CURRICULUM VITAE

Dr. Che Nor Aiza Bt. Jaafar
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Education

1. PhD. Metallurgy, 2011, Universiti Sains Malaysia (USM), Malaysia.
2. MSc (E&D). Metallic and Ceramic Materials, 2000, University of Manchester and UMIST, UK.
3. BSc (Hons). Materials Science. 1996, Universiti Kebangsaan Malaysia (UKM). Malaysia.

Areas of Interest

1. Metallurgy.
2. Powder Metallurgy
3. Ceramic materials.
4. Composite materials.
5. Polymer materials

Professional Qualification/ Membership/ Affiliation

1. Life Member, Microscopy Society of Malaysia (MSM) 2013.
2. Member, Solid State Science and Technology Society of Malaysia (MASS) 2013
3. SAE International Classic Membership (Associate)
4. International Association of Advanced Materials (IAAM)

Appointments

Position	Duration
1. Senior Lecturer, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, UPM.	2012 to date.
2. Coordinator of Students Affair and Alumni (HEPA), Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, UPM.	2014 - 2017.
3. Committee Exco, Microscopy Society of Malaysia (MSM)	2014 - 2016
4. Deputy of Project Manager of Putra Motorsport Team, UPM	2015 - 2016
5. Editor of Microscopy Journal of Malaysia	2018 - 2019
6. Editor Chapter in Book: Basic Methodology: Sample Preparation and Characterization.	2018
7. Reviewer of Microscopy Journal of Malaysia	2016-2018
8. Chairman of Symposium and Workshop on Materials and Characterization (SWMC 2018)	2018

Publications

Journals (30 recent journals)

1. **Aiza C.N**., Azmi R., Zuhailawati, H and Ismail Z, (2011). Effect of Mg, Si and Cu content on the microstructure of dilute 6000 series aluminium alloys. Journal of Alloys and Compounds. 509, p. 8632-8640. (IF=2.13).

2. **Aiza C.N**., Ismail Z and Saleh M. H, (2011). The effect of Si and Cu Contents on Ageing Behaviour and Microstructure in Over-Aged Aluminium Alloys 6061 and 6070. Malaysian Journal of Microscopy.7, p. 210-215.

3. **Aiza C.N**., Azmi R., Azizan, A. and Zuhailawati, H, (2010). A hardness and TEM studies of precipitate in dilute Al-Mg-Si alloys. Malaysian Journal of Microscopy. 6, p. 96-102.

4. **Aiza C.N**., Lorimer G.W and Parson N.C, (2006). The effect of composition and temperature on the ageing response of some dilute 6xxx series alloys, Material Science Forum, Vol. 519-521, p. 227-232. (IF=0.4).

5. **Aiza C.N.,** Azmi R., Ismail Z and Zuhailawati, H, (2012). Effects of composition on the mechanical properties and microstructural development of dilute 6000 series alloys. Journal of Applied Science, p.1-5.

6. **Aiza C.N** and Ismail Z, (2013). Relationship between the microstructure and property of Al-0.21 wt% Mg-0.41 wt%Si alloy. Malaysian Journal of Microscopy. 9, p. 42-46.

7. **Aiza C.N.,** Ismail Z and Ayub M,A (2014). Effects of PVA-PEG Binders System on Microstructure and Properties of Sintered Alumina. Applied Mechanics and Materials, Vol 564, p. 355-360.

8. Fairuz, A.M., Sapuan, S.M., Zainudin E.S and **Aiza, C.N** (2014). Polymer Composite Manufacturing using a Pultrusion process: A review. American Journal of Applied Sciences 10, p. 1798-1810 (ISSN: 1546-9239).

9. Fairuz, A.M., Sapuan, S.M., Zainudin E.S and **Aiza, C. N** (2015) The Effect of Gelation and Curing Temperatures on Mechanical Properties of Pultruded Kenaf Fibre Reinforced Vinyl Ester Composites. Fibers and Polymers 2015, Vol.16, No.12, p. 2645-2651 (ISSN: 1875-0052).

10. Fairuz, A.M., Sapuan, S.M., Zainudin E.S and **Aiza, C. N** (2015) Optimization of Pultrusion for Kenaf Fibre Reinforced Vinyl Ester Composites. Applied Mechanics and Materials, Vol 761, p. 499-503.

11. **Aiza C.N** and Ismail Z and Mohamad Amirul, M.S (2016) The Effect of Thermal Ageing on Properties and Microstructure of Al-6063 Alloy, Key Engineering Materials, Vol 694, p. 111-115.

12. Nor Aiman, S., Mohd Khairol Anuar, M.A. Hang Tuah, B.T., **Aiza C.N** and Mohd Idris S.I (2016) Comparison on Dimensional Accuracy Using a Newly Developed Nozzle for Open Source 3D Printer, Applied Mechanics and Materials, Vol 859, p. 15-19.

13. Nor Aiman, S., Mohd Khairol Anuar, M.A. Hang Tuah, B.T., **Aiza C.N** and Mohd Idris S.I (2016) Analyzing The Effect of Nozzle Diameter in Fused Deposition Modelling for Extruding Polyactic Acid Using Open Source 3D Printing, Jurnal Teknologi, 78:10, p. 7-15.

14. Nor Aiman, S., Mohd Khairol Anuar, M.A. Hang Tuah, B.T., **Aiza C.N** and Mohd Idris S.I (2017) Optimization of the Parameters for Surface Quality of the Open-source 3D Printing, Journal of Mechanical Engineering, Vol SI 3 (1), p. 33-43.

15. Nor Aiman, S., Mohd Khairol Anuar, M.A. Hang Tuah, B.T., **Aiza C.N** and Mohd Idris S.I (2017), Analysis on Temperature Setting for Extruding Polylactic Acid using open Source 3D Printer, ARPN Journal of Engineering and Applied Sciences, Vol. 12, 4, p.1348-353.

16. Nor Aiman, S., Mohd Khairol Anuar, M.A. Hang Tuah, B.T., **Aiza C.N** and Mohd Idris S.I (2017), Analysis on the Impact Process Parameters on Tensile Strength using 3D Printer Repetier-Host Software, ARPN Journal of Engineering and Applied Sciences, Vol. 12, 10, p.3341-3346.

17. **Aiza C.N.,** Ismail Z and Mastura M.A (2017) Fish Scales Hydroxyapatite as Potential Fillers in HDPE Composites for Bone Replacement Applications, Solid State Phenomenon, Vol 264, p. 79-82.

18. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N**, Norkhairunnisa, M and Khamirul A. M (2017) Preparation and characterization of porous alumina ceramics using different pore agents, Journal of the Ceramic Society of Japan 125 [5], p. 402-412.

19. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N**, Norkhairunnisa, M , Khamirul A. M and Naser H (2017) Factors Affecting the Porosity and Mechanical Properties of Porous Ceramic Composite Materials, Reference Module in Materials Science and Materials Engineering. Oxford: Elsevier; 2017. pp. 1-54.

20. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N**, Norkhairunnisa, M and Khamirul A. M (2017) The Effect of Commercial Rice Husk Ash Additives on the Porosity, Mechanical Properties, and Microstructure of Alumina Ceramics, Hindawi Publishing Corporation, Advances in Materials Science and Engineering, Volume 2017, Article ID 2586026, 10 pages, https://doi.org/10.1155/2017/2586026.

21. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N**, Norkhairunnisa, M and Khamirul A. M (2016), Strengthening of Porous Alumina Ceramics Using (Cu) Metal in Nanoscale Particle and Graphite Waste as Pore Agent, Journal of Engineering and Applied Science, 11 (12):2713-2722 (ISSN: 1816-949X).

22. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N,** Norkhairunnisa, M and Khamirul A. M (2017) The effect of nano-copper additives on the porosity, mechanical properties, and microstructure of alumina ceramics using commercial rice husk ash as a pore former. J Aust Ceram Soc, D)1 10.1007/s41779-017-0112-0.

Conference Proceedings

1. **Aiza, C.N**., Azmi R., Azizan, A. and Zuhailawati, H, (2009). Effect of composition on the hardness and microstructural development of dilute 6000 series aluminium alloys: In: Kolokium Kebangsaan Pasca Siswazah Sains and Matematik, Tanjung Malim, Perak: Universiti Pendidikan Sultan Idris (UPSI), Perak, 21 December 2009.

2. **Aiza C.N.,** Lorimer G.W and Parson N.C, (2006). The effect of composition and temperature on the ageing response of some dilute 6xxx series alloys, International Conference on Al alloys (ICAA-10), Vancouver, Canada, 9th – 13th July 2006.

3. **Aiza, C.N**., and Harun, M, (1997). Mullite Synthesis for Catalytic Converter Supporter, Malaysian Science & Technology Congress, Genting Highland, Pahang, October 1997

4. Zainol, I., Zulkipli, A.A.M., Abidin, H.H.M., Zain, H.H.M., Ahmad, M.S. and **Aiza, C.N,** (2012). Synthesis of Chitosan/Nano Hydroxyapatite Composite by In-Situ Precipitation Technique, Extended Proceeding of the 21 st Scientific Conference of the Microscopy Society Malaysia, 22nd-24th November 2012, Kota Bharu, Kelantan.

5. Sapuan, S.M., Zainudin E.S, **Aiza, C.N**., Study of pultrusion process parameter, The Postgraduate Symposium on Composites Science and Technology 2014 & 4th Postgraduate Seminar on Natural Fibre Composites 2014, Engineering Composites Research Group, Faculty of Engineering, UPM, Feb 2014.

6. **Aiza C.N** and Ismail Z, (2014). Effect of polymeric Binders and Internal Lubricant on Mechanical Properties and Microstructure of Sintered Alumina, Advanced Materials Conference (AMC), Langkawi, Kedah, 25 th -26th November 2014.

Books (If any)

Chapter in Books (If any)

1. Fairuz, A.M., Sapuan, S.M., Zainudin E.S and **Aiza, C. N** (2015) Chapter 11: Pultrusion Process of Natural Fibre-Reinforced Polymer Composites: in Manufacturing of Natural Fibre Reinforced Polymer Composites. Springer International Publishing Switzerland 2015.
2. **Aiza, C. N** (2017), Chapter 2: Heat Treatment of Metal alloys: in Basic Methodology: Sample Preparation, Department of Mechanical & Manufacturing Engineering, CLMO Technology Sdn. Bhd and Crest NanoSolution (M) Sdn. Bhd. 2017.

3. Ali M.S, Azmah Hanim M.A, Tahir S.M, **Aiza C.N**, Norkhairunnisa, M (2017), Chapter 6: Preparation of Porous Alumina Ceramic Samples: in Basic Methodology: Sample Preparation, Department of Mechanical & Manufacturing Engineering, CLMO Technology Sdn. Bhd and Crest NanoSolution (M) Sdn. Bhd. 2017.

4. I.K.M. Ismail, **C.N.Aiza Jaafar** and I.Zainol (2018), Preparation and Characterization of Spray Dried from Fish Scale. Chapter 3, Basic Methodology: Sample Preparation and Characterization, Department of Mechanical & Manufacturing Engineering and CLMO Technology Sdn. Bhd.

5. I.K.M. Ismail, **C.N.Aiza Jaafar** and I.Zainol (2018), High Density Polyethelen/Hydroxyapatite Composite for Biomedical Application, Chapter 4 Basic Methodology: Sample Preparation and Characterization, Department of Mechanical & Manufacturing Engineering and CLMO Technology Sdn. Bhd.

6. **C.N.Aiza Jaafar,** I. Zainol and R.A. Suhaimee (2018), Influence of Si Content and Ageing Treatments on Hardness of Al-Mg-Si Alloys, Chapter 23, in Basic Methodology: Sample Preparation and Characterization, Department of Mechanical & Manufacturing Engineering and CLMO Technology Sdn. Bhd.

7. **C.N.Aiza Jaafar**, M.S. Samsudin, I.Zainol and R. Mustafa (2018), Modification of Hydroxyapatite with Zirconia (HA-Zr-O2) for Biomedical Applications, Chapter 24, in Basic Methodology: Sample Preparation and Characterization, Department of Mechanical & Manufacturing Engineering and CLMO Technology Sdn. Bhd.

8. A.A. Majhool, I.Zainol and **C.N.Aiza Jaafar** (2018), Improve Mechanical Properties of Epoxy Resin using Hydroxyapatite Fillers, Chapter 10. Basic Methodology: Sample Preparation and Characterization, Department of Mechanical & Manufacturing Engineering and CLMO Technology Sdn. Bhd.

Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Recycle of aluminum beverage can for potential biomedical device applications	29,000	2012-2014	RUGS
2.	Physicochemical and mechanical properties of HDPE/F_SHAp: Effect of filler loading, particle size and surface modification.	29,00	2017-2019	Geran Putra

Awards/Recognition (Current)

No	Name of awards	Title	Award Authority	Award Type	Year
1.	Anugerah Harta Intelek Negara (Kategori Paten): Silver Award	Method for preparing Porous Body from Hap from fish scale for water filter or any liquid filter applications	Kementerian Perdagangan Dalam Negeri Koperasi & Kepenggunaan (KPDNKK) dan Perbadanan Harta	National	2015

			Intelek Malaysia (MyIPO)		
2.	Intensif Pingat Emas for gold medal in ITEX 2014	-	Sultan Idris Education University	University	2015
3.	Malaysia Innovative Product Award 2015	Halal water filter system for domestic and industrial applications	Ministry of Science Technology & Innovation, and MINDS	International	2015
4.	BioInnovation Award: Gold Award	Natural Hydroxyapatite for Halal Water Filter Applications	Protemp and MARS	National	2014
5.	I-nova'14: Gold Award	Natural calcium Sources in Halal Water Filter Applications	Kementerian Pendidikan Malaysia, USIM dan MOSTI	National	2014
6.	International Invention, Innovation and Technology Exhibition (ITEX ' 14): Gold Award	Natural Hydroxyapatite as Calcium Source in Water Filter Applications	MINDS	International	2014
7.	Best Micrograph	TEM Microscope (Needles)	Scientific Conference of Electron Microscopy Society of Malaysia (EMSM).	National	2012
8.	Best Micrograph	TEM Microscope (Lath-shaped precipitates)	Scientific Conference of Electron Microscopy Society of Malaysia (EMSM).	National	2010
9.	Best Micrograph	Light Microscope (Grain structure)	Scientific Conference of Electron Microscopy Society of Malaysia (EMSM).	National	2010
10.	Poster Competition (3th Prize)	The effect of compositions on the ageing response of 6000 series alloys	Manchester Materials Science Centre, University of Manchester, UK.	University	2004
11.	Best Micrograph Award	Optical Micrograph	Regional Conference on Materials & ASEAN Microscopy Conference 2017	International	2017

Professional Services/Consultation

No	Year	Title	Authority	Amount

Student Supervision

PhD (Co-Supervisor)

No.	Name	Title	Status
1.	Mohd Fairuz Bin Abdul Manab	Mechanical Properties of Kenaf Pultruded Reinforced Vinyl Ester Composite.	Ongoing
2.	Mohammad Sabah Ali	Assessment of macroporous and mechanical properties of ceramic matrix composite reinforced with nanometal particle by using rice husk ash	Ongoing
3.	Nor Aiman Sukinder	Analysing and development of fused deposition modelling nozzle for extruding bio materials	On going
4.	Zatil Aqmar Zulkifli	Mechanical Properties of Titanium Carbide Reinforced Aluminium Copper Composites using Dynamic Casting	On going

MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Ahmad Syahir Saarani	Development of Android Application for Farm-Made Fish Feed Formulation	Ongoing
2.	Izyan Khairani Mohd Ismail (GS47565)	Physiochemical and Mechanical properties of HDPE/Fish Scales Hydroxyapatite (HDPE/FsHap) Composite: Effect of Filler Loading, Particle Size and Surface modification	Ongoing
3.	Rozilah Abdullah (GS50792)	Development and Characterization of Antimicrobacterial Sugar Palm Nanocrystalline Cellulose Reinforced Sugar Plam Starch Nanocomposite Film	Ongoing
4.	Nur Amani Abdul Nasir	Toughened Natural Hydroxyapatite with Zirconia for Biomedical Applications	Ongoing

MS with thesis (Co-Supervisor)

No.	Name	Title	Status
1.	Tengku Muhammad Fahmi Tengku Ibrahim	Design of Heat Exchanger for Water Distiller using Computational Fluid Dynamics	Ongoing
2.	Siti Nurul Adura Daud	A comparative study of mechanical properties of iron silivon carbide under microwave hybrid and conventional sintering	Ongoing