CURRICULAM VITAE

1. PERSONAL DATA

Name	:	**Dr. Khatijah Aisha Yaacob**
Nationality	:	**Malaysia**
Current Position	:	**Senior Lecturer**
Qualifications	:	**Doctor of Philosophy and Diploma of the Imperial College, Imperial College London, M. Sc, USM, B. Eng., USM**
Field of specialization	:	**Electronic Materials/Semiconductors Devices/Nanotechnology**

2. ACHIEVEMENTS

On going grants	:	2
Completed grants	:	15
Graduated students	:	7 (5 MSc, 2 PhD)
Postgraduate Under supervision	:	4 Ph D
Publications	:	19 (SCOPUS/ISI), 9 (Local Journal)
Patents/ Copyrights/ Filing	:	-
Achievements/Awards / Recognitions	:	2

As Principal Investigator

No	***Title***	***Source of Grant***	***Total Grant***	***Period***
1.	Understanding on the selft-limiting oxidation mechanism on scalling down of silicon sub-micron wires to nano wires fabricated using AFM lithography.	USM Research University Grant	RM 80, 000	March 2018-Feb 2021
2.	Fabrication of Nickel doped	Collaborative Research Grant	USD 9000	Oct 2015 –

	Titanium Dioxide Ferromagnetic Materials via Conventional Method	AUNSEED-Net		Sept 2018
3.	Development of Biosensor Device using Silicon Nanowire Arrays Fabricated by AFM lithography	USM Research University Grant	RM 242,035.00	15 July 2012 – 14 July 2015
4.	Multilayer of CdSe Nanoparticles On Conductive Substrate For Quantum Dots Sensitised Solar Cell Photoanode	USM Research University Grant	RM 241,615	15 Dis 2012 – 14 Dis 2015
5.	Formation and Characterization of MUA Capped CdSe Nanoparticles on TiO_2 Porous Structure by Electrophoretic Deposition	USM Short Term Grant, USM, Malaysia	RM39,999	1 Dis 2011-30 Nov 2013
6.	The development of electron transport analysis techniques in the quantum dots/wires	IRPA-Top Down, Ministry of Science, Technology & Environment (MOSTE), Malaysia	RM1,945,240	01 Aug 2004-01Mei 2007
7.	Study on the effect of dopant atom to $CoSi_2$ layer subjected to temperature increase	USM Short Term Grant, USM, Malaysia	RM18,906	01 Sept 2004-31 Aug 2006

3. CURRENT RESEARCHS AND PAST RELATED RESEARCHS:

Current Research:
1. Fabrication of silicon nanowires arrays by AFM Lithography for biosensors.
2. Fabrication of silicon nanowires arrays by AFM Lithography for transistor device.
3. Synthesis of II-VI quantum dots for solar cell and LED application
4. Electrophoretic deposition of nanomaterials.

Past Research:
1. Silicon nanowires for dengue biosensor.
2. Electrophoretic deposition of CdSe nanoparticles for quantum dots solar cells.
2.The development of electron transport analysis techniques in the quantum dots/wires.
2. Study on the effect of dopant atom to CoSi2 layer subjected to temperature increase

4. RESEARCH PUBLICATIONS:

Publications in International Journal (SCOPUS/ISI Citation Journal)

1. Lim, F.S., Wang, X., Yaacob, K.A. (2017) **Effect of indirect irradiation on surface morphology of Au film by nanosecond laser**, Appl. Phys. A (2017) 123: 664
2. Raihana Bahru, Abdul Rahman Mohamed, Wei-Ming Yeoh & Khatijah Aisha Yaacob (2017) **Electrophoretic Deposition of Carbon Nanotubes on Heat Spreader for Fabrication of Thermal Interface Materials (TIM)**, Sains Malaysiana, 46(7), 1075-1082

3. Khatijah A. Yaacob, Liang Shu Yi and Muhamad Nizam Ishak (2017) **Deposition and Characterisation of CdSe Nanoparticles Layer on ITO/PET Flexible Substrate by Electrophoretic Deposition,** AIP Conference Proceedings, 1865, 020012
4. Hui-Chaing Teoh, M. Mariatti, Y. Khatijah (2016) **Enhancement of Thermal Conductivity of Cyanoacrylate with Different Types of Nanofillers and Loading**, Procedia Chemistry 19, 835-841
5. Siti Noorhaniah Yusoh, Khatijah Aisha Yaacob (2016) **Effect of tetramethylammonium hydroxide / isopropyl alcohol wet etching on geometry and surface roughness of silicon nanowires fabricated by AFM lithography**, Beilstein J. Nanotechnology, 7 ,1461-1470
6. Nurain Najihah Alias, Khatijah Aisha Yaacob(2016) **Natural Dye Sensitised Solar Cells**, Sains Malaysiana, 45(8), 1227-1234
7. S.N. Yusoh, K. A. Yaacob (2015) **Contact Mode Atomic Force Microscopy Cantilever Tips for Silicon Nanowires Fabrication**, Int. J. Electroactive Mater, Vol. 3, 6-9
8. M. Nizam Ishak, K. A. Yaacob & Ahmad Fauzi M. N (2015) **The Effect of Ligands on CdSe Nanoparticle Films Deposited by EPD**, Advanced Materials Research (Trans Tech Pub), Vol. 1087, 304 – 308.
9. A. L. Quah, K. A. Yaacob (2015) **Formation and characterization of $Pb_xCd_{1-x}S$ interlayer for PbS/CdS/ZnS quantum dot sensitized solar cells**, Advanced Materials Research (Trans Tech Pub), Vol. 1087, 316 – 320.
10. Khatijah A. Yaacob, Mohamad Syahir Borhanuddin (2014) **Formation and Characterization of TiO_2 Scattering Layer Deposited by Spray Pyrolysis for DSSC,** Advanced Materials Research (Trans Tech Pub) Vol. 1024, 95 - 98.
11. Mohamad Nizam Ishak, Khatijah A. Yaacob, Ahmad Fauzi Mohd Noor (2014) **Synthesis of CdSe Nanoparticles Size: Control of Growth Temperature,** Advanced Materials Research (Trans Tech Pub) Vol. 1024, 68 – 70.
12. Khatijah A. Yaacob, Jason D. Riley (2013) **Formation of MUA (mercaptoundeconic acid) Capped CdSe Nanoparticle Films by Electrophoretic Deposition,** Ceramic International, 39, 8797-8803
13. Khatijah A. Yaacob & Jason D. Riley (2013) **Study on the Influence of Synthesis Temperature of Anatase TiO_2 Nanoparticles for Electrophoretic Deposition,** Advanced Materials Research (Trans Tech Pub), vol. 620, 161-165.
14. Khatijah A. Yaacob, Jason D. Riley. (2013) **Anodic Electrophoretic Deposition of TiO_2 Nanoparticles Synthesis Using Sol Gel Method**, IOP Journal of Physics: Conference Series 431, 012019
15. Khatijah A. Yaacob, Gooi Wyn Gyn, (2013) **Formation of Gold Nanoparticles Film on Silicon Wafer by Self-Assembled Method**, Advanced Materials Research (Trans Tech Pub), Vol. 795, 726-731
16. S.D. Hutagalung, A. Ahmad, K.A. Yaacob. (2009) **Nickel nanoclusters catalyze growth of silicon nanowires**, International Journal of Nanomanufacturing (Interscience), vol. 4 139-145.
17. S. D. Hutagalung, K. A. Yaacob and Y. C. Keat, (2007) **The ballistic electron emission microscopy in the characterization of quantum dots**, Trans Tech Publication, Switzerland, Solid State Phenomena Vols. 121-123. 529-532
18. S. D. Hutagalung, T. Darsono, K.A. Yaacob, Z. A. Ahmad. (2007) **Effects of tip voltage and writing speed on the formation of silicon oxide nanodots patterned by scanning probe lithography,** Journal of Scanning Probe Microscopy (American Scientific Publishers).
19. S. D. Hutagalung, K.A. Yaacob, A.F. Abdul Aziz. (2007) **Oxide-assisted growth of silicon nanowires by carbothermal evaporation,** Applied Surface Science (Elsevier), 254, 633-637.

Publications in National Journals

1. K. A. Yaacob and J.D. Riley (2012) **Study on the Purification of CdSe Nanoparticles Solution by Repeated Precipitation,** Malaysian Journal of Microscopy Vol. 8, pg. 87-91
2. S.D. Hutagalung, A. Ahmad, K.A. Yaacob (2008) **Growth of silicon nanostructures by thermal evaporation using nickel catalyst**, Solid State Science and Technology, vol. 16, pg100-106.
3. T. Darsono, S.D. Hutagalung, Z.A. Ahmad, C.K. Yew, K.A. Yaacob (2008) **Localize I-V characterization of nano dot silicon oxide using atomic force microscopy (AFM)**, Solid State Science and Technology Letters, vol. 15, pg. 75-80.
4. S.D. Hutagalung, W.S. Woon, K.A. Yaacob, Z. Lockman (2007) **Phase formation study of $CuAlO_2$ transparent conductive oxide thin films**, Journal of Nuclear and Related Technology, vol. 4, pg. 165-170.
5. S.D. Hutagalung, K.A. Yaacob, Lee B.Y. (2006) **Antimony-doped tin oxide nanostructures prepared by sol-gel dip coating method**, Solid State Science and Technology, vol. 14 , pg. 153-159.
6. S.D. Hutagalung, T. Darsono, K.A. Yaacob (2008) **Fabrication of silicon oxide nanodot arrays by scanning probe lithography**, Sains Malaysiana (UKM), vol. 37, pg. 217-221.
7. Sabar D. Hutagalung, Khatijah A. Yaacob, & Sangeet K.B. Singh, (2006). **The Samarium Doping Effect On The Electrical & Optical Properties Of ZnS Thin Films.** *Journal of Solid State Science & Technology Letters*, 13 (2) (Suppl.) p. 95.
8. Sabar D. Hutagalung, Khatijah A. Yaacob, Lee B. Yeow. (2005). **Antimony-doped tin oxide nanostructures prepared by sol-gel dip coating method**, *Journal of Solid State Science & Technology Letters*, 14 (1). p. 64.
9. Khatijah A. Yaacob, Ibrahim, K & Mohamed, N. M., (2001). **Comparative studies between rapid thermal diffusion process and conventional diffusion for silicon wafer doping process**. *Journal of Solid State Science & Technology Letters*, 8 (2) (Suppl.) (2001) p. 40.

5. SUPERVISON OF POSTGRADUATESTUDENTS:

PhD Level – Completed

1. Siti Noorhaniah Yusoh, **Development of Dengue Biosensor On Silicon Wire Arrays Using Local Anodic Oxidation by Atomic Force microscope**, School of Materials and Mineral Resources Engineering, USM, 2018, Main Supervisoe.
2. Raihana Bahru, **Electrophoretically Deposited Carbon Nanotubes Based Thermal Interface Materials For Heat Removal**, School of Chemical Engineering, USM, 2017, Co-Supervisor

Master Level (Mixmode) – Completeed

1. Nurain Najihah Alias, **Fabrication of Silicon Nanowire Arrays Using Atomic Force Microscopy (AFM) Lithography**, School of Materials & Mineral Resources Engineering, USM, 2015, Main Supervisor
2. Quah Ai Li, **Formation and Characterisation of PbxCd1-xS Interlayer for PbS/CdS/ZnS Quantum Dots Sensitised Solar Cells**, School of Materials & Mineral Resources Engineering, USM, 2014, Main Supervisor
3. Mohamad Nizam Ishak, **Study on the Influence of Purification of Cadmium Selenide Nanoparticles on Quantum Dots Sensitised Solar Cells Photoanode**, School of Materials & Mineral Resources Engineering, USM, 2012, Main supervisor.

4. Aspaniza Ahmad, **One dimensional silicon nanostructures synthesized by thermal evaporation technique using nickel catalyst**, School of Materials & Mineral Resources Engineering, USM, Penang, Malaysia, 2007, Co-supervisor.
5. Azma Fitini Abdul Aziz, **Characterisation of silicon nanowires prepared by carbothermal evaporation technique**, School of Materials & Mineral Resources Engineering, USM, 2006, Co-supervisor.

6. AWARD / RECOGNITIONS:

1. Postgraduate sholarship : I had been granted a scholarship under Acadamic Staff Traning Scheme (ASTS) for my M. Sc. (August 1999 – August 2001)
2. Postgraduate sholarship : I had been granted a scholarship under Acadamic Staff Higher Education Scheme (ASHES) for my Ph. D. (September 2007- May 2011)