



CURRICULUM VITAE



I. PERSONAL PARTICULARS

Name	Dr Siti Zulaikha Binti Ngah Demon
Current Position Faculty / Department	Senior Lecturer DS51 Centre for Defence Foundation Studies National Defence University of Malaysia

II. ACADEMIC AND PROFESSIONAL QUALIFICATIONS

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

Year	Degree	Discipline	University
2008	Bachelor of Science (Physics)	Physics	Universiti Teknologi Malaysia (UTM)
2011	Master of Science (Physics)	Laser Technology/ Non-linear Optics	Universiti Teknologi Malaysia (UTM)
2014	Doctor of Philosophy (Materials Science)	Materials Science/Non-linear Optics	Japan Advanced Institute of Science and Technology (JAIST)

III. TITLES OF POSTGRADUATE THESES WRITTEN (At MSc/PhD Level)

No.	TITLES OF POSTGRADUATE THESES
1	Design of Q-Switch Driver Based on Switch Mode Power Supply (SMPS) Technique
2	Interfaces of Indium Tin Oxide and Organic Semiconductor Thin Film Studied by Optical Second Harmonic Generation.

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

Year	Position	Organisation	Start and End Date
2009	Tutor DA41	Department of Physics, Centre for Defence Foundation Studies, National Defence University of Malaysia (UPNM)	17/8/2009 – 1/1/2015
2015	Senior Lecturer DS51		2/1/2015-current

1.0 TEACHING AND SUPERVISION**1.1 Postgraduate Courses**

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

No.	Course Title	Semester	Year
1	Research Methodology: Oral Communication and Poster Presentation	I	2021

1.2 First Degree Courses

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

No.	Course Title	Semester	Year

1.3 Diploma Courses

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

No.	Course Title	Semester	Year

1.4 Pre-Degree Courses

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

No	Course Title	Semester	Year
1	Physics Laboratory II	2	2009-2011
2	Physics Laboratory I	1	2010-2011
3	Basic Physics in Medicine	1	2011
4	Physics II	2	2014-2021
5	Physics I	1	2015-2021

1.5 PhD Supervision

(Please list in chronological order)

No.	Name of Student	Project Title	Date of Registration	Role (Main / Co-Supervision)	Status <ul style="list-style-type: none">• Completed• Submitted• In Progress	University
1	Nursaadah Binti Ahmad Poad (Physics)	Third Order NLO of Gold Doped P3HT Nanowires for Low Power Laser	July 2021	Main supervision	In progress	UPNM
2	Nurul Farhana Binti Abu Kasim (Physics)	Optical and Surface Plasmon Resonance of Gold Nanoparticle Decorated Graphene Oxide for Nerve Agent Fiber Optics Sensor	September 2021	Main supervision	In progress	UPNM

1.6 PhD External/Internal Examination

(Please list in chronological order)

No.	Name of Student	Project Title	External / Internal	Date of Viva	University
1	Ahmad Firdaus Bin Zainal Abedin	Simulation of Landmine Detection by Fast Neutrons Backscattering Method Due to The Resonances In The Cross Section of C, N and O	Internal Examiner	2018	UPNM

1.7 MSc (by Research)

(Please list in chronological order)

No.	Name of Student	Project Title	Date of Registration	Role (Main / Co-Supervision)	Status • Completed • Submitted • In Progress	University
1	Nursaadah Binti Ahmad Poad (Physics)	Effect of Polylactic Acid Addition on Properties of Spin Coated Quaterthiophene Film	1/6/2015	Main supervision	Completed	UPNM
2	Nurul Syahirah Nasuha Binti Saáya (Chemistry)	Design of Hybrid Carbon Nanotubes/Polythiophene Based Chemiresistive Sensor for VX-type Nerve Agent Stimulants	1/6/2018	Co-supervision	Completed	UPNM
3	Nur Atikah Binti Shaari (Physics)	Nanostructure Materials for High Efficiency Thin Film Solar Cells	1/6/2018	Co-supervision	Completed	UPNM

1.8 MSc External/Internal Examination

(Please list in chronological order)

No.	Name of Student	Project Title	External / Internal	Date of Viva	University
1	Rusaini Athirah Binti Ahmad Rusdi	Characterization and Mechanical Studies on Laminated Bacterial Cellulose/Kevlar Composite	Internal	19/2/2020	UPNM
2	Asyraf Hakimi bin Azmi	The Study of Synthesis, Characterization and Fabrication of Bismuth Oxyiodide (BiOI) Thin Film for Non Toxic Perovskite Solar Cells	Internal	20/5/2022	UPNM

1.9 Supervision (Postgraduate Research Project or Final Year Research Project)

(Please list in chronological order)

No.	Name of Student	Project Title	Date of Registration	Role (Main/Co-Supervision)	Status <ul style="list-style-type: none"> • Completed • Submitted • In Progress

2.0 RESEARCH, PUBLICATION AND PRESENTATION

2.1 Research Projects

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

No.	Title	List of Researchers <ul style="list-style-type: none"> • Principal • Members 	Grant Year	Source Amount	Status <ul style="list-style-type: none"> • Completed • In Progress
1	The Perturbation of Backscattered Fast Neutrons Flux Caused by Resonance in the Cross Section of C, N and O for Possible Use in Explosive Detection	Siti Zulaikha Ngah Demon , Ahmad Firdaus Zainal Abedin, Nooriddin Ibrahim, Norhana Abdul Halim, Noriza Ahmad Zabidi, Abqari Luthfi Albert Abdullah	RAGS 1/1/2013-30/6/2015	RM 29 850.00	Completed
2	Electronic structure of metal oxide/organic semiconductor interface by optical second harmonic generation measurement	Siti Zulaikha Ngah Demon , Noor Aisyah Ahmad Shah, Wan Yusmawati Wan Yusoff, Noriah Bidin, Fauziah Hj Abdul Aziz	FRGS 1/11/2015-30/4/2018	RM 116 000.00	Completed
3	Study of intermolecular interaction between carbon nanotubes and π -conjugated molecules for ultrafast optical switching.	Siti Zulaikha Ngah Demon , Noor Aisyah Ahmad Shah, Wan Yusmawati Wan Yusoff, Noriah Bidin, Muhd Zu Azhan Yahya, Noor Fadhillah Rahmat	RAGS 1/1/2016-30/5/2018	RM 45 000.00	Completed

No.	Title	List of Researchers • Principal • Members	Grant Year	Source Amount	Status • Completed • In Progress
4	Synthesis of intermetallic-surface-modified carbon nanotubes for optical limiting applications.	Noor Aisyah Ahmad Shah, Siti Zulaikha Ngah Demon , Norli Abdullah, Noor Azilah Mohd Kasim, Wan Md. Zin Wan Yunus	RAGS 1/1/2016-30/5/2018	RM 45 000.00	Completed
5	Synthesis of dipolar amino-nitro-thiazole derivatives for electronic, electrooptic and nonlinear optical applications.	Noor Aisyah Ahmad Shah, Siti Zulaikha Ngah Demon , Noor Azilah Mohd Kasim, Bohari Mohd Yamin	FRGS 1/11/2015-30/4/2018	RM 102 000.00	Completed
6	The Effect of Metal Supported Catalysts on the Production of Renewable Energy of Microalgae	Norli Abdullah, Siti Zulaikha Ngah Demon , Taufik Yap Yun Hin, Fadhlina Che Ros, Siti Hasnawati Binti Jamal, Emmy Maryati Omar, Imran Shakir Mohamad	RACE 30/12/2015-	RM 50 000	Completed
7	Characterization of Gold Nanoparticles (GNP) from Laser Induced Coulomb Explosion (CE) for Nanophotolysis Therapy	Norhana Abdul Halim, Siti Zulaikha Ngah Demon , Noordin Ibrahim, Noriza Ahmad Zabidi	FRGS 1/12/2014-30/11/2017	RM 93,000.00	Completed
8	Design of Hybrid Carbon Nanotubes/Polythiophene Based Chemiresistive Sensor for VX-type Nerve Agent Stimulants	Wan Md. Zin Wan Yunus, Norhana Abdul Halim, Siti Zulaikha Ngah Demon , Norazman Mohamad Nor, Muhd Zu Azhan Yahya, Ariffin Ismail, Norli Abdullah	CHEMDEF 2018-2020	RM 200,000.00	Completed
9	Simple and Rapid Method to Detect A Simulant of Nerve Agent by Colorimetric Incorporated with Image Processing Technique	Ong Keat Khim, Wan Md. Zin Wan Yunus, Norhana Abdul Halim, Siti Zulaikha Ngah Demon , Norazman Mohamad Nor	CHEMDEF 2018-2020	RM 200,000.00	Completed

No.	Title	List of Researchers • Principal • Members	Grant Year	Source Amount	Status • Completed • In Progress
10	Polyionic Liquid-Metal Oxide Nanocomposite Based Sensor for Detection of Sarin Gas	Siti Aminah Mohd Noor, Wan Md. Zin Wan Yunus, Alinda Samsuri, Norhana Abdul Halim, Siti Zulaikha Ngah Demon , Safura Taufik	CHEMDEF 2018-2020	RM 200,000.00	Completed
11	Role of Intermolecular Interaction in Conductive Polymer Wrapped MWCNT as Organophosphate Sensing Material Structure	Norli Abdullah, Norhana Abdul Halim, Siti Zulaikha Ngah Demon	ISIS-NEWTON 2019	RM 477,150.00	Completed
12	Optical and Surface Plasmon Resonance of Graphene Oxide Decorated Gold Nanoparticle as Fiber Optics based Nerve Agent Sensor	Siti Zulaikha Ngah Demon , Norli Abdullah, Norhana Abdul Halim, Noor Aisyah Ahmad Shah, Ong Keat Khim	FRGS 2020	RM 118,518.00	In Progress
13	Development of simple and portable detection system of methylphosphonic acid (nerve agent degradation product) for national security interest	Ong Keat Khim, Nor Laili Azua Binti Jamari, Siti Zulaikha Binti Ngah Demon , Syed Nasir Alsagoff Bin Syed Zakaria, Wan Md Zin Bin Wan Yunus	PRGS 2021	RM 234,320.00	In Progress

2.2 Publications

2.2.1 Academic Journal

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

No.	Authors, year, title, publisher/journal, volume and number of pages (Please bold your name)	Type of Journal • ISI • SCOPUS • Peer-Reviewed
1	S. Z. N. Demon , Y. Miyauchi, G. Mizutani, T. Matsushima and H. Murata. (2014) Optical second harmonic generation at interfaces of some organic layers with indium tin oxide. Appl. Surf. Sci. 311 715-720	ISI
2	S. Z. N. Demon , N. A. Poad, S. H. Jamal, N. F. Rahmat and N. Bidin. (2016) Dispersion of Multi-Walled Carbon Nanotubes Aggregates in Spin Coated PLA Thin Film, Buletin Optik 2 1-7	Peer-Reviewed
3	S. Z. N. Demon , N. A. Poad, N. Rahmat and N. Bidin. (2017) Preparation of Indium Tin Oxide/Quaterthiophene Thin Film for Solution Processed Organic Device. Solid State Phenomena 268 269-273	Scopus
4	N. A. Poad, S. Z. N. Demon , M. Z. Yahya, N. Bidin, (2018) Optical Characteristics of ITO/NTCDA Film for Defence Technology Application, Int. J. Cur. Res. Eng. Sci. Tech. 1 (S1) 262-268	Peer-Reviewed
5	S. Z. Ngah Demon , N. S. N. Saáya, N. A. Poad, S. H. Jamal, (2018) Normal and Resonant Raman Spectra of CuPc-MWCNT Blend, Key Engineering Materials 773 113-117	Scopus
6	N. A. Abdul-Manaf, W. Y. W. Yusoff, S. Z. N. Demon , N. A. Shaari A. Shamshuddin, N. S. Mohamed, (2019) Anodic and cathodic deposition of polyaniline films: A comparison between two methods, Materials Research Express 6 096453	ISI
7	N. S. N. Saa'ya, S. Z. N. Demon , N. Abdullah, V. F. K. E. A. Shatar, N. A. Halim, (2019) Optical and Morphological Studies of Multiwalled Carbon Nanotubes-incorporated Poly(3-hexythiophene-2,5-diyl) Nanocomposites, Sensors and Materials 31 2997-3006	ISI
8	S. Z. N. Demon , A. I. Kamisan, N. Abdullah, S. A. M. Noor, O. K. Khim, N. A. M. Kasim, M. Z. A. Yahya, N. A. A. Manaf, A. F. M. Azmi, N. A. Halim, (2020) Graphene-based Materials in Gas Sensor Applications: A Review, Sensors and Materials 32 759-777	ISI
9	S. Z. N. Demon , N. S. N. Sa'aya, M. Abdullah, G. Krishnan, (2020) Effect of ZnO dispersion in optical and structural of nematic liquid crystal, Materials Today: Proceedings 29 34-38	Scopus
10	N. A. A. Shah, F. N. Diauddin, S. Z. N. Demon , N. Kasim, G. Krishnan, M Abdullah, (2020) Preparation and third order nonlinear optical properties of Ag coated carbon nanotubes, Materials Today: Proceedings 29 110-114	Scopus
11	M.S.M. Shukri, M.N.S. Saimin, M.H. Samat, N. Abdullah, S.Z.N. Demon , N.A. Halim and M.F.M.Taib, (2020) First-Principles Study of CH ₄ and NH ₃ Adsorption on Graphene Oxide Epoxy and Graphene Oxide Hydroxyl, International Journal of Nanoelectronics and Devices 13 249-258	ISI
12	M. F. M. Taib, M. H. Samat, S. Z. N. Demon , N. H. Hussin, O. H. Hassan, M. Z. A. Yahya and A. M. M. Ali, (2020) First-Principles Study on the Doping Effects of La on the Structural, Electronic and Optical Properties of MgO, , International Journal of Nanoelectronics and Devices 13 225-234	ISI
13	M. N. Norizan, M. H. Moklis, S. Z. N. Demon , N. A. Halim, A. Samsuri, I. S. Mohamad,(2021) Carbon nanotubes: functionalisation and their application in chemical sensors, RSC Advances 10 (71), 43704-43732	ISI

14	N. A. Halim, S. Z. N. Demon , N. Abdullah, N. Ahmad, Z. H. Z. Abidin, (2021) Localized Deep and Shallow Traps of α -Peaks from Thermally Stimulated Current (TSC) Measurement on Thermoplastic Polymers, <i>Solid State Phenomena</i> 317, pp 369-376	Scopus
15	N. S. N. Sa'aya, S. Z. N. Demon , N. Abdullah, N. A. Halim, (2021) Morphology Studies of SWCNT Dispersed in Conducting Polymer as Potential Sensing Materials, <i>Solid State Phenomena</i> 317, pp 189-194	Scopus
16	N. A. A. Shah, S. Z. N. Demon , F. N. Diauddin, N. Kasim, N. Abdullah, G. Krishnan, (2021) The Study of Platinum Coated Carbon Nanotubes as Third-Order Nonlinear Optical Materials, <i>Solid State Phenomena</i> 317, pp 166-172	Scopus
17	S. Z. Ngah Demon , N. A. Poad, (2021) Vibrational Spectroscopy Analysis of Oligothiophene Blend Film, <i>Solid State Phenomena</i> 317, pp 457-462	Scopus
18	N.M. Nurazzi, S.Z.N. Demon , N.A. Halim, I.S. Mohamad, N. Abdullah, (2021) Carbon nanotubes-based sensor for ammonia gas detection – an overview, <i>POLIMERY</i> 2021, 66, nr 3, 175-184	ISI
19	N.M. Nurazzi, M.M. Harussani, N.D. Siti Zulaikha , A.H. Norhana, M. Imran Syakir, A. Norli, (2021) Composites based on conductive polymer with carbon nanotubes in DMMP gas sensors – an overview, <i>POLIMERY</i> 2021, 66, nr 2, 1-12	ISI
20	Nurazzi, N.M., Abdullah, N., Demon, S.Z.N. , Halim, N.A., Mohamad, I.S., (2021) The Influence of Reaction Time on Non-Covalent Functionalisation of P3HT/MWCNT Nanocomposites. <i>Polymers</i> , 13, 1916.	ISI
21	Norizan M. Nurazzi, Norli Abdullah, Siti Z. N. Demon , Norhana A. Halim, Ahmad F. M. Azmi, Victor F. Knight, and Imran S. Mohamad. (2021) The frontiers of functionalized graphene-based nanocomposites as chemical sensors, <i>Nanotechnology Reviews</i> ; 10: 330–369	ISI
22	M Ibrahim, HY Seong, SZN Demon , S Ramli, SNAS Zakaria. (2021) HUMAN DETECTION FOR THERMAL AND VISIBLE IMAGES. <i>Zulfaqar Journal of Defence Science, Engineering & Technology</i> 4 (1)	Peer-Reviewed
23	Nur Amirah Mamat Razali, Risby Mohd Sohaimi, Raja Nor Izawati Raja Othman, Norli Abdullah, Siti Zulaikha Ngah Demon , Latifah Jasmani, Wan Mohd Zain Wan Yunus, Wan Mohd Hanif Wan Ya'acob, Emee Marina Salleh, Mohd Nurazzi Norizan, Norhana Abdul Halim. (2022) Comparative Study on Extraction of Cellulose Fiber from Rice Straw Waste from Chemo-Mechanical and Pulping Method. <i>Polymers</i> 14 (3), 387	ISI
24	NM Nurazzi, MM Harussani, SZN Demon , NA Halim, IS Mohamad, Norli Abdullah (2022) RESEARCH PROGRESS ON POLYTHIOPHENE AND ITS APPLICATION AS CHEMICAL SENSOR. <i>Zulfaqar Journal of Defence Science, Engineering & Technology</i> 5 (1)	Peer-Reviewed
25	MN Norizan, N. Abdullah, SZN Demon , NA Halim, NSN Sa'aya, IS Mohamad, (2022) Effect of reaction time on the structure and optical properties of P3HT/MWCNT-OH nanocomposites, <i>Polimery</i> 67,5, 205-211	ISI
26	MN Norizan, N Abdullah, NA Halim, SZN Demon , IS Mohamad, (2022) Heterojunctions of rGO/Metal Oxide Nanocomposites as Promising Gas-Sensing Materials – A Review, <i>Nanomaterials</i> 12 (13), 2278	ISI
27	Hamsan, M.H.; Halim, N.A.; Demon, S.Z.N. ; Sa'aya, N.S.N.; Kadir, M.F.Z.; Abidin, Z.H.Z.; Poad, N.A.; Kasim, N.F.A.; Razali, N.A.M.; Aziz, S.B.; et al. Multifunction Web-like Polymeric Network Bacterial Cellulose Derived from SCOBY as Both Electrodes and Electrolytes for Pliable and Low-Cost Supercapacitor. <i>Polymers</i> 2022, 14, 3196.	ISI

2.2.2 Book/Chapter in Book:

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

No.	Authors, year, title, publisher, volume and number of pages (Please bold your name)	Level <ul style="list-style-type: none"> • International • National • University
1	Jawatankuasa STEM Pusat Asasi Pertahanan, 2020, Kompilasi Ujikaji STEM Sekolah Menengah dan Sekolah Rendah, Penerbit UPNM, 57 pages	National
2	Modul Fizik 1, Pusat Asasi Pertahanan, 195 pages	University
3	Modul Fizik 2, Pusat Asasi Pertahanan, 218 pages	University

2.2.3 Proceeding Articles :

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

No.	Authors, year, title, publisher/conference, volume and number of pages (Please bold your name)	Level <ul style="list-style-type: none"> • International • National • University
1	S. Z. N. Demon , A. R. Tamuri and N. Bidin. (2009) High Voltage Power Supply for Laser System. Proceedings IEEE. International Conference TECHPOS Kuala Lumpur. IEEE catalog: CFP0330I-CDR. ISBN: 978-1-4244-5224-8. Library of Congress: 2009934930	International (Scopus)
2	S. Z. N. Demon , Y. Miyauchi, G. Mizutani, T. Matsushima and H. Murata. (2013) Study of ITO/organic interfaces by optical second harmonic generation phase measurement. Proceedings of 9th International Symposium on Atomic Level Characterizations for New Materials and Devices (ALC '13). Big Island, Hawaii, USA	International
3	A. F. Z. Abedin, N. Ibrahim, N. A. Zabidi and S. Z. N. Demon . (2016) The Use of Compton Scattering In Detecting Anomaly In Soil-Possible Use In Pyromaterial Detection, AIP Conference Proceedings 2016 (1704) 030009	International (Scopus)
4	Muhammad Samir Ullah, S. Z. Ngah Demon , K. Matsumoto, K.T.T. Hien, G. Mizutani and H. Rutt, New Method for Analyzing the Second Harmonic Generation Phase from the Interface between Indium Tin Oxide and Organic Layer, 10th International Symposium on Atomic Level Characterizations for New Materials and Devices (ALC '15). Matsue, Japan.	International

