



JABATAN PENDAFTAR

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Kewajipan, Maruah, Integriti

MS ISO 9001:2008 REG NO KLR -0500197

CURRICULUM VITAE

I. PERSONAL PARTICULARS			
Name	DR. FADHLUL WAFI BIN BADRUDIN		
Current Position Faculty / Department	PENSYARAH (DS51) JABATAN FIZIK, PUSAT ASASI PERTAHANAN		
Position applied for			
II. ACADEMIC AND PROFESSIONAL QUALIFICATIONS (Please list all academic qualifications, from your first degree, in chronological order)			
Year	Degree	Discipline	University
2013-2016	Doctor of Philosophy in Sciences,	Physics	Universiti Pertahanan Nasional Malaysia (UPNM)
2009-2012	Bachelor in Sciences (HONS.)	Physics	Universiti Teknologi Mara Shah Alam
III. TITLES OF POSTGRADUATE THESES WRITTEN			
No.	TITLES OF POSTGRADUATE THESES		
1.	FIRST PRINCIPLES STUDY OF POLYANIONIC CATHODE MATERIALS LiFeSO ₄ F AND LiFeSO ₄ OH USING DENSITY FUNCTIONAL THEORY		

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

Year	Position	Field of Work	Place of Work
6/18-present	Lecturer (DS51)	Physics and Mathematics	Universiti Pertahanan Nasional Malaysia
11/16-8/17	Lecturer (DS45)	Physics and Mathematics	Universiti Pertahanan Nasional Malaysia
2014-2015	Software Trainer (Material Studio Software)	Material Sciences	-
9/2012-4/2015	Graduate Research Assistance	Physics	Universiti Pertahanan Nasional Malaysia
2/2012-5/2012	Internship Student	Telecommunication	Telekom Malaysia R&D

1.0 TEACHING AND SUPERVISION**1.1 Undergraduate Courses**

(Please list in chronological order and state: course title, semester and year)

No	Course Title	Semester	Year
1.	Fizik 2 - FPY0326	2	2016-2017
2.	Matematik 1 – FMA0116	1	2017-2018
3.	Matematik 2 – FMA0126	2	2017-2018
4.	Matematik 1 -- FMA0116	1	2018-2019
5.	Matematik 2 – FMA0126	2	2018-2019
6.	Matematik 1 -- FMA0116	1	2019-2020
7.	Matematik 2 – FMA0126	2	2019-2020
8.	Phycis 1 – FPY0316	1	2020-2021
9.	Phycis 1 – FPY0326	2	2020-2021
10.	Phycis 1 – FPY0316	1	2022-2023

1.2 Postgraduate Courses

(Please list in chronological order and state: course title, semester and year)

No	Course Title	Semester	Year

1.3 Ph.D Supervision

(Please list in chronological order and state: name of student, year project title and status)

No	Name of Student	Project Title	Year	Status <ul style="list-style-type: none">• Completed• Submitted• In Progress
1.	Mohamed Firdaus bin Rosle	Synthesis of $\text{Na}_3\text{MO}_x\text{V}_{2-x}(\text{PO}_4)_3/\text{C}$ As High Rate and Stable Cycling Cathode Material for Sodium-ion Battery	9/2016	Completed
2.	Siti Munirah binti Hasanaly	Nanostructured Doped Lithium Vanadium Phosphate Based Materials as High Power for Li-ion Battery	9/2016	Withdraw
3	Shahrul Izwan bin Ahmad	First Principle Study on Properties of Heteroatom-Doped Graphene Encapsulated LiFePO_4 for Battery Application using Density Functional Theory	9/2020	In Progress

1.4 PhD.External/Internal Examination

(Please list in chronological order and state: name of student, year project title and status)

No	Name of Student	Project Title	Year	Status <ul style="list-style-type: none">• Completed• Submitted• In Progress

1.5 Supervision (Coursework and Project)

(Please list in chronological order and state: name of student, year, project title and status)

No	Name of Student	Project Title	Year	Status <ul style="list-style-type: none">• Completed• Submitted• In Progress
1	Norazman Bin Hamzah	Penyelidikan Secara Prinsip Pertama Terhadap Sifat Elektronik dan Struktur Bahan Katod LiFePO_4	2016	completed

1.6 M.Sc (by Research)

(Please list in chronological order and state: name of student, year, project title and status)

No	Name of Student	Project Title	Year	Status <ul style="list-style-type: none">• Completed• Submitted• In Progress
1.	Roslan bin Husin	Structural, Electronic and Optical of LiNbO_3 : First Principle Approach	6/2015	Completed
2.	Noor Atiqah binti Md Nasir	First Principles Study on Structural Properties, Electronic Properties, And Voltages of Cathode Material Nickel-Doped Sodium Iron Hexacyanoferrate For Sodium Ion Battery	2017	Completed
3.	Fatin Nabilah binti Sazman	First-Principles Study on Stuctural And Electronic Properties Of Hydrated and Pure Prussian Blue With Potassium Ion Intercalation For Cathode Material Of Potassium Ion Battery	2017	Completed
4.	Aqeel Bin Idrus	Strain Tuned ion (Li, Na) Migration in The Iron Hydrosulphate Cathode Material: A First Principles Investigation	6/2018	Completed

1.7 M.Sc. External/Internal Examination

(Please list in chronological order and state: name of student, year, project title and status)

No	Name of Student	Project Title	Year	Status
				<ul style="list-style-type: none">• Completed• Submitted• In Progress
1.				

2.0 RESEARCH AND PUBLICATION

2.1 Research Projects

(Please list in chronological order and state: title, list of researchers, grant/year, source/amount, date/duration and status) (Please bold your name)

No	Title	List of Researcher	Grant Year	Source Amount	Status
		<ul style="list-style-type: none">• Principal• Members			<ul style="list-style-type: none">• Completed• In Progress
1.	Strain Tuned ion (Li, Na) Migration in The Iron Hydrosulphate Cathode Material: A First Principles Investigation	Member	2017-2019	KPT (FRGS)	Completed
2	A First Principles Study on The Effect of Fe(CN) ₆ Vacancy Inside Two Electron Potential Prussian Blue Cathode	Principles	2018-2020	UPNM (Geran Penyelidikan Jangka Pendek)	Completed
3	Structural Study of Fast Lithium Ion Conduction in Halogen Doped Lithium Vanadium Phosphate Cathode.	Members	2018-2020	KPT (FRGS)	In Progress
4.	Kajian Terhadap Teknik	Member	2019-	UPNM	Revoked

No	Title	List of Researcher • Principal • Members	Grant Year	Source Amount	Status • Completed • In Progress
	Baru Untuk Sintesis Nanozarah Nikel Dalam Larutan Kitosan Menggunakan Kaedah Sinar Gama		2021	(Geran Penyelidikan Jangka Pendek)	
5.	Influences of Active Material, Binders, and Conductive Additive on Electrochemical Properties of a Graphene/Metal Oxide Composite Electrode for Supercapacitor Application	Member	2020-2022	UPNM (Geran Penyelidikan Jangka Pendek)	In Progress
6.	The role of heteroatom doping on the electronic conductivity, ionic conductivity, and structural stability of carbon-coated LiFePO ₄ . A computational Study.	Principles	2021-2023	UPNM (Geran Penyelidikan Jangka Pendek)	In Progress

2.2 Publications

2.2.1 Invited/Keynote Papers/Presentation

(Please list in chronological order and state: authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name))

No	Authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name)	Level • International • National • University
1.	First Principles Study on Novel Cathode Material NaFeSO ₄ OH base on Density Functional Theory – Invited Speaker at READ Program 1/2020	University

2.2.2 Book/Chapter in Book:

(Please list in chronological order and state: authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name))

No	Authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name)	Level <ul style="list-style-type: none"> • International • National • University
1.	W. Y. W. Yusoff, N. Ahmad, N. H. A. Rosli, N. F. Rahmat. S. Z. N. Demon, N. A. Halim, N. A. Zabidi, F.W. Badrudin , F. C. Ros, A. L. A. Abdullah, S. I. Ahmad, A. Amat and N. Osman, Module of Physics I, 5 th edition	University
2.	Dr Norhana, Dr. Wan Yusmawati, Dr Noriza, Dr. Fadhlina, Dr. Siti Zulaikha, Nurul Hazwani, Noor Fadhilah, Shahrul Izwan Dr. Fadhlul Wafi Badrudin , Laboratory Manual Physics I – FPY0316 Session 2017/2018	University
3.	W. Y. W. Yusoff, N. Ahmad, N. H. A. Rosli, N. F. Rahmat. S. Z. N. Demon, N. A. Halim, N. A. Zabidi, F.W. Badrudin , F. C. Ros, A. L. A. Abdullah, S. I. Ahmad, A. Amat and N. Osman, Module of Physics I, 6 th edition 2018/2019	University

2.2.3 Journal Article

(Please list in chronological order and state: authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name))

No	Authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name)	Level <ul style="list-style-type: none"> • International • National • University
1.	M. F. M. Taib, M. K. Yaakob, F. W. Badrudin , T. I. T. Kudin, O. H. Hassan, and M. Z. A. Yahya, "First-Principles Calculation of the Structural, Elastic, Electronic and Lattice Dynamics of GeTiO ₃ ." Ferroelectrics, vol. 452, no. 1, pp. 122–128, 2013.	International
2.	M. F. M. Taib, M. K. Yaakob, F. W. Badrudin , M. S. A. Rasiman, T. I. T. Kudin, O. H. Hassan, and M. Z. A. Yahya, "First-Principles Comparative Study of the Electronic and Optical Properties of Tetragonal (P4mm) ATiO ₃ (A = Pb,Sn,Ge)," Integrated Ferroelectrics, vol. 155, no. 1, pp. 23–32, 2014.	International
3.	M. F. M. Taib, M. K. Yaakob, F. W. Badrudin , T. I. T. Kudin, O. H. Hassan, and M. Z. A. Yahya, "First Principles Calculation of Tetragonal (P4mm) Pb-free Ferroelectric Oxide of SnTiO ₃ ," Ferroelectrics, vol. 459, no. 1, pp. 134–142, Jan. 2014.	International

4.	M. S. A. Rasiman, F. W. Badrudin , T. I. T. Kudin, M. K. Yaakob, M. F. M. Taib, M. Z. A. Yahya, and O. H. Hassan, "Determination of Electronic Structure and Band Gap of Li ₂ MnP ₂ O ₇ via First-Principle Study," Integrated Ferroelectric., vol. 155, no. 1, pp. 71–79, May 2014.	International
5.	F. W. Badrudin , M. F. M. Taib, O. H. Hassan, and M. Z. A. Yahya, Effect of lithium intercalation on the structural and electronic properties of layered LiFeSO ₄ OH and layered FeSO ₄ OH using first-principle calculations," Computational Materials Science., vol. 119, pp. 144–151, Jun. 2016	International
6.	A. A. Mohamad, M. S. Hassan, M. K. Yaakob, M. F. M. Taib, F. W. Badrudin , O. H. Hassan, and M. Z. A. Yahya, "First-principles calculation on electronic properties of zinc oxide by zinc–air system," Journal of King Saud University - Engineering Sciences., vol. 29, no 3, 278-283, July 2017	International
7.	R. Husin, F.W. Badrudin , M.F.M. Taib, M.Z.A. Yahya," Effects of Strain on Electronic and Optical Properties of LiNbO ₃ : A First Principles Study," Material Research Express, 2019	International
8.	N. A. M. Nasir, F. W. Badrudin , A. Idrus, F. N. Sazman, M. F. M. Taib, and M. Z. A. Yahya, "First principle Study on Structural and electronic properties of Prussian blue cathode material for sodium-ion battery", Molecular Crystals and Liquid Crystals, 2020	International
9.	FC Ros, SI Ahmad, FW Badrudin , SH Jamal, N Abdullah, NA Halim, Investigation on Purity and Thermal Stability of Ag ₂ O Raw Material Used to Synthesis Ag ₂ Nb ₄ O ₁₁ Ceramics Using Thermal and Phase Analysis Method, Zulfaqr Journal of Defence Science, Engineering & Technology 4 (2), 2021.	International
10.	SI Ahmad, FW Badrudin , ALA Abdullah, MZA Yahya, MFM Taib, OH Hassan, Evaluation of Olivine LiFePO ₄ Polyanionic Cathode Material Using Density Functional Theory, Key Engineering Materials 908, 293-298, 2022.	International

2.2.4 Proceedings Articles:

(Please list in chronological order and state: authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name))

No	Authors, year, title, publisher/journal/conference, volume and number of pages (Please bold your name)	Level <ul style="list-style-type: none"> • International • National • University
1.	A Idrus, FW Badrudin , MFM Taib, OH Hassan, AMM Ali, MZA Yahya, Ab Initio Study on Structural Properties of NaFeSO ₄ OH Cathode Material for Rechargeable Sodium Ion Battery Solid State Phenomena 317, 400-405, 2021.	International
2.	SI Ahmad, S Rahim, SA Shamsudin, AM Noor, FC Ros, FW Badrudin , Spheroid Nickel Nanoparticles Synthesized in CTAB Solution Using Gamma Radiation, Solid State Phenomena 317, 138-143, 2021.	International

3.	F.W. Badrudin , M.F.M. Taib, R.I.P.R. Mustapha, O.H. Hassan, M.Z.A. Yahya, Effects of Vanadium Substitution on the Layered LiFeSO ₄ OH: A First Principles Investigation, Materials Today Proceedings, 4 (2017) 5108–5115	International
4.	N. H. Hussin, M. F. M. Taib, F. W. Badrudin , N. A. Johari, N. Salleh, M. Z. A. Yahya, and O. H. Hassan, “First Principles Study on Structural and Electronic Properties of PZT and P _{Sn} ZT Using Density Functional Theory,” Material Science Forum, vol. 846, pp. 734–739, 2016.	International
5.	F. W. Badrudin , M. S. A. Rasiman, M. F. M. Taib, N. H. Hussin, O. H. Hassan, and M. Z. A. Yahya, “First Principles Study on Structural and Electronic Properties of LiFeSO ₄ F Cathode Material for Lithium Ion Batteries,” Advanced Material Research, vol. 1107, pp. 508–513, 2015	International
6.	M. S. A. Rasiman, F. W. Badrudin , M. K. Yaakob, M. F. M. Taib, A. M. M. Ali, M. Z. A. Yahya, and O. H. Hassan, “An Investigation of Structural and Electronic Properties of Novel Cathode Material Li ₂ MnP ₂ O ₇ and its Delithiated Li _{2-x} MnP ₂ O ₇ (x=1,2): A First Principles Study,” Advanced Materials Research., vol. 1107, pp. 485–490, 2015.	International
5.	N. H. Hussin, M. F. M. Taib, N. A. Johari, F. W. Badrudin , O. H. Hassan, and M. Z. A. Yahya, “Establishment of Structural and Elastic Properties of Titanate Compounds Based on Pb, Sn and Ge by First-Principles Calculation,” in Applied Mechanics and Materials, 2014, vol. 510, pp. 57–62.	International
6.	F. W. Badrudin , M. S. A. Rasiman, M. F. M. Taib, N. H. Hussin, O. H. Hassan, and M. Z. A. Yahya, “First Principles Study on Structural and Electronic Properties of LiFeSO ₄ OH Cathode Material for Lithium Ion Batteries,” Applied Mechanics and Materials., vol. 510, pp. 33–38, Feb. 2014	International
7.	M. F. M. Taib, M. K. Yaakob, M. S. A. Rasiman, F. W. Badrudin , O. H. Hassan, and M. Z. A. Yahya, “Comparative study of cubic Pm3m between SnZrO ₃ and PbZrO ₃ by first principles calculation,” in 2012 IEEE Colloquium on Humanities, Science and Engineering (CHUSER), 2012, pp. 713–718.	International
8.	M. F. M. Taib, M. K. Yaakob, M. S. A. Rasiman, F. W. Badrudin , O. H. Hassan, and M. Z. A. Yahya, “Ab-initio study of active lone pair of Ge ²⁺ cation in novel perovskite GeTiO ₃ compound,” in 2012 IEEE Colloquium on Humanities, Science and Engineering (CHUSER), 2012, pp. 708–712	International

3.0 ACADEMIC RECOGNITION AND LEADERSHIP, CONSULTANCY, SERVICE TO THE UNIVERSITY AND SERVICE TO THE COMMUNITY

(a) 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.	Anugerah Terbaik Doktor Falsafah	2018	University	Anugerah Kualiti TNC (Akademik dan Antarabangsa) UPNM
2	Penilai Kolokium Siswazah 2018	10/2018	University	Pusat Pengajian Siswazah, UPNM
3.	Penilai Kolokium Siswazah 2019	10/2019	University	Pusat Pengajian Siswazah, UPNM
4.	Penilai Kertas Cadangan FRGS	2/2020	University	Pusat Asasi Pertahanan, UPNM
5.	READ program Speaker	2/2020	University	Pusat Asasi Pertahanan, UPNM
6.	Silver Award - Publication Contest 2020	2020	University	Deputy Vice Chancellor (Research & Innovation)
7.	Anugerah Akademik Cemerlang: Kategori Anugerah Ahli Akademik Harapan	2020	University	Naib Cancellor UPNM
8.	Internal Master Thesis Examiner	2021	University	Pusat Pengajian Siswazah UPNM

(b) Consultancy - Consultancy work that benefited to the University.

(Please list in chronological order and state: title, year, sponsor, value, main researchers and duration of consultancy)

No.	Title	Year	Sponsor	Value	Duration

(c) Service to the University

Service to the university such as Vice Chancellor/Deputy Vice Chancellor/Dean/Director, Deputy Dean/Deputy Director/Unit Coordinator/Hostel Warden, Programme Chairperson/ Assistant Warden/Fellow. Representing University in Sports and Other Non-Academic Activities. Professional/Academic Association (Committee Member).

(Please list in chronological order and state: position/membership, committee and duration)

No	Position/Membership	Committee	Duration
1.	Member	Kelab Rekreasi Pusat Asasi Pertahanan	11/2016-present
1.	Advisory Board	Electroactive Material Society	2017-Present
2.	Member	Nadimasa	3/2017- present
3.	Player (PAP)	Pertandingan Bola Sepak Piala Pustakawan 2017	-
4	AJK STEM	Pusat Asasi Pertahanan	2018 - 2022
5	Editor Bulletin PAP	Pusat Asasi Pertahanan	2019-present
6	Player (PAP)	Pertandingan Futsal Piala TNC AA 2019	-
7	AJK 7 th ICSSST 2019	Pusat Asasi Pertahanan	2019
8	Kejohanan Bagi Kejohanan Olahraga Staf Antara Fakulti Pusat Jabatan Bahagian (Fpjb) Upnm Piala Akademi Kecergasan Pertahanan Kali Ke-3 2020	Pusat Asasi Pertahanan	2/2020
9	AJK	Pusat Asasi Pertahanan Innovation Competition 2021	2021
10	AJK PIITRAM 2022	Pre-University Matriculation Innovation Competition 2022	2022
11	AJK KRRPAP	Kelab Rekreasi Pusat Asasi Pertahanan	2022-present

(d) Service to the community

(Please list in chronological order and state: level of involvement, activity, organiser, venue, date/ year/ duration)

No	Level of involvement	Activity	Organiser	Venue	Date/Year/ Duration
1	State	Pertandingan Olympiad Sains Dan Matematik Peringkat Negeri Selangor	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	UiTM Puncak Alam	16 November 2016
2.	National	Pertandingan Olympiad Sains Dan Matematik Peringkat Akhir 2017	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	UiAM Kuantan	17-19 MAC 2017
3.	International	Expedisi Menuju Puncak 2017 (Official Attempt “ Longest Chain of People Claspig Wrists” Guinness World Record)	Kerajaan Negeri Sembilan	Stadium Tuanku Abdul Rahman, Paroi, Seremban	19 AUGUST 2017
4.	National	Pertandingan Olympiad Sains dan Matematik Peringkat Negeri Pahang	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	SMK Paya Besar Pahang	4 April 2018
5.	National	Pertandingan Olympiad Sains dan Matematik Peringkat Negeri Terangganu	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	SMS Sultan Mahmud Kuala Terengganu	9 April 2018

6.	National	Pertandingan Olympiad Sains dan Matematik Peringkat Negeri Selangor	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	Sekolah Agama Menengah Bestari Subang Jaya	17 April 2018
7.	National	Pertandingan Olympiad Sains Dan Matematik Peringkat Wilayah Persekutuan	Gagasan Pendidikan Melayu Malaysia (GAGASAN)	UPNM	19 April 2018
8	State	Bengkel "Training of Trainer" Sains Sekolah Rendah Bagi Program Mentor Mentee STEM 2018 Peringkat Wilayah Persekutuan	Pusat Asasi Pertahanan UPNM	Pusat Marin, UPNM	17-18 Oktober 2018

I declare that all the information in this form is true and correct. The University has the right to withdraw or reject the application if any information in this form found to be untrue.

Signature :

Name : **Fadhlul Wafi Bin Badrudin**

Faculty/Department : **Jabatan Fizik, Pusat Asasi Pertahanan**

Date : **25/08/2022**

I verify that, to the best of my knowledge, all the information provided in the forms are true.

**Dean
Signature and Stamp :**

Date :