

UNIVERSITY OF NIGERIA, NSUKKA, NIGERIA
DEPARTMENT OF MECHANICAL ENGINEERING
CURRICULUM VITAE OF ENGR. **EDMUND CHIJOKE OKOROIGWE**

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Edmund Chijioke Okoroigwe is a Nigerian born on 2nd February 1966. Currently I am a Senior Lecturer in the Department of Mechanical Engineering, University of Nigeria, Nsukka. I carry out research on renewable energy integration in electricity generation and community development.

I have obtained the following qualifications from different institutions starting from the most recent.

Institution	Year of graduation	Degree
University of Nigeria, Nsukka, Enugu State, Nigeria	2014	PhD
University of Nigeria, Nsukka, Enugu State, Nigeria	2005	M.Eng
Federal University of Technology, Owerri, Imo State, Nigeria	1994	B.Eng
Archdeacon Dennis Junior Seminary, Mbieri, Imo State, Nigeria	1987	WASC

Current and Previous Work Experiences are as follows:

- i) **Aug 2017- Date Head of Department**
Department of Mechanical Engineering, University of Nigeria, Nsukka
- ii) **Jun 2016 – date** Department of Mechanical Engineering, University of Nigeria, Nsukka
Position Senior Lecturer/Researcher
- iii) Dec 2014 – 2016 Energy Research Centre, University of Cape Town, South Africa
Position Postdoc Fellow
Renewable energy application to gas turbine cycle for carbon reduction
- iv) **2015** National Centre for Energy Research and Development,
University of Nigeria, Nsukka
Position Senior Research Fellow
- v) Oct. 2009 -2015 National Centre for Energy Research and Development, University of
Nigeria, Nsukka.
Position Research Fellow I
- vi) 2006 - 2009 National Centre for Energy Research and Development,
University of Nigeria, Nsukka.
Position Research Fellow II
- vii) 2006 – 2014 Voluntary service, Department of Mechanical Engineering,
University of Nigeria, Nsukka
Position Lecturer II (Postgraduate Studies)
- viii) 2003- 2006 Diocesan Education Board, St Cyprian’s Girls’ Sec. School, Nsukka
Position: Senior Physics Teacher

Academic Publications (2006 – date)

My research activities have resulted in the following publications:

S/No	Title of Paper	Type of Publication	IF
2006 1.	OKOROIGWE E. C; Iloeje, O. C; Enibe, S. O. and Eze, J. I. <i>Design, Construction and Performance Evaluation of a 1200 Litre plastic Biodigester</i> : Nigerian Journal of Solar Energy. Volume 16, pp 170 – 186, 2006	Journal	

	2.	OKOROIGWE, E. C. and Eze, J. I. <i>Comparative Analysis of Cost of Using Biogas</i> : Nigerian Journal of Solar Energy. Volume 16, pp 231 – 235, 2006.	Journal	
2007	3.	S. N. Agbo and E. C. OKOROIGWE . <i>Analysis of Thermal Losses in the flat-plate Collector of a Thermosyphon Solar Heater</i> . Research Journal of Physics 1 (1): 34 – 41, 2007. ISSN 1819 – 3463. 2007 Academic Journals. www.academicjournals.net	Journal	
	4.	E. C. OKOROIGWE . <i>Application of Biomass Technology in Sustainable Agriculture</i> : Trends in Applied Sciences Research 2(6): 549 – 553, 2007. ISSN 1819 – 3579. 2007 Academic Journals. www.academicjournals.net	Journal	
	5.	E. C. OKOROIGWE and S. N. Agbo. <i>Gas Evacuation Effect on the Quantity of gas Production in a Biogas Digester</i> : Trends in Applied Sciences Research 2(3): 246 – 250, 2007. ISSN 1819 – 3579. 2007 Academic Journals. www.academicjournals.net	Journal	
	6	OKOROIGWE, E.C ; ANYANWU CN, OPARAKU OU. Status of Biomass Gasification in Nigeria. Proceedings of the 1 st International Workshop on Renewable Energy for Sustainable Development of Africa (IWRESDA), July 30 – August 1, 2007 pp 132 – 136.	Conference	
2008	7	E. C. OKOROIGWE , C. N. Anyanwu and O.U. Oparaku. Maximizing the Utilization of Nigeria’s Biomass Potential Through Gasification Technology. Nigerian Journal of Solar Energy. Vol 19 (2), 2008. pp 16-19	Journal	
	8	E. C. OKOROIGWE , N. F. Oparaku and O.U. Oparaku, Harnessing Nigeria’s Biomass Potential for Sustainable Economic Development. Proceedings of The National Engineering Conference and Annual General Meeting, Nigerian Society of Engineers, 2008 2008 Yankari Bauchi State, PP 247 – 260	Conference	
	9	E. C. OKOROIGWE , J. I. EZE AND O.U.OPARAKU. Field Comparison of Biofertilizer and Chemical Fertilizer Application on Maize Production. Nigerian Journal of Solar Energy. Vol 19 (1), 2008. pp 55-57.	Journal	
2010	10	E. C. OKOROIGWE , C. N. Ibeto and C.G. Okpara: Comparative Study of Potential of Dog Waste For Biogas Production. Trends in Applied Sciences Research 5(1): 71-99, 2010	Journal	
2011	11	Eze I.S., A.U. Ofoefule, E.O.U. Uzodinma, E.C. OKOROIGWE , N.F. Oparaku, J.I. Eze and O.U. Oparaku (2011). Characterization and Performance Evaluation of 11M ³ Biomass Plant Constructed At National Centre for Energy Research and Development, University of Nigeria, Nsukka, <i>Cont. J. Ren. Energy 2 (1): 1-6</i> .	Journal	
	12	Edmund C. Okoroigwe ,; Zhenglong Li; Godwin Unachukwu; Thomas Stuecken; Christopher Saffron. Thermochemical Conversion of Palm Kernel Shell (PKS) To Bio-Energy. Proceedings of the ASME 2011 5th International Conference on Energy Sustainability ES2011 August 7-10, 2011, Washington, DC, USA. Paper no ES2011-54690	Conference	
2012	13	Edmund Okoroigwe , Zhenglong Li, Thomas Stuecken, Christopher Saffron and Samuel Onyegegbu. Pyrolysis of <i>Gmelina arborea</i> Wood for Bio-oil/Bio-char Production: Physical and Chemical Characterisation of Products. Journal of Applied Sciences Year: 2012 Volume: 12 Issue: 4 Page No.:	Journal	0.67

		369-374. DOI: 10.3923/jas.2012.369.374 http://scialert.net/jindex.php?issn=1812-5654		
	14	Okoroigwe, EC , Saffron, CM (2012) Determination of Bio-Energy Potential of Palm Kernel Shell by Physicochemical Characterization. Nigerian Journal of Technology (NIJOTECH) 31(3) 329-335	Journal	
	15	Okoroigwe, EC , Onyegegbu SO (2012) Bio-Oil Production by The Fast Pyrolysis Technology: A Case for Nigeria. Nigerian Journal of Solar Energy. Vol 23 pp106-114	Journal	
	16	Edmund C. Okoroigwe , Zhenglong Li, Samuel O. Onyegegbu Christopher M. Saffron. Maximizing the Energy Potential of Palm Kernel Shell by Pyrolytic Conversion to Biofuel. Proceedings of The Fourth International Renewable Energy Congress December 20-22, 2012 – Sousse, Tunisia	Conference	
2013	17	Okoroigwe EC , Ofomatah, AC, Oparaku NF, Unachukwu GO (2013). Production and Evaluation of Activated Carbon from Palm Kernel Shells (PKS) for Economic and Environmental Sustainability. International Journal of Physical Sciences. Vol. 8(19), pp. 1036-1041, 23 May, 2013 DOI: 10.5897/IJPS2013.3889	Journal	0.54 (ISI)
	18	Okoroigwe EC , Eke MN, Ugwu HU (2013). Design And Evaluation Of Combined Solar and Biomass Dryer for Small and Medium Enterprises for Developing Countries. International Journal of Physical Sciences, 8(25): 1341-1349. DOI: 10.5897/IJPS2013.3937	Journal	0.54 (ISI)
	19	Oparaku, N. F., Ofomatah, A. C; Okoroigwe, E. C. (2013). Biodigestion of cassava peels blended with pig dung for methane generation. African Journal of Biotechnology, vol. 12(40), pp. 5956-5961, 2 October, 2013. DOI: 10.5897/AJB2013.12938	Journal	
	20	Okoroigwe E. C , Ibeto C. N, Ezema, C. G: Experimental study of anaerobic digestion of dog waste. Scientific Research and Essays, vol 9(6): 121 – 127, 30 March 2014. DOI: 10.5897/SRE2013.5705	Journal	
2014	21	Edmund C. Okoroigwe , Christopher M Saffron, Pascal D Kamdem. Characterization of palm kernel shell for material reinforcement and water treatment. Journal of Chemical Engineering and Material Science, 5(1): 1 – 6. DOI: 10.5897/JCEMS2014.0172	Journal	
2015	22	Okoroigwe, E and Madhlopa, A. 2015. Evaluation of the potential for hybridization of gas turbine power plants with renewable energy in South Africa. In <i>Proceedings of the 22nd Conference on the Domestic Use of Energy, 30 March-1 April 2015</i> , Cape Peninsula University of Technology, Cape Town: 223-232.	Conference	
	23	Edmund C Okoroigwe , Zhenglong Li, Shantanu Kelkar, Christopher Saffron, Samuel Onyegegbu (2015). <i>Bio-oil yield potential of some tropical woody biomass</i> . Journal of Energy in Southern Africa, vol 26 (2) pp 33 – 41	Journal	0.22
	24	Okoroigwe Edmund . Combustion Analysis and Devolatilization kinetics of Gmelina, Mango, Neem and Tropical Almond Woods under Oxidative Condition. International Journal of Renewable Energy Research, 2015; 5(4): 1024-1033	Journal	
	25	Edmund C. Okoroigwe , Evidence C. Ndu, Florence C. Okoroigwe. Comparative evaluation of the performance of an improved solar-biomass hybrid dryer. Journal of Energy in Southern Africa, 2015, vol 26 (4) pp 38-	Journal	0.22

51

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| 2016 | 26 | Edmund C. Okoroigwe , Amos Madhlopa. An integrated combined cycle system driven by a solar tower: A review. <i>Renewable and Sustainable Energy Reviews</i> 57 (2016) 337–350,
https://doi.org/10.1016/j.rser.2015.12.092 | Journal | 6.0 |
| | 27 | EC Okoroigwe , SO Enibe, SO Onyegegbu. Determination of Oxidation Characteristics and decomposition kinetics of some Nigerian Biomass. <i>Journal of Energy in Southern Africa</i> , 2016, 27 (3): 39 – 49.
DOI: http://dx.doi.org/10.17159/2413-3051/2016/v27i3a1554 | Journal | 0.22 |
| 2017 | 28 | Madhlopa, A., Okoroigwe, E., 2017. Solar Gas Turbine Systems. In: Abraham, M.A. (Ed.), Encyclopedia of Sustainable Technologies. Elsevier, pp. 377–388. | | |

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Membership of professional bodies and committees

I belong to some professional bodies and societies and member of some committees as stated below

- 1) Technical Secretary, Nigerian Society of Engineers, Nsukka Branch
- 2) Member, Nigerian Society of Engineers, (NSE **17670**)
- 3) Member, Solar Energy Society of Nigeria, (SESN)
- 4) Registered Member, Council for Regulation of Engineering in Nigeria (COREN **R.15250**)
- 5) Member, American Society of Mechanical Engineers (ASME 2010-2011)

Awards/Honours

- 1) Postdoctoral Fellowship, Energy Research Centre, University of Cape Town, South Africa Dec 2014 – Dec 2016
- 2) Fulbright Visiting Scholar/Researcher, Michigan State University, East Lansing. Institute for International Education (IIE) NY USA. Grant No 15094001, June 2009 – May 2010.

Referees**Prof S. O. Enibe**

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