidation and Alginate Beads for Degradation of Chemical Oxygen Demand and Turbidity in Wastewater. **Borneo Journal of Science and Technology Vol. 2, Issue 2, 72-76 (2019)**.
11. Wong Ging King, Lee man Djun, **Augustine Chioma Affam***, Wong Chee Chung, Ir. Wong Chee Swee, Johnson Olufemi Adebayo. Application of Hybrid Ultrasonic Cavitation/Adsorption and Coagulation for Treatment of Palm Oil Mill Effluent Wastewater. **American Institute of Physics (AIP) Conference Proceeding** 2124, 020008 **(2019) – (SCOPUS INDEXED)**.
12. Tay Huat Hua, **Augustine Chioma Affam***, Wong Chee Chung, Wong Chee Swee, Johnson Olufemi Adebayo. Activation of Persulphate by Heat, pH, and Transition Metals for Removal of COD and Colour from Biologically Treated Palm Oil Mill Effluent. **American Institute of Physics (AIP) Conference Proceeding**. 2124, 020007 **(2019) – (SCOPUS INDEXED)**.
13. P.L. Lau*, **A.C.Affam**, Visible Light Driven Photocatalyst for Degradation of Organophosphate Pesticides: A Review. **Borneo Journal of Science and Technology**, 1 (2) 01-08 **(2019)**.

14. Olufemi Adebayo Johnson*, **Augustine Chioma Affam**, Petroleum sludge treatment and disposal: A review. *Environmental Engineering Research*, (2019) 24(2): 191-201 (**WOS & SCOPUS INDEXED**) Q2.
15. Ahmad Hanis Omar*, Khalida Muda, Susilawati Toemen, Siti Fadziana Sulaiman, Nur Syamimi Zaidi, **Augustine Chioma Affam**, Study on the Effect of Static Magnetic Field in Enhancing Initial State of Biogranulation. *Journal of Water Supply: Research and Technology - AQUA* (2018) 67 (5): 484-489. DOI: 10.2166/aqua.2018.128 (**WOS & SCOPUS INDEXED**). Q2
16. **Augustine Chioma Affam***, Malay Chaudhuri, Chee Chung Wong and Chee Swee Wong, Artificial Neural Network (ANN) Modeling for Prediction of Pesticide Wastewater Degradation by FeGAC/H₂O₂ Process *E3S Web of Conferences* 65, 05004 (2018) (**SCOPUS INDEX**)
17. **Augustine Chioma Affam***, Wong Chee Chung and Wong Chee Swee, Can Induced Magnetic Field Enhance Bioprocesses? – Review. *MATEC Web of Conferences* 203, 03007 (2018) (**SCOPUS INDEX**).Q3
18. Ahmad Hanis Omar, Khalida Muda*, Zaiton Abdul Majid, **Augustine Chioma Affam**, Nasiman Sapari, Emmanuel Olisa, Norelyza Husseing, Normala Hashim, Nur Syamimi Zaidi. Development of Microbial Granule Using Low Strength Textile Wastewater Under Influence of Static Magnetic Field. *International Journal of Pure and Applied Mathematics*. (2018) Vol. 118, no. 24 (**SCOPUS INDEXED**).
19. **Augustine Chioma Affam***, Chee Chung Wong, Mohammed A. B. Seyam. Preparation, Characterization and Adsorption Study of Granular Activated Carbon/Iron oxide composite for the Removal of Boron and Organics from Wastewater. *E3S Web of Conferences* 34, 02006 (2018) (**SCOPUS INDEXED**).
20. **Augustine Chioma Affam***, Malay Chaudhuri, Shamsul Rahman M. Kutty, Comparison of Five Advanced Oxidation Processes for Degradation of Pesticide in Aqueous Solution. *Bulletin of Chemical Reaction Engineering and Catalysis*. 13(1):179-186 (2018) (**WOS & SCOPUS INDEXED**). Q3

21. Wai Loan Liew, Khalida Muda*, Mohd. Azraai Kassim, **Augustine Chioma Affam**, Soh Kheang Loh. Agro-Industrial Waste Sustainable Management – A Potential Source of Economic Benefits to Palm Oil Mills in Malaysia. *Journal of Urban and Environmental Engineering* (2017) Vol II, (1) 108-118, **(SCOPUS INDEXED)**.
22. M. Anwar Alias, Khalida Muda*, Azmi Aris, **Augustine Chioma Affam**, Normala Hasim. The effect of divalent and trivalent cations on aggregation and surface hydrophobicity of selected microorganism. *Environmental Engineering Research* 22(2017): 61-74. **(WOS & SCOPUS INDEXED). Q2**
23. **Augustine Chioma Affam***, Malay Chaudhuri, Kimberly Hetrick. Optimization of solar irradiated Fenton treatment of pesticide chlorpyrifos wastewater by response surface methodology. *Environmental Earth Sciences* (2016) Sci (2017) 75:840 **(WOS & SCOPUS INDEXED). Q1**

➤ **BOOK & BOOK CHAPTERS**

1. **Augustine Chioma Affam** and Chaudhuri, Malay (2019). Comparative study of advance oxidation processes for treatment of pesticide wastewater. ISBN: 9781522557661, DOI: 10.4018/978-1-5225-5766-1.ch011, Chapter 11, pp. 1 – 63. IGI Global Book Press, Hershey, Pennsylvania, USA. **(ISI INDEXED)**
2. **Augustine Chioma Affam** and Ezerie Ezechi Henry (2020). Application of graded limestone as roughing filter media for the treatment of leachate. ISBN: 9781799803690. IGI Global Book Press, Hershey, Pennsylvania, USA.
3. Ezerie Ezechi Henry, **Augustine Chioma** and Khalida Muda (2020). Biological nutrient removal by suspended growth systems. ISBN: 9781799803690. IGI Global Book Press, Hershey, Pennsylvania, USA.
4. **Augustine Chioma Affam** and Ezerie Ezechi Henry (2020). Classical Fenton and sequencing batch reactor treatment of pesticide wastewater to meet discharge effluent requirement. ISBN: 9781799803690. IGI Global Book Press, Hershey, Pennsylvania, USA.

5. Ezerie Ezechi Henry, **Augustine Chioma and** Khalida Muda (2020). Principles of Electrocoagulation and Application in Wastewater Treatment. ISBN: 9781799803690. IGI Global Book Press, Hershey, Pennsylvania, USA.
6. **Augustine Chioma Affam** and Ezerie Ezechi Henry. (2020). Handbook of Research on Resource Management for Pollution and Waste Treatment. ISBN: 9781799803690. IGI Global Book Press, Hershey, Pennsylvania, USA.
7. **Affam A.C.**, Ezechi H.E. (2021) Sanitation Systems and Technology Options. In: Leal Filho W., Azul A.M., Brandli L., Lange Salvia A., Wall T. (eds) Clean Water and Sanitation. Encyclopedia of the UN Sustainable Development Goals. Springer, Cham. https://doi.org/10.1007/978-3-319-70061-8_129-1

- **Conference Proceedings & Exhibitions**

1. Prashobh Karunakaran, M. Shahril Osman, Dylan Greve, Timothy Jesse, Karuppanna V., Chee Cheng Sung, Man Djun Lee, Chee Chung Wong and **Augustine Chioma Affam**. Water Supply for a Village in Sarawak, Malaysia. International Conference on Sustainable Technology Applications for Green Energy Solutions. NSS College of Engineering. Palakkad, India, July 17-18, 2020.
2. Bryan Wong Peng Lee*, **Augustine Chioma Affam**, Wong Chee Chung. Nano Zero Valent Iron and Ozonation for Selected Recalcitrant Wastewater: Review. The 2nd International Conference on Civil and Environmental Engineering (CENVIRON 2019) Langkawi, Malaysia (20th-21st November 2019).
3. XinRu Fung*, **Augustine Chioma Affam**, Wong Chee Chung. Review of Combined Nano zero valent metal Oxidation and Ozone for Degradation of Wastewater. The 2nd International Conference on Civil and Environmental Engineering (CENVIRON 2019) Langkawi, Malaysia (20th-21st November 2019).
4. **Augustine Chioma Affam** and Abdul Rahman Bin Bistar. Oxidation of Palm Oil Mill Effluent Using Hydrogen Peroxide and Catalysed by UV Light/Zinc Oxide. Energy Security and Chemical Engineering Congress, Penang, Malaysia (17th – 19th, August, 2019).

5. **Augustine Chioma Affam**, Wong Chee Chung, Lau Poh Lin, Bryan Wong Peng Lee, Fung XinRu. Optimisation of Chlorpyrifos removal from Wastewater by Ag/AgBr/TiO₂ Process. The UNIMAS Innovative and Technology Exposition (InTEX 2019), Kuching, Malaysia (24th-25th July 2019).
6. Mohammed Seyam*, Jawad S Alagha and **Augustine Chioma Affam**. The effect of excess abstraction on groundwater quality in Coastal Aquifers. International Groundwater Resilience to Climate Change and High Pressure Conference (GRECPIMA 2019) Muğla, Turkey (May 8-10, 2019).
7. Wong Ging King, Lee man Djun, **Augustine Chioma Affam***, Wong Chee Chung, Ir. Wong Chee Swee, Johnson Olufemi Adebayo. Application of Hybrid Ultrasonic Cavitation/Adsorption and Coagulation for Treatment of Palm Oil Mill Effluent Wastewater. International Conference on Environment (ICENV 2018) Penang, Malaysia (December 11th -13th, 2018)
8. Tay Huat Hua, **Augustine Chioma Affam***, Wong Chee Chung, Wong Chee Swee, Johnson Olufemi Adebayo. Activation of Persulphate by Heat, pH, and Transition Metals for Removal of COD and Colour from Biologically Treated Palm Oil Mill Effluent. International Conference on Environment (ICENV 2018) Penang, Malaysia (December 11th -13th, 2018).
9. **Augustine Chioma Affam***, Sarawak E-Commerce Conference 2018 Organized by Sarawak ICT Association and the IT Section of the United Chinese Association (UCA) Sibu Division, Malaysia (8th November, 2018).
10. **Augustine Chioma Affam***, Malay Chaudhuri, Chee Chung Wong and Chee Swee Wong. Artificial neural network (ANN) modeling for prediction of pesticide wastewater degradation by FeGAC/H₂O₂ process. International Conference on Civil & Environmental Engineering (ICCEE), Kuala Lumpur, Malaysia (2nd - 5th October, 2018).
11. **Augustine Chioma Affam***, Wong Chee Chung, Wong Chee Swee, 2018. Can Induced Magnetic Field Enhance Bioprocesses? – Review. The 4th International Conference on Civil, Offshore & Environmental Engineering (ICCOEE), Kuala Lumpur Conventional Centre, Malaysia (13th - 15th August, 2018)

12. **Augustine Chioma Affam***, Bryan Wong Lee Peng, Ir. Wong Chee Swee, Wong Chee Chung. Production of Activated Carbon from Disposed Palm Kernel Shell (PKS) for Low-Cost Removal of Lead Heavy Metal from Water/Wastewater. Sarawak Invention and Innovation Technology Exhibition, 2018 (SAINTEX 2018).
13. M.F. Wong* and **A.C. Affam**. A Review of Visible Light Photocatalysis for Dye Decontamination. National Conference on Agricultural and Food Mechanization 2018 (NCAFM 2018). (17th - 19th April, 2018)
14. P.L. Lau and **A.C. Affam**, Degradation of organophosphate pesticides with visible light driven photocatalyst: A review. National Conference on Agricultural and Food Mechanization 2018 (NCAFM 2018). (17th - 19th April, 2018).
15. **Augustine Chioma Affam***, Chee Chung Wong, Mohammed A. B. Seyam. Preparation, Characterization and Adsorption Study of Granular Activated Carbon/Iron oxide composite for the Removal of Boron and Organics from Wastewater. International Conference on Civil and Environmental Engineering (CENVIRON 2017) Penang, Malaysia. (28-29th, November, 2017).
16. **Augustine Chioma Affam***, Malay Chaudhuri, Shamsul Rahman M. Kutty, Khalida Muda, Application of FeGAC/H₂O₂ and sequencing batch reactor for the treatment of an industrial pesticide wastewater Research & Development Congress on Sustainable Urbanization in the Course of ASEAN Economic Integration, Sofitel Philippine Plaza, Manila, Philippines (26-30th June 2017).
17. **Augustine Chioma Affam***, Malay Chaudhuri and Shamsul Rahman Mohd. Kutty, Comparison of five advanced oxidation processes for degradation of pesticide in aqueous solution. Second International Conference on Fluids and Chemical Engineering (FluidsChE 2017), TH Hotel Kota Kinabalu, Sabah, Malaysia (4-6th April, 2017).

List of Awards:

1. Silver Award during UNIMAS Innovative and Technology Exposition (InTEX 2019), Kuching, Malaysia (24th-25th July 2019).