

CURRICULUM VITAE



Personal Data:

Names:	Muhammad Nasir <u>Yaro</u>
Department:	Chemistry
Faculty:	Science
Date of Birth:	26 th December, 1971
Sex:	Male
Place of birth:	Dawakin Tofa Town
Local government:	Dawakin Tofa
State of origin:	Kano State
Nationality:	Nigerian
Religion:	Islam
Tribe:	Hausa
Languages spoken:	Hausa and English
Marital status:	Married
No. of children:	Nine (9)
Permanent home address:	Kofar Arewa Qtrs., Dawakin Tofa town, Dawakin Tofa L.G.A, Kano State – Nigeria
Correspondence Address:	Department of Chemistry, Federal University, Dutse Jigawa – Nigeria
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Schools Attended With Dates:

- ❖ Special Primary School Dawakin Tofa (1976 – 1981)
- ❖ Government Secondary School D/Tofa (1981 – 1986)
- ❖ Jigawa State College of Education, Gumel (1986 – 1989)
- ❖ Usmanu Danfodiyo University, Sokoto (1990 – 1993)
- ❖ Usmanu Danfodiyo University, Sokoto (2000 – 2003)
- ❖ Kano State College of Education, Kumbotso (June –Sept.2004)
- ❖ University of Jos, Plateau State (2004 – 2010)

Certificates Obtained With Dates:

- ❖ Certificate of Primary School Education (1981)
- ❖ General Certificate of Education (GCE) (1986)
- ❖ West African Senior School Certificate (WASSC) (2013)
- ❖ Nigeria Certificate in Education (NCE) (1989)
- ❖ Bachelor of Science (B.Sc.) Degree in Applied Chemistry
Second Class Lower Division (1994)
- ❖ Master of Science (M.Sc.) Degree in Applied Chemistry (2004)
- ❖ Certificate in Computer Application and Data Processing (2004)
- ❖ Doctor of Philosophy (Ph.D) in Applied Physical Chemistry (2011)
- ❖ Certificate of Advanced Digital Appreciation Programme
for Tertiary Institutions (ADAPTI) (2015)

Professional Qualifications with Dates:

- ❖ Nigeria Certificate in Education (NCE) (1989)
- ❖ Certificate in Computer Application and Data Processing (2004)
- ❖ Certificate in Advanced Digital Appreciation Programme (2015)

Professional Membership

- ❖ Member, Institute of Chartered Chemists of Nigeria (MICCON).
- ❖ Member, Chemical Society of Nigeria (MCSN)
- ❖ Member, Teachers Registration Council of Nigeria (MTRCN).

Area of Specialization:

Applied Physical Chemistry

Area of Research Interest:

Renewable Energy and Environmental Chemistry

Project, Dissertation and Thesis Undertook for the Award of Degrees with Dates

- a) 1994: Effect of Mass Change on Biogas Production from Cow dung.
A Project in the Department of Pure and Applied Chemistry, Usmanu Danfodiyo University, Sokoto – Nigeria. In partial fulfillment for the requirements of the award of Degree of Bachelor of Science (B.Sc.) in Applied Chemistry.
- b) 2004: Studies of Biogas Production from Neem (*Azadirachta indica* Leaves).
A Dissertation in the Department of Pure and Applied Chemistry, Usmanu Danfodiyo University, Sokoto – Nigeria. In partial fulfillment for the requirements of the award of Degree of Master of Science (M.Sc.) in Applied Chemistry.
- c) 2011: Studies on Biogas and Bioliquid Production by Fungal Degradation of Banana (*Musa sapintum*) leaves. A Thesis in the Department of Pure and Industrial Chemistry, University of Jos, Nigeria. In partial fulfillment for the requirements of the award of Degree of Doctor of Philosophy (Ph.D) in Applied Physical Chemistry.

Academic Appointments with Dates:

Lecturer 1	(1 st May, 2012)
Senior Lecturer	(1 st October, 2013)
Associate Professor	(1 st October 2016)

Academic Posts with Dates:

Departmental Examination Officer (November, 2014-September, 2015)
Level Coordinator for 200 level students (October, 2015- April, 2016)
Head of Department (May, 2016- Date)

Certificate of Honour and Merits

- ❖ Students Chemical Society of Nigeria. Certificate of Honour. April, 2019
- ❖ National Association of Kano Students (NAKSS). Certificate of Merit. July, 2019

University Working Experience with Dates

- ❖ Federal University, Dutse; 2012-Date
- ❖ Bayero University, Kano; 2010/2011 Session; as Full Time Lecturer II
- ❖ University of Jos; 2005-2009 as a Lecturer with Master's Degree during my Ph.D Study Fellowship

Non University Working Experience with Dates

- ❖ Kano State Ministry of Education; 1989-2001 as PAEO
- ❖ Sokoto State Utility Board, Gusau Water Board Area Office; NYSC May 1994- May 1995

- ❖ National Teachers Institute Kano/Jigawa States Office, Dawanau Study Centre, Kano State. as PES (ITS) Tutor. 1998-200
- ❖ Federal College of Education (Technical), Bichi; 2001-2012 as a Senior Lecturer

University Undergraduate Teaching Courses

- ❖ CHM 101 Physical Chemistry I
- ❖ CHM 103 Inorganic Chemistry I
- ❖ CHM 107 Practical Chemistry I
- ❖ CHM 108 Practical Chemistry II
- ❖ CHM 210 Physical Chemistry II
- ❖ CHM 214 Structure and Bonding I
- ❖ CHM 217 Practical Chemistry III
- ❖ CHM 301 Physical Chemistry III
- ❖ CHM 305 Petro Chemistry
- ❖ CHM 312 Instrumental Method of Analysis
- ❖ CHM 313 Applied Surface and Colloids Chemistry
- ❖ CHM 317 Industrial Raw materials and Resource inventory Chemistry
- ❖ CHM 319 Environmental Chemistry
- ❖ CHM 320 Industrial Chemical Technology I
- ❖ CHM 403 Quantum Chemistry
- ❖ CHM 404 Group Theory
- ❖ CHM 405 Statistical Thermodynamics
- ❖ CHM 406 Reaction Kinetics
- ❖ CHM 407 Electro- Chemistry
- ❖ CHM 409 Radio- Nuclear Chemistry
- ❖ CHM 413 Industrial Chemical Technology II
- ❖ CHM 422 Physical-Organic Chemistry

University Postgraduate Teaching Courses

- ❖ CHM 801 Spectroscopic Methods in Structure and Chemical Analysis
- ❖ CHM 802 Advanced Chemical Thermodynamics
- ❖ CHM 803 Advanced Electrochemistry
- ❖ CHM 804 Advanced Chemical Kinetics
- ❖ CHM 821 Selected Topic in Physical Chemistry

Undergraduate Students Project Supervision with Dates

1. Amina Haruna Hudu (FSC/CHM/13/0018): Proximate Composition of Chickens Droppings as Preliminary Investigation for its use as Substrate for Biogas Production. 2017.
2. Bilyaminu Musa (FSC/CHM/14/0001): Extraction of Bioliquid and Quantitative Analysis of Maltenes and Asphaltenes from Water hyacinth. 2017.

3. Yazeed Yusuf Muhammad (FSC/CHM/15): Kinetics Studies of Liquid State Catalytic Synthesis of Ureaformaldehyde Resin at 40°C. 2018.
4. Abdullahi Sani Abdullahi (FSC/CHM/15/0038): Extraction and Isolation of Saturates and Aromatics from Lemongrass (*Cymbopogon Citrus*) as Alternative Fuel and Raw Materials for Drugs Synthesis. 2019
5. Umar Iliyasu Abdullahi (FSC/CHM/15/0021): Effect of Temperature and Additives on Nutritional Composition of Cowpea. (*Vigna Unguiculata*). 2019
6. Farouk Mohammed Sagagi (FSC/CHM/14/0010): Synthesis and Characterization of Management (II) Shif Base Complex at Varying Concentration of Ethanolic Solution of Reactions. 2019
7. Auta Nenmene Taptok'ah (FSCH/CHM/15/0040): Production of Starch-Based Adhesive and Characterization from Cassava Tubar. 2019

External Examination

- ❖ External Examiner for M.Sc Students, Kano State University of Science and Technology Wudil, 2018.
- ❖ External Peer Review for Rock Journal, Jigawa State Polytechnics, Dutse

Administrative Responsibilities and Appointments with Dates

- ❖ Member, Panel for Post – UTME/ Direct Entry Screening Exercise, Federal University, Dutse, 2012.
- ❖ Member, Ad hoc Committee for the Establishment of the Proposed Dutse International Journal of Agriculture, Science, Environment and Technology (DIJOASET), June 2013.
- ❖ Member, Sub-committee on the Proposed Dutse International Journal of Physical Sciences (DIJPS), June 2013.
- ❖ Associate Editor, Dutse Journal of Pure and Applied Sciences (DUJOPAS), 2013 – Date.
- ❖ Member, Students Handbook Committee, Department of Chemistry Federal University, Dutse, August 2014.
- ❖ Examination officer, Department of Chemistry, Federal University, Dutse, November, 2014 – September, 2015.
- ❖ Level Coordinator for 200 level Students, Department of Chemistry, Federal University, Dutse, October, 2015 – April, 2016.
- ❖ Head of Chemistry Department, Federal University, Dutse. May, 2016 – date.
- ❖ Chairman, Direct Teaching and Laboratory Cost (DTLC), Department of Chemistry, Federal University, Dutse. May, 2016 – Date.
- ❖ Chairman, Staff Training and Development Committee, Department of Chemistry, Federal University, Dutse. May, 2016 – date.
- ❖ Chairman Department of Chemistry Appointment and Promotion Committee, Federal University, Dutse. May, 2016 – date.
- ❖ Chairman Department of Chemistry Board of Examiners, Federal University, Dutse. May, 2016 – date.
- ❖ Member, Faculty of Science, Staff Training and Development Committee, Federal University, Dutse. May, 2016 – Date.

- ❖ Chief Examination Officer Chemistry Department, Federal University, Dutse. May, 2016 – date.
- ❖ Member, Faculty of Science Appointment and Promotion Committee, Federal University, Dutse, May, 2016 – Date.
- ❖ Member, Faculty of Science Accreditation Committee, Federal University, Dutse, June, 2016 – Date.
- ❖ Chairman, Admission Screening Exercise Panel Department of Chemistry, Federal University, Dutse, July, 2006-Date
- ❖ Chairman, Department of Chemistry Accreditation Committee, Federal University, Dutse, July, 2016 – Date.
- ❖ Chairman, Department of Chemistry Committee on Postgraduate Studies Federal University, Dutse, July, 2016 – Date.
- ❖ Member, Faculty of Science Postgraduate Studies Committee, Federal University, Dutse, July, 2016 – Date.
- ❖ Member, Faculty of Science Committee on Research and Publication, Federal University, Dutse, September, 2016 – Date
- ❖ Member, Second Convocation Sub-committee on Publicity, Protocol and Souvenir, Federal University, Dutse, September, 2016
- ❖ Chairman, Sub-committee on Protocol for Second Convocation, Federal University, Dutse, September, 2016
- ❖ Member, Third Convocation Sub-committee on Publicity, Protocol and Souvenir, Federal University, Dutse, February, 2018
- ❖ Member, Mock Resource Verification Committee for Postgraduate Programmes, Federal University, Dutse, February, 2018.
- ❖ Member Faculty Quality Assurance Committee April, 2018
- ❖ Member Fourth Convocation Sub-Committee on Publicity, Protocol and Souvenir, Federal University Dutse. April, 2019.
- ❖ Chairman Departmental Quality Assurance Committee. August, 2018

Community Development Service:

- ❖ Director Social, Dawaki Consultative Forum (DACOF), Dawakin-Tofa L.G.A. (2001-Date)
- ❖ Adviser, Dawakin Tofa Local Government Students Association, DASA (2003-2010)
- ❖ Member, D/Tofa Local Govt. Casual /Temporary Workers Verification Committee, (2004).
- ❖ Member, D/Tofa Local Govt. Drugs Committee, (2005 – 2007)
- ❖ Adviser, D/Tofa Local Govt. Youth Alliance, DATOYA, (2005-Date)
- ❖ Member, Kungiyar Sada Zumunci, D/Tofa L .G. A. (2006-2011)
- ❖ Member, Weekend Extra Lesson Programme (Volunteer), 2013-Date
- ❖ Member, G.G A S S D/Tofa PTA, (20114-Date)
- ❖ Member, Partnership for Dawakin Tofa Development (PDD), September 2019-Date

Publications in Referred Journals, Book Chapters and Conference Proceedings:

a) Articles Published in Referred Journals

1. Ekwenchi, M. M and **Yaro, M. N.** (2010): Gaseous Fuel Production by Anaerobic Fungal Degradation of Banana leaves. *CHEMSEARCH Journal*, 1(1): 28–32. (Nigeria)
2. **Yaro, M. N.** (2010): Studies on the Potential Hazards of Some Heavy Metals Contents of the Leaves of *Calatropis procera* and *Mangifera indica* in Some Parts of Sokoto City-Nigeria. *Biological and Environmental Sciences Journal for the Tropics (BEST)*; 7 (2): 124 – 127.
3. Ekwenchi, M. M. and **Yaro, M. N.** (2012): Extraction of Bioliquid and Quantitative Determination of Saturates, Aromatics and Organic Poplars from Fermented Banana (*Musa sapintum*) leaves. *Bayero Journal of Pure and Applied Sciences (BAJOPAS)*; 5 (2): 97 – 100.
4. Gumel, S.M.and **Yaro, M.N.** (2012): An Evaluation of the Increased Atmospheric Pollutants due to the use of Urea and Buffer Solution for Maximum Gaseous Fuel Generation from Water hyacinth. *Biological and Environmental Sciences Journal for the Tropics (BEST)*; 9 (3): 30 – 33.
5. Gumel, S. M. and **Yaro, M. N** (2013): Production and Analysis of Biogas from Varying Concentration of Chicken droppings. *Biological and Environmental Sciences Journal for the Tropics (BEST)*; 10 (3): 109 – 114.
6. Ekwench, M. M., Gumel, S. M. and **Yaro, M. N.** (2013): Production of Biogas by Microbial Digestion of Banana leaves and Adduction of Paraffins from Saturates Using Urea and Thiourea Solutions. *Techno Science Africana Journal (TSAJ)*; 8(1): 85 – 90.
7. Ekwenchi, M. M. and **Yaro, M. N.** (2013): Effects of Buffering and Urea on the Quantity and Quality of Biogas from Banana leaves as Alternative Renewable Energy Resource. *Journal of Energy Technologies and Policy (JETP)*;3 (6): 16 – 22. (United States of America).
8. Gumel, S. M. and **Yaro, M.N.** (2013): Effects of Concentration and Catalyst on the Kinetics of Biogas Production from Cattle dung at Thermophilic Temperature. *Chemistry and Materials Research (CMR)*; 3 (7): 9-17. (United States of America).
9. **Yaro, M. N.** (2014): A Comparative Study of Biogas Production Potentials of Banana leaves, Elephant grass, Maize stalk and Water hyacinth as Alternative Fuels. *Biological and Environmental Sciences Journal for the Tropics (BEST)*; 11(3): 282 – 287.
10. **Yaro, M. N.** (2015): An Investigation into the Water Quality Parameters of Water from Bagwai Dam as a Quality Control Measure for Domestic and Industrial Uses. *Journal of Engineering and Applied Scientific Research*; 7 (1): 26 – 34.
11. **Yaro, M. N.** (2015): Assessment of Heavy Metal Contamination of *Calatropis procera* in Some Part of Sokoto City Based on Contamination Factor and Degree of Contamination. *Techno Science Africana Journal (TSAJ)*; 11 (2): 190 – 195.

12. **Yaro, M. N.** (2015): An Evaluation of the Concentration of Greenhouse Gases (CH₄ and CO₂) from Agricultural Wastes and Crop residues for Renewable Energy Generation and Environmental Protection. *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*; 1 (2): 70 – 74.
13. **Yaro, M. N.** (2015): Extraction and Characterization of Heavier Saturated Hydrocarbons from Banana leaves as Alternative Fuels for Domestic and Industrial Uses. *Techno Science Africana Journal (TSAJ)*; 11 (2): 158 – 164.
14. **Yaro, M. N.** (2015): Determination of Some Heavy Metals and Estimation of the Extent of Contamination from the Leaves of *Mangifera indica* in Sokoto Metropolis. *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*; 1 (2): 179 – 183.
15. Gumel, S. M. and **Yaro, M. N.** (2015): Generation of Biogas from Maize cob and Analysis of the Combustible Component of the Biogas Using Flame Ionization Detector (FID), *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*; 1 (1): 90 – 95.
16. Saminu Murtala Yakasai, Abdullahi Mustapha and **Muhammad Nasir Yaro** (2015): Application of Sugarcane Bagasse in the Treatment of Textile Effluent. *Techno Science Africana Journal (TSAJ)*; 11 (1): 1 – 7.
17. Saminu Murtala Yakasai, Abdullahi Mustapha and **Muhammad Nasir Yaro** (2015): Utilization of Groundnut Husk for Activated Carbon Preparation and Application for Textile Effluent Treatment. *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*; 1 (1): 110 – 116.
18. **Yaro, M. N.** (2016): Effect of Concentration of AgNO₃ on the Rate of Formation of a Complex Salt, [Co (NH₃)₆] (NO₃)₃ and Estimation of Molar Concentration of the Complex. *Chemistry and Materials Research (CMR)*; 8(2): 8 – 12. (United States of America).
19. **Yaro, M. N.** (2016): Efficacy of Organic Nutritive Additives on the Quantity and Fuel Value of Biogas from Donkey dung as Alternative Source of Gaseous Fuel. *Journal of Energy Technologies and Policy (JETP)*; 6(2): 1 – 5. (United States of America).
20. **Muhammad Nasir Yaro** (2016): Proximate Composition of Banana Leaves and Estimation of Fungal Degradation Products of the Leaves at Mesophilic Temperature. *World Wide Journal of Multidisciplinary Research and Development*; 2 (5):31 – 35.
21. **Muhammad Nasir Yaro** (2016): Effects of Concentration and pH on the Potential of a Locally Sourced Activated Carbon from *Balanites egyptiaca stems* on the Adsorption of Fe²⁺ ions. *World Wide Journal of Multidisciplinary Research and Development*; 2(3): 38 – 42.
22. **Yaro, M. N.** (2017): Catalytic Decomposition of *Cassia tora* Leaves and Analysis of Essential Aromatic Oils. *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*;3(2):214-225.
23. **Yaro, M. N.** (2017):Effect of Concentration on the Antimicrobial Activity of Phytochemicals from *Guiera Senegalensis*. *Dutse Journal of Pure and Applied Sciences (DUJOPAS)*;3(2):414-420.

24. **Yaro, M. N.** (2018): Determination of Calorific Value and Rate of Combustion of Biodiesel from *Jatropha Curcas* Seed Oil. *World Wide Journal of Multidisciplinary Research and Development (WWJMRD)*, 4(8):129-133.
25. Gumel M, Surayya MM, **Yaro, M.N**, Waziri IZ, Amina AA. (2019): Biogenic Synthesis of Silver Nanoparticles and its Synergistic Antimicrobial Potency: an Overview. *Journal of Applied Biotechnology & Bioengineering*, 6(1):22-28
26. Ilyasu A. Bashir, **Muhammad N. Yaro**, Ali Ibrahim and Hamza Badamasi. (2019): Adsorption Studies of *Delonix Regia* Seed Pods and Bambara Ground Nut Shell on Methylene Blue Dyes as Contaminant. *Chemistry Research Journal*, 4(2):105-122
27. **M. N. Yaro**, Aminu Dauda, I. A. Bashir and Hamza Badamasi. (2019): Production and Estimation of the Rate of Formation of a Complex, $[\text{Co}(\text{NH}_3)_6](\text{NO}_3)_3$ from a Labile Complex, $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$ at Varying Concentrations of AgNO_3 . *Science and Technology Publishing (SCITECH)*, 3(4):2632-1017
28. **M.N. Yaro**, Ilyasu A. Bashir, Aminu Dauda, Hamza Badamasi, Yazeed M. Y. (2019): Kinetics Studies of Liquid State Catalytic Synthesis of Urea Formaldehyde Resin at 40°C. *World Wide Journal of Multidisciplinary Research and Development (WWJMRD)*, 5(4):86-91
29. Ilyasu A. Bashir, **Yaro, M.N**, Abdulmalik Shehu, Ishaq Y. Habib. (2019): Synthesis, FT-IR and NMR Characterization of New 1,3-bis(3-(2-hydroxyphenylaminomethyl)phenoxy)methyl)-2,4,6-trimethylbenzene. *Science and Technology Publishing (SCITECH)*, 3(4): 154-158
30. **Yaro, M.N**, Hamza Badamasi, Aminu Dauda, Ilyasu A. Bashir. (2019): Analysis of Asphaltenes and Naphthenic Acids in Nigerian Crude Oil. *World Wide Journal of Multidisciplinary Research and Development (WWJMRD)*, 5(4):81-85
31. Hamza Badamasi, **Yaro, M.N**, Ali Ibrahim, Ilyasu A. Bashir. (2019): Impacts of Phosphates on Water Quality and Aquatic Life. *Chemistry Research Journal*, 4(3):1-10
32. H. Badamasi, **M.N. Yaro**, A. Dauda, Y. Muhammad, I.A Bashir. (2019): Assessment of Benzoic acid in Some Soft Drinks Marketed in Dutse. *International Journal for Scientific Research & Development*, 7(4): 801-803
33. **M.N. Yaro**, I. A. Bashir, Aminu Dauda and Hamza Badamasi (2019): Extraction and Analysis of Petroleum-Related Substances (Maltenes and Asphaltenes) from Water Hyacinth (*Eichnonia crassipes*). *The Pharmaceutical and Chemical Journal* 6(3): 77-82
34. **M.N. Yaro**, I. A. Bashir, Aminu Dauda and Hamza Badamasi (2019): Production of Biodiesel and Glycerol from Shea Butter Seed Oil at Different Operationa Conditions, *The Pharmaceutical and Chemical Journal* 6(3): 93-98

b) Book Chapter

1. **Yaro, M.N.** (2010): Step by Step Approach to Teaching of Chemical Combination in Senior Secondary Schools. In Elder Olayiwola, M. A. and Umoh W. S. (Eds.). *Science Teachers Association of Nigeria (STAN)*. Ibadan: Abioye Dynamic Printers. A Handbook for Chemistry Teachers, Chemistry Panel Series 5, Chapter 6, 37-42 pp. ISBN: 978-978-908-755-6.

C) Conference Proceedings

1. Gumel, S.M. and **Yaro, M.N.** (2014): Production of Biogas from Maize cob: A Viable Way of Generating an Environmentally-friendly Energy Resource. In Essien, D.U. (Ed.). *A Century of Nigeria (1914-2014): Contributions, Prospects and Challenges of Chemistry: Proceedings of the 37th Annual International Conference of Chemical Society of Nigeria (CSN)*, Akwa Ibom State: 217-221pp.

Referees:

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- Name:** Professor S.M. Gumel
Rank: Professor of Colour and Polymer Chemistry and Provost College of Natural and Pharmaceutical Sciences, B.U.K
Address: Department of Pure and Industrial Chemistry, BUK.
G.S.M.No: +2348023272315
- Name:** Professor M. M. Ekwenchi
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