



## CURRICULUM VITAE OF FABIAN IFEANYICHUKWU EZEMA

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### PERSONAL DATA:

<b>SURNAME:</b>	EZEMA
<b>OTHER NAMES:</b>	FABIAN IFEANYICHUKWU
<b>DATE OF BIRTH:</b>	22 <sup>ND</sup> October 1963
<b>NATIONALITY:</b>	NIGERIAN
<b>SEX:</b>	MALE
<b>STATE OF ORIGIN:</b>	ENUGU
<b>LOCAL GOVT. AREA:</b>	NSUKKA
<b>RELIGION:</b>	CHRISTIANITY
<b>MARITAL STATUS:</b>	MARRIED
<b>HOME ADDRESS:</b>	No. 12A Enugu Isiakpu Nkpunano, P. O. Box 403, Nsukka, Enugu State

### EDUCATION:

- Ph.D. in Physics, Nov., 2000, University of Nigeria, Nsukka, Nigeria.
- M.Sc. in Physics, Dec., 1993, University of Nigeria, Nsukka, Nigeria.
- B.Sc. in Physics, July, 1987, Anambra state University of Science and Technology, Enugu, Nigeria.
- PG Dip in RS/GIS, Satellite Meteorology and Global Climate August 2002, African Regional Centre for Space Science and Technology Education-English (ARCSSTE-E) Obafemi Awolowo University Ile Ife Nigeria.

### RESEARCH AREAS OF INTEREST:

Solar Energy Physics, Materials Science & Crystal Growth, Nanomaterials - Synthesis & Characterizations, Photovoltaics, Climate change & Environmental Physics

### PROFESSIONAL POSITION:

Assistant Lecturer, University of Nigeria, Nsukka, 1998-1999  
Lecturer II, University of Nigeria, Nsukka, 1999-2003  
Lecturer I, University of Nigeria, Nsukka, 2003-2006  
Senior Lecturer, University of Nigeria, Nsukka, 2006-till date

## **LEARNED SOCIETY ACTIVITIES:**

Member, Solar Energy Society of Nigeria (SESN)

Member, Nigerian Institute Physics (NIP)

Member, Material Society of Nigeria (MSN)

Member, African Nanosciences Networks (NANOAFNET)

Member, Electrochemical society (ECS)

Member, Material Research Society (MRS)

## **ATTENDANCE TO WORKSHOPS AND CONFERENCES**

1. The African School on Nanoscience for Solar Energy Conversion, Addis Abba, Ethiopia, 3 – 7 May 2010.
2. 5<sup>th</sup> International Conference Of African Materials Research Society (A-Mrs) & Nigerian Materials Congress (Nimacon–2009), The Sheraton And Towers, Abuja, December 14-18, 2009
3. 11th NEUTRON AND ION DOSIMETRY SYMPOSIUM (NEUDOS-11), iThemba LABS, **Somerset, Cape Town, South Africa**, 12-16 October 2009
4. Inaugural National Climate Change Roundtable In Nigeria, at the Ladi Kwali Conference Centre, **Abuja, Nigeria**, Sheraton Hotel And Towers, 27 August 2009
5. International Conference/workshop on Renewable Energy and Climate Change Mitigation, Covenant University **Ota, Nigeria**, July, 2009, Invited paper “Thin Synthesis and Characterizations”
6. **PHYSWARE: A Collaborative Workshop on Low-Cost Equipment and Appropriate Technologies that Promote Undergraduate Level, Hands-on Physics Education throughout the Developing World**, Miramare, **Trieste, Italy**, 16 – 27 February 2009
7. Joint ICTP-KFAS Workshop on Nanoscience for Solar Energy Conversion Organized the Abdus Salam International Centre for Theoretical Physics, **Trieste, Italy**, 27-29 October 2008
8. Nigerian Material Congress NIMACON 2008., Engineering and Materials Development Institute, **Akure, Nigeria**, November 4-8, 2008, Paper read, “Effect of deposition time on the band-gap and optical properties of chemical bath deposited CdNiS thin films”
9. 1<sup>ST</sup> Yaoundé International College on Novel Materials and Technologies, and Their Impact On Energy, Environment And Sustainable Development **Yaoundé, Cameroon**, 7-11 July 2008, Paper Read: Deposition Of Bi<sub>2</sub>S<sub>3</sub>, PVA/ZnS and PVA/CdS Thin Films Using Chemical Bath Technique.

10. Training for National Experts on Climate Change for Preparation of Nigeria's Second National Communication organized by the Special Climate Change Unit of the Federal Ministry of Environment, Housing and Urban Development 21 – 24 January 2008 Sharon Ultimate Hotels, Tafawa Balewa Way, Area 3, **Garki – Abuja**
11. US/Africa International Workshop on Nanotechnology and Nanosciences Education Nsukka, 20 -23 April, 2008, organised by the Solid State/Materials Science Division, Physics and Astronomy Department, University of Nigeria, **Nsukka, (UNN) Nigeria.**
12. 4<sup>th</sup> African Material Research Society (AMRS) conference **Dar es Salaam, Tanzania** 10-14 December 2007 Paper read “Band Gap Shift and Optical Characterization of Chemical Bath Deposited MnSe Thin Films on Annealing
13. African Regional College On Science at The Nanoscale, organized by Abdus Salam International Centre for Theoretical Physics (ICTP), 19 – 30 November 2007 at iThemba LABS, **Somerset, Cape Town, South Africa.**
14. 6<sup>th</sup> EBASI International conference iThemba Labs, **Somerset, Cape Town, South Africa**, January 23-28, 2007 Paper read “Solid State Properties and Structural Characterization of Sb<sub>2</sub>S<sub>3</sub> and Tl<sub>2</sub>S Thin Films”
15. Workshop on Frontiers in Materials Research and Education 21-25 Jan., 2007 organised by the US/Africa Materials Institute, Princeton New Jersey and NASENI, Nigeria and held at the Nikon Transcorp, **Abuja, Nigeria.**
16. Nigeria Nanotechnology Initiative workshop (NNI) June, 2006 , Sokoto Hall Transcorp Hilton Hitel **Abuja, Nigeria**
17. Nigerian Material Congress NIMACON 2006., Engineering and Materials Development Institute, Akure, December 7-9, 2006, Paper read, “Deposition And Characterization Of Chemical Bath Deposited Cadmium Sulphide (CdS) Thin Films”
18. National Solar Energy Forum 2006 (NASEF'06), Department of Physics, Nnamdi Azikiwe University Awka, December 7-9, 2006 Paper read “Optical Properties of CdMnS Thin Films Deposited By Chemical Bath Deposition Technique”
19. National Solar Energy Forum 2005 (NASEF'05), Department of Physics, University of Benin, December 7-9, 2005 Paper read “Optical Properties of CdS-CuS Thin Films Deposited By Chemical Bath Deposition Technique”
20. National Solar Energy Forum 2005 (NASEF'05), Department of Physics, University of Benin, December 7-9, 2005 Paper read “Optical Properties and Structural Characterizations Of Sb<sub>2</sub>S<sub>3</sub> Thin Films Deposited By Chemical Bath Deposition Technique ”

21. Nigerian Institute of Physics (NIP) 28<sup>th</sup> annual Conference, 2005, Obafemi Awolowo University Ile Ife Osun State, Nigeria, September, 17-20, 2005, Paper read, “Band Gap shift and Optical Characterization of Chemical Bath Deposited CdSe Thin Films ”
22. Nigerian Institute of Physics (NIP) 27<sup>th</sup> annual Conference, 2004, Kaduna Polytechnic, Kaduna, September, 15-18 2004, Paper read, “Optical Properties of CuS Thin Films Deposited By Chemical Bath Deposition Technique and Their Applications”
23. Nigerian Material Congress NIMACON 2004., Engineering and Materials Development Institute, Akure, December 7-9, 2004, Paper read, “Optical Properties of Ag<sub>2</sub>S Thin Films Deposited By Chemical Bath Deposition Technique and Their Applications”
24. National Solar Energy Forum 2003 (NASEF’03), National Centre for Energy and Development, University of Nigeria, Nsukka, December 3-6, 2003 Paper read “optical Characterization and Applications of Chemical Bath Deposited Beryllium Iodide”
25. National Solar Energy Forum 2002 (NASEF’02), Kaduna Polytechnic Kaduna, December 3-6, 2002 Paper read “Chemical Bath Deposition of Beryllium Sulphide Thin Film and Its Applications”
26. National Solar Energy Forum 2001 (NASEF’01), Obafemi University Ile Ife Nigeria December 3-6, 2003 Paper read “Fabrication and Characterization Of Palladium Sulphide (PdS) Thin Films For Solar Energy Applications Using Solution Growth Technique”
27. National Solar Energy Forum 1999 (NASEF’99), University of Ilorin, Ilorin, Nigeria, December 3-6, 2003 Paper read “Construction and characterization of Mobile Metal Basin (MMB) Solar Still”
28. 2<sup>nd</sup> Regional Workshop on RS/GIS and 1<sup>st</sup> Regional Workshop on Satellite Meteorology and Global Climate from September 24-28, 2001, held at ARCSSTE-E Obafemi Awolowo University, Ile Ife Nigeria. Certificate of Participation.
29. 1<sup>st</sup> Regional Workshop on Satellite Communications from September 16-20, 2002, held at ARCSSTE-E Obafemi Awolowo University, Ile Ife Nigeria. Certificate of Participation.
30. Training Workshop on Satellite Meteorology and Remote Sensing from August 4-9, 2003, held at ARCSSTE-E Obafemi Awolowo University, Ile Ife Nigeria. Certificate of Participation.

31. International Workshop on Space Science from October 13-17, 2003, held at ARCSSTE-E Obafemi Awolowo University, Ile Ife Nigeria. Certificate of Participation.

## **PUBLICATIONS:**

### **Chapters in Books**

1. **F.I. Ezema**, Asogwa M.O. & Asogwa P.U, 1999, “Solar and Stellar Systems” in Introduction to Natural Sciences 1, Ed Ezekwesili N.O., Chapter 10, pp 108-135.
2. Asogwa P.U. & **F.I. Ezema**, 1999, “Energy Transformation in Physical Systems” in Introduction to Natural Sciences 1, Ed Ezekwesili N.O. , Chapter 13, pp 167-180.
3. Asogwa P.U. & **F.I. Ezema**, 1999, “The Concept of Forces and Energy” in Introduction to Natural Sciences 1, Ed Ezekwesili N.O., Chapter 9, pp 94-107.
4. **F.I. Ezema**, 2001, “Conventional Sources of Energy”, in Introduction to Natural Sciences 2, Ed Ezekwesili N.O., Chapter 12, pp 212-225.
5. **F.I. Ezema**, & Asogwa M.O., 2001 “Space Science & Exploration”, in Introduction to Natural Sciences 2, Ed Ezekwesili N.O., Chapter 15 pp 263-295.

### **JOURNAL PUBLICATIONS**

1. **F.I. Ezema**, 2001 “Solar Adapted Mobile Metal Base (M.M.B) Solar Still for Production of Fresh Water for Rural Dwellers” *Journal of liberal studies* 9(1, 2) 289 – 297.
2. **F.I. Ezema**, & Asogwa P.U., 2001, “Man & Energy”, *Journal of Liberal Studies* 9(1, 2) Pp 250 – 266.
3. **F.I. Ezema** 2002, “Characterization of Zirconium Sulphide Thin Films Prepared by the Chemical Bath Deposition Technique for Spectral selective Coatings” *Journal of liberal studies* 10(2) 53-66.
4. **F.I. Ezema** & Okeke C.E., 2002, “Preparation and Characterization of Bismuth Bromide Oxide Thin Films Prepared by Solution Growth Technique”, *Nig. Journal of Physics* 14 (2) 48 – 54.
5. **Ezema F.I** & Okeke C.E, 2002, Characterization of Bismuth Fluoride (BiF<sub>3</sub>) Thin Films Prepared by Solution Growth Technique and Its Applications, *Nig Journal of Physics* 14 (2) 77 – 85.
6. **F.I. Ezema** & Okeke C.E, 2003, “Chemical Bath Deposition of Bismuth Oxide (Bi<sub>2</sub>O<sub>3</sub>) Thin Films and Its Application”, *Greenwich Journal of Science and Technology* 3(2) 90 – 109.

7. **F.I. Ezema, 2003**, "Investigation of Optical Properties of Chemical Bath Deposited Beryllium Oxide (BeO) Thin and it's Applications," *Greenwich Journal of Science and Technology* 3(2) 110 – 122.
8. **F.I. Ezema, 2003**, "Photovoltaic Potentials of Some Chemical Bath Deposited PdS and Bi<sub>2</sub>S<sub>3</sub> Thin Films" *Greenwich Journal of Science and Technology*, Volume 4, Number 1, 31-36.
9. **F.I. Ezema, 2003**, "Estimation of Optical and Electrical Properties of Zirconium Sulphide Thin Films Prepared by the Chemical Bath Deposition Technique and Using a Spectrophotometer", *Greenwich Journal of Science and Technology* Volume 4, Number 1, 38-44.
10. **F.I. Ezema & Okeke C.E, 2003**, "Fabrication and Characterization Of Palladium Sulphide (PdS) Thin Films For Solar Energy Applications Using Solution Growth Technique" *Nig. Journal of Solar Energy*, 14, 68-72.
11. **F.I. Ezema, 2003**, "Optical Properties of Chemical Bath Deposited Beryllium Bromide (BeBr<sub>2</sub>) Thin Films" *Journal of University of Science and Technology*, 23(2), 32-40.
12. **F.I. Ezema, P.E. Ugwuoke & C.E. Okeke, 2003**, "Fabrication and Characterization of Undoped Tin Oxide (SnO<sub>2</sub>) Thin Film Prepared By Electroless Method", *Nig Journal of Physics* 15 (1), 31-36.
13. **F.I. Ezema & Okeke C.E., 2003**, "Chemical Bath Deposition of Beryllium Sulphide Thin Films and Its Applications" *Academic Open Internet Journal* [http://www.acadjournal.com/2003/v9/part2/p4/CHEMICAL\\_BATH\\_DEPOSITION.PDF](http://www.acadjournal.com/2003/v9/part2/p4/CHEMICAL_BATH_DEPOSITION.PDF)
14. **F.I. Ezema, 2004**, "Optical Properties of Chemical Bath Deposited FeCdS<sub>3</sub> Thin Films", *Academic Open Internet Journal* <http://www.acadjournal.com/2004/v11/part2/p1/index.htm>
15. **F.I. Ezema, 2004**, "Preparation and Optical Properties of Cadmium Chloride Thin Films Prepared by Solution Growth Technique", *Academic Open Internet Journal* <http://www.acadjournal.com/2004/v11/part2/p7/index.htm>
16. **F.I. Ezema & Asogwa P.U., 2004**, "Preparation and Optical Properties of Chemical Bath Deposited Beryllium Chloride (BeCl<sub>2</sub>) Thin Films", *Pacific Journal of Science and Technology*, 5(1), 26-32.
17. **F.I. Ezema & Ugwuoke P.E., 2004**, "Investigation of Optical Properties of Barium Oxide (BaO) Thin Films Deposited by Chemical Bath Technique", *Pacific Journal of Science and Technology*, 5(1), 33-38.

18. **F.I. Ezema, 2004**, Effects of Some Parametric Variations on the Optical Properties of Chemical Bath Deposited BiClO Thin Films. *Journal of the University of Chemical Technology and Metallurgy*, 39(2), 225-238.
19. **F.I. Ezema, 2004**, Optical Properties of Strontium Sulphide (SrS) Thin Films Prepared By Solution Growth Technique, *Journal of the University of Chemical Technology and Metallurgy*, 39(4), 351-354
20. **F.I. Ezema, 2004**, Fabrication, Optical Properties And Applications Of Undoped Chemical Bath Deposited ZnO Thin Films, *J. Research (Sci.)* 15 (4) 343-350
21. **F.I. Ezema, 2005**, Optical Characterization of Chemical Bath Deposited Bismuth Oxy Iodide (BiOI) Thin Films, *Turk. J. Phys.* 29, 105-114
22. **F.I. Ezema, 2005**, Chemical Bath Deposition of Bismuth Chloride Oxide (BiClO) Thin Film and its Applications, *Pacific Journal of Science and Technology* 6 (1):6-15.
23. **F.I. Ezema & M.N. Nnabuchi, 2005**, Optical Characterization of Chemical Bath Deposited Bismuth Sulphide (Bi<sub>2</sub>S<sub>4</sub>) Thin Films, *Discovery & Innovation*, 17(3&4), 156-166
24. **F.I. Ezema & M.N. Nnabuchi, 2005**, Growth Characteristics And Effect Of Thickness On Optical Properties Of Iron Copper Sulphide (FeCu<sub>2</sub>S<sub>3</sub>) Thin Films *Journal of Applied Science and Technology (JAST)*, 10(1&2), pp. 53 – 59
25. **F.I. Ezema & A.B.C. Ekwealor, 2005**, Optical Characterization and Applications of Chemical Bath Deposited Beryllium Iodide, *Nig. Journal of Solar Energy*, 15, 73-79
26. **F. I. Ezema & M.N. Nnabuchi, 2006**, Growth and Optical Properties of Chemical Bath Deposited MgCdS<sub>2</sub> Thin Films, *J. Research (Sci.)*, 17(2), 115-126
27. **F.I. Ezema, A.B.C. Ekwealor and R.U. Osuji, 2006**, Effect of Thermal Annealing On The Band Gap and Optical Properties Of Chemical Bath Deposited ZnSe Thin Films, *Turk. Journ. Physics*, 30, 157-163
28. **F.I. Ezema & R.U. Osuji, 2006**, Preparation and Optical Characterization Of Chemical Bath Deposited CdCoS<sub>2</sub> Thin Films, *Journal of Applied Sciences*, 6(8), 1827-1832
29. **F.I. Ezema, M.N. Nnabuchi & R.U. Osuji, 2006**, Optical Properties Of CuS Thin Films Deposited By chemical Bath Deposition Technique And Their Applications, *Trends in Applied Sciences Research* 1(5), 467-476
30. Ugwoke P.E., **F.I. Ezema & Okeke C.E., 2006**, Performance Response of Monocrystalline Silicon PV Modules to some Meteorological Parameters at Nsukka, *Nig. J. Space Science Research*, 2, 63-70

31. **F.I. Ezema**, P.U. Asogwa, A.B.C. Ekwealor, P.E. Ugwuoke, R.U. Osuji **2007** Growth And Optical Properties Of Ag<sub>2</sub>S Thin Films By Deposited Chemical Bath Deposition Technique, *Journal of the University of Chemical Technology and Metallurgy*, 42, 2, 217-222
32. S.N. Agbo, and **F.I. Ezema**, 2007, Analysis of Chemically Deposited MnS Thin Films, *Pacific Journal of Science and Technology*, <http://www.akamaiuniversity.us/PJST.htm> 8(1)
33. **F.I. Ezema** and R.U. Osuji, 2007, Band Gap Shift and Optical Characterization of Chemical Bath Deposited CdSSe Thin Films on Annealing, *Chalcogenide letters*, 4(6), 69-75
34. **F.I. Ezema** and M.N. Nnabuchi, **2007**, Optical Properties of Chemical Bath Deposited Bismuth Fluoride (BiF<sub>3</sub>) Thin Films, *Discovery and Innovation*, 19(1), 33-36.
35. G. Ezugwu, **F.I. Ezema** and R.U. Osuji, **2007**, Effect of Dip Times on Optical properties of chemically deposited Bi<sub>2</sub>S<sub>3</sub> Thin Films. *Nig. Journal Solar of Solar Energy* 18, 37-42.
36. S.N. Agbo, P.E. Ugwuoke, **F.I. Ezema**, and O.U. Oparaku, (**2007**), Solar Radiation Estimates from Relative Humidity –Base D Models, *Nig. Journal Solar of Solar Energy* 18, 134-138.
37. **F.I. Ezema**, A.B.C. Ekwealor, P.U. Asogwa, P.E. Ugwuoke, C. Chigbo and R.U. Osuji, (**2007**), Optical Properties and Structural Characterizations of Sb<sub>2</sub>S<sub>3</sub> Thin Films Deposited by Chemical Bath Deposition Technique, *Turk J Phys*, 31, 205 – 210.
38. P.E. Ugwuoke, **F.I. Ezema**, O.U. Oparaku, and C.E. Okeke, (**2007**), Effect of Temperature Variation on the Performance of Polycrystalline Silicon Photovoltaic Modules in a Tropical Climate, *Inter. J. of Physical Sciences*, 2(3) 54-60
39. **F. I. Ezema** and R. U. Osuji, (**2007**), Preparation and Optical Properties of Chemical Bath Deposited MnCdS<sub>2</sub> Thin Films, *FIZIKA A (Zagreb)*, 16(3),107–116
40. **F.I. Ezema**, A.B.C. Ekwealor and R.U. Osuji, (**2007**), Optical properties of chemical bath deposited nickel oxide (NiO) thin films, *J. Optoelectron. Adv. Mater. (JOAM)*, 9(6), 1898-1903.
41. P. U Asogwa, **F. I Ezema**, and S. C Ezugwu, (2008) .The effect of Thermal Annealing on the Optical and Solid State Properties of Thallium Sulphide (Tl<sub>2</sub>S) Thin Film. *Journal of Liberal Studies*, 12(1&2)
42. **F. I. Ezema**, A.B.C Ekwealor and R.U. Osuji, **2008**, Optical properties of chemical bath deposited nickel oxide (NiOx) thin films, *Superficies y Vacío* 21(1), 6-10
43. S. C. Ezugwu, **F. I. Ezema**, R. U. Osuji, P. U. Asogwa, A. B. C. Ekwealor, B. A. Ezekoye, (**2009**), Effect of deposition time on the band-gap and optical properties of chemical bath deposited CdNiS thin films, *Optoelectron. Adv. Mater. – Rapid Comm.*, 3(2), 141 – 144.



44. C.I. Oriaku, **F.I. Ezema** and J.C. Osuwa, 2009, Fabrication and Optical Constants of CdMnS Ternary Thin Films deposited by Chemical Bath, *Pacific Journal of Science and Technology*, 10(1), 413-416
45. P. U. Asogwa, S. C. Ezugwu, **F.I. Ezema**, R.U. Osuji, 2009, Influence Of Dip Time On The Optical And Solid State Properties of As-Grown Sb<sub>2</sub>S<sub>3</sub> Thin Films, *Chalcogenide Letters* 6(7), 287 – 292
46. S. C. Ezugwu, **F. I. Ezema**, R. U. Osuji, P. U. Asogwa, B. A. Ezekoye, A. B. C. Ekwealor, C. Chigbo, M. Anusuya, M. Mahaboob Beevi, 2009, Optical studies of chemically deposited PVA-capped PbS nanoparticle thin film, *Optoelectron. Adv. Mater. – Rapid Comm.*, 3(6), 528 – 532
47. P. U. Asogwa, S. C. Ezugwu, **F. I. Ezema**, A. B. C. Ekwealor, B. A. Ezekoye, R. U. Osuji, 2009, Effect of thermal annealing on the band gap and optical properties of chemical bath deposited PbS-CuS thin films, *J. Optoelectron. Adv. Mater.*, 11(7), 940 – 944
48. J. C. Osuwa, C. I. Oriaku, **F. I. Ezema**, 2009, Impurity Effects Of Cadmium Salt On The Absorption Edge And Structure Of Chemically Prepared PbS Films, *Chalcogenide Letters*, 6(8), 385 – 391
49. **F. I. Ezema**, S. C. Ezugwu, P.U. Asogwa, A. B. C. Ekwealor, 2009, Solid State Properties And Structural Characterization Of Sb<sub>2</sub>S<sub>3</sub> and Tl<sub>2</sub>S Thin Films, *Journal of Ovonic Research*, 5(5), 145 - 156
50. **F. I. Ezema**, S. C. Ezugwu, R. U. Osuji, P. U. Asogwa, B. A. Ezekoye, A. B. C. Ekwealor, M. P. Ogbu, 2010, Role Of Thermal Annealing On The Optical And Solid State Properties Of Chemically Deposited Cadmium Sulphide Nanocrystalline Thin Film Grown In A Polymer Matrix, *Journal of Non-Oxide Glasses*, 1(1), 45 – 50
51. S. C. Ezugwu, **F. I. Ezema**, R. U. Osuji, P. U. Asogwa, A. B. C. Ekwealor, B. A. Ezekoye, 2010, Structural and Optical Properties Of PVA capped Nickel Oxide Thin Film Prepared by Chemical Bath Deposition, *Journal of Physical sciences*, 1(1), 43 – 47
52. S.C. Ezugwu, P.U. Asogwa, **F.I. Ezema**, Variation of Optical properties And Solid State with Post Deposition Annealing PVA-Capped MnO<sub>2</sub> in Thin Films, *Superficies y Vacio* 23 (1), accepted for publication in March 2010 edition.
53. A.E. Ajuba, S.C. Ezugwu, B.A. Ezekoye, **F.I. Ezema**, P.U. Asogwa, 2010, Influence Of pH on the Structural, Optical and Solid State Properties of Chemical Bath Deposited ZnO Thin Films, *Journal of Optoelectronics and Biomedical Materials*, 2(2), 73 - 78
54. S. C. Ezugwu, **F.I. Ezema**, P. U. Asogwa, 2010, Synthesis and Characterization of Ternary CuSbS<sub>2</sub> Thin Films: Effect of Deposition Time, *Chalcogenide Letters*, 7(5), 369 – 376

55. S. U. Offiah, S. C. Ezugwu, **F. I. Ezema**, O. U Oparaku, P. U. Asogwa, 2010, Effects of Deposition Media And Thermal Annealing on Chemical Bath Deposited Zinc Oxide Thin Films, *Journal of Ovonic Research*, 6(3), 135 – 141
56. S. C. Ezugwu, P. U. Asogwa, **F. I. Ezema**, R. U. Osuji, 2010, Synthesis and Characterization of Co Doped CdS Thin Films Grown within a Polymer Matrix by Solution Growth Technique, *Journal of Non-Oxide Glasses* , 2(2), 121 - 127
57. **F. I. Ezema**, S. C. Ezugwu, P. U. Asogwa, A. B. C. Ekwealor, R. U. Osuji, 2010, Synthesis and characterization of CdS nanowires and CdS/TiS nanoflower grown in a polymer matrix by chemical bath deposition (CBD) method, *Optoelectron. Adv. Mater. – Rapid Comm.*, 4 (5), 747 – 750
58. **F. I. Ezema**, D. D. Hile, S. C. Ezugwu, F. U. Osuji, P. U. Asogwa, 2010, Optical Properties Of CdS/CuS & CuS/CdS Heterojunction Thin Films Deposited by Chemical Bath Deposition Technique, *Journal of Ovonic Research*, 6(3), 99 – 104
59. S. C. Ezugwu, P. U. Asogwa, **F. I. Ezema**, P. M. Ejikeme, 2010, Structural and optical characterization of PVP-capped lead oxide nanocrystalline thin films, *J. Optoelectron. Adv. Mater.*, 12 (8), 1765 – 1771

Refereed proceedings

1. **F.I. Ezema**, P.E. Ugwuoke, **2004**, Optical Properties Of Ag<sub>2</sub>S Thin Films By Deposited Chemical Bath Deposition Technique, Proceedings of the Nigerian Materials Congress, (NIMACON 2004), 73-78
2. G. Ezugwu, **F.I. Ezema** and R.U. Osuji, **2006**, Effect of Dip Times on Optical properties of chemically deposited Bi<sub>2</sub>S<sub>3</sub> Thin Films. International Conference of the Solar Energy Society of Nigeria, Conference Proceedings, 1, 84-90.
3. S.N. Agbo, and **F.I. Ezema (2007)**, **Evaluation of the Regression Parameters of the Angstrom Page for Predicting Global** Solar Radiation, Proceedings of the 1<sup>st</sup> International Workshop on Renewable Energy for Sustainable Development in Africa (WRESDA), 1, 92-97.
4. **F. I. Ezema**, R. U. Osuji, S. C. Ezugwu, A. B. C. Ekwealor, P. U. Asogwa, B. A. Ezekoye, and M. Mahaboob Beevi (**2009**), Chemical bath deposition of heterojunction thin films for solar cell application, International Conference on Photonics, Nanotechnology and Computer Applications, India, (ICOPNAC-2009), 1, 144-150
5. S.N. Agbo, and **F.I. Ezema (2009)**, **Predicting Global** Solar Radiation using sunshine duration and ambient temperature, Proceedings of the ISES world congress 2009, Renewable Energy Shaping Our Future, 182-187.

6. M.O. Nwodo, S. C. Ezugwu, **F. I. Ezema**, P. U. Asogwa, R. U. Osuji, (2009), The Structural, Surface Morphological of PVA-capped PbS Nanoparticle Thin Films deposited by Chemical bath deposition Technique, National Solar Energy Forum, Nigeria, (NASEF 2009), 102-109
7. R. U. Osuji, S. C. Ezugwu, **F. I. Ezema**, P. U. Asogwa, (2009), Direct Synthesis of Ternary CuSbS<sub>2</sub> Thin Films by Chemical bath deposition Technique for Photovoltaic application, National Solar Energy Forum, Nigeria, (NASEF 2009), 110-119