



UPNM
National Defence University of Malaysia
Kewajipan • Maruah • Integriti

JABATAN PENDAFTAR
Aras Bawah, Bangunan Canselori
Kem Sungai Besi, 57000 Kuala Lumpur
Tel : +603 - 9051 3400 Faks : +603 - 9058 1536
Emel : pendaftar@upnm.edu.my



CURRICULUM VITAE



1. PERSONAL PARTICULARS

Name		NOOR AISYAH BINTI AHMAD SHAH	
Current Position Faculty / Department		Senior Lecturer DS52 Department of Chemistry and Biology, Centre for Defence Foundation Studies	
Address		Department of Chemistry and Biology, Centre for Defence Foundation Studies, Universiti Pertahanan Nasional Malaysia, Kem Sungai Besi, 57000 Kuala Lumpur	
Mobile No:	018-2399484	Email:	aisyah@upnm.edu.my

2. ACADEMIC AND PROFESSIONAL QUALIFICATIONS

(Please list all academic qualifications, from your first degree, in chronological order)

Year	Degree	Discipline	University
2004	BSc. (Hons)	Industrial Chemistry	Universiti Teknologi Malaysia
2007	MSc.	Chemical Engineering	Universiti Sains Malaysia
2017	PhD.	Chemistry	Australian National University

3. TITLES OF POSTGRADUATE THESES WRITTEN

No.	TITLES OF POSTGRADUATE THESES
1.	Nanostructured Materials as Catalysts for the Production of Gasoline From Used Palm Oil and Crude Palm Oil: Synthesis, Characterization and Activity Studies (Master Thesis)
2.	Ruthenium Organometallic Complexes Incorporating <i>R,R</i> -Chiraphos for Nonlinear Optical Applications (PhD Thesis)

4. WORK EXPERIENCE (Please list your relevant experience in chronological order)

Year	Position	Organisation	Start and End Date
2004	Practical student	Water Laboratory, SIRIM Shah Alam, Selangor	2004
2005-2006	Graduate Research Assistant	School of Chemical Engineering, USM	2005-2006
2007	Substitute Teacher	Sekolah Menengah Kebangsaan Sultan Ahmad Tajuddin, Bandar Baharu, Kedah	2007
2007 – 2017	Lecturer	Department of Chemistry & Biology, Centre for Defense Foundation Studies UPNM	2007 – present
2017 – present	Senior Lecturer	Department of Chemistry & Biology, Centre for Defense Foundation Studies UPNM	2017 – present
2020 – 2022	Head of Department	Department of Chemistry & Biology, Centre for Defense Foundation Studies UPNM	2020 – 2022

5. TEACHING EXPERIENCES

No	Course Title	Level	Semester	Year
1	Chemistry I	Pre-degree course	1	2007/2008 – 2009/2010 2014/2015 – present
2	Chemistry II	Pre-degree course	2	2007/2008 – 2009/2010 2014/2015 – present
3	Research Methodology	Postgraduate course	-	2021

6. PREVIOUS ACADEMIC COURSES TAKEN

Core courses	Elective courses	University requirement courses
General Chemistry I	Radiochemistry	
Practical Chemistry I	Forensic Science	
General Chemistry II	Material Chemistry	
Practical Chemistry II	Radiochemical Analysis	
Organic Chemistry I	Application of Spectroscopy	
Practical Organic Chemistry I	Polymer Chemistry	
Organic Chemistry II	Corrosion Chemistry	
Practical Organic Chemistry II	Metal	
Inorganic Chemistry I		
Practical Inorganic Chemistry I		
Inorganic Chemistry II		
Practical Inorganic Chemistry II		
Physical Chemistry I		
Physical Chemistry II		
Practical Physical Chemistry		
Analytical Chemistry I		
Practical Analytical Chemistry I		
Analytical Chemistry II		
Practical Analytical Chemistry II		
Biochemistry		
Environmental Chemistry		
Computer Applications in Chemistry		
Spectroscopy		
Quality Control & Laboratory Management		
Industrial Chemistry Process		

7. RESEARCH AREA

Synthesis of new chemical compounds, heterogenous catalysis, optical materials, antimicrobial compounds

8. RESEARCH ACTIVITIES

No	Title	Role	Grant Year	Source Amount	Status
1.	Synthesis and Mechanistic Studies of The Reaction of Thiocyanatoacetylacetone With Amino Acids	Noor Azilah Mohd Kasim, Bohari M Yamin, Noor Aisyah Ahmad Shah	FRGS (2010 – 2012)	RM 50000	Completed
2.	Synthesis of Carbon Nanotubes For The Detection of Volatile Compounds	Noor Azilah Mohd Kasim, Norazman Bin Mohamad Nor, Noor Aisyah Ahmad Shah , Siti Hasnawati Jamal, Faizah Md Yasin	FRGS (2010 – 2013)	RM 50000	Completed
3.	Synthesis of dipolar amino-nitro-thiazole derivatives for electronic, electrooptics and nonlinear optical applications	Noor Aisyah Ahmad Shah (Principal) , Noor Azilah Mohd Kasim, Bohari Mohd Yamin, Siti Zulaikha Ngah Demon	FRGS (2015-2018)	RM 102000	Completed
4.	Electronic structure of metal oxide/organic semiconductor interface by optical second harmonic generation measurement.	Siti Zulaikha Ngah Demon, Noor Aisyah Ahmad Shah , Fauziah Aziz, Wan Yusmawati Wan Yusoff, Noriah Bidin, Noor Fadhilah Rahmat	FRGS (2015 – 2018)	RM116000	Closed
5.	Synthesis of intermetallic-surface-modified carbon nanotubes for optical limiting applications	Norherdawati Kasim, Noor Aisyah Ahmad Shah , Siti Zulaikha Ngah Demon, Wan Md Zin Wan	RAGS (2015 – 2018)	RM 45000	Closed

		Yunus, Norli Abdullah			
6.	Study of intermolecular interaction between carbon nanotubes and π -conjugated molecules for ultrafast optical switching.	Noor Fadhilah Rahmat, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff, Muhd Zu Azhan Yahya, Noriah Bidin, Noor Aisyah Ahmad Shah	RAGS (2015 – 2018)	RM 45000	Closed
7.	Surface modification of carbon nanofiber for the development of volatile organic compounds (VOCs) chemical sensor.	Noor Azilah Mohd Kasim, Wan Md Zin Wan Yunus, Siti Hasnawati Jamal, Noor Aisyah Ahmad Shah , Faizah Md Yasin, Famiza Abd Latif, Norherdawati Kasim	FRGS (2016-2020)	RM 91,000	Closed
8.	Synthesis and Characterization of Nitrocellulose From Nano Cellulose For Green Propellant Preparation	Siti Hasnawati Jamal, Wan Md Zin Wan Yunus, Ariffin Ismail, Siti Aminah Mohd Noor, Noor Aisyah Ahmad Shah , Norhana Abdul Halim	FRGS (2017 – 2020)	RM 101,442	Closed
9.	Detection of Chlorine Gas using Metal-Oxide Carbon Nanotubes Nanocomposite	Noor Azilah Mohd Kasim, Victor Feizal Abd Shattar Knight, Norazman Mohamad Nor, Muhd Zu Azhan Yahya, Ariffin Ismail, Noor Aisyah Ahmad Shah , Siti Hasnawati Jamal, Mohd	UPNM/2018/CHEMDEF/ST/4 (2018 –2022)	RM 240,000	Closed

		Hanif Yaacob			
10.	Synthesis and Characterization of Unsymmetrical Nitrothiazole-substituted Urea Derivatives for Electrooptics and NonlinearOptical (NLO) Applications	Noor Aisyah Ahmad Shah (Principal) , Noor Azilah Mohd Kasim, Siti Zulaikha Ngah Demon, Bohari Mohd Yamin, Ganesan a/l Krishnan	UPNM/2019/GPJP/2/SG/4	RM 20,000	Closed
11.	Unsymmetrical urea derivatives for electric and electro-optics applications	Noor Aisyah Ahmad Shah (principal) , Noor Azilah Mohd Kasim, Norli Abdullah, Siti Hasnawati Jamal, Wan Yusmawati Wan Yusoff	SF0116-UPNM/2022/SF/STG/1	-	Closed
12.	Computational Studies and Design of Novel Amidine-Based Molecules and Oligomers for Antimicrobial Applications	Noor Aisyah Ahmad Shah (principal) , Norli Abdullah, Siti Hasnawati Jamal, Wafi, Jahwarhar Izuan Abd Rashid, Fadhlul Wafi Badrudin	UPNM/2023/GPPP/ST/1	RM 52,500	On-going
13.	Functionalized Cellulose as Antimicrobial Materials: Computational Studies	Noor Aisyah Ahmad Shah (principal) , Norli Abdullah, Fazi Nurrahim, Nor-Laili Azua Jamari, Safura Taufik	UPNM/2023/GPJP/STG/7	RM 20,000	On-going
14.	Effect of Stabilizer in KAPOK-Nitrocellulose based Propellant	Siti Hasnawati Jamal, Alinda Samsuri, Siti Aminah Mohd Noor, Khadijah, Khadijah	UPNM/2023/GPPP/SG/3	RM 52,500	On-going

		Ismail, Noor Aisyah Ahmad Shah			
15.	Investigation of Spectroscopy Method for Elemental Profiling of Soy Sauce in Malaysia	Nor Laili-Azua Jamari, Ong Keat Khim, Nurhana Binti Mohamad Rafiuddin, Noor Aisyah Ahmad Shah , Safura Taufik	UPNM/2023/GPJP/STG/1	RM 20,000	On-going
16.	Investigation of the binding interaction between molecularly imprinted polymer (MIP) and PFAS molecules: Computational and experimental studies using ortho-phenylenediamine (O-PD) based polymers	Safura Taufik, Jahwarhar Izuan Abd Rashid, Noor Aisyah Ahmad Shah , Nor Laili-Azua Jamari, Norli Abdullah	SBRF-2023	RM 10,000	On-going
17.	In silico design of novel guanine-rich SSDNA aptamers for pyocyanin detection: Integration into a portable electrochemical sensit smart biosensor	Jahwarhar Izuan Abd Rashid, Safura Taufik, Norli Abdullah, Mohd Junaedy Osman, Noor Aisyah Ahmad Shah	SBRF-2023	RM 10,000	On-going

9. SUPERVISION

No	Project Title	Level	Role	Status	University
1.	Synthesis of glucose imidazole conjugation with oxime for organophosphorus nerve agent.	PhD	Co-supervisor	Ongoing	UPNM
2.	Dipolar Thiazole Derivatives Incorporating Electron Withdrawing Group and Electron Donating Group as Potential Nonlinear Optical Materials	MSc	Main supervisor	Graduated	UPNM
3.	Synthesis and characterization of solid metal oxide catalysts as potential biofuel production from microalgae.	MSc	Co-supervisor	Graduated	UPNM
4.	Development of Portable Water System	Final year research project	Co-supervisor	Graduated	UPNM

5.	Chemical Analysis	Industrial training	Main-supervisor	Graduated	UiTM
6.	Computational Studies and Design of Novel Amidine-Based Molecules and Oligomers for Antimicrobial Applications	Postdoctoral	Main-supervisor	Ongoing	UPNM

10. ARTICLES/ PROCEEDING/ BOOK

No	Authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name)	• Level
1.	Subhash Bhatia, Abdul Rahman Mohamed, Noor Aisyah Ahmad Shah , Composites as cracking catalysts in the production of biofuel from palm oil: Deactivation studies. <i>Chemical Engineering Journal</i> 2009, 155(1), 347-354.	International
2.	Nick Van Steerteghem, Stijn Van Cleuvenbergen, Noor Aisyah Ahmad Shah , Mark G. Humphrey, Thierry Verbiest, Koen Clays, Investigation of the second hyperpolarizability of Ru-alkynyl complexes by z-scan and nonlinear scattering. <i>Proc. SPIE 9939</i> , Light Manipulating Organic Materials and Devices III, 99390G (September 23, 2016). Doi:10.1117/12.2237203	International
3.	Nur Farahin Pairan, Noor Azilah Mohd Kasim, Bohari M. Yamin and Noor Aisyah Ahmad Shah , Crystal structure of ϵ -N,N-diethyl-2-(5-nitrothiazol-2-yl)-1-phenylethen-1-amine, C ₁₅ H ₁₇ N ₃ O ₂ S. <i>Zeitschrift für Kristallographie – New Crystal Structures</i> . 2017.	International
4.	Noor Aisyah Ahmad Shah , Nur Farahin Pairan, Noor Azilah Mohd Kasim and Bohari Mohd Yamin, Synthesis and Optical Properties of Dipolar Thiazole Derivatives Incorporating Nitro and Amino Substituents, <i>Key Materials Engineering</i> , 773 (2018) 157-161.	International
5.	Noor Aisyah Ahmad Shah , Farah Nabila Diauddin, Siti Zulaikha Ngah Demon, Norherdawati Kasim, Ganesan Krishnan, Mundzir Abdullah, Preparation and third order nonlinear optical properties of Ag coated carbon nanotubes, <i>Materials Today: Proceedings</i> 29 (2020) 110-114.	International
6.	Noor Aisyah Ahmad Shah , Farah Nabila Diauddin, Siti Zulaikha Ngah Demon, Norherdawati Kasim, Ganesan Krishnan, Mundzir Abdullah, The Study of Platinum Coated Carbon Nanotubes as Third-Order Nonlinear Optical Materials, <i>Solid State Phenomena</i> 317 (2021) 166-172.	International
7.	Syed Mohd Shafiq Syed Ahmad, Noor Azilah Mohd Kasim, Noor Aisyah Ahmad Shah , Norli Abdullah, Madinah Jaafar Mad Ariff Ohsem Organoboard: Interactive Game for Pre-University Organic Chemistry, <i>Creations de UiTM e-proceeding</i> , eISBN 978-967-17072-6-5(2022) page 38	National
8.	Norherdawati Kasim, Norhana Abdul Halim, Fadhlul Wafi Badrudin, Ahmad Farid Mohd Azmi, Azuraida Amat, Jahwarhar Izuan Abdul Rashid, Noor Aisyah Ahmad Shah , Noor Azilah Mohd Kasim, Noor Fadhilah Rahmat, Nor Azlian Abdul Manaf, Norli Abdullah, Safura Taufik, Siti Hasnawati Jamal, Siti Zulaikha Ngah Demon, Wan Yusmawati Wan Yusoff (2020) <i>Kompilasi Ujikaji Sains Untuk Sekolah Rendah dan Menengah</i> , Penerbit UPNM	National
9.	Muhd Zu Azhan Yahya, Wan Md Zin Wan Yunus, Nor Laili-Azua Jamari, Noor Azilah Mohd Kasim, Wan Yusmawati Wan Yusoff, Fadhilina Che Ros, Norli Abdullah, Noor Aisyah Ahmad Shah , Norhana Abdul Halim (Editors) (2021) <i>Solid State Science and Technology VII selected peer-reviewed papers from the 7th International Conference on Solid State Science and technology (7th ICSSST)</i> , Trans Tech Publications, Volume 317 of <i>Solid State Phenomena</i>	International

10.	Norli Abdullah, Norherdawati Kasim, Siti Hasnawati Jamal, Intan Juliana Shamsudin, Noor Aisyah Ahmad Shah (2024) Chapter: Recent Progress of Advanced Nanomaterials in Renewable Energy in Book: Nanofillers for Sustainable Applications, CRC Press Taylor & Francis Group	International
11.	Asmaa Zainal Abidin, Mohd Nor Faiz Norrahim, Nik Noorul Shakira Mohamed Shakrin, Baharudin Ibrahim, Norli Abdullah, Jahwarhar Izuan Abdul Rashid, Noor Azilah Mohd Kasim, and Noor Aisyah Ahmad Shah . "Amidine containing compounds: Antimicrobial activity and its potential in combating antimicrobial resistance." Heliyon (2024).	International

11. CONFERENCES

No.	Event	Title of Paper Presented	Role	Date	Organizer
1.	6 th Australian Organometallics Discussion Meeting at the University of Tasmania, Hobart, Australia.	Ruthenium complex incorporating chiral diphosphine ligand for non-linear optics	Presenter	17-20 January 2011	Royal Australian Chemical Institute & University of Tasmania
2.	Inaugural One-day Student Symposium in Inorganic Chemistry at the University of Sydney, Australia.		Presenter	30 June 2011	University of Sydney
3.	Second Student Symposium on Inorganic Chemistry, Australian National University, Australia.		Presenter	30 November 2012	Australian National University
4.	7 th Australasian Organometallics Discussion Meeting, Victoria University of Wellington, New Zealand.	Ruthenium Complexes Incorporating R,R-Chiraphos for Nonlinear Optics	Presenter	13-16 January 2013	Royal Australian Chemical Institute & Victoria University of Wellington
5.	29 th Regional Conference on Solid State Science and Technology, KSL Hotel and Resort, Johor.	Ruthenium Alkynyl Complexes for Nonlinear Optical Applications	Presenter	15 – 17 November 2016	MASS & UTM
6.	3 rd International Conference on Applied Engineering, Materials and	Synthesis and Optical Properties of Thermally Stable Dipolar Thiazole Chromophores Incorporating Nitro and Amino Substituents	Presenter	21 April 2018	IETP Association

	Mechanics 2018 (3 rd ICAEMM 2018), Okinawa, Japan.				
7.	4 th Advanced Materials Conference 2018 (AMC2018), Hilton Kuching, Sarawak	Preparation and third order nonlinear optical properties of Ag coated carbon nanotubes	Presenter	27 – 28 November 2018	SIRIM Bhd.
8.	7 th International Conference on Solid State Science and Technology (7 th ICSSST 2019)	The Study of Platinum Coated Carbon Nanotubes as Third-Order Nonlinear Optical Materials	Presenter	11-13 November 2019	MASS & UPNM
9.	3 rd Virtual Symposium on Multidisciplinary Science 2021	Dipolar Thiazole Derivatives as Potential Optical Materials	Presenter	7 July 2021	Asasi UPM
10.	9th International Conference on Solid State Science and Technology (ICSSST) 2023	Investigation of the Interaction between New Amidine-Piperazine Derivatives and PBP2a as Potential Antimicrobial Candidate Against MRSA through Molecular Docking	Presenter	2023	MASS & UMS
11.	International Conference on Advanced Materials and Applied Sciences 2024 (IConMAS 2024)	Investigation of Cellulose I Derivatives as Potential Antimicrobial Agents against <i>Staphylococcus aureus</i>	Presenter	2024	UPNM

12. EXHIBITION

No.	Event	Title of project	Award	Date	Organizer
1.	Defence, Security and Sustainability (DSS) Exhibition 2019	New Thioazole Derivatives as Nonlinear Optical Materials	Silver	25 April 2019	UPNM
2.	Materials Technology Challenges (MTC) 3.0	Platinum Coated Carbon Nanotubes for Optical Limiting Applications	Bronze	12 November 2019	MASS & UPNM
2.	Pre-University Malaysia Innovation Competition (PIITRAM) 2021	1. Ohsem Organoboard: Interactive Game for Pre-University Organic Chemistry	1. Silver 2. Gold 3. Gold	7-15 March 2021	Asasi Council Malaysia / UMT/ UnisZa

		2. Polypcon: A Recycled Used Face Masks Based Concrete 3. The NOA: Absorbent for Oily Foods			
3.	PAP Innovation Competition (PAPIC) 2021	1. Ohsem Organoboard: Interactive Game for Pre-University Organic Chemistry 2. Polypcon: A Recycled Used Face Masks Based Concrete 3. The NOA: Absorbent for Oily Foods		30 March 2021	PAP, UPNM
4.	Pre-University Malaysia Innovation Competition (PIITRAM) 2022	1. Yippie Organo Tiles: An Interactive Game for Pre-University Organic Chemistry 2. Recycled Plastic Blocks for Flood's Temporary Shelter 3. Application for shopping trolley payment	1. Gold 2. Gold 3. Silver	7 – 9 March 2021	UPNM
5.	Creations de UiTM International Mega Innovation Carnival 2022	Ohsem Organoboard: Interactive Game for Pre-University Organic Chemistry	Silver	24 March – 8 April 2022	UiTM
6.	Defence, Security and Sustainability (DSS) Exhibition 2022	Intermetallic-surface-modified carbon nanotubes for optical limiting applications	Silver	3 – 4 Ogos 2022	UPNM
7.	Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA'22)	Yippie organo tiles-an interactive game for pre-university organic chemistry	Gold	1 – 3 November 2022	Kementerian Pengajian Tinggi & Universiti Malaysia Kelantan
8.	PAP Innovation Competition (PAPIC) 2022	1. Smartime Aquaria 2. Fish Freshness Detection 3. MAUZ STRAWS	1. Gold 2. Gold 3. Bronze	9 November 2022	PAP, UPNM
9.	ITEX 2023	NANOK	Gold	10 – 13 May 2023	
10.	PAP Innovation Competition (PAPIC) 2023	1. Ecovac 2. Paper stone foldable bottle 3. BEES	1.Silver 2.Bronze 3. Bronze	18 October 2023	PAP, UPNM
11.	Defence, Security and Sustainability (DSS) Exhibition 2024	Functionalized Cellulose as Antimicrobial Materials	Silver	24 – 25 April 2024	UPNM

13. MEMBERSHIP

No	Membership	Position	Duration
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1.	American Chemical Society (ACS)	Member	2022 – present
2.	Malaysian Solid State Science & Technology Society (MASS)	Member	2019 – present
3.	Institut Kimia Malaysia	Member	2009 – 2010

14. Academic Recognition and Leadership

Academic recognition and leadership such as Academic Award, Academic Assessor/External Examiner/Ph.D. Thesis Examiner, Master's Thesis Examiner/Promotion Assessor (External), Internal Thesis Examiner, Visiting Professor/Fellowship, Invited Speaker, Editorial Board and other academic recognition.

(Please list in chronological order and state: Academic Recognition (e.g. award name, invited speakers etc.), year, level and awarding body/ name of institution)

No	Academic Recognition	Year	Level	Awarding Body / Name of Institution
1.	Editorial Board – Publication for International Conference on Advanced Materials and Applied Sciences 2024 (IConMAS 2024)	2024	International	UPNM
2.	Internal Master's Thesis Examiner	2021	University	UPNM
3.	Editorial Board – Solid State science & Technology VII (Selected peer-reviewed papers from the 7 th ICSSST) – Trans Tech Publication	2020	International	Solid State Phenomena, Trans Tech Publications Ltd
4.	Anugerah Perkhidmatan Cemerlang	2016	University	UPNM
5.	Pemeriksa Kertas Kimia Bahagian Matrikulasi	2015	National	Bahagian Matrikulasi, Kementerian Pendidikan Malaysia
6.	Anugerah Perkhidmatan Cemerlang	2009	University	UPNM

15. REFERENCES

Name: Prof. Emeritus Dato' Dr. Wan Md Zin Wan Yunus Address: Fakulti Sains & Teknologi UPNM Email: wanmdzin@upnm.edu.my Office No: +603-90513400 ext 7612662	Name: Prof. Madya Dr. Noor Azilah Mohd Kasim Address: Jabatan Kimia & Biologi, Pusat Asasi Pertahanan UPNM Email: azilah@upnm.edu.my Office No: +603-90513400 ext 4425
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