

## CURRICULUM VITAE

### Professor Unachukwu Godwin Ogechi



**Name:** UNACHUKWU, Godwin Ogechi,

**Rank:** Professor (Energy & Power)

**Nationality:** Nigerian

**Date of birth:** 14<sup>th</sup> September, 1957

**State of Origin:** Imo State

**LGA:** Ikeduru

**Marital Status:** Married with Children




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University of Nigeria, Nsukka

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**Positions Held:** [Ag. Director](#)  
National Centre for Energy Research & Development (NCERD)  
University of Nigeria, Nsukka: Oct 4, 2009-August, 2011.

[Head:](#) Energy Management and Environment Unit, National Centre  
for Energy Research and development, University of Nigeria,  
Nsukka 2005- March 1<sup>st</sup> 2015.

### Schools Attended:

-  Holy Ghost College Owerri, Imo State
-  University of Nigeria, Nsukka
-  University of Port Harcourt, Rivers State

### Overseas Training Courses

-  University of Twente, Enschede-The Netherlands
-  Renewables Academy AG / Beuth University of Applied Sciences Berlin

### Present Research Areas

- ✚ Energy Efficiency Programs “Bench Marking Energy Consumption to Determine Energy Savings Potential in the University of Nigeria”: TETFUND Project
- ✚ Solar Energy & other Renewables
- ✚ Domestic Cook stoves Development
- ✚ Energy Policy

### **Educational Qualifications & Certificates**

- ❖ **BSc. Hons** (Industrial Chemistry) Nigeria, 1982
- ❖ **MEng** (Fuels & Energy Engineering) Department of Petroleum Engineering, University of Port Harcourt, Rivers State 1991
- ❖ **PhD** (Energy & Power) Department of Mechanical Engineering, University of Nigeria, April 2005
- ❖ Certificate in “**Energy Management and Cleaner Production in Small and Medium Scale Industries**” Awarding Body: University of Twente Enschede- The Netherlands 2006
- ❖ Certificate in “**Energy Efficiency in Industry, Commerce and Buildings**” Awarding Body Renewables Academy RENAC , Berlin Germany
- ❖ Certificate in “**Financing Renewable Energy Projects**” Awarding Institution: Institute of Distance Learning, Beuth University of Applied Sciences/ Renewables Academy RENAC, Berlin Germany.
- ❖ Certificate in “**International Energy Policy**” Awarding Institution: Institute of Distance Learning, Beuth University of Applied Sciences/ Renewables Academy RENAC, Berlin Germany,
- ❖ **Overview of Renewable Energy and Energy Efficiency Technologies**- Institute of Distance Learning, Beuth University of Applied Sciences/ Renewables Academy RENAC, Berlin Germany.
- ❖ Certificate: “**Train the Trainers**”-Capacity Building for Energy Auditing, UNIDO/ECN 2003 and 2004 & other certificates from professional bodies

### **Career Records**

1. **Wages clerk (1978):** George Wimpey International Company Port Harcourt
2. **Teacher 11- (1983):** (Physics & Chemistry) National Youth Service Corp Alari High School Ifekuwajo Idiroko Ogun State.

3. **Teacher 11 (1983-1985):** (Physics, Chemistry & Mathematics) Imo State Schools Board, Girls Secondary School Amakohia Ikeduru.
4. **Research Officer 11 (1985-1988)-** Projects Development Institute (PRODA) Enugu, Federal Ministry of Science and Technology, Coal Utilization Technology
5. **Part-time Lecturer (1987)-**Department of Chemical Engineering Institute of Management and Technology Enugu
6. **Research Officer 1(1988-1991):** Projects Development Institute (PRODA) Enugu, Federal Ministry of Science and Technology: Coal Briquetting, Coal tar processing etc
7. **Senior Research Officer (1991- August 8,1994):** Projects Development Institute (PRODA) Enugu, Federal Ministry of Science and Technology
8. **Lecturer1/ Research Fellow 1 (August, 8 1994-2000):** Department of Mechanical Engineering /National Centre for Energy Research and Development, University of Nigeria Nsukka
9. **Senior Lecturer/ Senior Research Fellow (2000-1<sup>st</sup> Oct 2010)** Department of Mechanical Engineering /National Centre for Energy Research and Development University of Nigeria, Nsukka
10. **Professor (Energy & Power)** Department of Mechanical Engineering University of Nigeria, Nsukka. **(2010-date)**
11. **Former Head,** Energy Management and Environment, National Centre for Energy research and Development, University of Nigeria, Nsukka till February 2015.
12. **Ag Director- Oct 4. 2009-August 2011:** National Centre for Energy Research and Development, University of Nigeria, Nsukka

#### **Some Training Courses Attended**

- 1) “Train the Trainer Energy Audit/ Industrial Energy Walkthrough” organized by the United Nations Industrial Development Organization/ Energy Commission of Nigeria Lagos 14-26 July 2003.
- 2) “Train the Trainer” A one month “Energy Efficiency/Industrial Energy Audit Walkthrough Training Programme” organized by the United Nations Industrial Development Organization/ Energy Commission of Nigeria Abuja, may 2004.
- 3) “Energy Management and Cleaner Production in Small and Medium Scale Industries” **University of Twente, Enschede-The Netherlands, 23 October-24 November 2006.**

- 4) Advanced Productivity Tool in MS/Word, Excel and Power Point, AFRIHUB, UNN, 2006
- 5) Training Course on the Application of Renewable Energy for Production and Processes of Plant and Animal Products in Agricultural Sector National Centre for Energy R&D UNN Aug 27-3 Sep.2007
- 6) NCERD/Georgia Institute of Technology, University Centre of Excellence for Photovoltaic Research and Education, National Workshop on Solar Cell Design, processing and Modeling, held at the National Centre for Energy Research and Development, University of Nigeria, Nsukka February, 25-2<sup>nd</sup> March 2007.
- 7) ComSim Group Educational Services Training Programme on General MATLAB, SIMULINK, Numerical Methods with MATLAB; National Centre for Energy Research and Development, University of Nigeria, Nsukka, May 8-9 2007,
- 8) Course 1 and 11 on Resource Mobilization and Funding Support For Universities, Other Higher Institutions and Research Centres Organized by Global Centre for Resource and Policy Development in Collaboration with Kentay Bumper Harvest at Obafemi Awolowo University Ile-Ife October 15-18,2008.
- 9) Leadership Training Retreat: Change for the Positive organized by the Management of the University of Nigeria, held at Grand Hotel Asaba, Delta State 28-30<sup>th</sup> March 2010.
- 10) Capacity Building in Energy Efficiency in Industry, Commerce and Building under Project in the context of the International Climate Change Initiative (ICI): Implementing Know-How Transfer Renewable Energy and Energy Efficiency for Political and Economic Decision Makers from Emerging and Developing Countries as well as Countries of the MENA region; RENAC Berlin, Germany 4<sup>th</sup>-12<sup>th</sup> December, 2010
- 11) Certificated Distance Learning Programme, RENAC/ Beuth University Berlin Germany, on the following courses (1) Overview of Renewable Energy and Energy Efficiency Technologies (2) International Energy Policy and (3) Financing Renewable Energy projects.
- 12) Certificate of Participation: Three-day Procurement Capacity Building for Energy Commission of Nigeria, 22nd-24th August 2011

## **Publications**

- 1) Izuchukwu Francis Okafor; Godwin Ogechi Unachukwu; Anthony Okay Odukwe “ Measuring energy efficiency of public passenger road transport vehicles in Nigeria (2014) <http://dx.doi.org/10.1016/j.tranpol.2014.05.014>.Elsevier [www.elsevier.com/locate/tranpol](http://www.elsevier.com/locate/tranpol)

- 2) Nnaji, C.E, Nnaji, M and Unachukwu, G O “Demographic Variables, Energy Intensity, Environmental Degradation and Economic Growth Nexus in the Nigerian Economy” Journal of Environmental Science, Computer Science and Engineering & Technology, www.jecet.org 2014
- 3) Unachukwu Godwin Ogechi, A.S Sambo and Zarma H Ismaila “The Nigerian National Energy Policy and the World Energy Trilemma: Dealing with the Challenges” Daegu South Korea 22<sup>nd</sup> WEC Publications 2013.
- 4) I.F Okafor and G O Unachukwu “ Performance Evaluation of Nozzle type Improved Wood Cook Stove” International Journal of Scientific & Engineering Research, Volume 4, Issue4, April 2013 ISSN2229-5518
- 5) Okoroigwe, E.C., Ofomatah, A.C, Oparaku, N.F and Unachukwu, G O “ Production and evaluation of activated carbon from palm kernel shells(PKS) for economic and environmental sustainability” Academic Journals vol.8 (19) pp.1036-1041, 23 May 2013 International Journal of Physical Sciences
- 6) Edmund. C Okoroigwe, Zhenglong Li, Godwin Unachukwu, Thomas Stuecken, Christopher Saffron (2011) “Thermochemical Conversion of Palm Kernal Shell (PKS) to Bio-Energy” Proceedings of the ASME 2011 5<sup>th</sup> International Conference on Energy Susutainability August 7-10. Washington DC
- 7) Godwin Ogechi Unachukwu “Energy Savings Opportunities at the University of Nigeria, Nsukka. Journal of Energy in Southern Africa Volume 21, Number 1- 2010
- 8) Nwaoga, J A, Okonkwo, W I and Unachukwu, G O “Exploring the Photo Sensitivities of Mimosa Pudica for Solar Cell Production” Proc. 26<sup>th</sup> European Photovoltaic Solar Energy Conference and Exhibition Germany 2011
- 9) P.N. Nwosu, O U Oparaku, W.I Okonkwo, G O Unachukwu and D. Agbiogwu “Experimental Study of a Thermosyphon Solar Water Heater Coupled to a Fibre-Reinforced Plastic (FRP) Storage Tank ISSN 0003-701X, Applied Solar Energy 2011 Vol 47, No 3 pp 207-212 c Allerton Press, Inc
- 10) F I Abam, G O Unachukwu “Vehicular Emissions and Air Quality Standards in Nigeria” European Journal of Scientific Research ISSN 1450-216 vol. 34 No 4 pp 550-560; <http://www.eurojournals.com/ejsr.htm> 2009
- 11) G O Unachukwu and C N Anyanwu “Small-Scale Incinerator for Domestic Hot Water Generation from Municipal Solid Wastes” European Journal of Scientific Research ISSN 1450-216 X Vol. 39 Issue 33 pp 430-439, <http://www.eurojournals.com/ejsr/htm>
- 12) F. I Abam, D C Onyejekwe and G O Unachukwu “The effect of Ambient Temperature on Components Performance of an In-Service Gas Turbine Plant Using Exergy Method” Singapore Journal of Scientific Research ISSN 2010-006X/DOI:10.3923/sjsr @ 2010 Science Alert.

- 13) Godwin Ogechi Unachukwu, "Potential Economic and Social Benefits of Promoting Energy Efficiency Measures in Nigeria" DOI: 10.1007/s 12053.011-9126-6 Energy Efficiency, Springer.com Netherlands.
- 14) F. I Abam, D C Onyejekwe and G O Unachukwu " Effect of Operating Parameters and Compressor Inlet Temperature on Exergetic Performance of an In-Service Gas Turbine Plant" International Journal of Applied Engineering Research ISSN 0973-4562 volume 5 Number 16 pp 2775-2784.
- 15) S N Agbo; G O Unachukwu "Design and Performance Features of a Domestic Thermosyphon Solar Water heater for an Average-sized Family in Nsukka Urban" Trends in Applied Sciences Research 2 (3): 224-230, ISSN 1819-3579© Academic Journals.
- 16) G O Unachukwu "Energy Efficiency Measures Investigation in Cement Company: BCC Case Study" Nigerian Journal of Renewable Energy vol. 10 Nos1&2 pp 85-92 2002
- 17) H C Okolo; G O Unachukwu; P C Oragwu "Production of Smokeless Solid Fuel and Chemicals through Low Temperature Carbonization: PRODA's Experience" Chapter viii in "Nigerian Coal: A Resource for Energy and Investments", Mufadenic Ltd Lagos publishers, pp 156-173. 1996
- 18) Unachukwu G O; N.C Onyemelukwe "Devolatization Studies of Nigeria Coal by Thermogravimetric Analysis" Nigerian Journal of Renewable Energy vol.7 Nos 1 & 2 pp 55-61.1999
- 19) G O Unachukwu "Energy Efficiency: Key to Sustainable Industrial Development in Africa" Nigerian Journal of Solar Energy vol. 19.2, pp. 54-59.
- 20) Mkpadi M C; G O Unachukwu "Biofuel Development in Nigeria" Energy and Environment; Proc. 1<sup>st</sup> Renewable Energy Congress, Reading U K 1990; P.2057
- 21) Ofoefule A. U, Unachukwu G O and Oparaku O U "Comparative Performance Evaluation of Charcoal Cookstoves" Nigerian Journal of Solar Energy vol 16 pp 187-194.
- 22) G O Unachukwu; S O Onyegegbu "Electrical Energy Consumption Pattern of a Cement Company in Nigeria" Proc. 4<sup>th</sup> International Conference on Power Systems Operations and Planning (ICPSOP2000) pp 243-247
- 23) N.F Oparaku; G O Unachukwu; C. E Okeke "Design, Construction and Performance Evaluation of Solar Cabinet drier with an Auxiliary Heater" Nigerian Journal of Solar Energy vol. 14 pp 41-50.2003
- 24) S N Agbo; G O Unachukwu "Performance Evaluation and Optimization of the NCERD Thermosyphon Solar Water Heater" Proc. World Renewable Energy Congress, August 19-25, Florence Italy ix Elsevier Pub.UK ISBN 00844671X.2006
- 25) G O Unachukwu" Entrenching the Culture of Energy Management and Efficiency Measures for Sustainable Industrial Development in Africa" Proc. Int'l W/shop on Renewable Energy for Sustainable Development in Africa Nsukka 2007, pp 193-199.

- 26) Agbo S N; Unachukwu G O; Okeke, C E ; Enibe, S O “Solar Water Heating for Resident University Students” Nigerian Journal of Solar Energy vol. 15 pp 85-92.2005
- 27) Nnaji, M and Unachukwu G O “Energy Efficiency and the Nigerian Economy: The Need for an Integrated Approach” Journal of Solar Energy Vol. 21 pp179-181 2010
- 28) I F Okafor and G O Unachukwu “Renewable Energy and Energy Efficiency for Sustainable Agricultural Development in Nigeria” Nigeria Journal of Solar Energy. Vol 21 ISSN 0794-9537 pp 173-178 2010
- 29) Nnaji, M Nnaji, C. E and Unachukwu G O “Solar Water Pumping for Sustainable Agricultural Development in Nigeria” Nigerian Journal of Solar Energy vol 21, pp 169-172 2010
- 30) Chigasa C Uzoma, Cynthia N. Ibeto, Chidinma G Okpara, Okala O Nwoke, Innocent O Obi, Chibueze E Nnaji, Ogbonna U Oparaku and Godwin O Unachukwu “Level of Awareness and Utilization of Biogas Technology in South-Eastern Zone of Nigeria” International Journal of Applied Agricultural Research ISSN 0973-2683 vol.5 Number 5, pp 569-574 [http:// www.ripublication.com/ijaar.htm](http://www.ripublication.com/ijaar.htm)
- 31) Nnaji, M and Unachukwu, G O “A Review of Energy Efficiency Measures in Agro Based Industries” Nigerian Journal of Solar Energy. Vol. 19.pp. 74-79 2008
- 32) I.F Okafor and G. O Unachukwu “The Power Reform Agenda: The Role of Energy Efficiency and Demand-Side Management in the Improvement of Current Electricity Situation in Nigeria” Journal of Engineering Science and Technology, vol. 4 Number 3, 2009 Duncan Science
- 33) Engr. I Yusuf; A A Mati; G O Unachukwu “Monitoring Energy Use in Small and Medium Scale Industries” proc. NSE Electrical Division Conference pp 31-33. 2003
- 34) I. F Okafor, G O Unachukwu and O.A Odukwe “Measuring Energy Efficiency of Public Passenger Road Transport Vehicles in Nigeria” Journal of Engineering Research, University of Lagos
- 35) I.F Okafor and G O Unachukwu “Need for Climate Change Mitigation in Nigeria through Energy Efficiency Practices in Industrial Sector”- Proc. National Conference on Climate Change and Nigerian Environment (NCCCNE) UNN 29<sup>th</sup>-2<sup>nd</sup> July 2009’
- 36) Uzoma, C C; Nnaji, C E; Ibeto C N; Okpara C G; Nwoke, O O; Obi I O; Unachukwu G O and Oparaku O U Renewable Energy Penetration in Nigeria: A case study of the South –East Zone “Continental Journal of Environmental Sciences 5(1):1-5 ISSN: 2141-4084 <http://www.wiloludjournal.com>
- 37) C. N Ibeto, C.N Anyanwu, C.G Okpara, I.S Eze and G O Unachukwu “Distribution of Heavy Metals in some Sub-bituminous Coals from Nigeria “ J. Chem. Soc. Nigeria. Vol. 36. No.2 pp95-101

- 38) C. N Ibeto, C.N Anyanwu, C. G Okpara, I.S Eze and G O Unachukwu “Assessment of Heavy Metals Concentration of Petrol Samples Utilized in Nigeria” Conf. Proc. Chem. Soc. of Nigeria.,
- 39) Prof S.O Onyegebu, Dr D C Onyejekwe, Dr O V Ekechukwu, Dr S O Enibe, Dr O U Oparaku, Dr (Mrs) R U Osuji, Mr. G O Unachukwu “ Environmental Benefits of Using Renewable Energy Sources in Nigeria “ Technical Report Submitted to UNESCO, June 1997.

#### **Some Presented Conference/ Workshop Papers**

- 1) Unachukwu Godwin Ogechi, A.S Sambo and Zarma H Ismaila “*The Nigerian National Energy Policy and the World Energy Trilemma: Dealing with the Challenges*” Paper presented at the 22<sup>nd</sup> World Energy Congress Daegu, South Korea 2013.
- 2) Unachukwu Godwin O “ *Energy Efficiency and Conservation as Instruments for Sustainable Energy Development*” Invited paper delivered at a One-day National Workshop on Energy Access for Sustainable Development organized by the Energy Commission in collaboration with the Nigerian National Committee of the World Energy Council, Rockview Hotel Abuja, 3<sup>rd</sup> September 2013
- 3) Unachukwu Godwin O “ *Global Trends in Solar Energy Development and the Nigerian Experience*” An invited paper presented at the Demonstration Workshop on Green Energy (Solar Power Systems) organized by the Centre for Entrepreneurship and Development (CERD) University of Nigeria Nsukka, June 2013
- 4) Unachukwu Godwin O “*Solar Energy, Financing, Tariffication and Policy in Africa*” An invited paper delivered at the 1<sup>st</sup> International Conference on Solar Energy: Issues, potentials and Constraints for Africa organized by Zie and INES Ouagadougou Burkina Faso December, 13-15, 2012
- 5) Unachukwu Godwin O “*The Role of Energy Efficiency and Conservation in Industrial/Residential/Commercial sectors in Nigeria*” paper delivered at a one-day Awareness Workshop on Energy Consumption in the Domestic and Industrial sectors organized by the Energy commission of Nigeria, Enugu 22<sup>nd</sup> November, 2012
- 6) Unachukwu Godwin O “*Energy Efficiency and Conservation as Instruments for mitigating Climate Change*” Paper delivered at a 3-Day Training Workshop on Application of RE Devices and Climate Change mitigation for Rural Women, Farmers and Amnesty Youths in Delta State organized by the Energy Commission of Nigeria in



collaboration with UNESCO and Delta state government Melrose Hotel Asaba 9-13 July 2012

- 7) Unachukwu Godwin **O** *“Harnessing Renewable Energy Resources for National Industrial Growth”* An invited paper delivered at the International Conference on Renewable and Alternative Energy, organized by the Renewable and Alternative Energy Society of Nigeria in conjunction with the Renewable and Alternative Energy Research Growth FUTO Owerri, August 7-11, 2011.
- 8) Unachukwu G O –*“Applications of Energy Efficiency Measures in Residential and Public Building Sector”*. **Paper presented** at a 3-day National workshop on Application of Renewable Energy Devices and Climate Change Mitigation for Rural Women and Farmers within South-East Zone Women Development Centre Akwa 28<sup>th</sup>-30<sup>th</sup> June 2010.
- 9) Unachukwu G O; Oparaku, O U *“Potential Economic and Social Benefits of Energy Efficiency Measures in Nigeria”* Paper Presented at FUTO Alternative Energy April 2009.
- 10) Unachukwu G O *“Obstacles to Sustainable Energy Development in Sub-Saharan Africa”* Paper presented at the W/Shop on Sustainable Renewable Energy Development in Sub-Saharan Africa. Abuja
- 11) Unachukwu G O –*“The Fundamentals of Energy Audit in the Transport Sector”*, Paper presented at the National W/shop on Energy Savings in the Transport Sector RockView Hotel 30<sup>th</sup> Nov-1<sup>st</sup> Dec 2009.
- 12) Unachukwu G O – *The Role of Energy Managers in Achieving Industrial Energy Efficiency and Conservation*, **Paper presented** at National Workshop for Energy Managers Organized by the Energy Commission of Nigeria, Sheraton Hotel & Towers 18<sup>th</sup> Dec 2009
- 13) Unachukwu G O – *“The fundamentals of Energy Audit in Refineries and Petrochemical Companies”* **Paper presented** at the National W/shop on Industrial Energy Savings in Refineries and Petrochemicals, Abuja, 17<sup>th</sup> Dec 2009
- 14) Unachukwu G O – *“The Role of Electric Utilities in Energy Efficient Lighting”* **Paper presented** at the National Workshop on Efficient Lighting Systems; Organized by the Energy Commission of Nigeria, Sheraton Hotel & Towers 16<sup>th</sup> Dec 2009
- 15) Unachukwu G O – *“The Role of Energy Efficiency and Conservation Programmes in the Industrial Sector of Nigeria”*, paper presented at the National W/shop on Industrial Energy Savings, Organized by the Energy Commission of Nigeria, Sheraton Hotel & Towers 15<sup>th</sup> Dec 2009

- 16) Unachukwu G O- ***“Energy Savings Strategies in the Household Sector”***, Paper presented at the National W/shop on Household Energy Savings Rockview Hotel Abuja, Dec, 10<sup>th</sup> 2009
- 17) Unachukwu G O ***“Energy Efficiency Programme for the Sustainable Development of the University of Nigeria Nsukka”*** paper presented at the Annual Conference of the Solar Energy Society Abuja 2008.
- 18) Unachukwu, G O; Oparaku N F Ofoefule A and Uzodinma E ***“Woodfuel Stoves Research, Development and Outreach in Nigeria”*** paper presented at the W/shop and Exhibition on Improved Woodfuel Stove, International Centre for Environment and Development Abuja. 2008.
- 19) Unachukwu G O ***“Energy Cost Calculations”*** Paper presented at the 1<sup>st</sup> Zonal W/shop on Energy Cost Saving Measures in Nigerian Industries NCERD UNN 2005.
- 20) Agbo S N; Unachukwu G O ***“Design and Performance Features of a Domestic Thermosyphon Solar Water Heater for Average Size Family in Nsukka Urban”*** Paper presented at the annual conference of the Nigerian Institute of Physics OAU Ife 2005.
- 21) Unachukwu G O ***“How to Organize and Analyze Energy Consumption Data in Relation to Efficiency of Use”*** paper Presented at the 1<sup>st</sup> Zonal W/Shop on Energy Cost Saving Measures in Nigerian Industries NCERD UNN 2005.
- 22) Unachukwu G O –***“Current Practices in Industrial Energy Utilization and Efficiencies”*** in-house seminar paper presented at Energy Commission of Nigeria 2004.
- 23) Unachukwu G O ***“Monitoring Energy Use in Industry: Textile”*** in-house seminar paper presented Energy Commission of Nigeria 2004.
- 24) G O Unachukwu; S O Onyegbegbu (2001) ***“Energy Audit of Cement Company in Nigeria”*** Proc. The 7<sup>th</sup> Arab International Solar Energy Conference& Regional World Renewable Energy Congress, Sharjah UAE
- 25) Unachukwu G O ***“Basic Principles of Solar Energy Conversion”*** Paper Presented at the National W/Shop on Solar Brooding NCERD UNN 2000.
- 26) Unachukwu G O; S O Onyegbegbu ***“Design and Fabrication of High Efficiency Cook-Stove”*** Paper presented at the National Solar Energy Conference Makurdi 1997.
- 27) Unachukwu G O; Mkpadi M C and Onyegbegbu S O ***“Hybrid Fuel Briquettes Developed in Nigeria for Domestic Use”*** Paper presented at the International Conference on Renewable and Alternative Energy Technologies, NCERD University of Nigeria, Nsukka 1995.

- 28) Unachukwu G O “*Basic Principles of Solar Energy Conversion*” Paper presented at the National Workshop on Solar Brooding, NCERD University of Nigeria, Nsukka
- 29) Unachukwu G O “*Overview of Energy Efficiency Measures in the Industries*” seminar Paper presented at the Energy commission of Nigeria.
- 30) G O Unachukwu, N C Onyemelukwe; H C Okolo “*Basic Industrial Chemicals from Coal Carbonization, PRODA’s Experience*” Paper Presented at the 11<sup>th</sup> International Conference of the Chemical Society of Nigeria Calabar, 1987.

### **Some Workshops and Conferences Attended**

Workshops and Conferences within and outside Nigeria some of which are listed below.

- 1) Renewable and Alternative Energy Society of Nigeria, University of Nigeria, 2015
- 2) The petroleum Industry and the Challenges of the 1990s, August 22-24<sup>th</sup> P.T.I Conference Centre Effurun Warri organized by Society of Petroleum Engineers (Nigeria Council)
- 3) Workshop on Strengthening Parliamentary Capacity for Renewable Energy Policy and Legislation in ECOWAS Sub-Region, ECOWAS Secretariat Abuja, 2006
- 4) World Energy Council -Africa Forum on Energy Efficiency(Making Energy Efficiency a Reality in Africa, not a Myth 8-12 Abuja Jan, 2007
- 5) 20<sup>th</sup> World Energy Congress” Energy Future in an Interdependent World” Rome Italy 11-15 Nov 2007
- 6) International W/Shop on Renewable Energy for Sustainable in Africa, National Centre for Energy Research and Development in Collaboration with Italian Agency for New & Renewable Energy Technologies –July 29-August 1, 2007.
- 7) Workshop on Preparation and Documentation for NSE Professional Interview organized by Nigerian Society of Engineers, Enugu Branch 8<sup>th</sup> August 2007
- 8) Workshop on Improved Wood Fuel Stove and Exhibition Abuja, 5-6 Nov 2007
- 9) World Energy Council Executive Assembly Meeting Mexico 2-7 November 2008.
- 10) W/Shop on Creating Legislative Framework and Awareness for Use of Alternative Energy for Sustainable Development in Nigeria organized by ECN/ UNESCO, NATCOM-UNESCO Calabar 14<sup>th</sup>-15<sup>th</sup> October 2009.
- 11) International Conference on Renewable and Alternative Energy, Federal University of Technology Owerri, April 2009

- 12) Workshop on “Cleaner Fossil Fuels Technologies in Africa, Challenges and Opportunities” Organized by WEC Committee on Cleaner Fossil Fuels Systems 6<sup>th</sup>-7<sup>th</sup> April Abuja 2009.
- 13) International W/Shop on “Promoting Coal for Power Generation” Organized by ECN/ Enugu State Govt. 27<sup>th</sup>-28<sup>th</sup> April 2009.
- 14) Workshop on Sustainable Energy Development in Sub-Saharan Africa” organized by ECN/Biodiesel Nigeria Ltd Abuja, 19<sup>th</sup>-20<sup>th</sup> May 2009.
- 15) National Workshop on Industrial Energy savings, ECN Abuja, 15<sup>th</sup> Dec 2009
- 16) National Workshop on Efficient Lighting Systems Sheraton hotel and Towers Abuja, 16<sup>th</sup> Dec 2009
- 17) National Workshop on Creating Awareness for use of Automotive Biodiesel and Bioethanol as Fuels for Vehicles in Nigeria Dec 2009
- 18) International Seminar on Renewable Energy Theme: Energy Conservation and Efficient Solar Application in Nigeria Protea Hotel Abuja, 3<sup>rd</sup> June 2010.
- 19) National workshop on Applications of Renewable Energy Devices and Climate Change Mitigation for Rural Women and Farmers within South-East Zone, Women Development Centre Akwa 28<sup>th</sup>-30<sup>th</sup> June 2010.
- 20) A 2-Day National workshop on Energy Efficiency and Modern Bio-Fuels for Climate Change Mitigation in Nigeria, Hydro Hotel Minna, Nigeria State 20<sup>th</sup>-21<sup>st</sup> July 2010.
- 21) Workshop on Preparation and Documentation for NSE professional interview 2007
- 22) 1<sup>st</sup> National Forum on Renewable Energy, Energy Efficiency and Conservation Abuja

**Work Activities:**

- ❖ Teaching undergraduate courses, Thermodynamics, Combustion and Power Plant Engineering, Postgraduate course in Energy Management
- ❖ Undergraduate & Post graduate project supervisions
- ❖ Solar Energy
- ❖ Energy Efficiency & Energy Management and Environment.
- ❖ Energy Policy
- ❖ Domestic Cook-Stoves
- ❖ Energy systems development and Performance evaluations
- ❖ Coal Utilization

**Industrial Energy Audit Walkthrough and Energy Efficiency Experience**

Participated in UNIDO Energy Audit Walkthrough/Efficiency programmes in the following industries and establishments.

- ❖ ENPEE industries Ltd Lagos;
- ❖ Copulas Nig. Ltd Lagos;
- ❖ NASCO Household Products, & NASCO Foods Jos;
- ❖ Cement Company of Northern Nigeria; Uniform Industry & INCO Beverages Nig Ltd Sokoto;
- ❖ Nigerian Cement Company (NIGERCEM) Nkalagu;
- ❖ ISO Glass Plc. Ibadan;
- ❖ Nigerian Breweries 9<sup>th</sup> Mile Corner &; Enugu Brick Works Enugu;
- ❖ Sunseed Industries Ltd, Zaria.
- ❖ University of Nigeria, Nsukka

### **Foreign Countries Visited**

1. China: 2016-Technology Visit to Huawei Industries.
2. Abidjan Côte d'Ivoire 2015- Participation on AfDB's Towards a New Deal on Energy for Africa: High Level Consultative Stakeholder Meeting
3. South Korea 2013: World Energy Congress presented a paper on "The Nigeria National Energy Policy and the World Energy Trilemma".
- Ouagadougou, Burkina Faso 2012: 1<sup>st</sup> International Conference "Solar Energy: Issues, Potentials and Constraints for Africa"
4. Canada 2011 Nigeria Energy Trade Mission to Canada; Visited Montreal, Winnipeg, Calgary, Edmonton, British Columbia, Ontario, Ottawa
5. Germany (2010): Training Program on Energy Efficiency in Industry, Commerce & Building
6. Canada (2010): World Energy Congress: Responding Now to Global Challenges; Energy in transition for a living planet
7. U.S. A (2008 & 2010) en route to & from World Energy Council in Mexico and Canada respectively.
8. Mexico (2008): Executive Meeting of the World Energy Congress
9. Rome-Italy (2007): World Energy Congress, Energy Future in an Interdependent World
10. The Netherlands 2006): Training on Energy Management and Cleaner Production in Small and Medium Scale Industries, University of Twente

11. Ghana (2000) Participation at the 4th International Conference on Power Systems Operation and Planning (ICPSOP), Restructuring the Power System for the Year 2000 and Beyond.

### **Membership of Societies**

- 1) Energy Institute UK
- 2) Member Solar Energy Society of Nigeria
- 3) Member NSE Nsukka Branch
- 4) Member-Nigerian National Committee World Energy Council

### **Consultancy Services: GIZ, FOSAB Global Services, NAPSAS**

- Solar Energy programs
- Energy Efficiency Measures & Surveys
- Solar Water Heating Schools Program Surveys

### **Hobbies**

Reading, Sports (football), Watching /listening to news, listening to good music