

## CURRICULUM VITAE

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## I. PERSONAL DETAILS

**Name in Full** Kayode Oyeboade ADEBOWALE, mni, FAS, FRSC, FCSN, FSAN  
FAvH, FPIN  
[Formerly Kayode Oyeboade ESUOSO]

**Date of birth** January 11, 1962

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**Present position:** Deputy Vice-Chancellor (Administration)  
University of Ibadan  
Ibadan – Nigeria



## II. HIGHER EDUCATION AND QUALIFICATIONS

**Feb – Nov 2017** Member of National Institute (mni)  
National Institute for Policy and Strategic Studies (NIPSS),  
Kuru, near Jos, Nigeria (Course 39)

**1986 – 1991** PhD (Industrial Chemistry), University of Ibadan, Ibadan,  
Nigeria (October, 1991)

**1985 – 1986** M.Sc. (Industrial Chemistry), University of Ibadan, Ibadan,  
Nigeria.

**1980 -1984** B.Sc. (Chemistry), University of Ibadan, Ibadan, Nigeria.

## III. POSTDOCTORAL RESEARCH

**Aug – Nov 2008** Scientific Research supported by the Alexander von Humboldt  
Stiftung, at the Faculty of Natural Sciences and Mathematics,  
Institute of Food Chemistry, Technical University, Dresden,  
Germany.

**May – Jul 2006** Scientific Research at the International Centre for Theoretical  
Physics, ICTP, Trieste, Italy.

May – Jul 2004 Scientific Research at the International Centre for Theoretical Physics, ICTP, Trieste, Italy.

April – Jun 2003 Scientific Research at the International Centre for Theoretical Physics, ICTP, Trieste, Italy.

Apr 2000 – Oct 2000 Scientific Research supported by the Alexander von Humboldt Stiftung, at the Institute of Organic Chemistry, University of Tuebingen, Germany.

Apr 1996–Oct, 1997 Scientific Research supported by the Alexander von Humboldt Stiftung, at the Institute of Organic Chemistry, University of Tuebingen, Germany.

#### **IV. TITLE OF PROJECTS, DISSERTATIONS AND THESIS**

**NIPSS individual research,** *“Funding of public universities and the development of tertiary education in Nigeria: A study of TETFund intervention in the University of Ibadan”.* (Nov., 2017)

**PhD Thesis Title:** *Some chemical parameters required for the improved bench scale production of Ethanol and Citric acid.* (Oct., 1991)

**MSc Dissertation Title:** *Local sourcing of citric acid: Fermentation of molasses and yellow nut sedge (Cyperus esculentus) by Aspergillus niger.* (Sept, 1986)

**BSc Honours Project Title:** *Investigation into the use of cocoa shell as fertilizer source, extraction and attempted characterization of pigments from the husk and shell.* (June, 1984)

#### **V. MEMBERSHIP OF PROFESSIONAL BODIES**

Member, Waste Management Association of Nigeria (since 2008)

Member, Institute of Chartered Chemists of Nigeria (since 2007)

Member, Institute of Public Analyst of Nigeria (since 2006)

Member, Nigerian Institute of Food Science and Technology (since 1991)

Member, Chemical Society of Nigeria (since 1991)

Member, New York Academy of Science (since 1991)

Member, Science Association of Nigeria (since 1986)

Member, American Chemical Society (since 1986)

#### **VI. FELLOWSHIPS, HONOURS AND DISTINCTIONS**

Fellow, Science Association of Nigeria FSAN – 2019

Fellow, Polymer Institute of Nigeria FPIN – 2019

Fellow, Royal Society of Chemistry FRSC - 2019

Fellow, Chemical Society of Nigeria FCSN - 2018

Member of the National Institute (mni) - 2017

Fellow, Nigerian Academy of Science FAS- 2012

Fellow, Alexander von Humboldt Fellowship, Germany FAvH– 1996

**Regular Associate**, International Centre for Theoretical Physics ICTP - 2003 – 2006  
(*This is being utilised in the training of two Doctoral students, Lawal, A. S and Afolabi, T. A.*)

## VII. COGNATE EXPERIENCE

**2006 – date** Professor, Department of Chemistry, University of Ibadan

**2003 – 2006** Reader: Department of Chemistry, University of Ibadan

**1999 - 2003** Senior Lecturer: Department of Chemistry, University of Ibadan

**1994- 1998** Lecturer Grade I: Department of Chemistry, Federal University of Technology, Akure

**1991 – 1994** Lecturer Grade II: Department of Chemistry, Federal University of Technology, Akure

**1987 – 1991** Graduate Assistant: Department of Chemistry, University of Ibadan

## VIII. UNIVERSITY LEADERSHIP AND SENIOR MANAGEMENT EXPERIENCE

### DEPARTMENT

**2006 – 2009** Examinations Officer, Department of Chemistry, University of Ibadan

**2006 – 2009** Member, Finance Committee, Department of Chemistry

**2004 – 2006** Postgraduate Coordinator, Department of Chemistry, University of Ibadan

**June 2000** Member, investigative Panel on the alleged examination malpractices of first undergraduate course in Organic Chemistry (CHE 177)

**1991 – 1996** Examinations Officer, Department of Chemistry, Federal University of Technology, Akure

### FACULTY

**2009 - 2011** Dean, Faculty of Science

### Notable achievements:

- *Resuscitation of the Faculty Journal (Journal of Science Research)*
- *Sixty-eight academic staff were promoted comprising nine Assistant lecturers promoted to lecturer grade II; 24 were promoted from lecturer grade II to lecturer grade I; 27 promoted from lecturer grade 1 to Senior lecturers; 3 Senior lecturers promoted to the grade of Reader; One Senior lecturer to the grade of Professor; and Two academic staff were promoted from the grade of Reader to the grade of Professor.*
- *The Dean's Roll of Honours for students in the Faculty with CGPA  $\geq$  6.0 on a scale of 7 was sustained. In addition, book vouchers were presented to the students and parents were invited to the ceremony*
- *For the first time in the history of the Faculty, four inaugural lectures were delivered during the 2009/10 session while five inaugural lectures were delivered during the 2010/11 sessions. This enabled some of our senior colleagues in the Faculty to deliver their inaugural lectures instead of giving valedictory lecture at the time of their retirements.*
- *The Redeemed Christian of God (Apapa Family) endowed a forty eight million Naira (N48,000,000.00) Professorial Chair of Mathematics in honour of the General Overseer of the Redeemed Christian Church of God, RCCG Pastor E A Adeboye*
- *A Memorandum of Understanding MOU was signed between the University of Ibadan (Faculty of Science) and the University of Magdeburg. University of Magdeburg was represented by Prof. Wolfgang Konig Chairman, Clinical Microbiology, Virology Immunology & Environmental Medicine, Institute of Medical Microbiology, Otto-von-Guericke-University Magdeburg. It also involved some academic staff from the Faculty of Pharmacy (Prof. Bola A Adeniyi), Department of Medical Microbiology, College of Medicine (Dr A A Oni), The Departments in the Faculty of Science includes, Department of Zoology (Dr A A Bakare); and Department of Microbiology (Dr K F Fasae).*
- *The following donations were facilitated during my tenure as the Dean of the Faculty*
- *FANMILK Plc offered to beautify the surroundings of the Faculty as part of its Corporate Social Responsibility. The first phase of the project which is worth about N2.5m has been completed. It involved the landscaping of the frontage of the Faculty building. The remaining two phases would be embarked upon in due course.*
- *LADSOM, a University contractor undertook the renovation of twelve toilets in the Faculty building for the students. The renovation entailed the complete replacement of the WC's, painting of the toilets as well as provision of 6000 litres capacity water storage.*
- *Prof. Aderonke Bayeroju of the College of Medicine donated an elephant jaw which is estimated to be about 100 years old to the Department of Archaeology & Anthropology.*
- *A 40kVA generator was donated by Mr. Wadji Zard, MD/CEO of Zartech Nigeria Ltd; 100kVA generator was donated by "Prof. B B Adeleke. Prof B B Adeleke is a one-time Vice Chancellor of Ladoko Akintola University of Technology, Ogbomosho. He is supported by his friends. All these generators were donated to the Department of Chemistry*

- *C-1 Inorganic Chemistry Laboratory in the Department of Chemistry was refurbished to the tune of N7m by Mr. Abiola Ogunrinde, MD/CEO Tropical Naturals Limited, Lagos, (Makers of Dudu Osun Soap) and Mr. Segun Balogun, MD/CEO Dutsi Laboratory Engineering Limited, Lagos*

**2000 – 2004**                      **Sub-Dean**, Postgraduate, Faculty of Science

## **UNIVERSITY**

### **Deputy Vice-Chancellor (Administration)**

I was first appointed Deputy Vice-Chancellor (Administration) by Council in June 2018 and re-appointed for a second term with effect from June 2020.

<b>2018 to Date</b>	<b>Member</b> , University Governing Council
<b>2018 to Date</b>	<b>Member</b> , Finance and General Purposes Committee of Council
<b>2018 to Date</b>	<b>Member</b> , Project Committee of Council
<b>2018 to Date</b>	<b>Chairman</b> , Tender Analysis Committee
<b>2018 to Date</b>	<b>Member</b> , Appointments and Promotions Committee for Academic Staff
<b>2018 to Date</b>	<b>Member</b> , Appointments and Promotions Committee for Senior Staff (Non-Teaching)
<b>2018 to Date</b>	<b>Member</b> , Senior Staff Disciplinary Committee
<b>2018 to Date</b>	<b>Member</b> , Students Disciplinary Committee
<b>2018 to Date</b>	<b>Chairman</b> , Project Monitoring Committee
<b>2018 to Date</b>	<b>Member</b> , Tenders Board
<b>2018 to Date</b>	<b>Member</b> , Board of University of Ibadan Endowment Fund
<b>2018 to Date</b>	<b>Member</b> , Development Committee
<b>2018 to Date</b>	<b>Chairman</b> , Internal Revenue Board
<b>2018 to Date</b>	<b>Chairman</b> , Vehicle Refurbishing Loan Committee
<b>2018 to Date</b>	<b>Chairman</b> , University Staff Private Home Ownership Scheme
<b>2018 to Date</b>	<b>Chairman</b> , National Housing Fund by Federal Mortgage Bank of Nigeria
<b>2018 to Date</b>	<b>Chairman</b> , Diesel Usage and Allocation
<b>2018 to Date</b>	<b>Chairman</b> , Board of Centre for Social Orientation CENSO
<b>2018 to Date</b>	<b>Chairman</b> , Board of Survey
<b>2018 to Date</b>	<b>Director</b> , UI Bookshop
<b>2018 to Date</b>	<b>Chairman</b> , Unified Pensions Board
<b>2018 to Date</b>	<b>Member</b> , University Students Lodging Bureau
<b>2018 to Date</b>	<b>Chairman</b> , University Cleaning and Sanitation

### **Notable achievements as Deputy Vice-Chancellor (Administration)**

It is noteworthy that I came in as the Deputy Vice-Chancellor (Administration) at a time that UI's finances were in a major crisis. Practically no capital release from the Federal Government neither was there an adequate release for overhead. The situation was further compounded by the fact that most projects started in 2015 and earlier, that were still on-going were caught up with the require devaluation of the naira and the scarce

foreign exchange that came with the political change at the Federal Government level in 2015. There was therefore extra pressure on the meager internally generated revenue (IGR) of the University to complete most of these projects or risk their being abandoned. A lot of innovations, proactiveness and pragmatism was required to get things done in such circumstance. Nevertheless, with the robust support of the Vice-Chancellor, there were achievements in the provision of physical infrastructure, an aspect that I supervise.

- Completion of some on-going projects
- The halls of residence were given a facelift in a very cost-effective way. The facilities in the halls, which had practically broken down, were resuscitated
- The water supply was in comatose early 2018. Many factors were responsible for this. Nevertheless, there had been consistent improvement. There is however going to be a major improvement when the laying of the rising mains from the water treatment plant to Amina Way is completed. The pipework was commenced in 2019. Efforts are on also to complete the abandoned construction of an additional water treatment plant to increase the volume of treated water available to the University community
- Enormous resources go into power supply – laying of Ibadan Electricity Distribution Company (IBEDC) bills, purchase of diesel and maintenance of the University electrical network and the power generators.
- A good rapport was created with the IBEDC to maximize supply from the energy company. Besides, through personal supervision and proper motivation of the staff of Works and Maintenance Department, down time has been drastically cut down due to timely interventions.
- On 9 March 2019, there was a terrible windstorm that caused a great damage to our buildings and some fence walls on campus. The cost of the damage was estimated to cost about N90 million. The roofs of these buildings were removed and the fence walls collapsed. Through a close supervision and personal involvement, the roofs were fixed in record time, thereby precluding further damage that would have resulted from exposure to weather elements and an insecure environment
- I facilitate and supervise the repair of campus roads to ensure comfort to road users and a good environment. Among the road rehabilitated are Crowder Lane, Botanical Garden and Liard Roads
- Under my watch, the campus has maintained a fairly good look and things are getting better. Recently, we took stock of the public toilets on campus, and efforts are on the resuscitate many of the dysfunctional ones.
- In terms of revenue generation activities, in the Board of Survey, obsolete materials that littered the campus were boarded. Within the past one year, not less than N25 million was brought into the coffers of the University through boarding of disused items. In the same vein, the UI Water enterprises was strengthened and revitalized for better delivery and increased production

**December 2015 – Feb 2017** Director, Special Duties, Office of the Vice-Chancellor

## Notable achievements

- I assisted the Vice Chancellor in the processing of Part II promotion of academic staff to the grade of Reader and Professor.
  - I liaised actively with the Establishments Division (Academic Staff), made regular telephone and e-mail contacts with the local and foreign assessors.
  - I developed an alert system for monitoring external assessors who might have otherwise delayed in turning in their reports.
  - These measures, which have since been consolidated by the Office of the Vice-Chancellor, have led to a considerable reduction in the waiting time for the processing of our Part II promotion cases.
- I led a programme of Corporate Social Responsibility whereby the University of Ibadan intervened in the teaching of science subjects in some public secondary schools in the inner-city and peri-urban parts of Ibadan with funding support from Guaranty Trust Bank PLC and endorsement by the Governor of Oyo State through the Oyo State Ministry of Education.
- I took an active part in the development of a project proposal in collaboration with Pennsylvania State University, College Station, USA, through a UI Alumnus, Professor Michael Adewumi.
- I helped the University of Ibadan to resolve a conflict with an architectural firm that designed an upgrade of the Wole Soyinka Theatre and this saved the university the embarrassment of a protracted litigation in a court of law and a potential loss of goodwill.
- I took an active part in managing the conflict that arose from shortfall in the personnel grants received from Abuja as well as the management and ownership of the University Staff School.
- I led the team that produced the 2016 Annual Report in collaboration with the Publications unit of the Registry.
- I represented the Vice-Chancellor on a number of university functions when neither of the two Deputy Vice-Chancellors was around.

<b>2014</b>	Convener, Committee on the Implication of the Retirement of Academic Staff
<b>2013</b>	Convener, Investigative Panel on the Determination of Class of Degree by two students in the Department of Mechanical Engineering – 2013 (The affected students were threatening to take the University to court but after a dispassionate investigation, our Panel was able to resolve the matter amicably).
<b>2012 to Date</b>	Member, Committee of the Appointments of Emeritus Professors
<b>2011 - 2012</b>	Member, Committee on Intellectual Property Policy for University of Ibadan
<b>2012</b>	<b>Member</b> , NUC Accreditation team to Benue State University, Makurdi, Benue State



2012 – 2016	Member of the Board of the Centre for Social Orientation (CENSO) and Chairman Committee on Research and Intelligence, CENSO
2009 – 2011	Dean, Faculty of Science
2009 – 2011	<b>Member</b> , Committee of Provosts and Deans
2009 - 2011	<b>Member</b> , Ad-Hoc Committee on Affiliation of some Institutions to the University of Ibadan
2008 to date	<b>Member</b> of Senate
2006	Member Investigative Panel on the MPhil/PhD to PhD Conversion Examination in the Department of Forest Resources Management

#### **IX. ENGAGEMENT OUTSIDE THE UNIVERSITY OF IBADAN**

2018 to date	<b>Member</b> of Governing Council, Precious Cornerstone University, Ibadan
2014 – 2016	External Examiner, Department of Chemistry, Federal University of Agriculture, Abeokuta
2012 – 2014	External Examiner, Department of Industrial Chemistry, University of Ilorin, Nigeria
2011 – 2014	External examiner, Department of Chemistry, Olabisi Onabanjo University, Ago-Iwoye
2011 – 2014	External Examiner, Department of Chemical Sciences, College of Natural & Applied Sciences, Bells University of Technology, Otta
2011 – 2014	External Examiner, Department of Chemical Sciences, Redeemers University, Mowe, Ogun State
2007 – 2009	External examiner, Department of Chemistry and Biochemistry, BOWEN University, Iwo
2006 – 2008	External Examiner, Department of Chemistry, Olabisi Onabanjo University, Ago – Iwoye, Ogun State
2004 – 2007	External Examiner, Department of Chemistry, Federal University of Technology, Yola

#### **X. COMMUNITY SERVICES**

2015 – 2016	Coordinator of Pilot Intervention in Selected Secondary Schools in Oyo State by the University of Ibadan and Guaranty Trust bank
2014 to Date	Instituted and funded two annual awards, for members of the Nigerian Young Academy; NYA “ <i>Prof Kayode Adebawale National Scientist Prize for Women in Chemical Sciences</i> ” ( <a href="http://nas.org.ng/download/1728/">http://nas.org.ng/download/1728/</a> ) and “ <i>Prof. Kayode Adebawale National Scientist Prize</i> ” which is to promote original research in Chemical Sciences among young scientists in Nigeria ( <a href="http://nas.org.ng/download/1726/">http://nas.org.ng/download/1726/</a> )

#### **XI. EXPERIENCE OF FUND GENERATION AT THE UNIVERSITY OF IBADAN**

**Recipient**, International Foundation for Science (IFS) Grant to a tune of **12,000 US Dollars**- 2002

**Recipient**, African Union Kwame Nkrumah Continental Scientific Award for Science, Technology and Innovation to a tune of **100,000 US Dollars**– 2014.

*(This is being utilized in the training of four of my current doctoral students)*

**Lead Researcher** of the Alexander von Humboldt Humboldt Kolleg Regional and Expert Conference on “*Climate Change and Sustainable Development: Cultural and Techno-Environmental Responses in West Africa*”. The Grant is worth **EUR 27,000.00** *(This provided opportunity for 80 Humboldt fellows and 250 early career scientist to interact with experts in their areas of research. Proceedings of the conference was also published)*

As **Dean of Science**, from 2009-2011, the Redeemed Christian of God (Apapa Family) endowed a forty eight million Naira (N48, 000, 000.00) Professorial Chair of Mathematics in honour of the General Overseer of the Redeemed Christian Church of God, RCCG Pastor E A Adeboye.

*C-1 Inorganic Chemistry Laboratory in the Department of Chemistry was refurbished to the tune of N7m by Mr. Abiola Ogunrinde, MD/CEO Tropical Naturals Limited, Lagos, (Makers of Dudu Osun Soap) and Mr. Segun Balogun, MD/CEO Dutsi Laboratory Engineering Limited, Lagos.*

*Esso Exploration and Production Nigeria Limited in Conjunction with NNPC donated the following equipment and sums of money to the Department of Geology.*

- (i) Logitech thin sectioning machine*
- (ii) A 35 kVA Diesel powered sound-proof generator*
- (iii) Four sets of inverters with batteries to power the thin sectioning machine, microscopes, the sub-surface laboratory, and the Head of Departments office*
- (iv) Six Meiji Petrological Microscopes*
- (v) Four digital Cameras*
- (vi) Automated sieve shaker*
- (vii) Fifty Mosquito nets for field camping during field work*
- (viii) N1.5m as honorarium for staff of the Department who participated in the field work exercise*

**Project Manager**, UICARE, March 2020- date

In response to the CODIV-19 pandemic, I am leading a group of scholars to manufacture alcohol-based hand sanitizers. We are awaiting approval from the National Agency for Food, Drugs Administration and Control (NAFDAC). This Project has the potential to generate up to a net profit of Ten Million Naira per annum for the University of Ibadan.

## XII. CURRENT AND PREVIOUS TEACHING DUTIES AT THE UNIVERSITY OF IBADAN

1 <sup>st</sup> year Undergraduate -	Introductory Chemistry (Organic, Inorganic and Physical Chemistry)
2 <sup>nd</sup> year Undergraduate Chemistry:	Chemical Raw Materials I; Large Scale Chemistry, Physical Chemistry.
3 <sup>rd</sup> year Undergraduate Chemistry:	Heavy Inorganic Chemicals; Unit Operation I; Petrochemicals and Wastes Utilisation, Introductory Industrial Chemistry .
4 <sup>th</sup> year Undergraduate Chemistry:	Unit operation II; Process Chemistry I; Special Topics in Industrial Chemistry.
M.Sc Industrial Chemistry:	Heterogeneous and Homogenous Catalysis; Oil Refining, Advanced Polymer Chemistry.
M.Sc. Environmental Chemistry & Pollution control	Hazardous Waste Chemistry & Management; National & Global Chemical Environmental Issues
MSc Forensic Science	Introduction to Forensic Chemistry

Supervision of Industrial Chemistry Practical in the Department of Chemistry

## XIII. POSTGRADUATE SUPERVISION

### COMPLETED DOCTORAL SUPERVISION

In addition to several M.Sc projects, I have successfully supervised to date fourteen (14) Ph.D students since February 1997. The theses and dates of graduation of the PhD graduates are given below:

- (1) Bamke, A. *Characterisation and Functional Properties of Flour and Protein Isolates from Germinated Solojo Cowpea (Vigna unguiculate (L) WALP.* (PhD Thesis, University of Ibadan, February, 2020)
- (2) Okekunle, M. O. *“Isolation, modification, characterization and cytotoxicity of Phaseolus lunatus Linn (Lima Bean) starches”.* (PhD Thesis, University of Ibadan, 2018)
- (3) Vaikosen, E. N. *“Persistence and accumulation of organochlorine pesticides in selected cocoa farms in southwestern Nigeria.”* (PhD Thesis, University of Ibadan, 2016)

- (4) **Diagboya, P.** *"Sorption and Desorption of organic and inorganic pollutants in soils collected from different Ecological zones of Nigeria.* (PhD Thesis, University of Ibadan, 2015)
- (5) **Yahaya, L. E.** *"Studies Synthesis and Characterization of Natural Rubber/Organoclay Nanocomposite from Camellia seed oil* (PhD Thesis, University of Ibadan, February 23, 2012)
- (6) **Agunbiade, F. O.** *"Metal dispersion and speciation in Sediments, plants and Fishes of Ondo State coastal Area, Nigeria using Fuzzy Logic Models".* (PhD Thesis, University of Ibadan, May 2010)
- (7) **Olayinka, O.O.,** *"Physicochemical properties, retrogradative behaviour and X-ray Diffraction of Native and modified starches of three varieties of Sorghum bilolor L. moench."* (PhD thesis, University of Ibadan; May, 2010).
- (8) **Nwosu, F.O.,** *"Adsorption properties of Active Carbons from some tropical biomass and Nigerian Coals"* (PhD Thesis, University of Ibadan, April, 2010)
- (9) **Afolabi, T.A.,** *"Physicochemical and functional properties of modified finger millet (Eleusine coracana) and Sword bean (Carnavalia gladiata) starches and its potentials as excipients in Pharmaceutical applications."* (PhD Thesis, University of Ibadan, June, 2009).
- (10) **Unuabonah, E.I.,** *"Kinetic and thermodynamic studies of the adsorption of some heavy metal ions on modified kaolinite clay."* (PhD Thesis, University of Ibadan, September, 2007).
- (11) **Akintayo, C. O.,** *"Synthesis and characterization of Albizia benth oil-modified akyd resin and its chemically modified derivatives."* (Ph.D Thesis, University of Ibadan, December 2004).
- (12) **Lawal O. S.,** *"Physicochemical properties, microstructure and retrogradation behaviour of native and modified starches and protein concentrates of some tropical legumes."* (PhD Thesis, University of Ibadan, November 2004).
- (13) **Odetokun, S. M.** *"Effect of fermentation on the nutrient composition and antinutrients of some underutilised tropical legumes".* (PhD Thesis, Federal University of Technology, Akure, June 1998)
- (14) **Akintayo, E. T.** *"Physicochemical and functional properties of flour and protein concentrates from African yam bean Sphenostilis sternocarpa".* (PhD Thesis, Federal University of Technology, Akure, February 1997)

## CURRENT DOCTORAL STUDENTS

1. **Chigbundu, E. C.** Facile Intercalation of Kaolinite Clay for the Adsorption of Basic Dyes in Water (2016)
2. **Agbaje, W B** Isolation and Characterisation of Polysaccharide Gums from *Bombaxcostatum* (Pellegr.), *Corchorus olitorius* (linn.) and *Cissus populnea* (Guill. and Perr.) as Potential Emulsion Stabilisers. (2015)
3. **Olomukoro, A.** Kaolinite clay as catalyst for remediation of water contaminated with personal care products and drugs (2018)
4. **Soladoye, P.** Remediation of dyes and selected metal Cr, As and Hg on Kaolinite Clay (2018)
5. **Usang R.** Fuzzy Logic Assessment of the Coastal Waters of Ikaje, Ondo State, Nigeria (2015)

## XIV. ON-GOING AND PREVIOUS RESEARCH ACTIVITIES

My research focus over the years include the following:

### **Production, optimisation and improvement of yield of ethanol and citric acid from fermentation the fermentation of molasses, *Zea mays*, and *Cyperus esculentus***

In the search for new, cheap and sustainable raw materials for the production of ethanol and citric acid, which is important for food and pharmaceutical industries, my research investigated the use of local materials like sugar cane molasses (by-product of the sugar industry) and *Cyperus esculentus* (tuber of a weed) in the production of these products via fermentation using *Saccharomyces cerevisiae* and *Aspergillus niger*. The results obtained have significant application for food, pharmaceutical and Allied industries of Africa. This has been adopted by many industries in Nigeria.

### **Thermo-catalytic conversion of wastes and biomass into useful industrial feed stocks:**

My other ground-breaking research was the thermocatalytic conversion of wastes and biomass, involving the low temperature conversion using a converter which was developed by Bayer and Kutubuddin for the conversion of oil shales into shales using inorganic catalyst. The application was extended to biomass during my visit to the University of Tuebingen as an Alexander von Humboldt research fellow in 1997.

Wastes and biomass are converted to oils, which is rich in technical fatty acid that could serve as precursors for the synthesis of oleochemicals like fatty alcohols and fatty amides.

### **Composition and possible industrial utilisation of seeds, seed oils and other industrial raw materials:**

During the course of my research, I discovered that lack of information on the composition of tropical fruits, seeds, tubers and some other industrial raw materials are responsible for their under-utilization. I then carried out a systematic study on the compositional analysis of the materials in order to unveil their potentials. The practical relevance is that if the results are cultivated both at household and industrial sectors, much of the wasted fruits, seeds and tubers in Africa will yield substantial incomes and thus, provide jobs and reduce poverty.

### **Rheological and baking properties of non-wheat flours:**

Over the past 50 years, millions of people in developing countries particularly in Africa have abandoned various fermented staple foods prepared from traditional crops like sorghum, millet, maize, cassava and cocoyam. The reason is that bread and other confectionary products from wheat are tasty and can be eaten with many supplementary foods. Unfortunately, wheat does not grow well in the humid tropics of Africa. A large amount of African meager foreign exchange earnings are expended on the importation of wheat. My research focus on the use of polymer gum (*Cissus poplnea*), local soup thickener to produce bread with over 80% substitutions from cocoyam. The flour has excellent rheology and physical properties of the bread like the loaf volume, loaf weight, crust structure, and the staling rate as well as the organoleptic properties of the bread were unaffected.

### **Physicochemical, functional properties and retrogradation behaviour of native and modified starches and protein concentrates of underutilised legumes and cereals:**

Due to shortage of animal proteins and the fact that animals have been implicated in coronary and heart diseases, one of my striking research endeavours involves the development of methods for the isolation, and determination of the functional properties of protein concentrates and isolates. The structures of these proteins are also modified chemically in order to make them functional for specific industrial application that demands good gelation concentration, better oil absorption capacity, better foaming capacity and stability, better emulsifying properties to mention a few. In the same vein, I have researched extensively on starch, which is a major component of the underutilized seeds, legumes and cereals. This aspect of my study involves both physical and chemical modification of the native starches. The chemical modification includes oxidation, acetylation, hydroxypropylation, benzylation, carboxymethylation, succinylation and acid thinning. Physical modification involves annealing and heat moisture conditioning. To date, I have produced five doctoral students on this area of research.

### **Synthesis, kinetics of production and characterisation of oil-modified alkyd resin:**

In my alkyd resin research, we modified conventional alkyd resin with lipids in order to improve both physical and chemical properties. Alkyd resin is a major raw material for the production of paints and other industrial coating materials. My research synthesized short, medium and long chain modified alkyds and I carried out systematic studies of their rate of reaction. Characterization was carried out using FT IR, <sup>1</sup>N-NMR and <sup>13</sup>C NMR. Furthermore, we produced acrylated oil modified alkyds which has improved film forming properties, and weatherability of paints. In addition, chlorinated *Albizia benth* oil modified alkyd resin was synthesized, characterized and reported for the first time through my research enterprise as a don in the University of Ibadan, Nigeria. I produced alkyd resin with improved drying properties, better chemical film forming properties, better scratch hardness, and water and acid resistances

Furthermore, we modified kaolin with sodium salt of rubber and tea seed oils (RSO-Na) to produce nanocomposites rubber vulcanisates.

### **Kinetic and thermodynamic studies of the adsorption of metals on kaolinite clay**

The strong need for portable water in Nigeria and in sub-Sahara Africa as one of the millennium development goals (MDGs) inspired my research group to search for low cost adsorbents for micropollutant removal in aqueous solutions. My research modified locally obtained kaolinite clay from Ubulu-Ukwu, Delta State, Nigeria, using simple techniques in order to improve the efficiency of the removal of the micropollutants from water and waste waters. My interest in kaolinite is its abundance.

The mineral is found in 20 states in Nigeria. I successfully prepared four efficient adsorbents from the kaolinite clay using simple surface functionalization technique.

These functionalized clay adsorbents have shown improved rate of micropollutant uptake and enhanced capacity even in the presence of competing ions with excellent selectivity for micropollutants especially the polymer-clay composite adsorbent (Polyvinyl alcohol modified kaolinite clay).

For two consecutive years (2011 and 2012), two of my publications were rated by Thomson Reuters ISI Science web of knowledge (Essential Science indicators) as the first two top papers in Engineering in Nigeria. This was among six other top articles selected.

### **Fuzzy Logic Modelling of Environmental Compartments**

With the graduation of many PhD students through my research interests, I constituted a research group, using my laboratory, funded through many international research grants, fellowships and awards. Recently, through my leadership, the research group used a novel modelling concept, Fuzzy Logic, to elicit the understanding of the Chemistry of environmental compartments. The concept advocates that an object can belong to two classes at the same time with a membership function between 0 and 1.

The membership functions of various evaluated objects are then formulated into evaluation matrix, which can be subjected to various algorithms to formulate the resultant class to which the object belongs. We have applied fuzzy logic to recognize the dispersion pattern of metals in water and sediments; to model the understanding of the fate and speciation pattern of Ni and V in sediments from crude oil exploration area; to

model the bio-accumulation trend of metals in aquatic biota; in assessing the usage supports of coastal water for various applications; to evaluate the impacts of industrial activities on the host community of an industrial estate; and to investigate the persistence and bio-accumulation of Cu based fungicide on cocoa among others. We are currently applying the concept to study and understand other environmental concepts such as organic pollutants

## **XV. JOURNAL REVIEWS**

I have served as Reviewer to the following:

Journal of Hazardous Materials,  
Chemistry and Ecology,  
African Journal of Biotechnology,  
Journal of Environmental Management,  
Food Research International,  
Journal of Food Composition and Analysis,  
Thermochimica Acta,  
Biochemical Engineering,  
Carbohydrate Polymers,  
Food Research International,  
International Journal of Biological Macromolecules, and  
European Journal of Food Research.



## XVI. PUBLICATIONS

### CITATIONS AND H-INDEX

I have one patent and I have published 137 peer-reviewed scientific papers, 14 conference papers and 3 technical reports.

Eighty eight (88) of the peer-reviewed publications are listed on **SCOPUS** and have been cited 3227 times in 2494 different articles. My *h*-index on SCOPUS is **34**.

[https://www.scopus.com/cto2/main.uri?origin=resultlist&stateKey=CTOF\\_1118585975](https://www.scopus.com/cto2/main.uri?origin=resultlist&stateKey=CTOF_1118585975)

One hundred and ten (110) of my peer-reviewed articles are listed on **the Google scholar** and have been cited 5931 times in 3455 different articles with i10 index of **78** and H-index of **40**

<https://scholar.google.com/citations?user=Z1fMR5QAAAAJ&hl=en>

### PATENT

1. Unuabonah, Emmanuel Iyayi, Olu-Owolabi, Bamidele Iromidayo and **Adebowale, Kayode Oyebo** (2014). Preparation of novel low cost kaolinite Clay Agro waste composite adsorbent. *Federal Republic of Nigeria Patent and Designs Act Cap 344 Laws of the Federal Republic of Nigeria 1990: Patent No: NG/P/2013/616 (Date of Patent: 07-10-2013; Date of Sealing: 25-02-2014)*

### ARTICLES IN LEARNED JOURNALS ALREADY PUBLISHED

2. Paul N. Diagboya, Bamidele I. Olu-Owolabi, Fanyana M. Mtunzia and **Kayode O. Adebowale** (2020) Clay-carbonaceous material composites: Towards a new class of functional adsorbents for water treatment *Surfaces and Interfaces* <https://doi.org/10.1016/j.surfin.2020.100506> Received 17 September 2019; Received in revised form 20 February 2020; Accepted 6 March 2020
3. Edebi N Vaikosen, Bamidele I Olu-Owolabi Lorraine T. Gibson, Christine N Davidson, **Kayode O Adebowale**, Uche Asogua (2019) Kinetic field dissipation and fate of endosulfan after application on *Theobroma cacao* farm in tropical Southwestern Nigeria. *Environ Monit Assess* **191**: 196-214.
4. Edebi N Vaikosen, Lorraine T Gibson , Christine M Davidson , Bamidele I Olu-Owolabi , **Kayode Adebowale** , Benjamin U Ebeshi and Paul NE Diagboya (2019) GC-MS fragmentation patterns of sprayed endosulfan and its sulphate metabolite

in samples of *Theobroma cacao* L from a field kinetic study. *European Journal of Mass Spectrometry* **25**: 362-371

5. Bamidele I. Olu-Owolabi , Paul N. Diagboya, Emmanuel I. Unuabonah, Alimoh H. Alabi, Rolf-Alexander Düring, **Kayode O. Adebowale** (2018) Fractal-like concepts for evaluation of toxic metals adsorption efficiency of feldspar-biomass composites *Journal of Cleaner Production* **171**: 884-891.
6. Paul N. Diagboya, Bamidele I. Olu-Owolabi, Ezekiel D. Dikio, **Kayode O. Adebowale** (2018) Concentration-dependent and simultaneous sorption and desorption of pyrene and fluorene on major soil minerals in sub-Saharan Africa *Applied Clay Science* **153**: 257-264
7. Emmanuel I. Unuabonah, Adedoyin O. Adedapo, Cynthia O. Nnamdi, Adewale Adewuyi, Martins O. Omorogie, **Kayode O. Adebowale**, Bamidele I. Olu-Owolabi, Augustine E. Ofomaja, Andreas Taubert (2015) Successful scale-up performance of a novel papaya-clay combo adsorbent: up-flow adsorption of a basic dye. *Desalination and Water Treatment* **56**: 536-551
8. Emmanuel C. Chigbundu . **Kayode O. Adebowale** (2017) Equilibrium and fractal-like kinetic studies of the sorption of acid and basic dyes onto watermelon shell (*Citrullus vulgaris*) *Cellulose* **24**:4701–4714
9. O. S. Lawal, O. S. Ayanda, O. O. Rabiun and **K. O. Adebowale** (2017) Application of black walnut (*Juglans nigra*) husk for the removal of lead (II) ion from aqueous solution *Water Science and Technology* **75 (10)**: 2454-2464
10. Chukwunonso P. Okoli, Paul N. Diagboya, Ikenna O. Anigbogu, Bamidele I. Olu-Owolabi. **Kayode O. Adebowale** (2017) Competitive biosorption of Pb(II) and Cd(II) ions from aqueous solutions using chemically modified moss biomass (*Barbula lambarenensis*) *Environmental Earth Science* **77 (33)**: 1-10
11. Paul N. Diagboya, Bamidele I. Olu-Owolabi , **Kayode O. Adebowale** (2017) Distribution and interactions of pentachlorophenol in soils: The roles of soil iron oxides and organic matter *Journal of Contaminant Hydrology* (**191**) 99–106
12. Bamidele I. Olu-Owolabi, Paul N. Diagboya, Chukwunonso P. Okoli and **Kayode O. Adebowale** (2016) Sorption behaviour of pentachlorophenol in sub-Saharan tropical soils: soil types sorption dynamics. *Environ Earth Sci* **75**:1494-1504. DOI 10.1007/s12665-016-6307-9

13. Emmanuel I Unuabonah, Bamidele I Olu-Owolabi and **Kayode O Adebowale** (2016) Competitive adsorption of metal ions onto goethite–humic 3 acid-modified kaolinite clay. *Int. J. Environ. Sci. Technol.* 13:1043–1054 DOI 10.1007/s13762-016-0938-y
14. Kovo, G Akpomie, Dawodu, Folasegun A and **Kayode O Adebowale** (2015) Mechanism of sorption of heavy metals solution by a low cost montmorillonite and its desorption potential. *Alexandria Engineering Journal* **54**: 757-767
15. Paul N. Diagboya & Bamidele I. Olu-Owolabi & **Kayode O. Adebowale** (2015) Effects of time, soil organic matter, and iron oxides on the relative retention and redistribution of lead, cadmium, and copper on soils. *Environmental Science and Pollution Control* **22**:10331–10339
16. Bamidele, I. Olu-Owolabi; Paul N. Diagboya and **Adebowale, K. O.** (2015) Sorption and desorption of fluorine on five tropical soils from different climates. *Geoderma* **239-240**: 179-185
17. Nwosu, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2015) Preparation and Characterisation of Active Carbons from Some Nutshells Using Carbon-dioxide Activation *Nigerian Journal of Scientific Research* **14 (2)**, 112 -117
18. **Adebowale, K. O.**, Olu-Owolabi, B. I. and Chigbundu, E. C. 2014. Removal of Safarin-O from aqueous solution by adsorption onto kaolinite clay. *Journal of Encapsulation and Adsorption Sciences.* **4(3)**:8 9-104
19. Adeyemo, A. O., **Adebowale, K. O.** Olu-Owolabi, B. I. (2014) Adsorption of copper by raw pinecone *American Chemical Science Journal* **4 (6)**, 992-1000
20. Yahaya, L. E., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2014) Cure characteristics and rheological properties of modified kaolin-natural rubber composites. *American Chemical Science Journal* **4 (4)**, 472-480
21. Adeyemo, A. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2014) Adsorption of copper by biochar. *International Research Journal of Pure and Applied Chemistry* **4 (6)**, 727-736
22. Bamidele I. Olu-Owolabi, Paul N. Diagboya, and **Adebowale, Kayode O.** (2014) Evaluation of pyrene sorption-desorption on tropical soils. *Journal of Environmental Management* **137**: 1-9

23. Adewale Adewuyi and **Kayode O. Adebowale** (2014). Addition of an azido group to epoxidised fatty acid methyl esters of *Jatropha curcas* by epoxy cleavage. *Research Chemistry Intermediates* **40**: 2015-2023
24. Paul N. Diagboya, Bamidele I. Olu-Owolabi, **Adebowale, Kayode O.** (2014) Microscale scavenging of pentachlorophenol in water using amine and tripolyphosphate-grafted SBA-15 silica: Batch and modeling studies. *Journal of Environmental Management* **146**: 42-49
25. Olu-Owolabi, B. I., Olaynka, O. O., Adegbemile, A. A, **Adebowale, K. O.** (2014) Comparison and functional properties of native and chemically modified starches from Acha (*Digitaria staph*) grains. *Food and Nutrition Sciences* **5**: 222-230
26. Unuabonah, E. I., Olu-Owolabi, B. I., Taubert, A., Omolehin, E. and **Adebowale, K. O.** (2013) SAPK- A Novel Composite Resin for Water Treatment with very high Zn<sup>2+</sup>, Cd<sup>2+</sup> and Pb<sup>2+</sup> Adsorption Capacity. *Industrial and Engineering Chemistry Research*. **52**: 578-585.
27. Olu-Owolabi, B. I., Agunbiade, F. O., Fagbayigbo, B. O., and **Adebowale, K. O.** (2013) Monitoring Copper Bioaccumulation in Cocoa from Copper-Based Pesticide-Treated Cocoa Farms Using Fuzzy Similarity Method. *Bioremediation Journal*, **17(3)**:1-17, 2013
28. Olayinka, O. O., **Adebowale, K. O.**, Olu-Owolabi, B. I. (2013) Physicochemical properties, morphological and X-ray pattern of chemically modified white sorghum starch. (*Bicolor-Moench*). *Journal of Food Science and Technology* **50(1)**: 70-77
29. 104. **Adebowale, K. O.**, Nwokocha, L. M., Agbaje, W. B. (2013) Composition of *Cissus populnea* stem. *Journal of Food Composition and Analysis* **30**: 41-46
30. Afolabi, T. A., Olu-Owolabi, B. I., **Adebowale, K. O.**, Lawal, O. S., and Akintayo, C. O. (2012) Functional and tableting properties of acetylated and oxidised finger millet (*Eleusine coracana*) starch. *Starch/Starke* **64**: 326-337
31. Yahaya, L. E., **Adebowale, K. O.**, Menon, A. R. R., Olu-Owolabi, B. I. (2012) Natural Rubber Organoclay Nanocomposite from Tea (*Camellia sinensis*) seed oil derivative. *American Journal of Materials Science* **2(2)**: 1-5
32. Adebowale, Y. A., Adewuyi, A. and **Adebowale, K. O.** (2012) Lipid composition and molecular speciation of the triacylglycerol oil of *Picralima nitida*. *GIDA (Research)* **37(1)**: 1-7

33. **Adebowale, K. O.**, Adewuyi, A and Ajulo, S. (2012) Examination of the fuel properties of the methyl esters of *Thevetia peruviana* seed oil. *International Journal of Green Chemistry* **9**: 1-11
34. Olu-Owolabi, B.I., Agunbiade, F.O., Ogunleye, I.O., **Adebowale, K.O.** (2012) Fate and Mobility of Copper in Soil of Cocoa Plantations in two South-Western States of Nigeria treated with Copper-Based Fungicides. *Soil and Sediment Contamination*. **21**: 1-19
35. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2012) Fuzzy logic modeling of bioaccumulation pattern of metals in coastal biota of Ondo State, Nigeria. *Environmental Monitoring and Assessment* **184**: 89-102
36. Olu-Owolabi, B. I., Agunbiade, F. O., Oseghe, E. O. and **Adebowale, K. O.** (2012) Fuzzy logic modelling of contamination degree of Ni and V metal species in sediments from crude oil prospecting area of Ondo coast, Nigeria. *Human and Ecological Risk Assessment: An International Journal*. *HERA* **18**: 1-17
37. Unuabonah, E. I., El-Khaiary, M. I., Olu-Owolabi, B. I., **Adebowale, K. O.** (2012) Predicting the Dynamics and Performance of a Polymer-Clay based composite in a Fixed Bed System for the removal of Lead (II) ion. *Chemical Engineering Research and Design* **90**: 1105-1115
38. Olu-Owolabi, B. I., Oputu, O. U., **Adebowale, K. O.**, Ogunsolu, O. and Olujimi, O. O. (2012) Biosorption of Cd<sup>2+</sup> and Pb<sup>2+</sup> ions onto mango stone and cocoa pod waste: Kinetic and equilibrium studies. *Scientific Research and Essays*. **7**:1614-1629.
39. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** 2012. Comparative Assessment of Coastal Water Usage Supports Using Water Quality Indices and Fuzzy Synthetic Evaluation Methods: A Case Study of Ondo State Estuary, Nigeria. *Terrestrial and Aquatic Environmental Toxicology* **6**: 41-49.
40. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2012) Modelling the speciation of metals in Ondo coastal water with geochemical model-PHREEQCI. *Water Practice and Technology*. **7**(3). Doi.10.2166/wpt.2012.051.
41. Olu-Owolabi, B. I., Fakayode, S. O., **Adebowale, K. O.**, and Legemah, O. (2012) Water quality assessments and heavy metals in sediments, soil and vegetable around Oke-Afa canal, Lagos Nigeria. *International Journal of Environment, and Waste Management* **10**:400-412.
42. Nwosu, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2012) Kinetics and Thermodynamic Adsorption of Pb (II) and Cd (II) Ions from Used Oil onto *Thevetia neriifolia* Nutshell Active Carbon *Current Research in Chemistry* **4 (2)**, 26-40.

43. Olu-Owolabi, B. I., Afolabi Adeniyi, T. and **Adebowale, K. O.** (2011) Pasting, thermal, hydration and functional properties of annealed and heat moisture treated starch of sword bean (*Canavalia gladiata*). *International Journal of Food properties*. Vol. **14**:157-174.
  
44. Olayinka O. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2011) Effect of succinylation on the physicochemical, rheological, thermal and retrogradation properties of red and white sorghum starches *Food Hydrocolloids* **25**: 515-520.
  
45. Agunbiade, F. O., Adetunji, A. A. and **Adebowale, K. O.** (2011) Fuzzy logic-based modeling of the impact of industrial activities on the environmental status of an industrial estate in Nigeria *Toxicological & Environmental Chemistry* **93 (10)**: 1856 – 1879.
  
46. Yahaya, I. E., **Adebowale, K. O.** and Menon, A. A. R. (2011) Compositional analysis of tea (*Camellia sinensis*) seed oil and its application. *International Journal of Research in Chemistry and Environment* **1**: 153-158.
  
47. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2010) Seasonal and Spatial variations analysis of pollution status of Ondo Coastal Environment, Nigeria using principal Component analysis. *Geochemical Journal* **44 (2)**: 89-98.
  
48. Olu-Owolabi, B. I., **Adebowale, K. O.** and Oseni, O. T. (2010) Physicochemical and thermodynamic adsorption studies of ferric luvisol soil in Western Nigeria. *Soil and sediment contamination: An International Journal* **19**: 119-131
  
49. Unuabonah, E. I., Olu-Owolabi, B. I., Fasuyi, E. I. and **Adebowale, K. O.** (2010) Modeling of fixed-bed column studies for the adsorption of cadmium onto novel polymer–clay composite adsorbent. *Journal of Hazardous Materials* **179**: 415–423.
  
50. Yahaya, L. E., **Adebowale, K. O.**, Menon, A. R. R., Rugmini, S., Olu- Owolabi, B. I. and Chameswary, J. (2010) Natural rubber/ organoclay nanocomposites: Effect of filler dosage on the physico-mechanical properties of vulcanizates. *African Journal of Pure and Applied Chemistry*. **4**: 198-205.
  
51. Olu-Owolabi, B. I., Afolabi Adeniyi, T. and **Adebowale, K. O.** (2010) Effect of heat moisture treatment on the functional and tableting properties of corn starch. *African Journal of Pharmacy and Pharmacology*. **4(7)**: 498-510.

52. **Adebowale, K. O.**, Thomas Henle, Uwe Schwarzenbolz, Thomas Doert (2009) Modification and properties of African yam bean (*Sphenostylis stenocarpa* Hochst. Ex A. Rich.) Harms starch I: Heat moisture treatments and annealing *Food Hydrocolloids* **Vol. 23**: pp. 1947–1957.
53. Nwosu, F. O., Olu-Owolabi, B. I., **Adebowale, K. O.**, Henle, T. and Uwe Schwarzenbolz (2009) Pore structure and surface functional groups on six tropical fruit nut shell active carbons. *Bioremediation, Biodiversity and Bioavailability* **3(2)**: 89-95.
54. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** (2009) Phyoremediation potential of *Eichornia crassipes* in metal contaminated coastal water. *Bioresource Technology* **100**: 4521-4526.
55. Yahaya, L. E., **Adebowale, K. O.** and Menon, A. R. R. (2009). Mechanical properties of organomodified kaolin/natural rubber vulcanizates. *Applied Clay Science* **46**: 283-288.
56. Unuabonah, E. I., Olu-owolabi, B. I., Okoro, D., **Adebowale, K. O.** (2009) Comparison of two-stage sorption design models for the removal of lead ions by polyvinyl-modified Kaolinite clay *Journal of Hazardous Materials*, **171**: 215–221.
57. Unuabonah, E. I. and **Adebowale, K. O.** (2009) Optimization of kinetic data for two-stage batch adsorption of Pb(II) ions onto tripolyphosphate-modified kaolinite clay *Journal of Chemical Technology and Biotechnology* **84**: 1726–1735.
58. **Adebowale, K. O.**, Agunbiade, F. O. and Olu-Owolabi, B. I. (2009) Trace Metal concentrations site variations and partitioning pattern in water and bottom sediments from Coastal Area: A case study of Ondo Coast, Nigeria. *Environmental Research Journal* **3**: 46-95.
59. Adebowale, Y. A. and **Adebowale, K. O.** (2008) Emulsifying properties of *Mucuna* flour and protein isolates. *Journal of Food Technology* **62**: pp. 66-97.
60. **Adebowale, K. O.**, Unuabonah, E. I., Olu-Owolabi, B. I. (2008) Kinetic and thermodynamic aspects of the adsorption of Pb<sup>2+</sup> and Cd<sup>2+</sup> ions on tripolyphosphate-modified kaolinite clay. *Chemical Engineering Journal* **136**: 99–107.
61. **Adebowale, K. O.**, Agunbiade, F. O. and Olu-Owolabi, B. I. (2008) Impacts of Natural and Anthropogenic multiple sources of pollution on the environmental

- conditions of Ondo State coastal water, Nigeria. *Electronic Journal of Environmental, Agricultural and Food Chemistry* **7(4)**: 2797-2811.
62. Adebawale, Y. A. and **Adebawale, K. O.** (2008) Evaluation of the gelation characteristics of Mucuna bean flour and protein isolate. *Electronic Journal of Environmental, Agriculture and Food Chemistry*. **7(9)**: 3206 – 3222.
63. Unuabonah, E. I., **Adebawale, K. O.**, Olu-Owolabi, B. I., Yang, L. Z and Kong, L. Z. (2008) Adsorption of Pb(II) and Cd(II) from aqueous solutions onto sodium tetra borate –modified Kaolinite: Equilibrium and Thermodynamic studies. *Hydrometallurgy* **Vol. 93**: pp. 1-9.
64. Unuabonah, E. I., **Adebawale, K. O.**, and Dawodu, F. A. (2008) Equilibrium, kinetic and sorber design studies on the adsorption of aniline blue dye by sodium tetraborate-modified Kaolinite clay adsorbent. *Journal of Hazardous Material*. **157**: pp.397-408.
65. **Adebawale, K. O.**, Agunbiade, F. O. and Olu-Owolabi, B. I. (2008) Fuzzy comprehensive assessment of metal contamination of water and sediments in Ondo Estuary, Nigeria. *Chemistry and Ecology* **24(4)**: 269-283.
66. Nwosu, F. O., Olu-Owolabi, B. I. and **Adebawale, K. O.** and Luther, L. (2008) Comparative investigation of wear metals in virgin and used lubricant oils. *Terrestrial and Aquatic Toxicology* **2(1)**: 38-43.
67. Agunbiade, F. O., Olu-Owolabi, B. I. and **Adebawale, K. O.** (2008) Empirical modelling of Dissolved oxygen against Pollution parameters in coastal waters in different seasons. *Terrestrial and Aquatic toxicology* **2(1)**: 5-13.
68. Unuabonah, E.I., **Adebawale, K.O.**, Olu-Owolabi, B.I, and Yang L.Z. (2008) Comparison of Sorption of Pb<sup>2+</sup> and Cd<sup>2+</sup> on kaolinite clay and Polyvinyl alcohol-modified kaolinite clay. *Adsorption* 14 (6): 791-803.
69. Unuabonah, E.I., Olu-Owolabi, B.I., **Adebawale, K.O.**, and Yang L.Z (2008). Removal of Lead and Cadmium from aqueous solution by Polyvinyl alcohol-modified Kaolinite clay: a novel nanoclay adsorbent. *Adsorption Science and Technology*, **26(6)**:383-405.
70. Unuabonah, E. I., **Adebawale, K. O.** and Ofomaja, A. E. (2008) Two-stage batch adsorber design: A time-dependent Langmuir model for adsorption of Pb<sup>2+</sup> and Cd<sup>2+</sup> onto modified kaolinite clay. *Water, Air and Soil Pollution*, **200 (1-4)**: 133-145.



71. Nwosu, F. O., Olu-Owolabi, B. I. and **Adebowale, K. O.** and Leke, L. (2008) Comparative investigation of wear metals in virgin and used lubricant oils *Terrestrial and Aquatic Environmental Toxicology* **2 (1)**, 38-43.
72. Adebowale, Y. A. and **Adebowale, K. O.** (2007). The influence of kosmotropic and chaotropic salts on the functional properties of *Mucuna pruriens* protein isolate. *International Journal of Biological Macromolecules*. **40**: 119-125.
73. Unuabonah, E. I., Olu-Owolabi, B. I., **Adebowale, K. O.** and Ofomaja, A. E. (2007) Adsorption of Lead and Cadmium ions from aqueous solutions by tripolyphosphate-impregnated kaolinite clay. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **292**: 202-211.
74. Unuabonah, E. I, **Adebowale, K. O.** and Olu-Owolabi, B. I. (2007) Kinetic and thermodynamic studies of the adsorption of Pb(II) ions onto phosphate modified kaolinite clay. *Journal of Hazardous Materials* **144**: 386-395.
75. Olayinka O. O., **Adebowale, K. O.** and Olu-Owolabi, B. I (2007) Effect of heat-moisture treatment on physicochemical properties of white sorghum starch. *Food Hydrocolloids* **22**: 225-230.
76. Olu-Owolabi, B. I., Fakayode, S. O., **Adebowale, K. O.** and Onianwa, P. C. (2007). Proximate and elemental composition and their estimated intake in infant formulae from developed and developing countries: A comparative analysis. *Journal of Food, Agriculture and Environment* **5**: 40-44.
77. Lawal, O. S., **Adebowale, K. O.** and Adebowale, Y. A.(2007). Functional properties of native and chemically modified protein concentrates from Bambarra groundnut *Food Research International* **40**: 1003-1011.
78. Lawal, O. S. and **Adebowale, K. O.** (2006) The acylated protein derivatives of *Canavalia ensiformis* (Jack beans): A study of functional characteristics *Lebensmittel-Wissenschaft und-Technologie (LWT)- Food Science and Technology* **39**: 918-929.
79. **Adebowale, K. O.**, Unuabonah, I. E. and Olu-Owolabi, B. I. (2006) The effect of some operating variables on the adsorption of lead and cadmium ions on kaolinite clay *Journal of Hazardous Materials* **134**:130-139.
80. **Adebowale, K. O.** and Adedire, C. O. (2006) Chemical composition and insecticidal properties of some underutilised *Jathropha curcas* seed oils. *African Journal of Biotechnology* **5(10)**: 901-906.

81. Abdullahi, N., Majeed, Q., Oyeyi, T. I., **Adebowale, K. O.**, Adedire, C. O. and Ahmed, K. S. (2006) Resistance to Pest of Cowpeas in Nigeria. *Journal of Entomology* **8 (4)**, 147-154.
  
82. **Adebowale, K. O.**, Afolabi A. T and Olu-Owolabi, B. I. (2006) Functional, physicochemical and retrogradation properties of sword bean (*Canavalia gladiata*) acetylated and oxidized starches *Carbohydrate Polymers* **65(1)**: 93-101.
  
83. **Adebowale, K. O.**, Olu-Owolabi, B. I., Kehinde, O. S. and Lawal, O. S. (2005) Functional properties of native, physical- and chemically modified breadfruit (*Artocarpus artilis*) starch. *Industrial Crops and Products* **21**:343-351.
  
84. **K. O. Adebowale**, Unuabonah, I. E. and Olu-Owolabi, B. I. (2005) Adsorption of some heavy metal ions on sulphate and phosphate modified kaolinite clay. *Applied Clay Science* **29(2)**: 145-148.
  
85. Lawal, O. S., **Adebowale, K. O.**, Ogunsanwo, B. M., Barda, L. L. and Ilo, N. S. (2005) Oxidised acid thinned starch derivatives of hybrid maize: Functional characteristics, wide angle X- ray and thermal properties. *International Journal of Biological Macromolecules* **35**: 71-79.
  
86. Lawal, O. S., **Adebowale, K. O.**, Ogunsanwo, B. M., Sosanwo, O. A. And Bankole, S. A. (2005) On the functional properties of globulin and albumin protein fractions and flours of African Locust bean. (*Parkia biglobossa*) *Food Chemistry* **92**: 681-691.
  
87. Lawal, O.S and **Adebowale, K.O.** (2005). Physicochemical characteristics and thermal properties of chemically modified starch of jack bean (*Canavalia ensiformis*):. *Carbohydrate Polymers*. **60(3)**: 331-341.
  
88. **Adebowale, K. O.**, Afolabi Adeniyi, T and B. I. Olu-Owolabi (2005) Hydrothermal treatments of finger millet (*Eleusine coracana*) starch. *Food Hydrocolloids* **19**: 974-983.
  
89. **Adebowale, K. O.** Olu-Owolabi, B. I., Olayinka, O. O. and Lawal, O. S. (2005), Effect of heat moisture treatment on the physicochemical properties of red sorghum starch. *African Journal of Biotechnology* **4(9)**: 928 – 933.
  
90. Lawal, O. S. and **Adebowale, K. O.** (2005) An assessment of changes in thermal and physico-chemical parameters of jack bean (*Canavalia ensiformis*) starch

following hydrothermal modifications. *European Food Research and Technology* **221(5)**: 631 – 638.

91. Adebowale, Y. A., **Adebowale, K. O.** and Oguntokun, M. O. (2005) Evaluation of nutritive properties of large African cricket (Gryllidae) spp. *Pakistan Journal of Scientific and Industrial Research* **48**: 274-278.
92. Lawal, O. S., Afolabi, T. A., **Adebowale, K. O.**, Ogunsanwo, B. M., and Bamkole, T. O. (2005) Effect of Selected Hofmeister anions on the functional properties of protein isolates prepared from lablab seeds (*Lablab purpureus*). *Journal of Science of Food and Agriculture* **Vol. 85(15)**: pp. 2655-2659.
93. Lawal, O. S. and **Adebowale, K. O.** (2004) Effect of acetylation and succinylation on the solubility profile, water absorption capacity, oil absorption capacity and emulsifying properties of Mucuna bean (*Mucuna pruriens*) protein concentrates. *Nahrung Food* **48(2)**: 129-136.
94. Akintayo, C. O. and **Adebowale, K. O.** (2004) Synthesis, characterisation and Evaluation of Chlorinated *Albizia benth* medium alkyds. *Progress in Organic coatings* **50**:138-143.
95. **Adebowale, K. O.** and Lawal, O. S. (2004) Comparative study of the functional properties of Bambarra groundnut (*Voadzeia subterranean*), Jack bean (*Carnavalialia einseformis*) and Mucuna bean (*Mucuna pruriens*) flours. *Food Research International* **37**: 355-365.
96. Akintayo, C. O. and **Adebowale, K. O.** (2004) Synthesis and Characterisation of acrylated *Albizia benth* medium oil alkyds. *Progress in Organic Coatings* **50(4)**: 207-212.
97. **Adebowale, K. O.**, Ajayi, O. R. and Okonkwo, A. N. (2004) Effect of refining on the physicochemical properties of some tropical underutilised seed oils. *La Rivista Italiana Delle Sostanze Grasse* **81**: 190-192.
98. Aremu, M. O., **Adebowale, K. O.**, Lawal, O. S., Adeyeye, E. I. and Fagbohun, E. D. (2004) Amino acid and mineral compositions and functional properties of some oil seeds. *Journal of Applied Sciences* **6 (9)**, 355-365.
99. Lawal, O. S., **Adebowale, K. O.** and Oderinde, R. A. (2004) Functional properties of amylopectin and amylose fractions isolated from Bambarra groundnut

(*Voandzeia subterranean*) starch. *African Journal of Biotechnology* **Vol. 3(8)**: pp. 399-404.

100. **Adebowale, K. O.** and Lawal, O. S. (2003) Microstructure, physicochemical properties and retrogradation behaviour of *Mucuna* bean (*Mucuna pruriens*) starch on heat moisture treatments. *Food Hydrocolloids* **17**: 265-272.
101. Adedire, C. O., **Adebowale, K. O.** and Dansu, O. M. (2003) Chemical composition and insecticidal properties of *Monodora tenuifolia* seed oil (Annonaceae). *Journal of Tropical Forest Products* **9 (1/2)**, 15-25.
102. **Adebowale, K. O.** and Lawal, O. S. (2003) Foaming, gelation and electrophoretic characteristics of *Mucuna* bean (*Mucuna pruriens*) protein concentrates. *Food Chemistry* **83(2)**: 237-246.
103. **Adebowale, K. O.** and Lawal, O. S. (2003) Functional properties and retrogradation behaviour of native and chemically modified starch of *Mucuna* bean (*Mucuna pruriens*). *Journal of Science of Food and Agriculture* **83**: 1541-1546.
104. Ihedioha, J. N., Okoye, C. O. B., **Adebowale, K. O.**, Lawal, O. S. and Adewolu, M. A. (2003) Nutritional Composition of *Sonchus* species (*S. asper* LS. *Oleraceus* and *S. tenerrimus* L) *American Journal of Plant Nutrition and Fertilization Technology* **1 (1)**, 1541-1548.
105. **Adebowale, K. O.**, Afolabi Adeniyi, T and Lawal, S. O. (2002) Isolation, chemical modification and physicochemical characterisation of Bambarra groundnut (*Voandzeia subterranea*) starch and flour. *Food Chemistry* **78**: 305-311.
106. **Adebowale, K. O.**, Adebowale, Y. A. and Nicholson, G. (2002) Triacylglycerols in some underutilised tropical seed oils: Systematic studies of ten oils. *La Rivista Italiana Delle Sostanze Grasse*. **79**: 267-272.
107. **Adebowale, K. O.** and Lawal S. O. (2002) Effect of annealing and heat moisture conditioning on the physicochemical characteristics of Bambarra groundnut (*Voandzeia subterranea*) starch. *Die Nahrung/Food* **46(5)**: pp. 311-316.
108. Ajayi, I. A. Dawodu, F. A. and **Adebowale, K. O.** (2002) A study of the oil content of Nigerian grown *Monodora myristica* seeds for its potential and industrial applications. *Pakistan Journal of Scientific and industrial Research* **79**: 183-185.

109. Ajayi, I. A., Dawodu, F. O., **Adebowale K. O.** and R. A. Oderinde (2002) Chemical composition of *Pentaclethra macrophylla* seed and seed oil grown in Nigeria. *La Rivista Italiane delle Sostanze Grasse* **79**: 183-185.
110. Amoo, I. A., Emenike, A. E., Akpambang, V. O. E., **Adebowale, K. O.** and Afolabi, T. A. (2002) Germplasm collection and fruit characterization of cherimoya (*Annona cherimola*) in Loja Province, (Ecuador), an important centre of biodiversity. *Trends in Applied Sciences Research* **3 (2)**, 305-311.
111. Akintayo, E. T., Bayer, E. and **Adebowale, K. O.** and I. Ogunlade (2001) Content of polycyclic aromatic hydrocarbons in some oil seeds consumed in South Western part of Nigeria. *La Rivista Italiana Delle Sostanze Grasse* **78**: 633-638.
112. **Adebowale, K. O.**, Oguntokun, M. O., Adebowale, Y. A. and Dawodu, F. A. (2001) Evaluation of the nutritive and functional properties of Akee apple (*Blighia sapida*). *Journal of Tropical Forest Resources* **17(1)**: 160-169.
113. Akintayo, E. T., Oshodi, A. A. and **Adebowale, K. O.** (2000) Physicochemical properties of Lima beans modified and unmodified starches. *Nigerian Journal of Science* **32**: 187-193.
114. Butt, M. S, Batool, R., **Adebowale, K. O.**, Lawal, O. S., Akpata, M. I. and Akubor, P. I. Effects of NaCl, ionic strength and pH on the foaming and gelation of pigeon pea (*Cajanus cajan*) protein concentrates. *Pakistan Journal of Nutrition* **9 (4)**, 237-246.

(PLEASE NOTE THE CHANGE OF MY NAME FROM **K.O. ESUOSO** TO **K.O. ADEBOWALE** FROM THE YEAR 2000)

115. Osungbaro, T. O., Esuoso, Y. A. and **K. O. Esuoso, K.O.** (2000), Nutritional and Textural qualities of Soy ogi (Soy-maize porridge) and Agidi(Fermented Soy-ogi meal) *La Rivista Italiana Sostanze Grasse*. **77**, pp 499-502.
116. Folarin, M. O., Bamiro, F. O. and **Esuoso, K. O.** (2001) Distribution of Nutritive Elements in Water Leaf (*Talinum triangulare*) and Juice mallow (*Corchorus olitorus*). *Global Journal of Pure and Applied Sciences* **7**: 285 – 289.
117. **Esuoso, K. O.**, Lutz, H., Bayer E. and Kutubuddin, M.(2000) Unsaponifiable lipid constituents of some tropical underutilised seed oils. *Journal of Agriculture and Food Chemistry* **48**: 231-234.

118. Akintayo E. T. , Oshodi, A. A. and **Esuoso, K. O.** (1999) Effect of NaCl, ionic strength and pH on the foaming and gelation of pigeon pea (*Cajanus cajan*). *Food Chemistry* **66**: 51-56.
119. **Esuoso, K. O.** , Esuoso, Y. A. , Lutz, H. and Bayer E. (1999) Incorporation of plant gums into non-wheat flours. I. Cocoyam (*Colocasia esculenta*). *Advances in Food Sciences (CMTL - Chemie, Mikrobiologie, Technologie der Lebensmittel)*. **21**: 184-191.  
<https://www.tib.eu/en/search/id/olc%3A1560295880/Incorporation-of-plant-gums-into-non-wheat-flours/>
120. Bamiro, F. O., Arowolo, T. A. and **Esuoso, K. O.** (1999) Metal content of some Nigerian wines and spirit beverages. *Nigerian Food Journal* **33**: 155-162.
121. Odetokun, S. M, Ayesanmi, S.M. and **Esuoso K. O.** (1998) Enhancement of the qualities of Pupuru, A fermented Cassava product. *La Rivista Italiana Sostanze Grasse*, **75**: 155-158.
122. **Esuoso, K. O.**, Lutz, H., Kutubuddin, M. and Bayer, E. (1998) Chemical Composition and Potentials of Some Underutilized Tropical Biomass I. Fluted pumpkin. *Telfairia occidentalis*. *Food Chemistry* **61 (4)**: 487-492.
- 121 Lutz, H., **Esuoso, K. O.**, Kutubuddin, M. and Bayer, E. (1998) Low temperature conversion of by-products of Sugar cane molasses. *Biomass and Bioenergy* **15 (2)**: 155-162.
- 122 **Esuoso, K. O.** and Bayer, E. (1998) Chemical composition and Potentials of some underutilized tropical biomass. *La Rivista Italiana Sostanze Grasse* **75**: 191-195.
- 123 Akintayo E. T., **Esuoso, K. O.** and Oshodi A. A. (1998) Emulsifying properties of some legume proteins. *International Journal of Food Science & Technology* **33**: 239-246.
- 124 **Esuoso, K.O.**, (1996) The nutritive value of monkey pod (*Samanea saman*), *La Rivista Italiana Delle Sostanze Grasse*, **72**: 34-38.
- 125 **Esuoso, K.O.** and Bamiro, F.O., (1995) Studies of the baking properties of non wheat flours I. Breadfruit (*Artocarpus artilis*). *International Journal of Food Sciences and Nutrition*, **46**: 267-73.

- 126 **Esuoso, K.O.** and Odetokun, S.M., (1995). Proximate chemical composition and possible industrial utilization of *Blighia sapida* seed and seed oils. *La Rivista Italiana Delle Sostanze Grasse*, **72**: 311-3113.
- 127 Bamiro, F.O., **Esuoso, K.O.** and Adetunji, N.V. (1994), Fortified Corn flow feed as infant formula substitute, *Pakistan Journal of Scientific and Industrial Research*, **37(3)**: 693-95.
128. **Esuoso, K.O.** (1994), The influence of Nitrilotriacetic acid (NTA) and 8-Hydroxyquinoline on the production of citric acid using *Aspergillus niger*, *Journal of Fermentation and Bioengineering* (Japan), **7(6)**: 693-95.
129. **Esuoso, K.O.**, Bamiro, F.O. and Oderinde, R.A. (1994) Influence of complexing agents on Bio-ethanol production from molasses, *Pakistan Journal of Scientific and Industrial Research*, **37**: 64-67.
130. Bamiro, F.O. and **Esuoso, K.O.**, (1994) Determination of moisture and various elements in commercially available teas and coffees in Nigeria, *Nigerian Food Journal*, **12**: 85-91.
131. **Esuoso, K.O.**, Oderinde R.A., Bamiro F.O. and Vega Catalan, F.J. (1993), Optimization of Batch Alcoholic Fermentation of *Cyperus esculentus*, *Die Nahrung-Food*, **37(3)**: 274-76.
- 132 Oderinde, R.A., Olanipekun, E.O. and **Esuoso, K.O.** (1992), Kinetics of illmenite ore dissolution in acid solutions, *Bulletin Chemical Society of Ethiopia*, **6(2)**: 274-276.
- 133 **Esuoso, K.O.**, Oderinde, R.A., and Okogun, J.I. (1991), Citric acid production from Imumu (*Cyperus esculentus*) and Maize (*Zea mays*), *Journal of Fermentation and Bioengineering* (Japan), **71**: 200-202.
134. Oderinde, R.A., **Esuoso, K.O.** and Okogun, J.I. (1990), The influence of CDTA and DPTA on ethyl alcohol production from molasses using *Saccharomyces cerevisiae*, *Die Nahrung-Food*, **34**: 171-175.

- 135 .Oderinde, R.A., **Esuoso, K.O.** and Adesogan, E.K. (1990), Effects of lipids on the alcoholic fermentation of molasses using *Saccharomyces cerevisiae*, *Die Nahrung-Food*, **34**: 683-687.
- 136 .Oderinde, R.A. and **Esuoso, K.O.** (1989), Hydrolysis and alcoholic fermentation of Imunu (*Cyperus esculentus*), *Ghana Journal of Chemistry*, **1**: 48-54.
137. Oderinde, R.A. and **Esuoso, K.O.** (1988), Batch alcoholic fermentation of molasses: Effects of pH, temperature and substrate concentration, *Pakistan Journal of Scientific and Industrial Research*, **31**: 809-810.

## **TECHNICAL REPORTS**

- 138.Faniran, J. A.; Adeleke, B. B., Oderinde R. A., **Esuoso, K. O.** (1987). Environmental Baseline Studies of Ogbombiri Field. A report submitted to the Shell Petroleum Development Company SPDC submitted to SPDC West (June 1987)
- 139.Faniran, J. A.; Adeleke, B. B., Oderinde, R. A. **Esuoso, K. O.** (1989) Environmental Impact Assessment of Forcados Terminus. A report submitted to the Shell {Petroleum Development Company SPDC East (September, 1989)
- 140.Ekundayo, O and **Adebowale, K. O.** (2007) Environmental Impact Assessment of the Proposed 5million bird Poultry Farm in Podo Village, Ibadan. A report submitted to Zartech Company Limited (February, 2007)



## XVII. SELECTED SCIENTIFIC CONFERENCES/WORKSHOPS

1. **Esuoso, K.O.**, Lutz, H., Kutubuddin, M. and Bayer, E., Low temperature conversion of some underutilized biomass from Nigeria, Poster presentation at the 3<sup>rd</sup> Brazilian-German Workshop for exchange in Environment Science and Technology, 10-12 October (1999), Ulm, Germany
2. Juan Chela-Florens and **Adebowale, K.O.** (2002) The Physics of weather and Climate. *Spring Colloquium on Regional weather prediction, modelling and predictability* at the Abdus Salam International Centre for Theoretical Physics ICTP Trieste, ITALY, 8<sup>th</sup> – 19<sup>th</sup> April, 2002
3. Juan Chela-Florens and **Adebowale, K. O.** (2002). Ethanol a viable alternative to petroleum? *Workshop on Indicators for Sustainable Energy Development* held at Abdus Salam International Centre for Theoretical Physics ICTP, Trieste, ITALY, 13<sup>th</sup> May – 17<sup>th</sup> May, 2002.
4. Juan Chela-Florens and **Adebowale, K.O.** (2003) Chemical Theory of Evolution. *Seventh Trieste Conference on Chemical Evolution of life: Life in the universe: From the Miller Experiments to the search of life on other Worlds* held at the Abdus Salam International Centre for Theoretical Physics ICTP, Trieste, ITALY, 15th September – 19th September 2003.
5. Juan Chela-Florens and **Adebowale, K.O.** (2006) Consultancy options for Post-Kyoto Regimes and their implications for sustainable Energy Development held at the Abdus Salam International Centre for Theoretical Physics ICTP, Trieste, ITALY, May 22-26, 2006
6. Juan Chela-Florens and **Adebowale, K.O.** (2006) Conference on Ion beam studies of nanomaterials: Synthesis, modification and characterisation held at the Abdus Salam International Centre for Theoretical Physics ICTP, Trieste, ITALY from June 26 – July 1, 2006.
7. E.I. Unuabonah, **K.O. Adebowale** and B I Olu-Owolabi (2008) Optimisation of kinetic data for two stage batch adsorption of lead ions onto tripolyphosphate modified kaolinite clay. Paper presented at the 31<sup>st</sup> International Conference of the Chemical Society of Nigeria held September 22 – September 26, 2008.
8. Agunbiade, F. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2008) Fuzzy logic modeling of metals contamination of water and sediment in Ondo Coastal Area.

Paper presented at the Annual Conference of the Nigerian Association of Hydrogeologists held between November 23 -28, 2008 at the Conference Centre of the University of Ibadan

9. Agunbiade, F. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2009) Fuzzy Synthetic Evaluation of the Usage of Supports of Ondo Coastal Water. Paper presented at the 44<sup>th</sup> Annual Conference of the Science Association of Nigeria held at the Conference Centre of the University of Ibadan between March 22 – 26, 2009
10. Agunbiade, F. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2009) Geothermal modeling of metal species in Coastal Water using PHREEQCI. Paper presented at the Eurotox Conference held in Dresden, Germany. The paper appeared in Toxicological Letter 1895, S222
11. Agunbiade, F. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2009) Biomonitoring of metal Contamination in Coastal zone of Ondo State, Nigeria: Fuzzy logic modeling approach. . Paper presented at the Eurotox Conference held in Dresden, Germany. The paper appeared in Toxicological Letter 1895, S155
12. Nwosu, F. O., **Adebowale, K. O.** and Olu-Owolabi, B. I. (2009) The production of active carbons from Nigerian mineral coal via steam activation. Paper presented at the 44<sup>th</sup> Annual Conference of the Science Association of Nigeria held at the Conference Centre of the University of Ibadan between March 22 – 26, 2009
13. E.I. Unuabonah, **K.O. Adebowale** and B I Olu-Owolabi (2011) Simple modification of kaolinite clay for removal of micropollutants from wastewater streams. Funfter innovations congress Chemie und biotechnologie “kleine partikel-grosse chancen” held between May 19, 2011 and May 21, 2011 at the Universität Postdam, Gölm, Postdam, Germany.
14. **K. O. Adebowale** and Y. A. Adebowale (2012) Modification of African yam bean *Sphenostylis sternocarpa* Hochst (EE. A. RICH) HARMS) Protein isolate: A source of novel functional protein for local food industry in Africa. Proceedings of the 12<sup>th</sup> International Conference on Functional Food Ingredients and Nutraceuticals in Chronic Disease: Science and Practice held between November 29 to December 3, 2012 at the Functional Food Centre, Southern Methodist University, Dallas, TX USA
15. Adesoji, A. O., **Adebowale, K. O.**, Nnamdi, C. O., Adewuyi, A., Omoregie, M. O., Olu-Owolabi, B. I., Ofomaja, A. E., Taubert, A., and Unuabonah, E. I. 2014. Scale-up Modelling of the adsorption of a basic dye onto a Novel Clay Papaya Combo

Adsorbent. Commonwealth Science Conference for the Common Good organised by the Royal Society of London and the Australian Academy of Science holding from 25-28 November, 2014 in Bangalore, India

16. Olu-Owolabi, B. I., **Adebowale, K. O.**, Unuabonah, E. I. Adewuyi ,A., Performance of A New Composite Clay Adsorbent for Dye Removal in Water. Conference on Water Security and Climate Changes holding 18-21 September, 2017 in Cologne, Germany.
17. **Adebowale, K. O.**, Diagboya, P. N., Olu-Owolabi, B. I., and Dikio, E. D. 2018. The Roles of Soil Iron Oxides and Organic Matter in the Distributions of Anionic Pesticide in Soils. 41<sup>st</sup> Annual International Conference of the Chemical Society of Nigeria, (CSN) in Ibadan, Nigeria.

#### **XVIII. REFEREES**

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A handwritten signature in black ink, consisting of stylized, overlapping loops and lines that form the initials 'K O Adebawale'.

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