



MONSURU OLATUNJI DAUDA

[Linkedin](#) | [Personal Page](#) | [ORCID](#)

EDUCATION AND ACADEMIC QUALIFICATION

Doctor of Philosophy in Chemical Engineering.

2022 - 2026

Louisiana State University

Address: Taylor Hall, 3307 Patrick F, Baton Rouge, LA 70803, USA.

Research: Sustainable Chemical Production through Electrochemical Reduction of CO₂

Top Skills: Electrochemical Measurements, Synchrotron-X-Ray Based Analytical Techniques, Density Functional Theory (DFT) Synthesis and Slurry Casting of Electrode Materials, Gas Chromatography–Mass Spectrometry (GC-MS), Nuclear Magnetic Resonance (NMR), Atomic Force Microscopy (AFM), Fourier-Transform Infrared Spectroscopy (FTIR), Raman Spectrometry

Master of Science in Chemical Engineering.

2022 - 2024

Louisiana State University

Address: Taylor Hall, 3307 Patrick F, Baton Rouge, LA 70803, USA.

Research: Copper-Based Electrocatalysts for Electrochemical Reduction of CO₂ to C₂ Products

Top Skills: Electrochemical Measurements, Nanoparticle Synthesis, Electrosynthesis, Electrochemical Deposition, Gas Chromatography (GC), X-ray Diffraction (XRD), X-ray Photoelectron Spectroscopy (XPS), Electron Microscopy (SEM, TEM), Nuclear Magnetic Resonance (NMR), Four Point Probe.

Bachelor of Technology (Hons.) in Chemical Engineering.

2014 - 2021

Ladoke Akintola University of Technology

Address: Old Oyo/ Ilorin Rd, 210214, Ogbomosho, Oyo-State, Nigeria

Final grade: First Class Hons

Research: Polysophtive Treatment of Synthetic Wastewater Using Batch and Continuous Technique

Top Skills: Gas and Liquid Phase Adsorption, Ultraviolet–visible spectroscopy, Statistical Package for the Social Sciences (SPSS), Design-Expert, Analytical Chemistry Techniques, MATLAB, Aspen HYSYS and Plus, Organizational and planning, and Research and analytical skills.

A1 Comprehensive Grammar School, Iwo, Nigeria.

2008-2014

Secondary School Certificate (WAEC/NECO)

2014 Alumni Award for Overall Best Student

Best Student in Osun State FRSC Mathematics Competition

Vico Hope Nursery and Primary School, Iwo, Nigeria

2002-2008

Primary School Certificate

MEMBERSHIP OF PROFESSIONAL BODIES

- Sigma Xi, The Scientific Research Honor Society– Full Member
- Omicron Delta Kappa National Leadership Honor Society – Full Member
- Electrochemical Society (ECS) – Member
- American Chemical Society (ACS) – Member
- American Institute of Chemical Engineers (AIChE) – Member
- National Society of Black Engineers (NSBE) – Collegiate Member.
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) –Member.
- Society of Petroleum Engineers (SPE) – Member
- Nigerian Universities Engineering Students Association (NUESA) – Fellow Member
- Nigerian Society of Engineers (NSE) – Graduate Member

PUBLICATIONS

1. FIRST AUTHOR PUBLISHED ARTICLES:

- **Dauda, M. O.**, Bello, M., Hendershot, J. C., Agbadan, I., Lombardo, N., Bin Noor, N., Sprunger, P.; Yao, K. P. C.; Engler, A.; Flake, J. (2026). Electrolytic Reduction of CO₂ in a Flowing Electrolyte Interlayer MEA Cell. *Journal of The Electrochemical Society*.
- **Dauda, M. O.**, Bello, M., Hendershot, J. C., Kingsley, N., Agbadan, I., Park, J., Tasnim, S., Oduyebo, O., Engler, A., Plaisance, C., & Flake, J. (2025). Highly Selective Electrolytic Reduction of CO₂ to Ethylene. *ACS Appl. Energy Mater.* 2025, 8, 13607–13619.
- **Dauda, M. O.**, Bello, M., Hendershot, J. C., Park, J., Agbadan, I., Tasnim, S., & Flake, J. (2025). (IE&EE Student Achievement Award) Strategies for Sustainable Ethylene, Ethanol, and Acetate via Electrochemical CO₂ Reduction. *ECS Meeting Abstracts, MA2025-01 2186*.
- **Dauda, M. O.**, (2025). 2025 ECS F. M. Becket Research Fellowship – Summary Report: Advancing CO₂ Electroreduction through Novel Electrocatalysts for Selective C₂ Products and Direct Carbonate Synthesis. *Electrochem. Soc. Interface* 34 47.
- **Dauda, M. O.**, Bello, M., Hendershot, J. C., Agbadan, I., Tasnim, S., Oduyebo, O., & Flake, J. (2025). Tailoring the Local Environment for Electrochemical Reduction of CO₂ to Ethylene. *ECS Meeting Abstracts, OCT2025*
- **Dauda, M. O.**, Hendershot, J., Bello, M., Park, J., Loaiza Orduz, A., Kizilkaya, O., Sprunger, P., Engler, A., Yao, K., Plaisance, C., & Flake, J. (2024). Activity and Selectivity in the Electrochemical Reduction of CO₂ at CuSn_x Electrocatalysts Using a Zero-Gap Membrane Electrode Assembly. *Journal of The Electrochemical Society*.
- **Dauda, M. O.**, Hendershot, J., Bello, M., Park, J., Loaiza Orduz, A., Lombardo, N., Kizilkaya, O., Sprunger, P., Engler, A., Plaisance, C., & Flake, J. (2024). Electrochemical Reduction of CO₂: A Common Acetyl Path to Ethylene, Ethanol or Acetate. *Journal of The Electrochemical Society*
- **Dauda, M. O.**, Bello, M., Hendershot, J. C., Agbadan, I., Tasnim, S., Plaisance, C., & Flake, J. C. (2023). Selective CO₂ Reduction to Multicarbon Products on Cu-Based Electrocatalysts in Membrane Electrode Assembly. *ECS Meeting Abstracts, OCT2024*
- **Dauda, M. O.**, Hendershot, J. C., Bello, M., Agbadan, I., Tasnim, S., Plaisance, C., & Flake, J. C. (2023). Selectivity and Durability in the Electrochemical Reduction of CO₂ to C₂ Products Using Cu-P, Cu-Sn and Cu-Se Electrocatalysts. *ECS Meeting Abstracts, MA2024*
- **Dauda M.O.**, Ajani A, Afolabi T. J, Alade A. Investigation of Adsorptive Removal of Methylene Blue from Synthetic Wastewater Using Polymeric Composite. *JOTCSA*. 2023;10(4):961-74.

2 CO-AUTHOR PUBLISHED ARTICLES:

- Agbadan, I., **Dauda, M. O.**, Bello, M., Hendershot, J. C., Oduyebo, O., Atalay-Oral, C., & Flake, J. (2026). Pressure Effect on the Electrochemical Reduction of CO to Acetate in MEA. *ECS Meeting Abstracts, MA2026*
- Yao, K., Mishra, M., Obetta, E., **Dauda, M. O.**, & Flake, J. (2026). Raman Evidence for the Mechanism of Enhanced C-C Coupling During CO₂RR on CuSn_x Bimetallic Electrocatalysts at Dilute Sn Levels. *ECS Meeting Abstracts, MA2026*
- Bello, M., **Dauda, M. O.**, Hendershot, J. C., Kingsley, N., Agbadan, I., Park, J., Tasnim, S., Oduyebo, O., Engler, A., Plaisance, C., & Flake, J. (2025). Anolyte Buffering and CO Coverage Effects in the Electrochemical Reduction of CO at Cu Electrocatalysts. *ACS Appl. Energy Mater*
- Hendershot, J. C., **Dauda, M. O.**, Tasnim, S., Agbadan, I., Lombardo, N., Park, J., Bello, M., Engler, A., & Flake, J. (2025). Anion Exchange Membrane Transport and Accelerated Lifetime Testing of Membrane Electrode Assembly Cells for the Electrochemical Reduction of CO₂-to-C₂ Products. *J. Electrochem. Soc.* 172 094509
- Flake, J., **Dauda, M. O.**, Hendershot, J. C., Bello, M., Park, J., Agbadan, I., Tasnim, S., Kennedy, E., Yao, K. & Liu, D. (2025). (Invited) Durability and Selectivity in the Electrochemical Conversion of CO₂/CO to C₂ Products. *ECS Meeting Abstracts, MA2025-01 2179*

- Mishra, M., **Dauda, M. O.**, Flake, J. & Yao, K. (2025). Raman Evidence for the Mechanism of Enhanced C-C Coupling During CO₂RR on CuSn_x Bimetallic Electrocatalysts at Dilute Sn Levels. *J. Electrochem. Soc.* 172 124501
- Mishra, M., **Dauda, M. O.**, Flake, J. & Yao, K. (2025). Operando Surface Enhanced Raman Spectroscopy Reveals Enhanced C-C Coupling in CO₂RR at Low Sn Doping of Cu Catalysts. *ECS Meeting Abstracts*, MA2025-01 2157
- Agbadan, I., Tasnim, S., **Dauda, M. O.**, Bello, M., Hendershot, J. C., Park, J., & Flake, J. (2025). Durability of Membrane Electrode Assembly Components for the Electrochemical Reduction of CO₂ to C₂ Products. *ECS Meeting Abstracts*, MA2025-01 2221
- Hendershot, J. C., **Dauda, M. O.**, Tasnim, S., Agbadan, I., Lombardo, N., Park, J., Bello, M., Engler, A., & Flake, J. (2025). Water and Potassium Transport in Anion Exchange Membranes Used for Electrochemical CO₂ Reduction. *ECS Meeting Abstracts*, MA2025-01 2155
- Park, J., **Dauda, M. O.**, Bello, M., & Flake, J. C. (2024). The Future of Die-to-Die Copper Interconnects and Epoxy Dielectrics. *ECS Meeting Abstracts*, OCT2024
- Bello, M., **Dauda, M. O.**, Hendershot, J. C., Park, J., Agbadan, I., Tasnim, S., & Flake, J. C. (2024). Comparative Selectivity of CO and CO₂ Reduction Using Cu Electrocatalysts in Zero-Gap MEA Cells. *ECS Meeting Abstracts*, OCT2024
- Bello, M., Hendershot, J. C., **Dauda, M. O.**, Park, J., & Flake, J. C. (2024). pH Effects in the Electrochemical Reduction of CO at Cu Electrocatalysts in an MEA Cell Configuration. *ECS Meeting Abstracts*, MA2024
- Flake, J. C., Bello, M., **Dauda, M. O.**, Hendershot, J. C., Gonçlaves, R., Jiao, F., Yan, Y., & Yao, K. (2023). Durability of CO and CO₂ Electrolyzers with Copper Electrocatalysts, Gas Diffusion Electrodes, and Anion Exchange Membranes. *ECS Meeting Abstracts*, MA2023-02(24), 1322.
- Hendershot, J. C., Bello, M., **Dauda, M. O.**, & Flake, J. C. (2023). Understanding the Role of Cu Electrocatalyst, Binder, and Membrane Interfaces in CO₂ Electrolyzer Durability. *ECS Meeting Abstracts*, MA2023-01(26), 1732.
- Dada, E.O., Adeniran, P.O., **Dauda, M.O.**, Afolabi, T.J., and Alade, A.O. (2021). Application of Agricultural Waste for the Adsorption of Pharmaceutical Pollutants in Wastewater: A Review. *LAUTECH Journal of Civil and Environmental Studies*, 6(1),26-45. DOI:10.36108/laujoces/1202.60.0130
- Dada, E.O., Ojo, I.A., Alade, A.O., Afolabi, T.J., Jimoh, M.O., and **Dauda, M.O.** (2020). Biosorption of Bromo-based Dyes from Wastewater Using Low-Cost Adsorbents: A Review. *Journal of Scientific Research and Reports*, 26(8), 34-56. <https://doi.org/10.9734/jsrr/2020/v26i830294>

3. CONFERENCE PRESENTATION:

- Flake, J. C., **Dauda, M. O.**, Bello, M., Hendershot, J. C., Gonçlaves, R., Jiao, F., Yan, Y., & Yao, K. (2023). C₂ product selectivity in the electrochemical reduction of CO₂ at CU-P, Cu-Sn and Cu-se electrocatalysts. *ACS Spring 2024 in New Orlean*.
- **Dauda M.O.**, Alade, A.O., Afolabi, T.J., Araromi, D.O., Salam, K.K., Arinkoola, A.O., Adeniji, A.T., and Atolagbe R.O. (November, 2021). Experimental Study of Adsorption of Methylene Blue Synthetic Wastewater Using Polymeric Composite as A Low-Cost Adsorbent. *2nd International Conference on Engineering and Environmental Science*.

4. POSTERS PRESENTATION:

- **Dauda, M.O.**, (2022). *Efficient Removal of Dyes Present in Industrial Water Effluent using a Novel Polymeric Adsorbent Composite*. LSU African in Research.
- **Dauda, M.O.**, Alade, A.O., Afolabi T. J., Adeniji, A.T., Latinwo, G.K1 & Yusuf, A.O. (2022). *Synthesis of Novel Functional Cellulose as a Low-cost Adsorbent for Methylene Blue Removal from Synthetic Wastewater*. LAUTECH LIRIDE, Poster Code: EGAT 22-011.
- Akinyemi, A.G., Ajayi, J.O., **Dauda, M.O.**, Afolabi, T. J. & Alade, A.O. (2022). *ADSORLVER: A Novel Stand-Alone Software for Processing Adsorption Experimental Data*. LAUTECH LIRIDE, Poster Code: EGAT 22-007.

- Adeniji, A.T., Alade, A.O., Afolabi T. J., **Dauda, M.O.**, Akinkuade, K. A. & Ganiyu, S.O. (2021). *Potential of Novel Tri-composite clay in Emerging Contaminant Remediation: A Diclofenac-Na Study*. PUEDUE University Davidson Schol of Chemical Engineering

5. THESIS/DISSERTATION:

- **Monsuru Dauda (2026)**. “Sustainable Chemical Production through Electrochemical Conversion of CO₂” Published Doctor of Philosophy in Chemical Engineering Dissertation, Louisiana State University, Baton Rouge, United State.
- **Monsuru Dauda (2024)**. “Copper-Based Electrocatalysts for Electrochemical Reduction of CO₂ to C₂ Products” Published Master of Science in Chemical Engineering Dissertation, Louisiana State University, Baton Rouge, United State.
- **Monsuru Dauda (2021)**. “Polysopitive Treatment of Methylene Blue wastewater By Batch and Continuous Technique” Unpublished B.Tech. Dissertation, Ladoke Akintola University of Technology, Ogbomoso, Nigeria
- **Monsuru Dauda (2021)**. “Design of 1.5 Mtons/Year of Gold Bar Plant from Gold Ore” Unpublished B.Tech. Dissertation, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

EXPERIENCE

Director of Engineering

Geaux Scale, Baton Rouge, US

2026–

Present

- Lead engineering support for a portfolio of 20+ Louisiana hard tech companies, guiding their scale-up from lab to pilot to production across hydrogen production, alternative energy, waste-to-value, advanced materials, and space tech, drawing on expertise in electrochemical process design, system scale-up, and techno-economic and life cycle analysis

Chief Technology Officer

Encore CO₂, Baton Rouge, US

2025–

Present

- Directed all R&D and lab operations for a venture-backed startup developing gas-diffusion electrode (GDE) electrolyzers converting captured CO₂ into ethanol, acetate, and ethylene; oversee catalyst synthesis, system optimization, and safety protocols.
- Achieved >50% Faradaic efficiency for C₂ products at 0.5 A/cm², exceeding NSF SBIR Phase I targets and validating better-than-linear scale-up performance.
- Delivered technical results that helped secure \$933,000+ in non-dilutive funding, including a \$363,000 Shell GameChanger Award, \$275,000 NSF SBIR Phase I grant, \$200,000 LSU FUEL initiative grant, and a \$50,000 FUEL pitch competition prize.
- Scaled the electrolyzer system from 5+ cm² to 25+ cm², built and tested a four-cell, 100+ cm² configuration achieving Phase I production targets, while cutting per-unit manufacturing cost from ~\$2,400 to ~\$950 through hybrid material redesign.
- Designed and fabricated the product separation unit, enabling selective recovery of CO₂-derived chemicals (ethanol, acetate, ethylene) from the electrolyzer output stream.
- Developed technoeconomic analysis (TEA) and life cycle assessment (LCA) models to evaluate production costs, energy consumption, capital expenditure, and emissions intensity across product pathways.

Research Assistant

Louisiana State University

2022–

Present

- Identified the reaction mechanisms governing selective CO₂ electroreduction to both C₁ products (CO, formate/formic acid, methanol) and C₂ products (ethylene, ethanol, acetate/acetic acid), achieving Faradaic efficiencies up to 90% for C₁ and 75% for C₂ products.
- Engineered Cu-based alloy electrocatalysts with extended operational stability at industrial current densities, enabling sustained record-level selectivity beyond initial lab-scale demonstration
- Established correlation between Cu surface charge and C₂ product selectivity using DFT calculations, enabling rational catalyst design for targeted products.
- Designed a proprietary electrolyzer process and electrode system and innovated a dual-membrane configuration that resolves product crossover and enables efficient liquid product collection, and optimized performance across a range of pH conditions to create a versatile platform applicable to multiple valuable chemical products.
- Applied advanced characterization techniques (XPS, XRD, SEM, GC-MS) to probe catalyst dynamics and validate mechanisms.

- Developed direct electrochemical CO₂ conversion to organic carbonates for high-value chemical production from captured carbon
- Supplied electrolyzer-derived acetate to collaborating research groups for downstream valorization, including nutraceutical-grade spirulina cultivation and cellulose acetate synthesis.
- Performed AFM, FTIR, XPS, and Raman characterization in support of collaborative research on electrodeposition and electroless thin-film Cu-epoxy interconnect adhesion

Teaching Assistant

2022– 2023

Louisiana State University

- Assisted in teaching Process Design and Reactor Design Project courses.
- Provided support in grading assignments, exams, and practical sessions.
- Developed skills in assisting with laboratory experiments and practical demonstrations.
- Enhanced my understanding of process design principles and reactor design concepts through teaching and hands-on experience.

2021 - 2022

National Youth Service Corps (N.Y.S.C)

Nigerian Content Development and Monitoring Board, NCDMB, National Headquarter, Bayelsa State, Nigeria

- Monitored and tracked progress on projects and activities executed in the Nigerian Oil and Gas Industry.
- Identified actions and processes that violated the NOGICD Act and applied measures to address and correct all such violations.
- Maximized the utilization of the country's materials, resources, goods, assets, and services.

2019 -
2021

Research Assistant

Bioenvironmental and Water Research Laboratory, LAUTECH, Oyo State, Nigeria

- Synthesized Silver-Gold Nanoparticles from Yam, Potato, Banana, and Cassava Peels Extract Bio-Composite.
- Conducted independent reviews of literature on the synthesis and characterization of nanoparticles from agricultural materials and designed an Adsorption Column.
- Investigated the effect of surface modification of polymeric material as a low-cost adsorbent.

Class Instructor

2017- 2020

Launchi Software Academy (LSA) Under-G, Ogbomoso, Oyo State.

- Coordinated training as the I.T (Industrial) Manager.
- Tutored and mentored undergraduate students and graduates in Data Analysis, Advanced Excel, and Desktop Publishing.
- Tutored and mentored undergraduate students and graduates in Aspen Hysys and Aspen Plus, MATLAB, Excel, Graphics (Corel Draw and Adobe Packages), and Microsoft Packages.

Technical Operation Intel

2019

Addax Petroleum Development Nigeria Limited

- Led a team of 16 to develop a Final Investment Decision (FID) for an onshore field.
- Learned about oil and gas business chain
- Acquired a strategic understanding of how different disciplines (such as Accounting, Economics, and Finance) operate in real life.

Class Instructor

2014- 2015

A1 Comprehensive Grammar School, Oke Oore, Iwo, Osun State, Nigeria.

- Taught and mentored secondary school student in Mathematics, Chemistry and Physics
- Developed and implemented lesson plans to enhance students' understanding and performance in these subjects.

SELECTED POSITIONS HELD

President

2025-2026

African Graduate Students Association (AGSA), Louisiana State University

- Led implementation of "UNITE, BUILD, THRIVE" strategic vision serving 200+ African graduate students across all LSU departments
- Developed and launched official AGSA website featuring event calendars, resource guides, and member spotlights to enhance digital presence and alumni engagement
- Established peer mentorship program connecting new students with senior graduate students for academic and professional guidance
- Coordinated comprehensive new student support including pre-arrival virtual orientation, airport pickups and welcome events
- Created professional development resources including mock interview program, travel guide for international students, and academic success handbook
- Launched new social programming including Summer Social Night and Bowling Events
- Organized "Africans in Research" symposium showcasing student research through formal presentations and poster sessions

Vice President

2024-2025

African Graduate Students Association (AGSA), Louisiana State University

- Organized and executed 10+ cultural, professional, and social events serving 100+ graduate students across two semesters
- Coordinated Summer & Fall 2024 events including Summer Mixer, Pitch Perfect Presentation Workshop, African Vogue Night, Fall Welcome Event, and Volleyball Soccer Thrill
- Planned Spring 2025 programming including New Student Orientation, AGSA Galentine, Beyond Graduation Career Workshop, Movie Night, and Afro Luxe Soirée: A 90s Cultural Rewind
- Facilitated professional development workshops on presentation skills and post-graduation career opportunities
- Promoted community building through themed social events and athletic activities

Governor

2022

Sustainable Development Goals, NYSC Bayelsa state

- Organized weekly in-house meetings.
- Organized a Child Awareness Program with the theme "Girl-Child Education: A 'Sine Qua Non' for Gender Equality."
- Organized a Students Empowerment Program with the theme "Don't Make Every Problem a Competition; Let Students Feel Personally Connected and Responsible for Their Own Issues from Time to Time."
- Organized a Child Awareness Program with the theme "Students Who Visualize Self-Expression Will Be More Likely to Express Themselves in Real Life."

Corps Camp Director

2021

National Youth Service Corps (NYSC) Bayelsa State

- Managed and supervised the development and execution of daily camp programs and communications with NYSC officials, instructors, and corps members.
- Provided daily oversight to insure a safe and efficient work environment in the orientation camp.

Pioneer National Ex-Official

2021

Nigerian Institute of Environmental Engineers Students' Affiliate (NIEEA)

- Established good relationship between Engineering Students and other Professional bodies
- Selected the first set of executives, Collaborate with them and community agencies to locate available resources
- Delivered one-on-one mentoring to students about Nigerian Institute of Environmental Engineers

- Designed a logo for the society to aid proper representation and recognition

National President

2020-2021

Nigerian University Engineering Students Association (NUESA)

- Represented the interest of all Engineering students in Nigeria.
- Provided of first ever Website, Chat App and E-Library with over 10,000 registered members (<https://nuesanational.org.ng>) within a year.
- Awarded electronic membership certificate and membership identification cards for all registered members.
- Organized Monthly webinars for all engineering students in Nigeria all the videos available at <https://nuesanational.org.ng>
- Organized the first ever National Engineering Summit.
- Organized the first ever National Engineering Workshop.
- Organized 10 general meeting with all engineering student in Nigeria with over 8,000 students in attendance on our national chat app.
- Carried-Out Quiz Competition and Career talk for Secondary School Students to give them firsthand information about Engineering.
- Carried-Out Paper Presentations contest and Project Exhibition among her members
- Organized COVID 19 Engineering Challenge
- Established good relationship between Engineering Students and other Professional bodies such Nigerian Society of Engineers (NSE), Council for the Regulation of Engineering in Nigeria (COREN), Association of Professional Women Engineers of Nigeria (APWEN), Federation of African Engineering Organization (FAEO) and World Federation of Engineering Organization WFEO.

Team Governor

2019

Addax Petroleum Internship Program (APIP 2019)

Lead the team of 16 in providing the Field Development Project Final Investment Decision (FID) for an onshore field. Where we were able:

- .Propose value addition to the Field through further development of the reservoir;
- Analyse the best development scenario which maximizes recovery from the reservoir at minimum cost

National Secretary-General

2019

Nigerian University Engineering Students Association (NUESA)

- Represented the interest of all Engineering students in Nigeria.
- Lead monthly meeting with the President, Create agenda and follow up on member inquires
- Collaborated with other student leaders on issues concerning Engineering students in Nigeria

Public Relation Officer

2018

Nigerian University Engineering Students Association (NUESA), LAUTECH chapter

- Planning publicity strategies and campaign
- Organized and attended promotional events such as Press Conferences
- Produced daily Presentation and Press release

Secretary

2018

American Chemical Society (ACS), LAUTECH chapter

- Collaborated with our staff advisor and community agencies to locate available resources
- Delivered one-on-one mentoring to students about American Chemical Society (ACS)
- Design a logo for the society to aid proper representation and recognition
- Scheduled quest speakers to enhance member knowledge and creating networking opportunities.

Academic Tutor

2014-2021

LAUTECH Student Union Tutorial (**Coordinator**), NUESA Tutorial (**Coordinator**), Muslim Student Society

of Nigeria (MSSN), LAUTECH Chapter Tutorial (**Tutor**) and Chemical Engineering Muslim Student, LAUTECH Chapter (**Director of Study**)

- Encouraged students in his/her mastery of the subject to feel competent in his/her understanding of the material
- Encouraged critical thinking and ensure that the student's knowledge is challenged and probed
- Promoted group problem solving and critical thinking by helping students to define issues and synthesize information

2014

Senior Prefect Boy (President)

A1 Comprehensive Grammar School, Oke Oore, Iwo, Osun State, Nigeria.

- Represented the interest of the students
- Lead a weekly meeting, create agenda and follow up on members inquires
- Implemented collective ideas to sponsors event which promote educational and social change

2008

Maintenance Prefect Boy (Labour Prefect Boy)

Vico Hope Nursery and Primary School, Iwo, Osun State, Nigeria

- Prompt, accurate and professional response to all maintenance job
- Removal and relocation of furniture from class to class
- Assisted with School improvement such as building renovation, fencing etc.

ACCOMPLISHMENT

Distinctions and Awards

- CAS Future Leaders Award - 1 of 100 successful candidates 2026
- ECS F. M. Becket Summer Fellowship - 1 of 4 successful candidates 2025
- Dow BEST Industry Symposium - 1 of 30 successful candidates. 2025
- The Industrial Electrochemistry and Electrochemical Engineering (IE&EE) Division Student Achievement Awards - 1 of 1 successful candidate 2025
- ECS-IOP Trusted Reviewer Status Award. Awarded by IOP Publishing 2024
- Award of Appreciation In Recognition of your Dedication and Exceptional Work at helping Celebrate World Refugee & Immigrant Day with LORI. Awarded by Louisiana Organization for Refugees and Immigrants 2023
- George A. Daniels Graduate Fellowship. LSU Cain Department of Chemical Engineering 2022
- Award of Appreciation. Awarded by LAUTECH Center for Research, Innovations and Discoveries. 2022
- Award of Commendation and Good Leadership Display. Awarded by the NYSC State Coordinator, Bayelsa State. 2021
- Best Undergraduate Research Award. Awarded by Bioenvironmental Water and Engineering Research Group 2021
- Award of Excellence and Impactive Leadership. Awarded by fourth NUESA Committee of Chapter President. 2021
- Most Resourceful Students. Awarded by the Class 19 Graduating Students, Ladoke Akintola University of Technology (LAUTECH) 2021
- Best Serving NUESA National President. Awarded by Nigerian Society of Engineers President, Engr. Babagana Muhammed, FNSE during NSE 2020 COnference in Abuja 2020
- Most Innovative and Outstanding Students Leader. Awarded by the executive governor of Nasarawa, Engr. Abdullahi A. Sule 2020
- Best Student in Process Design (CHE 503 and CHE 504). Awarded by Department of Chemical Engineering, Ladoke Akintola University of Technology (LAUTECH) 2020
- Award of Excellence and Impactive Leadership. Awarded by Etuk Ubongabasi, 2019 NUESA National President 2019
- Chairman of Technical Interest Group (TIG) LAUTECH Chapter. Led team LAUTECH in participating in Engineering Bow Competition 2018

- Second Runner Up In American Chemical Society, Quiz competition 2018
- Most Outstanding Students ever in CSE 331, Engineering Statistics (98/100). Awarded by Faculty of Engineering and Technology, Ladoke Akintola University of Technology (LAUTECH) 2017
- First Place Position in Interfaculty quiz competition organized by LAUTECH Student Union Government. 2015
- First Place Position in Inter-departmental quiz competition organized by NUESA LAUTECH Chapter. 2015
- A1 Grammar School ALUMNI Award For The Most Outstanding Student 2014
- Federation of Iwo Student (FISU) OAU Chapter Award For The Most Outstanding student in Iwo, Orlaoluwa and Ayedire Local Government 2014

Project

- Sustainable Chemical Production Through Electrochemical Conversion of CO₂
- Copper-Based Electrocatalysts for Electrochemical Reduction of CO₂ to C₂ Products
- Electrochemical Reduction of CO₂: A Common Acetyl Path to Ethylene, Ethanol or Acetate
- Activity and Selectivity Studies in CuSn_x Bimetallic Electrocatalysts
- Highly Selective Electrolytic Reduction of CO₂ to Ethylene
- Flowing Electrolyte Interlayer Electrolyzer (FEI-Electrolyzer) Development
- Experimental Study of Adsorption of Methylene Blue from Simulated Wastewater Using Polymeric Composite as A Low-Cost Adsorbent
- APO Field Development Project, OML 124
- Analysis of Ammonia synthesis loop process flow diagram using Excel
- Simulation of Natural Gas using Aspen-HYSYS
- Design of Automated Invoice using Excel

TECHNICAL SKILL

- **Electrochemistry & Catalysis** CO₂ Electroreduction, Cu-based Alloy Electrocatalyst Design, Membrane Electrode Assembly (MEA), Gas-Diffusion Electrode (GDE) Fabrication, Dual-Membrane Electrolyzer Design, Electrodeposition, Electroless Thin-Film Processing, Faradaic Efficiency Optimization, Electrochemical Impedance Spectroscopy
- **Process & Systems Engineering** Electrolyzer Design & Scale-Up, Product Separation Unit Design, Technoeconomic Analysis (TEA), Life Cycle Assessment (LCA), Process Optimization, Reactor/Electrode Engineering
- **Computational & Theoretical Methods** Density Functional Theory (DFT), Rational Catalyst Design, Structure-Property Correlation Modeling
- **Materials Characterization** XPS, XRD, SEM, TEM, AFM, FTIR, Raman Spectroscopy, GC-MS, NMR, Synchrotron X-Ray Techniques, Four-Point Probe, Peel Testing, Contact Profilometry
- **Software & Computational Tools** Aspen HYSYS, Aspen Plus, MATLAB, Python, Advanced Excel, SPSS, Design-Expert
- **Research & Intellectual Property** Invention Disclosure Preparation, Technical Reporting, Peer Review, Cross-Disciplinary Collaboration

HOBBIES

Travelling, Studying, Teaching, Meeting People