

CURRICULUM VITAE

MOHAMMED MANNIR ALIYU

**Department of PHYSICS,
Faculty of Physical Sciences,
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CURRICULUM VITAE

1. **NAME:** MOHAMMED MANNIR ALIYU
2. **STAFF-NO:** KASU/SP/2144
3. **DEPARMENT:** PHYSICS
4. **DATE/PLACE OF BIRTH:** KATSINA
5. **STATE OF ORIGIN:** KAITA
6. **LOCAL GOVERNMENT AREA:** KAITA
7. **NATIONALITY:** Nigerian
8. **MARITAL STATUS:** Married with Children
9. **GENDER:** MALE
10. **LANGUAGES SPOKEN:** ENGLISH, HAUSA
11. **CURRENT CONTACT ADDRESS:** Department of PHYSICS
Faculty of Physical Sciences,
Kaduna State University,
Tafawa Balewa Way, Kaduna
12. **PERMANENT HOME ADDRESS:** B12 Panteka Housing Estate, Kaduna.
13. **DATE OF FIRST APPOINTMENT:** JUNE, 2021
14. **DATE OF LAST PROMOTION:** NA
15. **PRESENT RANK:** ASSOCIATE PROFESSOR
16. **EDUCATIONAL QUALIFICATIONS OBTAINED WITH DATES:**

EDUCATIONAL QUALIFICATION / INSTITUTION	DATES
(i) Primary School Certificate / GRA LEA Primary School, Zaria	1970 - 1977
(ii) GCE (O/Level) / GSTS Soba Zaria, Kaduna State	1977 – 1982
(iii) Bachelor of Science (PHYSICS)/ Abubakar Tafawa Balewa University, Bauchi. (formerly ABU Bauchi Campus)	1982 – 1988
(iv) Master of Science (PHYSICS)/ University of Lagos, Lagos State.	1990 – 1992
(v) Master of Engineering (Electrical Engineering)/ Bayero University Kano.	2001 - 2004

(vi)	Post Graduate Diploma in Technical Education/ Federal University of Technology Minna, Niger State.	2007-2008
(vii)	Doctor of Philosophy (Electrical Engineering)/ Universiti Kebangsaan Malaysia UKM Malaysia	2009- 2012

1. ADDITIONAL QUALIFICATIONS:

COURSE/WORKSHOP	DATES
(a) Computational Intelligence and Soft Computing for Business and Engineering Applications, Kuala Lumpur, Malaysia	2009
(b) MATLAB: A Comprehensive Reference for Engineers, by Dept of Mechanical Engineering, National University of Malaysia, Selangor, Malaysia	December, 2009
(c) First Japan-Malaysia Joint Workshop on Solar Photovoltaic Technology, Univesiti Kebangsaan Malaysia, Bangi, Selangor Malaysia	November 2010
(d) Stand-Alone Photovoltaic Power System Engineering Workshop by National University of Malaysia, Selangor, Malaysia	July 2012
(e) Hybrid PV Systems Optimization Workshop by National University of Malaysia, Selangor, Malaysia	August 2012
(f) National Workshop on RET Screen Assessment of Renewable Energy Projects by National University of Malaysia, Selangor, Malaysia	August, 2012
(g) Remita e-Collection and e-Payment Training for Public Sector Organizations by Systems Specs, Abuja. Nigeria	October, 2015
(h) Eastman Solar Product Training	October, 2022
(i) Comprehensive Training on the use of RETScreen and Homer Softwares for Design of on-grid and off-grid Solar Systems	August , 2023
(j) Academic Board Workshop on Orientation and Re-Orientation	9 th - 16 th Sept. 2019
(k) Technology Enhancement Teaching and Learning Programm PTFDF	13 - 18 th Dec 2015
(l) Value Chain NITDA Professional Stakeholders Workshop	26-28 th Nov 2013
(m)Technology Enhancement Teaching and Learning Program (PTDF)	14 -18 th Dec 2015

1. WORKING EXPERIENCE WITH DATES:

PERIOD	EMPLOYER	POSITION HELD
Sept 1988- Aug. 1989	National Youth Service GSSS Toro, Bauchi	Classroom Teacher (Physics)
Oct 1989 to Aug 1990	Federal Ministry of Education, Lagos.	Education Officer
Aug. 1990 to Dec 1990	Heinemann Educational Publishers, Ibadan	Ass. Editor (Science and Technical)
Jan 1992 to Apr 1994	United Geophysical Ltd. Ikeja Lagos	Instrument Engineer
April 1996-Dec.'1996	Kaduna Polytechnic, Kaduna	Lecturer I
Jan 2000- Dce'2005	Kaduna Polytechnic, Kaduna	Senior Lecturer
Jan 2006- Dec'2010	Kaduna Polytechnic, Kaduna	Principal Lecturer
Jan 2011- May 2021	Kaduna Polytechnic, Kaduna	Chief Lecturer
Jan 2015- Dec 2019	Kaduna State University (Visiting)	Senior Lecturer

May 2020- May 2021	Kaduna State University (Sabbatical)	Senior Lecturer
June 2021- Date	Kaduna State University (Tenure)	Associate Professor

2. TEACHING EXPERIENCE WITH DATES:

CATEGORY/ COURSES TAUGHT	DATES
(A) SECONDARY SCHOOL: (i) Physics (Form 5)	Sept'1988 to August 1989
(B) KADUNA POLYTECHNIC: (i) Advanced Electromagnetic EEE501(3CU) (ii) Quantum Electronics EEE502 (3CU) (iii) Electromagnetic Field Theory EEC432 (2CU) (iv) Electrical materials Science EEC321 (2CU) (v) Telecommunications EEE444 (3CU) (vi) Instrumentation EEC244 (3CU) (vii) Digital Communications EEE323 (3CU) (viii) Microprocessor System PYE421 (2CU)	1996 - 2002 1996 to 2002 1996 to 2002 1997 to 2015 1996 to 2009 2001 to 2008 2013 to 2015 2014 to 2015
(C) KADUNA STATE UNIVERSITY: (ix) Energy and Environment (PHY208) (1CU) (x) Electrophysics (200L) (2CU) (xi) Electric circuits (PHY203) (3CU) (xii) Biomedical Engineering MLS308 (3CU) (xiii) Solid state Physics II (PHY402) (3CU) (xiv) Semiconducting Devices (723) (xv) Mathematical Methods (PHY801) (2CU) (xvi) Electrophysics (PHY211 2CU) (xvii) Sustainable Energy and Environ (PHY 841) (xviii) Computer Aided Methods in Renewable Energy (MRE) (xix) PV Materials Processing Tech (PHY851) (xx) Applied Photovoltaics (PHY854) (xxi) Smart Grid (MEM812) (xxii) Metering and Tariff (MEM815) (xxiii) Energy Audit (MEM810)	2015-2021 2022 to Date 2024 to date 2023 to date 2023 to date 2021 to 2021 2020 to 2020 2023 to date 2016 to 2021 2016 to 2021 2016 to 2021 2018 to 2021 2018 to Date 2021to Date 2023 to date

(xxiv) Energy Efficiency & Optimization (PHY842)	2018 to date 2023 to date 2023 to date
(xxv) RESEAERCH METHODS (PHY802)	2023 to date

Research work Experience:

- i. Closed Space Sublimation (CSS) Method for CdTe Thin Film Solar Cell Fabrication. MSc Student Co-supervision at King Saud University, Riyadh.

Field Work:

- i. Retrofitting of 10KVA Solar System to the Physics Department, Kaduna State University (2017)
- ii. Energy Audit of Kaduna Polytechnic Main Campus, Kaduna (2018)
- iii. Design and Installation of a PV Solar Power System at the ICT Kaduna Polytechnic 2015
- iv. Design and Installation of PV Solar Power System at the Central Admin, Kaduna Polytechnic 2016
- v. Design and Installation of PV Solar Power System at the Rectory, Kaduna Polytechnic 2015
- vi. Design and Installation of PV Solar Power System at the Pharmacy Unit, Shenu Kangiwa Medical Centre Kaduna Polytechnic 2014
- vii. Design and Installation of a 15kVA Inverter Power System at the Central Mosque, Kaduna Polytechnic Main Campus, 2016

3. SUPERVISION:

A- UNDEGRADUATE

S/No	Student Name	Matriculation No.	Year	Project Title
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1	Caleb Kambai	KASU/15/PHY/1015	2019	Obstacle Detection and Avoidance for Robotic Vehicle using Ultrasonic Sensor and Arduino Controller
2	Fauziyya Isah	KASU/15/PHY/1023	2019	Development of A PV Solar Charging System for an Unmanned Ground Vehicle
3	Yusuf Hussaini	KASU/18/PHY/2001	2022	Design and Construction of Wearable Solar Charger for mobile Devices
4	Amarachi Peace Onyemaechi	KASU/18/PHY/1014	2024	Design and Construction of DC Pressing Iron
5	DANIEL, Paul Ayemhere	KASU/18/PHY/1004	2024	Development of a DC Induction Cooker
6	George Seth Boman	KASU/18/PHY/1060	2024	Construction of an Automatic Brake light failure Alarm using Arduino

S/No	Student Name	Matriculation No.	Year	Project Title
1	Ahmad Bello	KPT/COE/19/00036	2023	Design and construction of an Overhead Water tank as Possible Replacement of Battery in PV Solar System
2	Sabit Orahachi Adams	KPT/COE/19/0092	2023	Design and construction of an Overhead Water tank as Possible Replacement of Battery in PV Solar System
3	Idris Yaro	KPT/COE/19/40483	2022	Design and Construction of Solar-Charcoal Hybrid Oven
4	Usman Abubakar Baba	KPT/COE/17/12677	2019	Design and Construction of a Solar water heater with Digital Display
5	Wambai Mwani Boga	KPT/COE/16/09425	2018	Design and Construction of a GSM Based Gas Leakage Detection and Monitoring System
6	Nuhu Zubair Khalifa	KPT/COE/19/40288	2022	Construction of an Automatic Solar Panel Cleaning System
7	Kareem T. Olayemi	KPT/COE/10/2015	2014	Design and Construction of Automatic Door control System using Infra Red Sensor
8	Dogara Tongshinen	KPT/COE/10/2011	2014	Design and Construction of a Numeric Water Level Detector
9	Suleiman Zakariyah	KPT/COE/10/2010	2014	Design and Construction of Infra Red Intruder Detector
10	Taofeek Olalekan	KPT/COE/12/2608	2015	Design and Construction of MODified Sinewave Inverter
11	Aneke John Pius	KPT/COE/10/2014	2014	Design and Construction of Microcontroller Based Water Level Monitoring System

12	Fatima A. Bello	KPT/COE/13/5103	2016	Design and Construction of a 12V, 30A Solar Charge Controller using Microcontroller
13	Saadullah Lasisi	KPT/COE/13/5153	2016	Design and Construction of a 12V, 30A Solar Charge Controller using Microcontroller
14	Sanusi A. Bello	KPT/COE/12/3650	2015	Design and Construction of a 5kVA Square wave Inverter
15	Bello T. Johson	KPT/COE/12/3832	2016	Design and Construction of 5kVA Modified Sinewave Inverter

17. POSTGRADUATE:

(i) Completed M.Sc. Dissertation

S/N	Student Name	Matriculation No.	Year	Project Title
1.	Jamila Tasi'u	KASU/MSC/CSC/S CS/01285/2014	2016	Comparison of Performance Characteristics of Monocrystalline and Polycrystalline PV Modules
2.	Hassan Mustapha Junaidu,	KASU/MSC/PHY/S CS/2015/00030	2018	Optimization of The Performance of Copper Indium Gallium Diselenide (Cigs) Thin Film Solar Cell Through Numerical Simulation Using Amps – 1D
3.	Abraham Kogi	KASU/MSC/PHY/2 016/00012	2023	Design and Development of a Low Cost Hybrid Automatic Voltage Regulator
4.	Emmanuel Onyemenam	KASU/MRE/PHY/1 8/0001	2018	Measurement and Analysis of Environmental Variables for PV Deployment
5.	Haruna Yusuf	KASU/MRE/PHY1 8/0005	2018	Deployment and Performance Analysis of a 10kw PV Solar System in Physics Department
6.	Habila Bature	KASU/MRE/PHY1 8/0015	2018	Design and Fabrication of a PV Carport in the Physics Department
7.	Kwasau Martins	KASU/MRE/PHY1 8/0016	2018	Measurement and Analysis of Environmental Variables for PV Deployment
8.	ABDUSSALAM SHUAIBU	KASU/MRE/PHY1 8/0021	2018	Load Inventory and Analysis of Physics Department for PV Design and Development
9.	ALIYU UMAR	KASU/MRE/PHY/1 8/0022	2018	Load Inventory and Analysis of Physics Department for PV Design and Development
10.	HARUNA RASHEED ALHASSAN	KASU/MRE/PHY/1 8/0026	2018	Design and Analysis of a 10kw PV Solar System for Physics Department of KASU
11.	CALEB Y, PIUS	KASU/MRE/PHY/1 8/0028	2018	Environmental Impact of a 10kw PV Solar System in Physics Department

12.	NASIR ALIYU CHINDO	KASU/MRE/PHY/1 8/0029	2018	Deployment and Performance Analysis of a 10kw PV Solar System in Physics Department
13.	MADAKI LAWRENCE PETER	KASU/MRE/PHY/1 8/0030	2018	Design and Fabrication of a PV Carport in the Physics Department
14.	AHOM ABEL TERESE	KASU/MRE/PHY/1 8/0044	2018	Energy and Economic Analysis of a 10kw PV Solar System in the Physics Department
15.	ADI, SOLOMON TANKO	KASU/MRE/PHY/1 8/0046	2018	Measurement and Analysis of Environmental Variables for PV Deployment
16.	ISAAC ODANG OCHAPA	KASU/MRE/PHY/1 8/0052	2018	Energy and Economic Analysis of a 10kw PV Solar System in the Physics Department
17.	JEROME. IDOKO ONOJA	KASU/MRE/PHY/1 8/0053	2018	Environmental Impact of a 10kw PV Solar System in Physics Department
18.	UDOSEN ANIETIE SAMUEL	KASU/MRE/PHY/1 8/0009	2018	Design and Analysis of a 10kw PV Solar System for Physics Department of KASU
19.	Gyuk Nehemiah John	KASU//M. Sc/PHY/17/002	2018	Comparison of Different Models for Estimation of Global Solar Radiation Measurement data in Kaduna
20.	Farida Ashiru Abdulrahid	KASU//MRE/PHY/ 17/029	2018	Significance of Energy Audit in Saving Energy at the Girls Hostel of KASU.
21.	Ojile Inyand David	KASU//MRE/PHY/ 17/0036	2018	Development of Weather Station using Arduino

(ii) PhD on Going Supervision

S/No	Student Name	Matriculation No.	Year	Project Title
1	Adamu Mohammed	KASU/PHD/PHY/20/0003	2020	Theoretical Modeling of New Low Cost Two-Dimensional Transition Metal Di-Chalcogenides (MoTe ₂ , WSe ₂ and PtSe ₂) as Electron Transport Layer in Unchanged CH ₃ NH ₃ PbI ₃ Solar Cell.
2	Bamaiyi Clement	KASU/PHD/PHY/21/0005	2021	Evaluation of Power System Harmonics and Imbalance in Distribution Networks within Kaduna Metropolis, Nigeria.

(iii) Post Graduate Diploma

S/No	Student Name	Matriculation No.	Year	Project Title
1	Zainab Abdurahman		2016	Assessment of the Performance of DC Voltage Regulator IC
2	Bagudu Mohammed		2016	Energy Audit of KASU

4. TECHNICAL REPORTS PRODUCED

- i. Energy Audit Report for Kaduna Polytechnic Main Campus
- ii. Conversion of Students Hostels Electrical Power Supply from Alternating Current to Direct Current
- iii. Conversion (Retrofitting) of a Conventional Tricycle into an Electric Drive vehicle
- iv. Development of a Solar Powered Electric Vehicle Tricycle
- v. Design and Deployment of a Solar Street Light for the Kaduna Polytechnic Campuses
- vi. Municipal Waste Gassification for Electricity Production in Kaduna Polytechnic
- vii. Establishment of a 1MW of PV Solar Plant for Kaduna Polytechnic
- viii. Development of a Campus Wide Internet Service in Kaduna Polytechnic
- ix. Design and Deployment of a Solar Thermal Water Heating System for Students Hostels, Kaduna Polytechnic Main Campus
- x. Report on Seeking for Intervention from the NNPC for the Establishment of the Department of Renewable Energy Engineering, Kaduna Polytechnic
- xi. Generation, Transmission and Control of Process Signal at Kaduna Refinery
- xii. Deployment of Smart Identity Card for Staff of Kaduna Polytechnic

5. RESEARCH/EXTENSION EXPERIENCE WITH DATES:

- i. *Depth Inversion and Interpretation of Seismic Times of an Oil Field in the Niger Delta*, Unpublished M.Sc Thesis, Department of Physics Federal University of Lagos, Nigeria, 1992.
- ii. *Design of a Digital Temperature Controller for an Incubator*, Unpublised M.Sc. Thesis, Department of Electrical Engineering, Bayero University, Kano.
- iii. *Development of High Quality Transparent Conducting Thin Films for Solar Cell Applications*, Unpublished PhD Thesis, Department of Electrical,

Electronic and Systems Engineering, National University of Malaysia Selangor Malaysia.

- iv. *Investigating the effect of dust on the performance of PV Solar Panels in Kaduna Metropolis (TETFund sponsored)*
- v. *Comparison of the Performance of Monocrystalline and Polycrystalline PV Panels in Kaduna Metropolis.*

6. ROUTINE ADMINISTRATIVE DUTIES:

- (i) Lectures, Lab/Workshop
- (ii) Research Activities
- (iii) Project supervision

7. ADMINISTRATION AND COMMUNITY SERVICES:

(Directorship and Head of Units and Departments)

- a) Ag. Head of Department, Physics Department, KASU, January 2024 to date.
- b) Head of Department, Renewable Energy Engineering Department, Kaduna Polytechnic, 2021.
- c) Director, Renewable Energy Technology Unit Kaduna Polytechnic 2018 -2020
- d) Director, Information and Communication Technology Centre (ICTC) 2013 -2018
- e) Departmental Examination Officer (2004-2008)
- i) Sectional Head, Telecommunications Section, (2004 -2008)
- f) Students Project Coordinator (2000 – 2004)
- g) SIWES Officer (2001 -2004)
- h) Students' Hostel Officer (1999 – 2003)
- i) Deputy Coordinator, Center for Renewable Energy Project, Kaduna State University. May 2023 to date.
- j) Head of Sustainability Research Unit, Centre for Energy and Environmental Strategy Research (CEESR) Oct 2023 to date.

- k) Post Graduate Coordinator, Centre for Energy and Environmental Strategy Research (CEESR) Oct 2023 to date.
- l) Principal, Kaduna Skipper Electrical, Electronic And Renewable Energy Academy Solar Academy, 2020 to date
- m) Chairman, Departmental Appointment and Promotion Committee 2024
- n) Member, Faculty of Science Examination Ethics Committee 2023 to date
- o) Member, First Faculty of Science International Conference Committee (2022)
- p) Member, PhD Physics Curriculum Development 2021
- q) Member, Departmental Committee on Quality Assurance 2023
- r) Faculty Representative, PG External Exams (Mathematics Dept) 2023
- s) Member, National Engineering Conference Organizing Committee 2001

8. COMMITTEES SERVED

- ii) **Chairman**, Task Force on Accumulated Utility Bills in Kaduna Polytechnic (2021).
- iii) **Chairman**, Committee to Advice on the Compliance of Spider Radio Transmitter with NBC Regulations (March, 2020)
- iv) **Member**, Kaduna Polytechnic Housing Committee (2020-2021)
- v) **Chairman**, Rapid Response Committee on Essential Services (2019-2022)
- vi) **Member**, Panelist at College of Business and Management Studies Annual Entrepreneurship Day (June, 2019)
- vii) **Chairman**, Kaduna Polytechnic Energy Audit Committee (2018-2020)
- viii) **Member**, Committee on the Provision of a Robust Wide Area Network for a Complete Digital Solution to the Kaduna Polytechnic (August, 2017)
- ix) **Member**, Convocation Committee (July, 2016)
- x) **Member**, Committee for the Semesterization of Programmes (2015)
- xi) **Chairman**, ICT Committee for WITED (11th March, 2015)

- xii) **Member**, Committee for the Conduct of Post-UTME Examination Screening Exercise in Kaduna Polytechnic, (2014-2017)
- xiii) **Chairman**, Committee to investigate Sexual Allegation against a Lecturer in Electrical Engineering Department, Kaduna Polytechnic, 2014
- xiv) **Chairman**, Committee to Inspect the newly Purchased Computer systems at the Establishment Division of Central Administration, Kaduna Polytechnic, (March, 2014).
- xv) **Member**, Committee to Harmonize Students' Enrolment and the Revenue Generated from the Enrolment (2013-2017)
- xvi) **Member**, Board of Post Graduate Studies Kaduna Polytechnic, (2013-2016).
- xvii) **Member**, College of Engineering Conference Committee (2001-2008).
- xviii) **Chairman**, Internal Examination Moderation Committee Electrical Engineering Dept (2013 - 2015)

9. NON UNIVERISTY COMMITTEES SERVED

- i. **Member**, Technical Committee on Draft Standards for Renewable Energy by Standards Organization of Nigeria (February, 2020)
- ii. **Member**, Governing Council, Hassan Usman Katsina Polytechnic (2007- 2010).
- iii. **Chairman**, Panteka Housing Estate Residents' Association (2015 to Date)
- iv. **Member**, Panteka Estate Muslim Community
- v. **Member**, Works Committee, Panteka Estate Mosque Committee (2023 to date)
- vi. **Coordinator**, Soba Old Boys Association
- vii. **Member**, Police-Community Relations Committee Unguwar Sanusi Division
- viii. **Patron** Muslim Students Society Kaduna Polytechnic
- ix. **Patron** Katsina State Students Association Kaduna Polytechnic Chapter
- x. **Counsellor**, National Association of Electrical Electronics Engineering Students Kaduna Polytechnic Chapter

xi. Chairman, Nigerian Institution of Electrical and Electronics Engineers (nieee)

Kaduna Chapter End of Year Activities Committee 2016

xii. Chairman, Nigerian Institution of Electrical and Electronics Engineers (nieee)

Kaduna Chapter End of Year Activities Committee 2015.

10. MEMBERSHIP OF PROFESSIONAL BODIES:

- (i) Nigerian Institute of Physics (NIP)
- (ii) Solar Energy Society of Nigeria
- (iii) National Institute of Science Laboratory Technologists
- (iv) Council for the Regulation of Engineering in Nigeria
- (v) Institute of Electrical, Electronic Engineers (IEEE)
- (vi) American Physical Society (APS)
- (vii) Society of Exploration Geophysicists (SEG)

11. INTERNATIONAL CONFERENCES ATTENDED:

- (i) See below
- (ii) See below

12. LOCAL CONFERENCES ATTENDED:

- (i) See list below

13. PUBLICATIONS/ARTICLES:

Areas of Interest: Renewable Energy, Photovoltaics, Solid state Physics,

Electronics, Instrumentation and Electric Power systems

Books:

- (i) _____, None.
- (ii) _____, None

(A) In Peer Reviewed Journals and Books:

- i. Auwal Abdulkadira , Mai Almohaimeedb, Aliyu Kabiru Isiyakuc Raed Abdalrheemd, Mustapha Isah, Muhammad Mannir Aliyu and Aliyu Yakubu Tanko (2024) Influence of micro-texture sizes towards light absorption improvement in hybrid microtextured/nanotextured black silicon for solar cells

- ii. **Mohammed Mannir Aliyu** (2024) The Effect of Work Function of Back Contact Metals on the Performance of CdTe Solar Cells, *PHYSICS Access* <https://doi.org/10.47514/phyaccess.2020.1.1.000> ISSN Online: 2756-3898, ISSN Print: 2714-500X
- iii. **Mohammed Mannir Aliyu** (2024) Towards the Fabrication of Flexible CdTe Thin Films Solar Cells: Significance of Substrates Surfaces, *Science World Journal Vol. 19*(No 1) 2024 <https://dx.doi.org/10.4314/swj.v19i1.31>
- iv. **Mohammed Mannir Aliyu** (2024), Assessing the Effects and Impacts of the CdS/Te Interlayer in the Performance of the CdTe-CdS Thin Film Solar Cells through Simulations *Science World Journal Vol. 19* (No 1) 2024 <https://dx.doi.org/10.4314/swj.v19i1.32>
- v. Abdulkadir, A., Almohaimed, M., Aliyu, K. I., Abdalrheem, R., Isah, M., **Aliyu, M.M.**, and Tanko, A.Y. (2024), Influence of micro-texture sizes towards light absorption improvement in hybrid microtextured/nanotextured black silicon for solar cells, *Int. Journal of Nanoelectronics and Materials*.
- vi. Mohammed, A., Shuaibu, A., Sadiq, G. Abdu and **Aliyu, M.M.**, ((2023) Two-Dimensional pure and bromine doped MoTe₂ AND WSe₂ as electron transport materials for photovoltaic applications: a DFT Approach. *Computational Condensed Matter* 37 (2023) e00855
- vii. Mohammed Adamu, Shuaibu Alhassan, Sadiq G Abdu and **Mohammed M Aliyu** (2023). Exploring the Physical Properties of Tungsten Diselenide (WSe₂): A First Principle Approach. *Physics Access*, <https://doi.org/10.47514/phyaccess.2023.3.2.005>
- viii. Junaidu, M.H., Liew, J.Y.C., **Aliyu, M.M.**, Bello, M., Kabeer, S.M., Shuaibu, A. and Talib, Z.A.,(2023) The Effects of CIGS Absorber Layer Thickness and Band Gap Energy on the Performance of CIGS Thin Film Solar Cell: A Numerical Simulation, *Int. Journal of Chemical and Biochemical Sciences*, 24(7) (2023): 74-80.
- ix. Mohammed, A., Shuaibu, A., Sadiq, G.A. and **Aliyu, M.M.** (2023) Ab-initio Investigation of Chlorine-Doped Molybdenum Di-Telluride Single-layer for Low-Cost Solar Cell Applications. *SLU Journal of Science and Technology* Vol. 7 No. 1
- x. Aliyu A Masanawa, Alhassan Shuaibu, **Mohammed M Aliyu** and Ismail Magaji, (2022) First Principle Investigation on Electronic Properties of Cationic and Anionic CO-Alloyed Cu₂ZnSnS₄ Kesterite Material, *PHYSICS Access SPECIAL ISSUE* 01, 2022 13.
- xi. **Aliyu, M.M.**, B. Paul and Salawu, (2021) H. Effects of Glass and Dust Absorption of Solar Radiation In PV Solar Panels In Kaduna Metropolis, *International Journal of Science Research and Technology*, Vol5, No9. P.237-248.
- xii. **M.M. Aliyu**, P. Bartholomew and H. Usman, (2020) Comparative Study of the Performances of Silicon Monocrystalline and Polycrystalline PV Solar Panels in Kaduna Metropolis. *International Journal of Pure and Applied Science*, Vol.19, No.9 P.384-395.
- xiii. J. Tasi'u, M. S. Abubakar and **M.M Aliyu**, (2018) Comparison of Performance Characteristics of Monocrystalline and Polycrystalline PV Modules, *Kada Journal of Physics* Vol. 2 (1) pp.79-85 (2018).
- xiv. **Mohammed Mannir Aliyu**, Mohammed Aminul Islam, Qamar Huda, Sejedur Rahman and Nowshad Amin. Influence of RF power in the growth of aluminium zinc oxide (AZO) thin films by RF sputtering. *Advanced Materials Research* Vol. 925 (2014) pp 295-299 (2014).
- xv. Mohammed L Ibrahim, **M.M. Aliyu**, I. Garba, The Effect of Booster-Mirror Reflector on the Thermal Performance of a Truncated Pyramid Solar Thermal Cooker, *Int. Journal of Engineering Research and Applications*, Vol. 4, Issue 5(Version 2), May 2014, pp.126-135
- xvi. M.S. Hossain; M.A. Islam; Q. Huda; **M.M. Aliyu**; T. Razykov; M.M. Alam; Z.A.

- Alothman; K. Sopian; N. Amin, Growth optimization of $Zn_xCd_{1-x}S$ thin films by radio frequency magnetron co-sputtering for solar cell applications, *Thin Solid Films*. 2013;548:202-209.
- xxvii. M.A. Islam; Q. Huda; M.S. Hossain; **M.M. Aliyu**; M.R. Karim; K. Sopian; N. Amin, High quality 1 μ m thick CdTe absorber layers grown by magnetron sputtering for solar cell application, *Current Applied Physics*. 2013;13(4 SUPPL.2):S1 15-S121.
- xxviii. Dhar, N. **Aliyu, M. M.** Hossain, M. S. Islam, M. A. Sopian, K. and Amin, N. Significance of Substrates and Buffer Layers In CdTe Thin Film Solar Cell Fabrication, *Journal of Asian Scientific Research* 2013 2(1 1):680-685
- xix. Mohammed Sharafat Hossain, Mahmud Abdul Matin, M. A. Islam, **Mohammad Mannir Aliyu**, Takhir Razykov, Kamaruzzaman Sopian and Nowshad Amin, Towards Ultra Thin and High Efficiency $Zn_xCd_{1-x}S/CdTe$ Solar Cell by AMPS 1D, *Advanced Materials Research* Vols. 622-623 (2013) pp 1183-1187
- xx. Nowshad Amin; M A Islam; Shrarafat Hossain; **M. Mannir Aliyu**; Yusuf Sulaiman; Kamaruzzaman Sopian; “ Investigation for optimum structure of CdS:O/CdTe solar cell from numerical analysis”, *Advanced Materials research*. 2013 ;622: 1194-1198
- xxi. M.A. Islam; Q. Huda; M.S. Hossain; **M.M. Aliyu**; M.R. Karim; K. Sopian; N. Amin; “High quality 1 μ m thick CdTe absorber layers grown by magnetron sputtering for solar cell application”, 2013, *Current Applied Physics*; 1 3(Supp.2) :S115-S121;
- xxii. M.A. Islam, M.S. Hossain, **M.M. Aliyu**, P. Chelvanathan, Q. Huda, M.R. Karim, K. Sopian, N. Amin; “Comparison of Structural and Optical Properties of CdS Thin Films Grown by CSVT, CBD and Sputtering Techniques”; PV Asia Pacific Conference, Singapore; Published in Elsevier Publication’s Energy Procedia 33 (2013) 203 – 213.
- xxiii. M.A. Islam; M.S. Hossain; **M.M. Aliyu**; M.R. Karim; T. Razykov; K. Sopian; N. Amin; “Effect of $CdCl_2$ treatment on structural and electronic property of CdTe thin films deposited by magnetron sputtering”, *Thin Solid Films*(2013) 546:367-374.
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14. **HOBBIES:**

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