



CURRICULUM VITAE



Associate Professor Dr. Suraya Abdul Rashid

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Materials Processing and Technology Laboratory,
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And
Department of Chemical and Environmental Engineering,
Faculty of Engineering,
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Education

1. Ph.D. Nanotechnology, 2004, Imperial College London, United Kingdom.
2. B. Eng (hons) Chemical Engineering, 2000, University of Nottingham, United Kingdom.

Areas of Interest

1. Nanomaterials: Synthesis and Processing.
2. Nanocomposites: Properties and Applications

Professional Qualification/Membership/Affiliation

1. Graduate Member, Institution of Chemical Engineers (IChemE)
2. Council Member, Malaysian Society for Engineering & Technology (MySET)
3. Graduate Member, Board of Engineers Malaysia (BEM)

Appointments

Position	Duration
1. Head, Materials Processing and Technology Laboratory, Institute of Advanced Technology, UPM	2015-2018
2. Member, Quality Assurance Board, Faculty of Engineering, UPM	2009 - 2010
3. Observe Auditor, Faculty of Engineering, UPM	2009 - 2011
4. Internal Auditor, Deputy Vice Chancellor (Research and Innovation), UPM	2010 - 2011
5. Lead Auditor, Deputy Vice Chancellor (Research and Innovation), UPM	2008 - 2010
6. Lead Auditor, Faculty of Engineering, UPM	2008 - 2009
7. Ketua Bidang Penyelidikan Pencirian dan Sintesis Bahan, Jabatan Kejuruteraan Kimia dan Alam Sekitar, UPM	2009 - 2011
8. Document Control Officer, Quality Assurance Unit, Faculty of Engineering, UPM	2007 - 2009
9. Research Associate, Institute Teknologi Maju, UPM	2008 - 2011
10. Assistant Document Control Officer, Quality Assurance Unit, Faculty of Engineering, UPM	2004 - 2007
11. Safety Representative, Department of Chemical and Environmental Engineering, UPM	2000

Publications

Journals (30 recent journals)

1. S. Arafat, G. Saad, P. Arasu, M. Mohd, **A.R. Suraya**, P. Suriati, Y. Mohd. Dynamic response of tapered optical multimode fiber coated with carbon nanotubes for ethanol sensing application. *Sensors*. 2015. 15(5):10452-10464 (IF=2.048)

2. S. Rahmanian, **A.R. Suraya**, R.N. Othman, R. Zahari, E.S. Zainudin. Growth of carbon nanotubes on silica microparticles and their effects on mechanical properties of polypropylene nanocomposites. *Materials and Design*. 2015. 69 181–189
3. H. O. Siti, **A.R. Suraya**, I. M. G. Tinia, and A. Norhafizah. 3D CFD Simulations: Effect of operation parameters on the deposition of photocatalytic TiO₂ nanoparticles by MOCVD. *Chemical Vapor Deposition*. 2014. 20:1-12
4. A. A. Shabaneh, S. H. Girei, P. T. Arasu, **A.R. Suraya**, Z. Yunusa, M. A. Mahdi, S. Paiman, M. Z. Ahmad, and M. H. Yaacob. Reflectance response of optical fiber coated with carbon nanotubes for aqueous ethanol sensing. *IEEE Photonics Journal*. 2014. 6
5. Mohd Shannan Zainal Abidin, Ahmad Shukri Muhammad Noor, **A.R. Suraya**, and Mohd Adzir Mahdi. Frequency and duty cycle modulation optimization in minimizing thermal accumulation effect in Z-scan measurement by high-repetition-rate laser. *Japanese Journal of Applied Physics*. 2014. 53:112702-1 - 112702-4
6. Norkhairunnisa Mazlan, Norasiah Termazi, Suraya Abdul Rashid, Saeed Rahmanian. Investigations on Composite Flexural Behaviour with Inclusion of CNT Enhanced Silica Aerogel in Epoxy Nanocomposites. *Applied Mechanics and Materials*. 2014. 695:179-182
7. M. Fariba, A. R. Suraya, K. Y. Khanif. Intercalation of Urea into Kaolinite for Preparation of Controlled Release Fertilizer. *Chem. Ind. and Chem. Eng Quaterly*. 2014. 20: 207-213
8. B. S. Bidita, **A. R. Suraya**, M. A. Shazed, M. A. Mohd Salleh, A. Idris. Influence of Fuel Additive in the Formulation and Combustion Characteristics of Water-in-Diesel Nanoemulsion Fuel. *Energy Fuels*. 2014. DOI: 10.1021/ef5002259. (IF= 2.835)
9. S. Rahmanian, **A.R. Suraya**, M.A. Shazed, R. Zahari, E.S. Zainudin .Mechanical Characterization of Epoxy Composite with Multiscale Reinforcements: Carbon Nanotubes and Short Carbon Fiber. *Materials and Design*. 2014. 60:34-40 (IF= 2.805)
10. B. S. Bidita, N. Aien, **A. R. Suraya**, M. A. Mohd Salleh, A. Idris. Effect of Experimental Variables on the Combustion Characteristics of Water in Diesel Emulsion Fuels. *Journal of Dispersion Science and Technology*. 2014. 35:185-192.(IF= 0.600).
11. Z. Yunusa, M. N. Hamidon, **A. R. Suraya**. Growth of Multi-walled Carbon Nanotubes on Platinum. *Micro and Nanoelectronics (RSM)*, 2013 IEEE Regional Symposium.
12. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. 3D CFD Simulations of MOCVD Synthesis System of Titanium Dioxide Nanoparticles. *Journal of Nanomaterials*. 2013. (IF= 1.547).
13. A. Najigivi, A. Khaloo, A. I. Zad, **A. R. Suraya**. Investigating the effects of using different types of SiO₂ nanoparticles on the mechanical properties of binary blended concrete. *Composite Part B: Engineering*. 2013. 54:52-58. (IF= 2.143).
14. S. Rahmanian, **A.R. Suraya**, M.A. Mohd Salleh. Synthesis of Vertically Aligned Carbon Nanotubes on Carbon Fiber. *Applied Surface Science*. 2013. 271:424-428. (IF= 2.112).
15. R. Kumar, A. M Isloor, A. F. Ismail, **S. A. Rashid**, T. Matsuura. Polysulfone-Chitosan blend ultrafiltration membranes: Preparation, characterization, permeation and antifouling properties. *RSC Advance*. 2013. 3(21):7855-7861. (IF = 2.56).
16. Fariba Mahdavi, **Suraya Abdul Rashid**, Mohd Khanif Yusop. Intercalation of Urea into Kaolinite for Preparation of Controlled Release Fertilizer. *Chemical Industry and Chemical Engineering Quarterly*. 2013. 59:71-74. (IF= 0.610).
17. **Suraya Abdul Rashid**, Zamir Abdul Rashid, Muharniza Musa, Siti Hajar Othman. Assessment of Gas Flow Characteristics and Reaction Kinetics of Chemical Vapour Deposition Reactors for the Production of Nano-Hybrid Fibres. *Asia Pacific Journal of Chemical Engineering*. 2013. 8(2):254-261. (IF= 0.797).
18. Seema S. Shenvi, **Suraya A. Rashid**, A. F. Ismail M. A. Kassim and Arun M. Isloor. Preparation and characterization of PPEES/Chitosan composite nanofiltration membrane. *Desalination*. 2013. 315:135-141. (IF= 2.751).
19. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. TiO₂ Nanoparticles Prepared by MOCVD: Effect of Temperature, Flowrate, and Precursor. *Asia Pacific Journal of Chemical Engineering*. 2013. 8(1):32-44. (IF= 0.797).
20. Rajesha Kumar A, Arun M. Isloor, A. F. Ismail, **Suraya A. Rashid** and Amir Al Ahmed. Permeation, Antifouling And Desalination Performance Of TiO₂ Nanotube Incorporated Psf/CS Blend Membranes. *Desalination*. 2013. 316:76-84. (IF= 2.751).
21. Alireza Najigivi, **Suraya Abdul Rashid**, Farah Nora Aziz, Mohd Amran Mohd Salleh. Influence of 15 and 80 Nano-SiO₂ Particles Addition on Mechanical and Physical Properties of Ternary Blended Concrete Incorporating Rice Husk Ash. *Journal of Experimental Nanoscience*. 2013. 8(1):1-18. (IF= 0.955).

22. S. Rahmanian, K.S. Thean, **A.R. Suraya**, M.A. Shazed, M.A. Mohd Salleh, H.M. Yusoff. Carbon and Glass Hierarchical Fibers: Influence of Carbon Nanotubes on Tensile, Flexural and Impact Properties of Short Fiber Reinforced Composites. *Materials and Designs*. 2013. 43:10-16. (IF= 2.805).
23. Shazed Aziz, **Suraya Abdul Rashid**, Mohd Amran Mohd Salleh. Theoretical Prediction of CNT-CF/PP Composite Tensile Properties Using Various Numerical Modeling Methods. *Fullerenes, Nanotubes, and Carbon Nanostructures*. 2013. 21(5):411-416. (IF= 0.680).
24. Hoong-Kun Fun, Chin Wei Ooi, B. Garudachari, Arun M. Isloor, **Suraya A. Rashid**. Ethyl 4-[[1-(2,4-dichlorobenzyl)-1H-1,2,3-triazol-4-yl]methoxy]-8-(trifluoromethyl) quinoline-3- carboxylat. *Acta Crystallographica Section E*. 2012. 68(10):3017-3018. (IF= 0.413).
25. Alireza Najjivi, **Suraya Abdul Rashid**, Farah Nora Aziz, Mohd Amran Mohd Salleh. Water Absorption Control Of Ternary Blended Concrete With Nano-Sio₂ In Presence Of Rice Husk Ash. *Materials and Structures*. 2012. 45(7):1007-1017. (IF= 1.184).
26. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. Dispersion and Stabilization of Photocatalytic TiO₂ Nanoparticles in Aqueous Suspension for Coatings Applications. *Journal of Nanomaterials*. 2012.(IF= 1.547).
27. Alireza Najjivi, **Suraya Abdul Rashid**, Farah Nora Aziz, Mohd Amran Mohd Salleh. The effects of lime solution on the properties of SiO₂ nanoparticles binary blended concrete. *Composites Part B*. 2011. 42(3):562-569. (IF= 2.143).
28. Setareh Monshi Toussi, A. Fakhru'l - Razi, Luqman Chuah A., **A.R.Suraya**. Optimization of synthesis condition for carbon nanotubes by catalytic chemical vapor deposition (CCVD). *IOP Conference Series: Materials Science and Engineering*.
29. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. Fe-doped TiO₂ Nanoparticles Produced via MOCVD: Synthesis, Characterization, and Photocatalytic Activity. *Journal of Nanomaterials*. 2011. (IF = 1.547).
30. Setareh Monshi Toussi, A. Fakhru'l-Razi, Luqman Chuah A., **A.R. Suraya**. Effect of Synthesis Condition on the Growth of SWCNTs via Catalytic Chemical Vapour Deposition. *Sains Malaysiana*. 2011. 17(1):197-201.

Conference Proceedings (30 recent Conference Proceedings)

1. **Suraya Abdul Rashid**, Shutesh Krishnan, Hong Ngee Lim, Thermal conductivity of Graphene Oxide Nanofluids, International Conference on Diamond and Carbon Materials, 2014, Madrid, Spain.
2. Rajesh Kumar, **Suraya Abdul Rashid**, Arun M Isloor. Preparation, Characterization of Chitosan/Modified Chitosan Novel Blends and its Nanofiltration Membranes for Desalination Application. International Conference on Nanotechnology, 2012 Kuantan, Pahang.
3. **Suraya Abdul Rashid**. Carbon Nanotube Coating onto Carbon Fibre using Chemical Vapour Deposition for Nanocomposite Application. Nanomaterials Specialized Conference, 2012, Universiti Teknologi Malaysia, Johor.
4. **Suraya Abdul Rashid**, Muhammad Zamir Abdul Rashid, Muharniza Azinita Musa. Comparison of Horizontal and Vertical Chemical Vapour Deposition Reactor for the Production of Hierarchical Carbon Fibres. Asia Pacific Conference on Chemical Engineering, 2012, Singapore.
5. Shazed Aziz, **Suraya Abdul Rashid**, Mohd Amran Mohd Salleh. Tensile Behavior Of CNT-CF/PP Composite Obtained From Experimental And Numerical Modeling Methods, International Conference on Nanoscience and Technology 2011.
6. S.M.Z. Sharifah Mazrah, S.N. Ismail, **A.R. Suraya**, R. Yunus, N. Abdullah. Optimization of CNT Growth on Carbon Fibre Using Floating Catalyst Chemical Vapour Deposition. Diffusion in Solids and Liquids 2010.
7. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. Effect of Fe Doping on Phase Transition of TiO₂ Nanoparticles Synthesized by MOCVD. International Conference on Process Engineering and Advanced Materials 2010.
8. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. Effect of Reaction Temperature on Photocatalytic Activity of TiO₂ Nanoparticles Produced via MOCVD. International Advanced Technology Congress 2009.
9. Setareh Monshi Toussi, A. Fakhru'l - Razi, Luqman Chuah A., **A.R Suraya**, Optimization of Synthesis Condition for Carbon Nanotubes by Catalytic Chemical Vapor Deposition (CCVD), International Advanced Technology Congress 2009.

10. Setareh Monshi Toussi, A. Fakhru'l - Razi, Luqman Chuah A., **A.R Suraya**. Effect of Synthesis Conditions for the Growth of Single-Walled Carbon Nanotubes via Catalytic Chemical Vapour Deposition, Nanotech Malaysia 2009.
11. Siti Hajar Othman, **Suraya Abdul Rashid**, Tinia Idaty Mohd. Ghazi and Norhafizah Abdullah. Synthesis And Photocatalytic Activity of Fe-Doped TiO₂ Particles Via Hydrothermal Treatment Of Microemulsion. Symposium on Engineering and Technology 2008.
12. **A. R. Suraya**, I. S. Norazian, A. Norhafizah. Improvement in Mechanical Properties of Carbon Fiber Composites: New Dimension in Whiskerization Treatment of Carbon Fibers. 4th National Carbon Fiber Conference and Composites (NCFC 08).
13. **A. R. Suraya**, I. S. Norazian, A. Norhafizah. A Preliminary Study on the Effect of Ferrocene Introduction Method in Treating Carbon Fiber Surface. Carbon Fibre in Malaysia: Process, Application & Commercialization, 2007.
14. S.M.Z., Sharifah Mazrah, **A.R., Suraya**, Y., Robiah and I., Nor Azowa. Effects of Whiskerization Treatment on Carbon Fibers via CVD Method to the Tensile Properties of Carbon Fiber reinforced Polypropylene Composites. Carbon Fibre in Malaysia: Process, Application & Commercialization 2007.
15. S.M.Z., Sharifah Mazrah, **A.R., Suraya**, Y., Robiah and I., Nor Azowa. Novel Application of Carbon Nanotubes for carbon Fiber Surface Treatment. Nanotech Malaysia 2007.
16. S.M.Z., Sharifah Mazrah, **A.R., Suraya**, Y., Robiah and I., Nor Azowa. Whiskerization Treatment of Carbon fibers for Enhancing Tensile Properties of Carbon Fiber reinforced Polypropylene Composite, 21st Symposium of Malaysian chemical Engineers, 2007.
17. Najua Delaila Tumin, A. Luqman Chuah, Z. Zawani, **Suraya Abdul Rashid**, Adsorption of Copper from Aqueous Solution by Elais Guineensis Kernal Activated Carbon, 21st Symposium of Malaysian chemical Engineers, 2007.
18. **A.R Suraya**, C. Vargis, R. Yunus, s. Shamsudin. Evaluation of Carbon Vapour Deposition Technique For Whiskerization Treatment of Carbon Fibers, Seminar on Engineering and Technology, 2006.

Chapter in Books (If any)

1. Siti Norazian Ismail and Suraya Abdul Rashid, Chapter 21, Hybrid CNT-Carbon Fiber Nanocomposites, Mohd Sapuan Salit et al. (eds), *Engineering Composites: Properties and Applications*, UPM Press, 2014, ISBN 978-967-344-396-3.
2. Bitu Roshanravan, Fariba Mahdavi, Suraya Abdul Rashid, Chapter 5, Nitrogen Release Properties of Urea-Kaolinite Controlled Release Fertilizer with Chitosan Binder, A. Z. Aris et al. (eds.), *From Sources to Solution*, Springer, 2014, ISBN 978-981-4560-96-6.

Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	The Mechanism of Catalytic Graphene Nanoribbons Synthesis by Chemical Vapour Deposition	115,000	2013-2015	FRGS
2.	Synthesis, Characterization and Application of Graphene Nanostructures	160,000	2013-2015	Putra Grant
3.	Urea-based Nanocomposite Fertilizer for Improved Rice Production	180,000	2011-2014	LRGS
4.	Fundamental Studies on the Intercalation and Release Mechanism of Urea Into/From Clay Nanolayers	97,000	2011-2014	FRGS
5.	The Effects of Nanoemulsification on the Physical and Chemical Properties of Diesel Fuel	142,000	2011-2014	ERGS
6.	Carbon Nanotube Growth on Carbon Fibres using Floating Catalyst Chemical Vapour Deposition for High Performance Fibre Reinforced Composites	139,000	2010-2012	Brain Gain
7.	High-yield Growth of Carbon Nanotubes on Glass Fibre to Produce Fuzzy-Fibre Reinforced Structural Composites	62,000	2009-2011	RUGS



8.	Development of magnetic Photocatalyst for Removal of Organic Pollutant through Photocatalysis	185,000	2009-2011	RUGS
9.	Dispersion and Stabilisation of TiO ₂ Nanoparticles in Aqueous Solution	50,000	2009-2011	FRGS
10.	Synthesis and Characterization of Photocatalytic Titanium Dioxide Particles	60,000	2007-2009	FRGS
11.	Whiskerization Treatment of Carbon Fibres With Carbon Nanotube Whiskers for Improving the Strength of Carbon Fibre Reinforced Composites	147,400	2007-2009	ESciencefund
12.	Development of Surface Treatment for Carbon Fibre via Conventional and Innovative Method	300,000	2004	Sciencefund, MOSTI

Awards/Recognition(Current)

Num	Name of awards	Title	Award Authority	Award Type	Year
1.	Silver Medal	Theoretical prediction and Experimental validation of the Tensile Response of Hierarchical CNT-CF/PP Composite	Pameran Rekacipta, Penyelidikan and Inovasi Malaysia	National	2012
2.	Silver Medal	Production of High Strength Concrete using SiO ₂ Nanoparticles and Agro-waste Rice Husk Ash	Pameran Rekacipta, Penyelidikan and Inovasi UPM	National	2011
3.	Anugerah Pengajar Muda		UPM	University	2008
4.	Anugerah Pengajar Cemerlang		Fakulti Kejuruteraan, UPM	University	2008
5.	Gold Medal	Super Strong Carbon Fibre Reinforced Composites by Thick Ultra Pure Carbon Nanotube Coatings	Pameran Rekacipta, Penyelidikan and Inovasi UPM	National	2008
6.	Silver Medal	New Perspective Polyurethane/Clay Nanocomposites For Fire Retardant To Complying Sustainable Development (Co-researcher)	International Invention, Innovation and Technology Exhibition, 18th ITEX	International	2007
7.	Bronze Medal	Innovation Technique of introducing Ferrocene in the Whiskerization	Pameran Rekacipta, Penyelidikan dan Inovasi UPM	National	2007



treatment of
Carbon Fibers

8.	Bronze Medal	Whiskerization treatment: A Novel Application of Carbon Nanotubes for Enhancing Mechanical Properties of Carbon Fiber Composites	UPM	Pameran Rekacipta, Penyelidikan dan Inovasi UPM	National	2007
9.	Anugerah Perkhidmatan Cemerlang	UPM	UPM		University	2006
10.	Bronze Medal	New Prospective Polyurethane/Clay nanocomposites for Fire Retardant to Complying Sustainable Development (Co-researcher)		Pameran Rekacipta, Penyelidikan dan Inovasi UPM	National	2006

Professional Services/Consultation

No	Year	Title	Authority	Amount
1.	2013-2015	Industrial Attachment	Platinum NanoChem Sdn. Bhd.	N/A
2.	2011	Fertilizer Research and Development Program.	Petroleum Nasional Berhad	RM50,000
3.	2010	Nanotechnology for Controlled-Release Fertilizer	Global RResources Management Sdn. Bhd.	RM18,353

Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
1.	Siti Hajar Binti Othman (GS17837)	Synthesis, Characterization, and Determination Of The Photocatalytic Properties of Titanium Dioxide Nanoparticles	Graduated
2.	Alireza Najigivi (GS19896)	Development of High Performance Concrete using Rice Husk Ash and Silica Nanoparticles	Graduated
3.	Saeed Rahmanian (GS30956)	Mechanical Properties of Multiscale CNT/Filler Reinforced Composites	Graduated
4.	Syazwan Afif Mohd Zobir (GS37024)	Synthesis of GNF/Graphene Nanohybrid for Supercapacitor Applications	On-going
5.	Nasser Abd-dullah Mohammed (GS38421)		On-going
6.	Mohd Firdaus Bin Abdul Rahman (GS38842)		On-going
7.	May Ali Muslim (GS39711)		On-going

Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
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MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Christina Vargis A/P Jones @ John Vargis (GS15090)	Development of Surface Treatment Process On Carbon Fibre Via Catalytic Chemical Vapour Deposition	Graduated
2.	Sharifah Mazrah bt Sayed Mohamed Zain (GS16530)	Enhancing Tensile Properties Of Carbon Fiber Reinforced Polypropylene Composite By Carbon Nanotube Coating	Graduated
3.	Siti Norazian Ismail (GS16998)	Investigation of Floating Catalyst Chemical Vapour Deposition for the Development of CNT-coated Carbon Fibre Reinforced Composite.	Graduated
4.	Thean Kean Sun (GS21642)	Whiskerization Treatment of Carbon Nanotubes (CNTs) on Carbon Fiber	Graduated
5.	Fariba Mahdavi (GS34434)	Intercalation of Urea into Kaolinite Nanolayers	Graduated
6.	Shazed Aziz (GS26931)	Modelling Mechanical Properties of Hierarchical Fibres	Graduated
7.	Muhammad	Kinetic Modelling of Free Fatty Acid Using Low Cost Adsorbent	Graduated
8.	Bidita (GS31389)	Nanoemulsion Based Diesel Fuel	Graduated
9.	Nurul Infaza Talalah Binti Ramli (GS38026)	Synthesis, Characterization and Electrochemical Performance of Hybrid GNF/CNT for Energy Storage Applications	Ongoing

Patents

Num	Title	Year	Registration No.	Satus (Filed/Granted)
1.	Transfer of Grapheneous Layer: A Facile and Efficient Technique via Hydrogel Formation.	2015	Submitted	
2.	Graphene Ribbons and A Process for Preparation Therof.	2014	PI2014703236	Filed
3.	Modification of optical microfiber with graphene and silver/graphene thin films for enhanced saturable absorption.	2014	PI2014703300	Filed
4.	Method and Composition for making Watertight Cement Based Concrete Product Utilizing Silica Nanoparticles and Rice Husk Ash	2012	PI2012000678	Filed
5.	A Chemical Vapour Deposition Reactor for Carbon Fibre Surface Treatment	2008	PI20080489	Filed