

CURRICULUM VITAE



A. BUTIR-BUTIR PERIBADI (<i>Personal Details</i>)			
Nama Penuh (<i>Full Name</i>)	Mazliana binti Ahmad Kamarudin		Gelaran (<i>Title</i>): Dr.
No. MyKad / No. Pasport (<i>Mykad No. / Passport No.</i>) 830519-05-5300	Warganegara (<i>Citizenship</i>) Malaysian	Bangsa (<i>Race</i>) Malay	Jantina (<i>Gender</i>) Female
Jawatan (<i>Designation</i>)	Senior Lecturer	Tarikh Lahir (<i>Date of Birth</i>)	19-05-1983

Alamat Semasa (<i>Current Address</i>)	Jabatan/Fakulti (<i>Department/Faculty</i>)	E-mel dan URL (<i>E-mail Address and URL</i>)
Department of Physics, Faculty of Science, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan Tel: 03- 8946 6649	Department of Physics, Faculty of Science, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Darul Ehsan Tel: 03- 8946 6649 Fax: 03- 8945 4454	E-mail: mazliana_ak@upm.edu.my URL: H/P: 012- 6790079

B. KELAYAKAN AKADEMIK (<i>Academic Qualification</i>)			
Nama Sijil / Kelayakan (<i>Certificate / Qualification obtained</i>)	Nama Sekolah Institusi (<i>Name of School / Institution</i>)	Tahun (<i>Year obtained</i>)	Bidang pengkhususan (<i>Area of Specialization</i>)
Bachelor of Science (Honours)	Universiti Putra Malaysia	2005	Physics
PhD	Lancaster University, UK	2010	Physics
Postdoctoral	University of Nottingham, UK	2014- 2016	Chemistry synthesis

C. KEMAHIRAN BAHASA (<i>Language Proficiency</i>)					
Bahasa / <i>Language</i>	Lemah <i>Poor (1)</i>	Sederhana <i>Moderate (2)</i>	Baik <i>Good (3)</i>	Amat Baik <i>Very good (4)</i>	Cemerlang <i>Excellent (5)</i>
English			√		
Bahasa Melayu				√	
Chinese					
Lain-lain (<i>other</i>): <i>Spanish</i>	√				

D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN <i>(Scientific experience and Specialisation)</i>				
<i>Organization</i>	<i>Position</i>	<i>Start Date</i>	<i>End Date</i>	<i>Expertise</i>
Lancaster University, UK	Research student	2006	2010	III-V Semiconductor Quantum Dots
The University of Nottingham, UK	Postdoctoral staff	2014	2016	Synthesis of PbS Colloidal Quantum Dots

E. PEKERJAAN <i>(Employment)</i>				
<i>Majikan / Employer</i>	<i>Jawatan / Designation</i>	<i>Jabatan / Department</i>	<i>Tarikh lantikan / Start Date</i>	<i>Tarikh tamat / Date Ended</i>
Universiti Putra Malaysia	Tutor	Physics	Jan. 2006	Aug. 2010
Universiti Putra Malaysia	Senior Lecturer	Physics	Aug. 2010	present

F. ANUGERAH DAN HADIAH <i>(Honours and Awards)</i>				
<i>Name of awards</i>	<i>Title</i>	<i>Award Authority</i>	<i>Award Type</i>	<i>Year</i>
<i>Academic Awards</i>	Scholarship award for PhD	Ministry of Higher Education, Malaysia	National (Scholarship award)	October 2006- June 2010
	Scholarship award for Postdoctoral Study	Ministry of Education, Malaysia	National (Scholarship award)	April 2014- April 2016
<i>Non-Academic Awards</i>	Sakura programme (Young Scientist Exchange)	UPM-Kyutech Japan	International (Travel grant)	2018
	5th Science Conclave Allahabad, India	Asean	International (Travel grant)	2013

<i>Awards of Merit</i>	Designing an Efficient Live Cell Bio-imaging using MnTe- and SiO₂ Capped PbS Quantum Dots via Aqueous Synthesis	Materials Technology Challenges 2019	National (Gold medal)	2019
	Discovering Temperature Dependent Behaviour of the PbS Quantum Dots Charge Carriers for Potential Photovoltaic Application	Materials Technology Challenges 2019	National (Silver medal)	2019
	Colloborative of Augmented Reality in Teaching	IUCEL 2018	International (Bronze medal)	2018
	AR Crystal: Augmented reality for mobile learning	Putra InnoCreative Carnival in Teaching and Learning 2018	University (Gold medal)	2018
	Growth and Optical Properties of GaSb/GaAs Quantum Dots	Pameran Rekacipta , Penyelidikan dan Inovasi Malaysia 2012	National (Silver medal)	2012

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)

<i>Journal</i>	<ol style="list-style-type: none"> 1. JYC Liew, ZA Talib, Z Zainal, MA Kamarudin, NH Osman, HK Lee. <i>Structural and transport mechanism studies of copper selenide nanoparticles</i>. Semiconductor Science and Technology 34 (12) (2019) 125017. 2. Muhammad Safwan Zaini, Mazliana Ahmad Kamarudin, Josephine Liew Ying Chyi, Shahrul Ainliah Alang Ahmad, Abdul
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Rahman Mohmad. *Temperature and Power Dependence of Photoluminescence in PbS Quantum Dots Nanoparticles*. Sains Malaysiana 48(6) (2019): 1281–1288

3. Zur Mira Azizah Nor Haiza Lah, Shahrul Ainliah Alang Ahmad, Muhammad Safwan Zaini, **Mazliana Ahmad Kamarudin**. *An Electrochemical Sandwich Immunosensor for the Detection of HER2 using Antibody-Conjugated PbS Quantum Dot as a label*. Journal of Pharmaceutical and Biomedical Analysis. Vol. 174 (2019) 608-617.
4. Shelawati T. Nurisya M.S. Kar Tim C. **Mazliana A.K.** *Effects of step-potential on confinement strength of strain-induced type-I core-shell quantum dots*. Superlattices and Microstructures. Vol.131 (2019) 95-103.
5. HK Lee, F Ashari, ZA Talib, WF Yap, MA Kamarudin, N Effendi, JYC Liew. *Concentration Effect of Zinc Acetate Dihydrate as Precursor in Preparing Zinc Selenide Through Hydrothermal Method*. Chalcogenide Letters 15 (10) (2019), 509-514.
6. N. Fernandez- Delgado, M. Herrera, MF Chisholm, **MA Kamarudin**, QD Zhuang, M. Hayne and SI Molina. *Effect of an in-situ thermal annealing on the structural properties of self-assembled GaSb/GaAs quantum dots*, Applied Surface Science, 395 (2017) 136-139
7. N. Fernandez- Delgado, M. Herrera, MF Chisholm, **MA Kamarudin**, QD Zhuang, M. Hayne and SI Molina. *Atomic-column scanning transmission electron microscopy analysis of misfit dislocations in GaSb/GaAs quantum dots*. Journal of Materials Science, 51 (2016) 16
8. Manal Hashem, Elias Saion, Naif Mohammed Al-Hada, Halimah Mohamed Kamari, Abdul H. Shaari, Zainal Abidin Talib, Suriati B. Paiman, **Mazliana A. Kamarudeen**. *Fabrication and characterization of semiconductor nickel oxide (NiO) nanoparticles manufactured using a facile thermal treatment*. Results in Physics 6 (2016) 1024–1030
9. NM Al- Hada, EB Saion, AH Shaari, **MA Kamarudin**, MH Flaifel, SH Ahmad. *A facile thermal-treatment route to synthesize the semiconductor CdO nanoparticles and effect of calcination*. Materials Science in Semiconductor Procession 26 (2014) 460-466
10. PD Hodgson, M. Hayne, **MA Kamarudin**, QD Zhuang, Simone Birindelli and Mario Capizzi. *Hydrogenation of GaSb/GaAs quantum rings*. Appl. Phys. Lett. 105 (2014) 081907
11. Naif Mohammed Al-Hada, Elias B Saion, Abdul Halim Shaari,

	<p>Mazliana A Kamarudin, Moayad Husein Flaifel, Sahrim Hj Ahmad, Salahudeen A Gene. <i>A facile thermal-treatment route to synthesize ZnO nanosheets and effect of calcination temperature. PloS one. 9 (2014) e103134.</i></p> <p>12. SA Gene, E Saion, AH Shaari, MA Kamarudin, NM Al-Hada, A Kharazmi. <i>Structural, optical, and magnetic characterization of spinel zinc chromite nanocrystallines synthesized by thermal treatment method. Journal of Nanomaterials (2014).</i></p> <p>13. NM Al-Hada, , E Saion, AH Shaari, MA Kamarudin, SA Gene. <i>The influence of calcination temperature on the formation of zinc oxide nanoparticles by thermal treatment. Applied Mechanics and Materials 446 (2014) 181-184.</i></p> <p>14. Hodgson, P., Young, R., Ahmad Kamarudin, M., Zhuang, Q., Hayne, M. <i>Hole migration and optically induced charge depletion in GaSb/GaAs wetting layers and quantum rings. Physical Review B. (2013) 88, 15, 7 p.</i></p> <p>15. Poh Lin Leng, Elias Saion, A. Halim Shaari, Mazliana Ahmad Kamarudin, <i>Characterization of Ni_{0.5}Zn_{0.5} Ferrite Nanoparticles Synthesized by Thermal Treatment Method, Solid St Sci. Technol. Express 8(1) (2012) 7-9.</i></p> <p>16. M. Ahmad Kamarudin, M. Hayne, R. J. Young, Q.D. Zhuang, T. Ben, and S. I. Molina, <i>Tuning the Properties of Exciton Complexes in Self-Assembled GaSb/GaAs Quantum Rings, Phys. Rev. B 83 (2011) 115311</i></p> <p>17. M Ahmad Kamarudin, M Hayne, Q D Zhuang, O Kolosov, T Nuytten, V V Moshchalkov and F Dinelli, <i>GaSb Quantum Dots Morphology for Different Growth Temperature and the Dissolution Effect of the GaAs Capping Layer, J. Phys. D: Appl. Phys. 43 (2010) 065402</i></p>
<p><i>Proceedings/Conference</i></p>	<p>1. M. Ahmad Kamarudin, M. Hayne, Q. D. Zhuang, O. Kolosov, T. Nuytten and V. V. Moschalkov, Compound Semiconductor UK 2007, 4-5 July 2007, Sheffield University, UK.</p> <p>2. M. Ahmad Kamarudin, M. Hayne, Q. D. Zhuang, O. Kolosov, F. Dinelli, T. Nuytten and V. V. Moschalkov, UK Semiconductor 2008, 1-2 July 2008, Sheffield University, UK.</p> <p>3. M. Ahmad Kamarudin, M. Hayne and Q. D. Zhuang, Faculty of Science and Technology Research Conference, 22 Dec. 2008, Lancaster University, UK.</p> <p>4. M. Ahmad Kamarudin, Q. D. Zhuang, T. Nuytten, V. V.</p>

	<p>Moschalkov and M. Hayne, International Conference of QD2010, 26-30 April 2010, Nottingham University, UK.</p> <p>5. M. Ahmad Kamarudin, Q. D. Zhuang, T. Ben, S. Molina and M. Hayne, International Conference of QD2010, 26-30 April 2010, Nottingham University, UK.</p> <p>6. M. Ahmad Kamarudin, Q. D. Zhuang, R. Young, T. Ben, S. I. Molina and M. Hayne, UK Semiconductor 2010, 7-8 July 2010, Sheffield University, UK.</p> <p>7. G. Foulds, R. Young, B. Bansal, M. Ahmad Kamarudin, Q. Zhuang and M. Hayne, UK Semiconductor 2010, 7-8 July 2010, Sheffield University, UK.</p> <p>8. M Hayne, M Ahmad Kamarudin, Q D Zhuang, R Young, T Ben and S I Molina, 11th International Conference on Physics of Light-Matter Coupling in Nanostructures (PLMCN), 4-8 April 2011, Berlin, Germany.</p> <p>9. M Ahmad Kamarudin, M Hayne, Q D Zhuang, T Ben and S I Molina, Nanomaterials Technology Specialized Conference 2012, 6-7 March 2012, UTM Skudai, Johor.</p> <p>10. Poh Lin Leng, Elias Saion, A. Halim Shaari, Mazliana Ahmad Kamarudin, Fundamental Science Congress (FSC 2012), 17-18 July 2012, UPM Serdang, Selangor.</p> <p>11. Aysar S. Keiteb, Elias Saion, Azmi Zakaria, Mazliana Ahmad, “<i>The influence of calcinations temperature on structural and optical properties of Zirconia nanoparticles synthesized by thermal treatment method</i>”, The Regional Fundamental Science Congress (FSC2014)/UPM, 19-20 Aug. 2014.</p> <p>12. Aysar Sabah Keiteb, Elias Saion, Azmi Zakaria, Nura Abdullahi, Aesha Salem, M. A. Kamarudin, “<i>The influence of calcination temperatures on structural and optical properties of TiO₂-ZrO₂ composite nanoparticles synthesized by modified thermal treatment method</i>”, International Conference on Nano-Electronic Technology Devices and Materials (IC-NET 2015) /UiTM, 27 Feb.-2 Mar. 2015.</p>
Other publications	Growth and Optical Properties of Self-Assembled GaSb/GaAs Quantum Dots (PhD Thesis, June 2010)
Computer software	-

H. PROJEK PENYELIDIKAN TERDAHULU (*Past Research Project*)

<i>Project No.</i>	<i>Project Title</i>	<i>Role</i>	<i>Year</i>	<i>Source of fund</i>	<i>Status</i>
9437564	Pemerkasaan Pendidikan Sains, Teknologi, Kejuruteraan dan Matematik (STEM) ke arah Pembangunan UPMSTEMreneurship melalui modul Eksplorasi Digital STEM	Member	2019-2020	UCTC UPM	On-going
5540137	Impact of shell thickness on exciton and paramagnetic relaxation of PbS/Fe ₃ O ₄ quantum dots in mesoporous silica nanoparticles	Project Leader	2019-2021	MoHE, FRGS RM90,200	On-going
9673800	Surface Modification of V ₂ O _x as Hole Transporting Layer for Efficient Solar Driven Water Splitting Devices	Member	Feb. 2019 – Jan. 2021	GP-IPM (RM60,000)	On-going
9664000	Accessing the Exciton and Quantum Confinement in PbS/MnS Quantum Dots by Low Temperature Photoluminescence	Project Leader	Sept. 2018- Sept. 2020	GP-IPS (RM25,000)	On-going
9567500	Enhancing Quantum Yield Emission of PbS/MnS Core Shell Quantum Dots for Functional Contrast Agent Prepares via Cation Exchange Mechanism	Project Leader	2017-2019	UPM Putra Grant (RM50,000)	On-going
FRGS/1/2017/	Surface	Member	2017-	MoHE,	On-going

STG01/UPM/02/4	Modification of Mn-Doped PbS Quantum Dots with Calixarene for Removal of Polyaromatic Hydrocarbons (PAHs) from Wastewater		2019	FRGS (RM95,050)	
5524428	Surface and interface phenomena study on copper zinc selenide (CZnSe) chalcogenide semiconductor thin film for solar cells devices.	Member	2013-2015	MOHE, FRGS (RM110,000)	Completed
9341400	Scattering mechanism study of polycrystalline metal chalcogenide nanoparticles	Member	2012-2014	UPM , RUGS (RM30,000)	Completed
05-01-11-123RU	Synthesis of CdS Nanoparticles by a Thermal Treatment Method	Project Leader	2011-2013	UPM , RUGS (RM30,000)	Completed