CURRICULUM VITAE

I.	(a) Name:	Mary Bosede Ogundiran
	(b) Date of Birth:	12 February, 1967
	(c) Department:	Chemistry
	(d) Faculty:	Science
II.	(a) First Academic Appointment:	Assistant Lecturer (9 July, 2001)
III.	(b) Present Post (with date):	Professor (1 October, 2018)
	(c) Date of last promotion:	1 October, 2018
	(d) Date Last Considered for Promotion:	Not Applicable

IV. University Education (with dates):

University of Ibadan, Ibadan, Undergraduate, B.Ed.	1990-1994
University of Ibadan, Ibadan, Postgraduate, M.Sc.	1995-1997
University of Ibadan, Ibadan, Postgraduate, Ph.D	1998-2007

V. Academic Qualification (with dates and granting bodies):

B. Ed Chemistry/Physics (University of Ibadan)	1994
M.Sc. Analytical Chemistry (University of Ibadan)	1997
Ph.D Analytical/Environmental Chemistry (University of Ibadan)	2007

VI. Professional Qualifications and Diplomas (with dates): None

VII. Scholarships, Fellowships and Prizes (with dates) in respect of Undergraduate and Postgraduate work only:

ATES Prize-1990/91: Best final year student in Teacher education, University of Ibadan	1994

VIII. Honours, Distinctions and Membership of Learned Societies

Member, Organization for Women in Science for the Developing World (OWSD)	
Member, Royal Society of Chemistry (RSC)	
Vice President, Biochar Initiatives of Nigeria	
Member, Chemical Society of Nigeria (CSN)	
Member, Institute of Chartered Chemists of Nigeria (ICCON)	
Member, Waste Management Society of Nigeria (WAMASON)	
Ex-Member, Nigerian Young Academy	
Young researcher, 59th Meeting of Nobel Laureates dedicated to Chemistry, Lindau, Germany	2009
Participant, post conference programmes by DFG German Research Foundation, Germany	2009
Postdoctoral Research Intern, Department of Chemical Engineering, Delft University of Technology, The Netherlands by Organisation for Prohibition of Chemical Weapons.	2009-2010
Senate Research Grant, University of Ibadan, Nigeria	2010
Research Fellow, TWAS-DFG Cooperating Visits Fellowship for Scientists from Sub-Saharan Africa, Institute of Soil	

Science and Soil Conservation, Justus Liebig University, Giessen, Germany 2013

Research Fellow, CV Raman International Fellowship for African Researchers, National Metallurgical Laboratory, (Council of Scientific and Industrial Research), Jamshedpur, India. 2013-2014

IX. Details of Teaching/Work Experience

(a) Work Experience

(i) Assistant Lecturer: Department of Chemistry, University of Ibadan, Ibadan. 2001-2004

(ii) Lecturer II: Department of Chemistry, University of Ibadan, Ibadan. 2004-2009

(iii) Lecturer I: Department of Chemistry University of Ibadan, Ibadan. 2009-2012

(iv) Senior Lecturer: Department of Chemistry University of Ibadan, Ibadan. 2012-2015

(v) Reader: Department of Chemistry University of Ibadan, Ibadan. 2015-2018

(vi) Professor: Department of Chemistry University of Ibadan, Ibadan. 2018-Date

(b) Teaching Experience

(i) Courses Taught in Current Session

Undergraduate

CHE 281 (2): Research Methods and Presentation Techniques	(with 4 others)
CHE 318 (4): Instrumental Methods	(with 2 others)
CHE 416 (3): Chemical Environmental Assessment and Management	(with 3 others)
CHE 417 (4): Advanced Analytical Chemistry and Application (Practical)	(with 6 others)
CHE 481 (2): Seminar Topics	(with 7 others)
CHE 496 (6): Research project	(with 7 others)

Postgraduate

CHE 705 (4): Separation Methods of Analysis	(with 2 others)
CHE 706 (3): Analytical Chemistry Practical	(with 7 others)
CHE 712 (3): Food Analysis and Drugs Analysis	(with 1 other)
CHE 717 (3): Analysis of Miscellaneous Materials	(with 2 others)
ECH 791 (4): Man, Environment and Sustainable Chemistry	(with 2 others)
ECH 784 (4): Chemical Environmental Pollution Studies	(with 3 others)
ECH 786 (4): Environmental Analysis	(with 3 others)
ECH 788 (3): Seminars and Case Studies in Environmental Chemistry	(with 7 others)
CHE 796 (6): Research project	(with 7 others)

(ii). Other Courses Previously Taught

Undergraduate

CHE 218 (3): Introductory Analytical Chemistry	(with 3 others)
CHE 417 (4): Advanced Analytical Chemistry and Application	(with 3 others)
CHE 195 (2): Practical Chemistry	(with 6 others)
ECH 781 (4): General Concepts in Environmental Chemistry	(with 2 others)

Postgraduate

CHE 709 (3): Quantitative Spectroscopic Methods of Analysis	(with 1 other)
CHE 711 (3): Electroanalytical methods	(with 1 other)
CHE 713 (3): Water Analysis	(with 2 others)
ECH 789 (4): Industrial Attachment	(with 9 others)
CHE 790 (4): Practical/Field Work	(with 9 others)

(iii). Research Project Supervision

Completed
(i). B.Sc.: 50
(ii). M.Sc.: 90
(iii). M.Phil.: 1 (Co-supervised)
(iv). Ph.D.: 4 (Supervised), 5 (Co-supervised)

Ongoing
(i). B.Sc.: 2
(ii). M.Sc.: 5
(iii). M.Phil./Ph.D.: Nil
(iv). Ph.D.: Nil

(c) Administrative Duties:

Students' Welfare committee member	2024
Senate Business Committee member	2024
Science and Technology Research Ethics Committee Member	2023-date
Faculty of Science Academic Award Committee member	2023-date
Associate Editor, Journal of Science research	2023-date
Departmental Ph.D. students' Abstract monitoring reviewing Committee	2023-date
Appointment and Promotion committee member	2023-date
University Senate member	2022-date
University Congregation Senate member	2017-2019
Faculty Postgraduate Committee member	2014-2018
Departmental M.Sc. Postgraduate Coordinator	2014-2018
Departmental Postgraduate committee member	2013-2018
Departmental 200 level examination officer	2012-2013
Departmental 100 level Examination Officer	2010-2012
Departmental Seminar Coordinator	2008-2010
Departmental Examination Committee Member	2001-2013

Departmental Students Registration Officer	2001-date
Departmental Representative on Board of Education, University of Ibadan	2007-2008
Industrial training supervision, University of Ibadan	2001-date

X Research:

(a) Completed

(i) Assessment and chemical remediation of soil contaminated by lead-acid battery waste in Lalupon, Ibadan

(ii) Effectiveness of phosphate chemicals, compost, cashew nut shell ash and biochar to remediate contaminated soil both in the laboratory and field trials

(iii) Successful growing of *Moringa oleifera* on highly lead contaminated soils using compost and biochar remediation techniques

(iv) Geopolymerisation of fly ash with spent aluminium etching waste solution from aluminium anodising industry for use in waste immobilisation and construction applications

(v) Characterisation of Nigerian clay for production of geopolymers

(vi) Effective binding of highly leaded cathode ray tube glass with local calcined clay geopolymers

(vii) Current management practices of municipal solid and domestic small electrical wastes and evaluation of agricultural wastes for potential uses

(b) In Progress

(i) The study on geopolymer science commenced in 2010 with European fly ash as the geopolymer aluminosilicate precursor and waste aluminate solution as the activator. On coming home, Nigerian kaolin clays have shown good potentials for production of geopolymers. The current studies include (i) Characterisation of more clays from deposits in Ekiti, Ondo, Osun, Ogun and Oyo states to evaluate their cementitious and binding abilities. (ii) Characterisation of calcined excavated waste clays from five states as geopolymer materials (iii) Production of geopolymer bricks and mortars from local calcined clay, waste bottle glass and quarry dust (iv) Assessing the possibility of replacing commercial activators ($NaOH/Na_2SiO_3$ or KOH/Na_2SiO_3) with a $Na,K/Na_2SiO_3$ from biomass ash as activator in the synthesis of calcined kaolin clay-based geopolymer to enhance sustainability and durability. Additionally, geopolymer is being applied for pharmaceutical wastewater treatment, thermoelectric materials.

(ii) The current study on soil assessment and remediation commenced in 2010 and is based on assessment of other sites contaminated by the lead slag in Ibadan. The ongoing remediation techniques include the use of compost and biochar in greenhouse experiments to treat the contaminated soil. Current results showed that compost and biochar remediation techniques can be used to grow

vegetation on the bare contaminated soils. Currently, the study is extended to remediation of petroleum contaminated soils using biochar and compost technology.

(iii) Biochar and compost technologies for food security in Nigeria.

(c) Projects, Dissertation and Thesis

(i) M.Sc. Project:
M. B. Ogundiran. (1997): A comparative study of chemistry of rainwater in Warri and Ibadan.

(ii) Thesis
M. B. Ogundiran. (2007): Assessment and chemical remediation of soil contaminated by lead-acid battery waste in Lalupon, Oyo state, Lalupon. Ph.D. Thesis. University of Ibadan, Ibadan.

XI Publications:

(a) Books already published: Nil

(b) Chapters in books already published:

1. Frazer-Williams R., **Ogundiran M.B.**, Unuabonah E.I. (Editors). (2024). Environmental Pollution and Public Health: Case studies of Air, Water and Soil from an Interdisciplinary Perspective. Elsevier, Amsterdam, Netherlands. ISBN: 878-0-323-95967-4
2. **Ogundiran M.B**., Adejumo S.A., Fagbenro J. A (2024). Sustainable remediation techniques for solid waste polluted soils. In Frazer-Williams R., Ogundiran M.B., Unuabonah E.I. (Editors). (2024). Environmental Pollution and Public Health: Case studies of Air, Water and Soil from an Interdisciplinary Perspective. Elsevier, Amsterdam, Netherlands. 265-288pp. ISBN: 878-0-323-95967-4
3. **Ogundiran M.B**., Osibanjo O (2016). Assessment and remediation of heavy metals contaminated soils. In Onianwa P. C., Adie G. U. (Eds.), Chemical Environmental Pollution: A selection of Reviews and Studies. Depet Publishers, Nigeria. 57-72pp. ISBN 978-978-50705-2-1.
4. Osibanjo O., Nnorom I.C., Adie G.U., **Ogundiran M.B**., Adeyi A.A (2016). Global management of electronic wastes: Challenges facing developing and economy-in-transition countries. In Reed M. Izatt. (Ed.), Metal Sustainability: Global Challenges, Consequences, and Prospects. John Wiley & Sons, Ltd, United Kingdom. 52-84pp. ISBN 9781119009146.
5. **Ogundiran M.B**., Osibanjo O (2011). Evaluation of heavy metals bioaccumulation potentials of plants grown on waste contaminated soils. O. Akinloye. (Ed), Biotechnology: Trends in Advanced of life science research and development in Nigeria (pp. 172-176). Cuvillier Verlag Gottingen, Germany.

(c) Articles that have Already Appeared in Refereed Conference Proceedings

6. **Ogundiran M.B.**, *Akinola O.P (2018). Performance evaluation of metakaolin clay geopolymers synthesised with bamboo wood ash as an activator. In J. Provis, C. Leonelli, W. Kriven, A. Boccaccini, A. Van Riessen, (Eds) Proceedings of the International Conference on Alkali Activated Materials and Geopolymers: Versatile Materials Offering High Performance

and Low Emissions", ECI Symposium Series. Tomar. http://dc.engconfintl.org/geopolymers/19. Portugal.

7. Mekwunyei N.S., **Ogundiran M.B.**, Adejumo S.A (2017). Utilisation of agro-waste derived biochars and compost as amendments for phytoremediation of lead slag- contaminated soil using *moringa oleifera* plant presented at the 3rd Annual Conference of Biochar Initiative of Nigeria on Biochar for climate change mitigation, crop protection and soil remediation for sustainable agriculture held at First bank building, Faculty of Agriculture and Forestry, University of Ibadan, Nigeria. 11-15 September 2017.

8. Oladele O.L., **Ogundiran M.B**. (2017). Feasibility of utilisation of mining waste, spent window glass and quarry sand for production of geopolymer mortars at the 3rd Faculty of Science International Conference on Diversification of Nigeria's economy through Science held at Lakeside Lecture Theatre, Faculty of Science, University of Ibadan, Nigeria. 16-19 May 2017.

9. **Ogundiran, M.B**., Kemie, E.A., Adejumo, S.A (2015). Comparison of organic chelators and compost assisted phyoremediation of a lead slag-contaminated soil by *Sporobolus fertilis* and *Gomphrena serrate*. CRC CARE 2015, 6th International Contaminated Site Remediation Conference: Program and Proceedings, CleanUp 2015 Conference, Melbourne, Australia, 13-16 September 2015.

10 Adejumo, S.A., Morakinyo, O., **Ogundiran, M.B**. (2015). Dissolved organic matter, chemical speciation and phytoavailability of lead in contaminated soil amended with composted and uncomposted organic manures. CRC CARE 2015, 6th International Contaminated Site Remediation Conference: Program and Proceedings, CleanUp 2015 Conference, Melbourne, Australia, 13-16 September 2015.

11. Nugteren, W.H, **Ogundiran, M.B**., Witkamp, G.J. and Kreutzer M.T. (2011). Coal Fly Ash Activated by Sodium Aluminate Solutions as an Immobiliser for Hazardous waste: Proceedings of the 2011 World Coal Ash (WOCA) conference. Denver: CO.

12. Oketola, A.A., **Ogundiran, M.B**., Adefolu, O.R., *Mojeed, O.A. and Itiveh, S.E. (2011). Medical Waste Management Practices in Nigeria, the Case of Lagos and Ibadan. In I. Zandi, R.L. Mersky, W.K. Shieh (Eds.) Proceedings of the 26th International Conference on Solid Waste Technology and Management. Philadelphia. 1311-1321pp.

13. Nugteren, W.H, **Ogundiran, M.B**, Witkamp, G.J. and Kreutzer, M.T. (2011). Coal Fly Ash Activated by Sodium Aluminate Solutions as an Immobiliser for Hazardous waste: Proceedings of the 2011 World Coal Ash (WOCA) conference. Denver: CO.

14. Oketola, A.A., **Ogundiran, M.B.,** Adefolu, O.R., Mojeed, O.A. and Itiveh, S.E. (2011). Medical Waste Management Practices in Nigeria, the Case of Lagos and Ibadan. In I. Zandi, R.L. Mersky, W.K. Shieh (Eds.) Proceedings of the 26th International Conference on Solid Waste Technology and Management. Philadelphia. 1311-1321pp.

15. **Ogundiran, M.B.,** Kemie, E.A. and Adejumo, S.A. (2015). Comparison of organic chelators and compost assisted phyoremediation of a lead slag-contaminated soil by *Sporobolus fertilis*

and *Gomphrena serrate*. In R. Naidu (MD), Proceedings of CleanUp 2015, The 6th International Contaminated Site Remediation Conference. Melbourne. 548-549pp.

16. **Ogundiran, M.B.** and Akinola, O. P. (2018). Performance evaluation of metakaolin clay geopolymers synthesised with bamboo wood ash as an activator. In J. Provis, C. Leonelli, W. Kriven, A. Boccaccini, A. Van Riessen, (Eds) Proceedings of the International Conference on Alkali Activated Materials and Geopolymers: Versatile Materials Offering High Performance and Low Emissions", ECI Symposium Series. Tomar. http://dc.engconfintl.org/geopolymers/19.

(d) Patents and Copyrights

17. **Ogundiran, M.B,** Ogundele, T.D. and Jha, M.K. (2017). A process for production of nano-PbO from spent automobile lead-acid battery. Nigeria. OAI/PT/201710190722174-309306.

(e) Articles that have already appeared in Learned Journals:

18. **Ogundiran, M.B.** and Osibanjo, O. (2008). Heavy metal concentrations in soils and accumulation in plants growing in a deserted slag dumpsite in Nigeria. *African Journal of Biotechnology* Vol. 7. No. 17: 3053-3060.

19. **Ogundiran, M.B.** and Osibanjo, O. (2009). Mobility and speciation of heavy metals in soils impacted by hazardous waste. *Chemical Speciation and Bioavailability* Vol. 21. No. 2: 59-69.

20. **Ogundiran, M.B.** and Osibanjo, O**. (**2009). Effects of phosphate chemicals treatments on auto battery waste contaminated soil in Nigeria. *Journal of Solid Waste Technology and Management* Vol. 35. No. 3: 181-190.

21. **Ogundiran, M.B**., Babayemi, J.O. and Nzeribe, C.G. (2011). Determination of metal content and an assessment of potential use of waste cashew nut ash (CNAS) as a source for potash production. *BioResources* Vol. 6. No. 1: 529-536.

22. **Ogundiran, M.B.**, Babayemi, J.O. and Nzeribe, C.G. (2011). Application of waste cashew nut shell ash showed significant reduction in mobility of Pb and Cd in waste battery contaminated soil. *The Pacific Journal of Science and Technology* Vol. 12, No 2: 472-478.

23. Adejumo, S.A., Togun, A.O., Adediran, J.A. and **Ogundiran, M.B**. (2011). Field assessment of progressive remediation of soil contaminated with lead-acid battery waste in response to compost Application. *Pedologist* Vol. 54. No. 3: 182-193.

24. Adejumo, S.A., Togun, A.O., Adediran, J.A. and **Ogundiran, M.B.** (2011). In-Situ remediation of heavy metal contaminated soil using mexican sunflower (*Tithonia diversifolia*) and cassava waste composts. *World Journal of Agricultural Sciences* Vol. 7. No. 2: 224-233.

25. **Ogundiran, M.B**. and Adeniyi, S.O. (2012). Determination of fat contents, iodine values, trace and toxic metals in commonly consumed frozen fish in Nigeria. *American Journal of Food Technology* Vol. 7. No. 1: 34-42.

26. **Ogundiran, M.B**., Ogundele, D.T., Afolayan P.G. and Osibanjo, O. (2012). Heavy metals levels in forage grasses, leachate and lactating cows reared around lead slag dumpsites in Nigeria. *International Journal of Environmental Research* Vol. 6. No. 3: 695-702.

27. **Ogundiran, M.B.** and Osibanjo, O. (2012). Contamination and potential risk assessment of an abandoned auto battery waste contaminated site in Ibadan, Nigeria. *Journal of Science Research* Vol. 11. No. 1: 6-14

28. **Ogundiran, M.B.,** Nugteren, H.W. and Witkamp, G.J. (2013). Immobilisation of lead smelting slag within spent aluminate-fly ash based geopolymers. *Journal of Hazardous Materials* Vol. 248-249: 29-36

29. **Ogundiran, M.B.,** Oyetade, O.A., Babayemi, J.O. and Oladele, O. (2014). Potential environmental hazards of non-rechargeable electric torch wastes in Nigeria. *International Journal of Environment and Waste Management* Vol. 13. No. 2: 115-130.

30. **Ogundiran, M.B.,** Olujobi, T. and Oladele, O. (2014). Composition and management of rechargeable electric torch wastes in Ibadan, Nigeria. *Journal of Material Cycles and Waste Management* Vol. 16: 115-123.

31. **Ogundiran, M.B.** and Ikotun, O.J. (2014). Investigating the suitability of Nigerian calcined kaolins as raw materials for geopolymer binders. *Transactions of Indian Ceramic Society* Vol. 73. No. 2: 138-142.

32. **Ogundiran, M.B.** and Kumar S. (2015). Synthesis and characterisation of geopolymer from Nigerian Clay. *Applied Clay Science* Vol. 108: 173-181.

33. Ojo O.I., **Ogundiran, M.B.** and Adebayo, O.L. (2015). Toxic and essential metals in staple foods commonly consumed by students in Ekiti State, South West, Nigeria. *International Journal of Chemistry* Vol. 7. No. 1: 155-150.

34. Olawale, M.D. and **Ogundiran, M.B.** (2015). Screening Nigerian Kaolin for Use as Potential Sources of Geopolymer Materials. *American Journal of Applied Chemistry* Vol. 3. No. 3: 134-138.

35. O**gundiran, M.B.** and Fasakin, S.A. (2015). Assessment of heavy metals and crude protein content of molluscs and crustaceans from two selected cities in Nigeria. *African Journal of Food Agriculture Nutrition and Development* Vol. 15. No. 3: 10099-10117.

36. **Ogundiran, M.B.** and Winjobi, F.A. (2015). The potential of binary blended geopolymer binder containing Ijero-Ekiti calcined kaolin clay and ground waste window glass. *African Journal of Pure and Applied Chemistry* Vol. 9. No. 7: 159-166.

37. **Ogundiran, M.B.,** Lawal, O.O. and Adejumo, S.A. (2015). Stabilisation of Pb in Pb Smelting Slag-contaminated Soil by Compost-modified Biochars and their Effects on Maize Plant Growth. *Journal of Environmental Protection* Vol. 6: 771-780.

38. Jayeoye, T.J, **Ogundiran, M.B.**, Fadare, D.A, Ogunjobi, A.A. (2015). Evaluation of physicochemical and biodegradability properties of selected Nigerian non-edible oilseeds as potential cutting fluids. *Pakistan Journal of Scientific and Industrial Research Series A: Physical sciences* Vol. 58. No. 3: 122-129.

39**. Ogundiran, M.B.,** Ademola, E.F. and Adejumo, S.A. (2015). Poultry litter management in Lagos and effects of its soil application on the growth of okra (*Abelmoschus esculentus*). *African Journal of Plant Science* Vol. 9. No. 11: 427-438.

40. **Ogundiran, M.B.** and Kumar S. (2016). Synthesis of fly ash-calcined clay geopolymers: Reactivity, mechanical strength, structural and microstructural characteristics. *Construction and Building Materials* Vol. 125: 450-457.

41. **Ogundiran, M.B.**, Nugteren, H.W. and Witkamp, G.J. (2016). Geopolymerisation of fly ashes with waste aluminium anodising etching solutions. *Journal of Environmental Management* Vol. 181:118-123.

42. **Ogundiran, M.B.**, Buluku, T.G., Babayemi, J.O., Osibanjo, O. (2017). Waste rechargeable electric lamps: Characterisation and lead recovery from their lead-acid batteries. *Journal of Material Cycles and Waste Management* Vol. 19. No 1: 163-171.

43. Babayemi, J.O., **Ogundiran, M.B.** and Osibanjo, O. (2017). Overview of environmental hazards and health effects of pollution in developing countries: A Case Study of Nigeria. *Environmental Quality Management* Vol. 26. No. 1: 51-71.

44. Babayemi, J.O., **Ogundiran, M.B.** and Osibanjo, O. (2017). Current levels and management of solid wastes in Nigeria. *Environmental Quality Management* Vol. 26. No. 3: 29-53.

45. **Ogundiran, M.B.**, Mekwunyei N.S. and Adejumo, S.A. (2018). Compost and biochar assisted phytoremediation potentials of *Moringa oleifera* for remediation of lead contaminated soil. *Journal of Environmental Chemical Engineering* Vol. 6: 2206-2213.

46. Babayemi, J. O., **Ogundiran M.B.**, Weber, R. and Osibanjo, O. (2018). Initial inventory of Plastics imports in Nigeria as a basis for more sustainable management policies. *Journal of Health Pollution* Vol. 8. No. 18: 1-15.

47. **Ogundiran, M.B.** and Enakerakpo, I.S. (2018). Metakaolin clay-derived geopolymer for recycling of waste cathode ray tube glass. *African Journal of Pure and Applied Chemistry* Vol. 12. No. 6: 42-49.

48. Adejumo, S.A., **Ogundiran, M.B.** and Togun, A.O. (2018). Soil amendment with compost and crop growth stages influenced heavy metal uptake and distribution in maize crop grown on

lead-acid battery waste contaminated soil. *Journal of Environmental Chemical Engineering* 6: 4809-4819.

50. Babayemi J. O., **Ogundiran M.B.**, Weber R., Osibanjo O (2018). Initial inventory of Plastics imports in Nigeria as a basis for more sustainable management policies. *Journal of Health Pollution 8 (18): 1-15.*

51. **Ogundiran M. B.**, Enakerakpo I. S (2018). Metakaolin clay-derived geopolymer for recycling of waste cathode ray tube glass. *African Journal of Pure and Applied Chemistry 12(6): 42-49.*

52. Ouabo R.E., Sangodoyin A.Y., Ogundiran M.B. Babafemi A. (2018). Babalola. Levels and Risk Assessment of Polychlorinated Biphenyls (PCBS) in Soils from Informal E-Waste Recycling Sites in Cameroun. *European Journal of Sustainable Development Research 2(4), 44.*

53. Ouabo R.E., **Ogundiran M.B.,** Sangodoyin A.Y., Babalola B.A (2019). Ecological risk and human health implications of heavy metals contamination of surface soil in E-Waste recycling sites in Douala, Cameroun. *Journal of Health and Pollution 9(21):190310 .https://doi.org/10.5696/2156-9614-9.21.190310.*

54. Adejumo S.A., Arowo D.O., **Ogundiran M.B.,** Srivastava P. (2020). Biochar in combination with compost reduced Pb uptake and enhanced the growth of maize in lead (Pb)-contaminated soil exposed to drought stress. *Journal of Crop Science and Biotechnology 23(3): 273-288.*

55. Ouabo R.E., Sangodoyin A.Y., **Ogundiran M.B.** (2020). Assessment of ordinary kriging and inverse distance weighting methods for modeling chromium and cadmium soil pollution in E-Waste sites in Douala, Cameroon. *Health and Pollution: June 2020, Vol. 10, No. 26, 200605.https://doi.org/10.5696/2156-9614-10.26.200605.*

56. Ogundele D., **Ogundiran M.B.,** Babayemi J.O., Jha M.K. (2020). Material and Substance Flow Analysis of used lead acid batteries in Nigeria: Implications for Recovery and Environmental Quality. Journal of Health and Pollution: September 2020, Vol. 10, No. 27, 200913. https://doi.org/10.5696/2156-9614-10.27.200913.

57. Adeniyi F.I., **Ogundiran M.B.** (2020). Synthesis of geopolymer binders and mortars from Ijero-Ekiti calcined clay, blast furnace slag and river sand. Earthline Journal of Chemical Sciences 4 (1):15-34.

58. Adeniyi F.I., **Ogundiran M.B.**, Hemalatha T., Bharatkumar B.H. (2020). Characterisation of raw and thermally treated Nigerian kaolinite-containing clays using instrumental techniques. Springer Nature Applied Science 2 (5): 1-14 https://doi.org/10.1007/s42452-020-2610-x.

59. Adelodun A. A., Sangodoyin A. Y., **Ogundiran M. B**. (2022). Optimisation of biochar yield from sorted wood wastes as sustainable alternatives to burning to ash. Ecological Chemistry and Engineering S 29(1): 15-26. DOI: 10.2478/eces-2022-0003.

60. Awe Y.T., Sangodoyin A.Y., **Ogundiran M.B**. (2022). Assessment of organophosphate pesticide residues in environmental media of Araromi farm settlement, Osun State, Nigeria. Environmental Analysis Health and Toxicology 37(4): e2022031, https://doi.org/10.5620/eaht.2022031.

61. Oladele O.L., Adesanya E.D., Arbe A., Iturrospe A., **Ogundiran M. B**. (2023). Mitigation of efflorescence, drying shrinkage, and water demand of calcined clay-based geopolymers with biological waste ashes as activator and hardener. Applied Clay Science 243: 107050.

62. Goracci G., Saeed E., **Ogundiran M.B.**, Iturrospe A., Arbe A., Aymonier C., Dolado J.S. (2024). Cool concrete incorporating carbonated periwinkle shell: A sustainable solution for mitigating urban heat Island effects. ACS Sustainable Chemistry and Engineering 12: 1911-1917.

63. Goracci G., **Ogundiran M.B**., Barzegar M., Iturrospe A., Arbe A., Dolado J.D. (2024). Kaolin clay-based geopolymer for ionic thermoelectric energy harvesting. ACS Omega 9: 13728-13737.

64. Ogunsola S.S., Adelodun A.A., Ogundiran M.B. (2024). Stabilization of Pb, Cu, and Zn in phytoaccumulator ash in calcined clay-based geopolymers and potential Application. Volume Tropical Aquatic and Soil Pollution 4(1): 27-42.

(f) Books, Chapters in Books and Articles already accepted for publication: NIL

(g) Technical Reports and Monographs:

65. Osibanjo, O. and **Ogundiran, M.B.** (2004). Report on the Environmentally Sound Disposal of Diazinon Cattle Dip Solution Post Cattle Death on ILRI farm, IITA, Ibadan. A Technical Report submitted to International Livestock Research Institute, Ibadan. 14pp.

66. **Ogundiran, M.B**. (2010). Geopolymer: New Cement with Low CO_2 Emission for Immobilisation of Hazardous wastes and Construction materials. A Technical Report submitted to the Organisation for Prohibition of Chemical Weapons, the Netherlands. 52pp.

67. **Ogundiran, M.B.**, Oketola, A.A., Ajai, M.B., Osibanjo, O. (2011). Description and Evaluation of Policy Measures. Under Integrated Waste management in Western Africa (IWWA) via Basel Convention Regional Coordinating Centre for Africa, University of Ibadan. A Technical Report submitted to European Commission. 29pp.

68. **Ogundiran, M.B.**, Oketola A.A., Ajai, M.B. Osibanjo, O. (2012). Prognosis on Environmental and Socio-economic Effects in the Targeted Regions. Under Integrated Waste management in Western Africa (IWWA) via Basel Convention Regional Coordinating Centre for Africa, University of Ibadan. A Technical Report submitted to European Commission. 25pp.

69. **Ogundiran, M.B.** (2014). Material Characterisation and Synthesis of calcined Clay, Fly Ash and Fly Ash Clay-Based Geopolymers for Sustainable Construction Material. A Technical Report submitted to the office of C.V Raman International Fellowship for African Researchers. 28pp.

X. Major Conferences Attended with Paper Read (in the last 5 years)

1. International Conference on Ceramics Science and 77th Annual session of Indian Ceramic Society, held at S.N.T.I., N Road, Bistupur, Jamshedpur, India, 19-20 December, 2013. Paper presented was:

   Ogundiran, M. B. (2013). Investigating the suitability of Nigerian calcined kaolins as raw materials for geopolymer binders.

2. American Chemical Society 19th annual Green Chemistry and Engineering Conference held at Bethesda North Marriott Hotel - North Bethesda, MD, USA. 14-16 July, 2015.

3. The 3rd Faculty of Science International Conference on Diversification of Nigeria's economy through Science held at Lakeside Lecture Theatre, Faculty of Science, University of Ibadan, Nigeria. 16-19 May, 2017. Paper presented was:

   Oladele O. L. and Ogundiran, M. B. (2017). Feasibility of utilisation of mining waste, spent window glass and quarry sand for production of geopolymer mortars.

4. 3rd Annual Conference of Biochar Initiative of Nigeria on Biochar for climate change mitigation, crop protection and soil remediation for sustainable agriculture held at First bank building, Faculty of Agriculture and Forestry, University of Ibadan, Nigeria. 11-15 September, 2017. Paper presented was:

   Mekwunyei, N.S., Ogundiran, M.B. and Adejumo, S. A. (2017). Utilisation of agro-waste derived biochars and compost as amendments for phytoremediation of lead slag-contaminated soil using *moringa oleifera* plant.

5. The Engineering Conferences International on Alkali Activated Materials and Geopolymers: Versatile Materials Offering High Performance and Low Emissions held at Hotel Dos Templarios, Largo Candido do Reis 1, Tomar, Portugal. 27 May to 1 June, 2018. Paper presented was:

   Ogundiran, M.B. and Akinola, O. P. (2018). Performance evaluation of metakaolin clay geopolymers synthesised with bamboo wood ash as an activator.

6. Pan Africa Chemistry Network Congress on Riches of the natural world: Sustainable use of Africa's natural products and materials at Addis Ababa, Ethiopia 5-7 November 2019.

   Ogundiran, M.B. (2019). Nigerian calcined clay-based geopolymers: Early, current and future

7. The American Ceramic Society 45th International Conference and Exposition on Advanced Ceramics and Composites (ICACC2021) Virtual conference. 8-11 February 2021.

   Ogundiran, M.B. (2021). Geopolymers, Inorganic Polymers and Sustainable Materials

8. The American Ceramic Society 46th International Conference and Exposition on Advanced Ceramics and Composites (ICACC2022) Virtual conference. January 23-28, 2022

Ogundiran, M.B. (2022). Production and applications of geopolymers for inert waste management and hazardous waste materials encapsulation.

9. Pan American Ceramics Congress and Ferroelectrics Meeting of Americas (PACC-FMAs) 2024. Hilton Panama, Balboa Avenida & Aquilino De La Guardia, Panama City, Panama 0000, PA. April 7-11, 2024.

Ogundiran, M.B. (2024). Production and characterization of cocoa pods and periwinkle shell ash-based geopolymers at

XI. Ten Best Publications that Reflect the Totality of my Contributions to Scholarship

1. **Ogundiran, M.B.** and Osibanjo, O. (2008). Heavy metal concentrations in soils and accumulation in plants growing in a deserted slag dumpsite in Nigeria. *African Journal of Biotechnology* Vol. 7. No. 17: 3053-3060.
2. **Ogundiran, M.B.** and Osibanjo, O. (2009). Mobility and speciation of heavy metals in soils impacted by hazardous waste. *Chemical Speciation and Bioavailability* Vol. 21. No. 2: 59-69.
3. **Ogundiran, M.B.**, Ogundele, D.T., Afolayan P.G. and Osibanjo, O. (2012). Heavy metals levels in forage grasses, leachate and lactating cows reared around lead slag dumpsites in Nigeria. *International Journal of Environmental Research* Vol. 6. No. 3: 695-702.
4. **Ogundiran, M.B.**, Nugteren, H.W. and Witkamp, G.J. (2013). Immobilisation of lead smelting slag within spent aluminate-fly ash based geopolymers. Journal of Hazardous Materials Vol. 248-249: 29-36.
5. **Ogundiran, M.B**., Oyetade, O.A., Babayemi, J.O. and Oladele, O. (2014). Potential environmental hazards of non-rechargeable electric torch wastes in Nigeria. International Journal of Environment and Waste Management Vol. 13, No. 2: 115-130.
6. **Ogundiran, M.B.**, Olujobi, T. and Oladele, O. (2014). Composition and management of rechargeable electric torch wastes in Ibadan, Nigeria. Journal of Material Cycles and Waste Management Vol. 16: 115-123.
7. **Ogundiran, M.B.** and Kumar S. (2015). Synthesis and characterisation of geopolymer from Nigerian Clay. *Applied Clay Science* Vol. 108: 173-181.
8. **Ogundiran, M.B.** and Sanjay, K. (2016). Synthesis of fly ash-calcined clay geopolymers: Reactivity, mechanical strength, structural and microstructural characteristics. *Construction and Building Materials* Vol. 125: 450-457.
9. **Ogundiran, M.B.**, Nugteren, H.W. and Witkamp G.J. (2016). Geopolymerisation of fly ashes with waste aluminium anodising etching solutions. *Journal of Environmental Management* Vol. 181:118-123.
10. **Ogundiran M.B.**, Mekwunyei N.S. and Adejumo S.A. (2018). Compost and biochar assisted phytoremediation potentials of *Moringa oleifera* for remediation of lead contaminated soil. *Journal of Environmental Chemical Engineering* Vol. 6: 2206-2213.

23 September 2024

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Professor Mary B. Ogundiran Date