



PROF Ir Dr ABU BAKAR SULONG (P.Eng, MIEM)

Lecturer VK7

Department of Mechanical and Materials Engineering

Faculty of Engineering and Built Environment

Universiti Kebangsaan Malaysia

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SECTION A: PERSONAL INFO AND SERVICES**CURRICULUM VITAE****1. NAME**

ABU BAKAR SULONG
I/C No: 770921-11-5445

2. DATE AND PLACE OF BIRTH

21 September 1977/ Kuala Berang, Terengganu

3. DATE OF SERVICE

19 Mac 2008

4. POST DURING SERVICE

Lecturer VK7

5. CURRENT POSITION

- a. Current : Lecturer VK7
b. Administration : Deputy Director of CRIM (Planning, Operations & Quality)

Date of service until current post::

- a. Started service: 1 Disember 2003
b. Permanent post : 19 Mac 2008
c. Confirmation of posting : 19 Mac 2009
d. Confirmation of current post: Sept 2019

6. FACULTY

FACULTY : Faculty of Engineering and Built Environment

DEPARTMENT :

a. Main : Department of Mechanical and Materials Engineering

b. Administrative :

Coordinator for undergraduate students of Manufacturing Program in

Department of Mechanical and Materials Engineering (2008 ~ 2014)

JKMB Accreditation Coordinator (2015 ~ 2017)

Chief Editor Of Jurnal Kejuruteraan (The Engineering Journal) (1997-2020)

7. FIELD OF SPECIALIZATION

Main: Composite Processing

Sub; Powder Injection Molding of Composite Metal-Ceramic

Advanced Polymer Composites

8. CONFIRMATION OF SERVICES

CONFIRMED/~~YET TO BE CONFIRMED~~

9. CONFIRMATION DATE OF SERVICE

19 March 2009

10. EXAMS

a. General Government : Unnecessary

b. Induction Courses / Instructions : As attached

c. Courses / Training Department : As attached

Induction Course

Group	Start Date	End Date	Status
Profesional	15 July 2008	23 July 2008	Passed

PTK

Group	Start Date	End Date	Status
PTK 4	10 May 2010	15 May 2010	Passed Level 4

11. DISCIPLINARY PUNISHMENT

None

12. PROPERTY REPORT

Has been confirmed

Cofirmation date: 14 August 2008, 30 April 2013, 11 April 2018

13. CURRENT HEAD OF SERVICE

Vice Chancellor

SECTION B:**1. ACADEMIC QUALIFICATIONS**

Doctor of Engineering (Mechanical Engineering)	-2008-	Sejong University, Seoul, South Korea
Bachelor of Engineering (Mechanical and System Engineering)	-2001-	Gifu University, Gifu, Japan

2. PARTICIPATED SHORT COURSES

No. of courses attended 2013 ~ 2020: 40

No. of courses attended 2009 ~ 2012: 30

Year	Tajuk kursus	Tarikh dan Tempat
2020	28th Annual International Conference on Composites or Nano Engineering (ICCE-28)	19/07/2020 - 25/07/2020, Prague, Czech Republic

- | | | |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 2019 | HPI International Conference on Innovation in Polymer Science and Technology 2019 In conjunction with The 7th International Conference on Fuel Cell & Hydrogen Technology 2019 | 16/10/2019 -
19/10/2019, Bali,
Indonesia, Indonesia |
| 2019 | The International Conference on on Advanced Processes and Systems in Manufacturing (APSIM 2019) | 20/08/2019 -
22/08/2019, Hotel
Bangi Putrajaya,
Malaysia |
| 2019 | 22nd International Conference on Composite Materials (ICCM22) | 11/08/2019 -
16/08/2019,
Melbourne, Australia |
| 2019 | Symposium on Fuel Cell and Hydrogen Technology 2019 (SFCHT2019) | 17/04/2019 -
18/04/2019, Bangi
Resort Hotel Malaysia |
| 2019 | 5th Internatonal Conference On Powder Metallurgy In Asia + Exhibition (APMA2019) | 18/02/2019 -
21/02/2019, Pune,
India |
| 2018 | Bengkel Perkongsiana Amalan Terbaik Kaedah Penilaian Dana KPM | 20-21 Februari 2018,
KPM |
| 2018 | Clarivate Analytics Editors Day 2018 | 5 Februariy
2018,Putrajaya |
| 2018 | European Research Funding and Collaboration Opportunities Horizon 2020 Info Days | 29-30 January 2019,
Kuala Lumpur |
| 2017 | UKM Scientific Seminar for Instrumentation and Biocompatibility | 15-16 August 2017,
Bangi, Selangor |
| 2017 | Bengkel Kumpulan Penyelidikan LRGS “Kenaf: Sustainable material for automotive” | 11-15 Mei 2017,
Lengkawi, Kedah |

2016	Collaborative Research and Field Work in UTeM	29 March 2016, UTeM, Melaka
2016	Research Colloquium JKMB 2016	8 – 10 April 2016, Port Dickson, Neger Sembilan
2016	Post 11 th Asia Pacific Microscopy Workshop	31 May – 2 June 2016, UKM FST
2016	24 th Annual International Conference on Composites or Nano Engineering	17 – 23 July 2016, Haikou, China
2016	Symposium and Exhibition of Additive Manufacturing SAEM2016	25 – 28 July 2016, Seberang Jaya, Pulau Pinang
2016	Symposium on Damage Mechanisms in Materials and Structure SDMMMS 2016	8 August 2016, Hotel Bangi-Putrajaya, Bangi
2016	Research Collaboration Visits to UM, UiTM & Maju Saintifik	24 August 2016, Petaling Jaya, Shah Alam
2016	Research Group Meeting in MJIIT UTM KL	25 August 2016, UTM KL Semarak
2016	ICPEAM2016 International Conference on Process Engineering & Advanced Materials	15 – 17 August 2016, Kuala Lumpur
2016	Advanced Processes & Systems in Manufacturing (APSIM2016)	28 – 30 August 2016, Everly Hotel, Putrajaya
2016	Malaysia – Thailand – Japan International Conference on Science & Technology	28 – 29 September 2016, UKM
2016	Field Work in USM Nibong Tebal	8 June 2016, USM Nibong Tebal
2016	Invitation to MAWEA Customer Meet – Empowering Engineering Technology	7 September 2016, Bangsar
2016	Kyoto University ASEAN Forum 2016	8 September 2016, Pullman City Center
2016	Advances in Materials and Processing	8 – 11 November 2016,

	Technologies Conference (AMPT2016)	Kuala Lumpur
2016	ICFCM2016 International Conference on Frontiers of Composite Materials 2016	15 - 23 November 2016, Auckland New Zealand
2015	Training on CAE Simulations of Advanced Manufacturing Processes	27-29 March 2015, Port Dickson
2014	Workshop on Advanced Manufacturing Engineering Research Group (AMReG'08) & Persis'14	13 February 2014, Pullman Putrajaya
2014	CATIA V5 Animated Product Review (CAT-D01)	12-14 March 2014, MAWEA Petaling Jaya
2014	Research Outcome Opportunity Workshop (ROOW) Bil. 1/2014 Anjuran Pusat Inovasi Kolaboratif (PIK)	14-15 April 2014, Danau UKM
2014	Workshop on National Graphene Roadmap Development	20-22 August 2014, A Famosa Melaka
2014	Autodesk Solution Day 2014	14 August 2014, Bukit Bintang, Kuala Lumpur
2014	Android Training	29-31 December 2014, FTSM UKM
2014	Workshop on Malaysia-CLMV Regional Cooperation in Technology Transfer and R&D Commercialization	14-16 October 2014, Hotel Putra-Bangi
2013	CATIA V5 Professional Preparation and Examination	4-6 December 2013, Petaling Jaya
2013	FKAB Roadmap Workshop	29 November - 1 December 2013, Langkawi
2013	1 day Workshop on Complex Problem Solving	19 August 2013, Marriot Hotel, Putrajaya
2013	Roadmap and Monitoring Workshop of Fuel	13-15 December 2013,

	Cell Institute 2013	Gambang
2012	One Day Course of SAR (EAC) Assessment	1 December 2012, Serdang, Selangor
2012	BEM Mandatory Course Safety & Health	26-27 September 2012, Petaling Jaya
2012	BEM Mandatory Course Engineering Management Practice	18-19 September 2012, Petaling Jaya
2012	Workshop on Sharing Good Practices in Research	2 Julai 2012, UKM
2012	I-Folio Workshop	29 August 2012, UKM
2012	BEM Code of Ethics and Regulations	2-3 May 2012, Petaling Jaya
2012	CATIA V5 Basic Training & CATIA Part Design Specialist	6-15 August 2012, Petaling Jaya
2012	CESMED & Yayasan Inovasi Malaysia Workshop	9 April 2012, Kuala Lumpur
2012	Double Degree UKM-UDE Workshop	16 February 2012, UKM
2012	Training Casting Software PROCAST	13-15 February 2012, UKM
2011	Early Courses on Research & Publications	4-5 April 2011, Bangi, Selangor
2011	Roadmap for Young Lecturers Workshop of Faculty Engineering & Built Environment	22 June 2011, UKM
2011	XRD Workshop 2011: Reitviled Analysis	29 June 2011, UKM
2011	100 Jurnal Q1 Project Workshop	6 Disember 2011, N. Sembilan
2011	Model Rasch Workshop	7-8 May 2011, N. Sembilan
2011	Teaching & Learning Forum	10 August 2011, UKM
2011	Workshop on processing, surface modification	15-16 November 2011,

	& Characterization Technique for Powder Metallurgy Component	SIRIM, Kedah
2011	Crystallography & Structure Determination Workshop	6-10 June 2011, UiTM, Selangor
2011	Induction course for new Mechanical & Electrical Engineers	3-5 October 2011, Petaling Jaya
2010	Center for Talented Youth (CTY) International Educators Institute	15 June -17 July 2010, John Hopkins University
2010	PTK4 Course	10 - 25 May 2010, UKM
2010	Consolidation Strategy Audit Seminar RU-UKM-2013	4 August 2010, UKM
2009	Tissue Engineering Course	17 June 2009, PPUKM
2009	CMM Skill Course	20 -25 October 2009, UKM
2008	Writing Courses & Indexed Journal Impact Enhancement Program Academic Staff	25-27 March 2008, UKM
2008	Management Courses Interactive Teaching & Learning (SPIN)	5 May 2008,UKM
2008	Effective Supervisory Skills courses in IPT	18-20 April 2008, Negeri Sembilan
2008	General induction courses and course modules bil. 3/2008	15-23 July 2008, UKM
2008	CD-AdapcoUni-program Basic Training	14-18 April 2008,UKM
2008	MoldFlow Insight Fundamental Course	17-20 Nov 2008, UKM

3. PROFESSIONAL / SCIENTIFIC MEMBERSHIP

- Member of Malaysia Board of Engineer (BEM), Membership No. 43090A(2005)
- Member of Institute Material Malaysia (IMM), Membership No. 2046 (2008)
- Member of Association Powder Metallurgy International (AMPI), Membership No. 42342(2011)
- Member of Malaysian Powder Metallurgy and Particulate Association (MPM2A), Membership No. 007(2009)
- Member of Malaysian Nano Association (MNA), Membership No. 111 (2011)
- Corporate Member of Malaysia Insitute of Engineer (MIEM), Membership No. ME01113
- Profesional Engineer (Malaysia Board Of Engineer BEM), Membership No. 16139)
- Profesional Engineer with Practicing (Malaysia Board Of Engineer BEM), Membership No. C116139)

4. GIFTS AND AWARDS

Scholarship Award

- 'Ijazah Pertama Dasar Pandang Ke Timur' Scholarship, Majlis Amanah Rakyat (MARA), 1997 - 2001
- Sejong University Scholarship 2004 Postgraduate (Research Students), Ministry of Education South Korea, 2004 - 2008

Service Award in UKM

- Excellent Lecturer Award (sijil) 2009
- Research Award 2010 (co-researcher with AMReG)
- Excellent Service Award 2010
- Excellent Service Award 2014
- Research Award 2011 (co-researcher with AMReG)
- Research Award 2011 (co-researcher with AMPI)
- Research Award 2012 (co-researcher with AMPI)
- Research Award 2014 (co-researcher with AMPI)
- Salary Shift Award 2012
- Excellent Researcher Award FKAB 2013, 2014 dan 2015
- Master of 'Bitara Harapan' Award UKM 2016
- Top 50 (no 42) of UKM for publication numbers from 2010 - 2015
- Top 10 (no 8) of UKM for publication numbers from 2013 - 2017
- Research Award 2015 (co-researcher with AMPI)

International Award

- MARQUIS Who's Who in the World 2012
- MARQUIS Who's Who in the World 2011
- MARQUIS Who's Who in the World 2013
- MARQUIS Who's Who in the World 2015
- MARQUIS Who's Who in the World 2017

- TOP 100 Engineers 2011, Int. Biographical, Cambridge
- MAN OF THE YEAR 2012 American Biographical Insititu

5. KEMAHIRAN BAHASA

Language	Speaking			Writing		
	Fluent	Average	Less than average	Good	Average	Less than average
	(8-10)	(5-7)	(1-4)	(8-10)	(5-7)	(1-4)
Malay	/			/		
English	/			/		
Japanese	/			/		
Korean	/				/	

6. LECTURE SUBJECTS SINCE CURRENT JOB

Session/ Semester	Code / Course Title	Level	Total Hour / Week	Total Hour / Semester
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20182018 /Sem 1	KKKM4632 Composite Processing & Mechanical	Undergraduate	3	42
20182019 /Sem 1	KKKM3062 Integrated Project	Undergraduate	3	42
20172018 /Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42
20172018 /Sem 2	KKKM6524 Advanced Manufacturing Process	Graduate	3	42
20172018 /Sem 1	KKKM4583 Composite Processing & Mechanical	Undergraduate	3	42
20172018 /Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20162017 / Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42
20162017 / Sem 2	KKKP4065 Industrial Project	Undergraduate	3	42

20162017 / Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20162017 / Sem 1	KKKP3214 CADCAM	Undergraduate	3	42
20162017 / Sem 1	KKKM4583 Composite Processing & Mechanical	Undergraduate	3	42
20152016 / Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42
20152016 / Sem 2	KKKP4065 Industrial Project	Undergraduate	3	42
20152016 / Sem 2	KKKM6524 Advanced Manufacturing Process	Graduate	3	42
20152016 / Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20152016 / Sem 1	KKKP3214 CADCAM	Undergraduate	3	42

20152016 / Sem 1	KKKM4583 Composite Processing & Mechanical	Undergraduate	3	42
20142015 / Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42
20142015 / Sem 2	KKKP4065 Industrial Project	Undergraduate	3	42
20142015 / Sem 2	KKKM6524 Advanced Manufacturing Process	Graduate	3	42
20142015 / Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20142015 / Sem 1	KKKP3214 CAD/CAM	Undergraduate	3	42
20142015 / Sem 1	KKKM4583 Composite Processing & Mechanical	Undergraduate	3	42
20132014 / Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42

20132014 / Sem 2	KKKP4065 Industrial Project	Undergraduate	3	42
20132014 / Sem 2	KKKM6524 Advanced Manufacturing Process	Graduate	3	42
20132014 / Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20132014 / Sem 1	KKKP3214 CADCAM	Undergraduate	3	42
20132014 / Sem 1	KKKM4583 Composite Processing & Mechanical	Undergraduate	3	42
20122013 / Sem 2	KKKP4163 FEM for Manufacturing	Undergraduate	3	42
20122013 / Sem 2	KKKP4065 Industrial Project	Undergraduate	3	42
20122013 / Sem 2	KKKM6524 Advanced Manufacturing Process	Graduate	3	42

20122013 / Sem 1	KKKJ4553 Composite Mechanic & Composite Materials	Undergraduate	3	42
20122013 / Sem 1	KKKP3134 Manufacturing Process II	Undergraduate	3	42
20122013 / Sem 1	KKKP6524 Applications in Computer Aided Manufacturing	Graduate	3	42
20122013 / Sem 1	KKKP6144 Advanced Manufacturing Porcess	Graduate	3	42
20112012 / Sem 2	KKKF1121 Engineering Professionalism II	Undergraduate	2	28
20112012 / Sem 2	KKP4263 Finite Element Method for Manufacturing	Undergraduate	3	42
20112012 / Sem 2	KKKP6524 Applications in Computer Aided Manufacturing	Graduate	3	42
20112012 / Sem 2	KKKP6144 Advanced Manufacturing Porcess	Graduate	3	42

20112012 / Sem 2	KKKP3024 Manufacturing Process II	Undergraduate	3	42
20112012 / Sem 1	KKKJ4553 Mekanik Polimer & Bahan Rencam	Undergraduate	3	42
20112012 / Sem 1	KKKP6523 CAD/CAM	Graduate	3	42
20112012 / Sem 1	KKKP6524 Applications in Computer Aided Manufacturing	Graduate	3	42
20102011 / Sem 2	KKKF1121 Engineering Professionalism II	Undergraduate	2	28
20102011 /Sem 2	KKKP4263 Finite Element Method for Manufacturing	Undergraduate	3	42
20102011 /Sem 2	KKKP6123 Composite & Polymer Processing (Banggi)	Graduate	3	42
20102011 / Sem 2	KKKP6123 Composite & Polymer Processing (Melaka)	Graduate	3	42

20102011 / Sem 1	KKKF1111 Engineering Professionalism I	Undergraduate	2	28
20102011 / Sem 1	KKKJ4553 Composite Mechanic & Composite Materials	Undergraduate	3	42
20102011 / Sem 1	KKKP3024 Manufacturing Process II	Undergraduate	3	42
20102011 / Sem 1	KKKP6123 Polymer & Composite	Undergraduate	3	42
20102011 /Sem 1	KKKP6523 CAD/CAM (Bangi)	Graduate	3	42
20102011 /Sem 1	KKKP6523 CAD/CAM (Melaka)	Graduate	3	42
20092010 /Sem 2	KKKP3423 Planning & Material Handling Equipment	Undergraduate	3	42
20092010 /Sem 2	KKKP4263 Finite Element Method for Manufacturing	Graduate	3	42

20092010 /Sem 2	KKKP6123 Composite & Polymer Processing	Graduate	3	42
20092010 /Sem 1	KKKF1134 Introduction to Engineering	Undergraduate	2	28
20092010 /Sem 1	KKKP3023 Manufacturing Process II	Undergraduate	3	42
20092010 /Sem 1	KKKP6523 CAD/CAM (Ipoh)	Graduate	3	42
20092010 /Sem 1	KKKP6523 CAD/CAM (Bangi)	Graduate	3	42
20082009 /Sem 2	KKKP2023 Manufacturing Process I	Undergraduate	3	42
20082009 /Sem 2	KKKP4263 Finite Element Method for Manufacturing	Undergraduate	3	42
20082009 /Sem 2	KKKP6123 Composite & Polymer Processing	Graduate	3	42

20082009 /Sem 1	KKKP3023 Manufacturing Process II	Undergraduate	3	42
20082009 /Sem 1	KKKP6123 Composite & Polymer Processing	Graduate	3	42

Laporan Penilaian Kursus

		Year				
		2013	2014	2015	2016	2017
KM4583	Processing & Mechanics of Polymer	4.57	4.7	-	4.63	4.80
KP3134	Manufacturing Process II	4.93	4.44	4.54	4.71	4.80
KP3214	CADCAM	-	-	4.49	4.63	-
KM6524	Advanced Manufacturing Process	-	4.55	5.00	4.85	4.83
KP4163	FEM for Manufacturing	4.78	5.00	5.00	5.00	5.00
KP4065	Industrial Project	4.64	4.51	4.88	4.85	4.83

7. STUDENT SUPERVISION

Postdoctoral Researchers

Dr Majid Niaz: 7/7/2014 – 6/7/2015 (Main)

Dr Rafi: 1/9/2012 – 30/8/2014 (Co-supervised with Prof Norhamidi)

Dr Farhana Foudzi : 24/10/2016 – 23/10/2017 (Co- supervised with Prof Norhamidi)

Dr Nabilah Afiqah Mohd Radzuan : 2/1/2018 – 2/1/2019 (Main)

Dr. Farah Atiqah Abdul Azam: 1/10/2019 – current (Main)

Project & PhD Thesis Supervision

Role	Sudent name	Thesis Title	Status
Main supervisor	Al Basir P95947	Micro-Co Powder Inejction Molding Metal- Ceramic	In Progress (Registered 18/19)
Main supervisor	Mahathir Mohamed P95495	Electrspinning ABS Fiber	In Progress (Registered 18/19)
Main superviosr	Nurul Nadiah P93131	Powder Injection Molding fo Screw Metal Ceramic Composite	In Progress (Registered 17/18)
Co-supervisor	Hanizam Hashim P90625	Thixoforming of aluminum aloy	In progress (Registered 17/18)
Main supervisor	Mohd Ikram Ramli (P83500)	Development of titanium alloy (Ti6Al4V)-wollastonite powder injection molding	Passed in 2019 (Registered 15/16)
Main supervisor	Mohd Yusuf Zakaria (P84205)	Development of titanium / wollastonite (Ti / Ws) foamed composites using metal injection molding	Passed in 2020 (registered 15/16)

Main supervisor	Najla Nazihah (P83881)	Layering tungsten/ alumina by using co-powder injection molding	Passed in 2020 (registered 15/16)
Main supervisor	Ros Emelia Rosli (P80610)	Design and development of high temperature PEM fuel cell system	In progress (registered 14/15)
Main supervisor	Zakaria Razak (P80515)	Influence of kenaf natural fibre and polypropylene composites on mechanical properties in automotive components	Passed in 2020 (registered 14/15)
Main supervisor	Farrahshaida Tharizi (P78335)	2C-PIM of Titanium-Hydroxyapatite	Passed in 2020 (registered 14/15)
Main supervisor	Izdihar Tharizi (P78335)	Unidirectional kenaf PLA composite	In progress (registered 14/15)
Co-supervisor	Nur Fawwaz Asri P78474	Kajian keberaliran elektrik dan kakisan plat dwikutub Logam 316 L dengan salutan Cr-C dan Nb-C didalam PEMFC.	In Progress (Registered 14/15)
Main supervisor	Ukweeze Bonaventure (P75173)	2C-PIM of Zirconia-Stainless	Passed in 2019 (registered 13/14)
Main supervisor	Dulina Tholibon	Unidirectional kenaf PP Composite	Passed in 2019 (registered

	(P72549I		13/14)
Main supervisor	Md Ahsanul Haque (P77790)	Fabrication of PBI/Pt base membrane electrode assemble and its characterization for single stack HT-PEMFC	Passed in 2018 (registered 14/15)
Main supervisor	Nishata Royan (P75171)	Rice Husk Composite	Passed in 2017 (registered 13/14)
Main supervisor	Nabilah Afiqah (P74274)	Effect of extrusion parameters on the electrical conductivity of the bipolar plate	Passed in 2017 (registered 13/14)
Main supervisor	Iswandi (P46816)	Thermal shock resistance of alumina (containing 20% weight siO2) matrix composites reinforced with nickel particle.	Passed 2017 (registered 09/10)
Main supervisor	Amir Ariffin (P63082)	Development of Composites Structure (Titanium-Ha) Through Metal Injection Molding	Passed in 2014 (registered 11/12)
Main supervisor	Tayser Sumer Gaaz (P68614)	Preparation and Characterization of Halloysite Nanotube/Polyurethane Nanocomposite	Passed 2017 (registered 12/13)
Co-supervisor	Azizah Wahi (P55888)	Penghasilan 'bur' gigi menggunakan zirkonia yang stabil sepenuhnya menggunakan proses mikro-pengacuanan suntikan logam.	Passed 2017 (registered 10/11)

Co-supervisor	Tan Koon Taat (P55682)	Foamed Titanium Development	Passed in 2015 (registered 10/11)
Co-supervisor	Javad Rajabi (P55582)	The Effects of Nano-Sized Stainless Steel Powders on The Processing Parameters of Micro Powder Injection Moulding Process	Passed 2015 (registered 10/11)
Co-supervisor	Abdolali Fayyaz (P53285)	Micro Powder Injection Moulding of Cemented Tungsten Carbide	Passed 2014 (registered 09/10)
Co-supervisor	Hendra Suherman (P42529)	Processing and properties of composites Epoxy / Cabon / Carbon Nanotubes	Passed in 2012 (registered 08/09)
Co-supervisor	Mohd Khairul Fadzly Md Radzi (P68149)	Injection Molding Kenaf Composite	Viva November 2018 (registered 12/13)
Co-supervisor	Mohd Ruzi Harun (P48972)	Metal Injection Molding of Magnesium Alloy using Palm Stearin Binder System	Failed& Quit (registered 08/09)
Co-supervisor	Rahim Ataollahi Eshkoor (P47073)	Experimental and finite element simulation of silk/epoxy composite	Passed in 2014 (registered 08/09)

cylindrical tube crashworthiness

Co-supervisor	Murtadhahadi (P40718)	Production of micro components through micro metal injection molding process (μ MIM)	In progress (registered 07/08)
Co-supervisor	Fauzi Ismail (P47059)	Investigation on the optimum process parameters of the metal injection moulding technique using a local palm stearin binder for producing stainless steel/silicon carbide composites material.	In progress (registered 08/09)
Co-supervisor	RozieNani Ahmad (P62720)	Metal Injection Molding	In progress (registered 11/12)
Co-supervisor	Stephanie Kong Lee Keong (P62837)	Membrane for oil palm separation from electrospinning	In progress (registered 11/12)
Co-supervisor	Hafizawati Zakaria (P44214)	Micro MIM of Zirconia for dental implant	In progress (registered 10/11)
Co-supervisor	Nur Farhani Ismai (P69995)	Compression Molded Kenaf Composite	In progress (registered 12/13)

Project Supervision and Thesis Master of Science (MSc) (by Research)

Role	Student name	Thesis Title	Status
Co-supervisor	Shan Li jun	3D printed metal for medical application	In progress (registered 17/18)
Co-supervisor	Ahmad Tajuddin (P84258)	Cooling system PEMFC	In progress (registered 15/16)
Co-supervisor	Nor Nabilla Kadiman (P84213)	Effect of sintering PIM of copper with graphene	In progress (registered 15/16)
Co-supervisor	Lohashenpah en (P84066)	Biocompatibility of Titanium-wollastonite	In progress (registered 15/16)
Co-supervisor	Natasha Emira (P78337)	PIM of copper with graphene	In progress (registered 14/15)
Co-supervisor	Farhana Mohd Foudzi (P52470)	Processability of Nano Yttria Zirconia with Palm Stearin Based Binter using Micro Powder Injection Molding	Passed in 2012 (registered 09/10)
Main supervisor	Muhammad IImanHakimi Chua Abdullah	Optimization of injection molding process parameters for the powder metal stainless steel SS316L 16um through Taguchi	Passed in 2012 (registered 09/10)

	(P52147)	method	
Main supervisor	Nishata Royan A/P Rajendran (P53326)	Effect of Acid Treatment and Care UV / O ₃ Multi-Wall Carbon Nanotubes (MWCNTs) on the Electrical Properties of Epoxy nanocomposite	Passed in 2012 (registered 09/10)
Main supervisor	Mohd Fazuri Abdullah (P53329)	Optimization of injection molding process parameters for the powder metal stainless steel SS316L 20um through RSM methods: experiment and simulation	Failed & Quit (registered 10/11)
Main supervisor	Siti Saniah Ab Karim (P55854)	Development a novel method to produce fiber through electrospinning.	Passed in 2014 (registered 10/11)
Main supervisor	Mohd Ikram Bin Ramli (P62311)	Effect of Metal Injection Molding (MIM) Processing Parameters on the Intra Networking Phase of Novel Hybrid Materials.	Passed in 2014 (registered 11/12)
Co-supervisor	Amirhossein Mansourigha sri (P48000)	Development of titanium foam by using tapioca starch as a novel spacer through space holder techniques.	Passed in 2012 (registered 09/10)
Co-supervisor	Haw Pei Li (P50234)	Optimization of micro metal injection molding process for stainless steel feedstock using	Passed in 2012 (registered 09/10)

Co-supervisor	Heng Shye Yunn (P54636)	Taguchi method Fabrication of tungsten carbide dental bur through micro powder injection molding.	Passed in 2012 (registered 10/11)
Co-supervisor	Syed Aqil Syed Nadzir (P62294)	Effect of microwave sintering on the metal injection molding Titanium based feedstock	Failed & Quit (registered 10/11)
Co-supervisor	Nurul Akidah Baharuddin (P62670)	Electrochemical performance of the cathode-SDC carbonate LSCF	Passed in 2014 (registered 11/12)
Co-supervisor	Wan Ahmad Shahrudin Wan Ibrahim (P69817)	Press Molded Kenaf Composite : Numerical simulation and experimental	Failed & Quit (registered 12/13)

Scientific Project Supervision and Dissertation Master of Engineering (Coursework-Master of Engineering)

Role	Student Name	Thesis Title	Status
Supervisor	Azizi Abdol Aziz (P71094)	The effect of sintering temperature on the physical and mechanical powder compacting hydroxyapatite (HA) and wollastonite (WA)	Passed in 2015 (registered 33/14)
Supervisor	Rozaiman	Study on environmental	Passed in 2012

	Suffian Othman (GP00688)	awareness through the design by using reprocessability index (RPI) for automotive Rotational Part	(registered 10/11)
Supervisor	Wan Hasbulalfi Wan Haron (GP00691)	Study of composite materials based on a mixture of plastic and wood	Passed in 2012 (registered 10/11)
Supervisor	Rashdin Ramli (G77144)	Study of micro-mechanical cutting on hardened steel with solid carbide using taguchi method	Passed in 2012 (registered 09/10)
Supervisor	Mohd Azhar Harimon (P55738)	The effect of the addition of carbon black to the graphite / epoxy composites: mechanical and electrical properties	Passed in 2012 (registered 10/11)
Supervisor	Noor Azlina Zizi Safar (P60148)	The effect of carbon nanotubes additives on PMMA fibers through spinning process of electricity	Passed in 2014 (registered 10/11)
Supervisor	Muhamad Azam Ngah (GP01117)	Machinability of polymer composite material using conventional machining	Passed in 2014 (registered 10/11)
Supervisor	Muhd Hasanul Isyraf Bin Mat Junoh (GP01520)	Numerical simulation of kenaf polymer composite molding for automotive components	Passed in 2014 (registered 10/11)
Supervisor	Sharuddin Mohd Dahuri (GP00926)	Effect of rib geometries on the flowability of injection molded composite via numerical	Passed in 2014 (registered 10/11)

		simulation	
Supervisor	Mustafizul Hilmie Abd Rahman (GP00684)	Mechanical properties of hybrid Woven Banana/Glass Fibre reinforced epoxy composite.	Passed in 2011
Supervisor	ShaifulHaili Sharon (GP00750)	Effect of ultraviolet radiation on the mechanical properties of Polypropylene copolymer with UV stabilizer concentrations.	Passed in 2011
Supervisor	Muhamad Afkar Husin (GP00542)	Design and analysis plastic material flow of cutting jig for knee replacement.	Passed in 2011
Supervisor	Md Jasmi Md Aris (GP00456)	Communication Management for aircraft composites component design and built project	Passed in 2010
Supervisor	EghbalHakim ian (GP00099)	Effect of injection molding parameters and feedstock types on the warpage and shrinkage of micro gear polymer composite through mold flow analysis.	Passed in 2010
Supervisor	Mohd Ashif Ahmad(G767 45)	High Pressure Die Casting: Acceptance of machine and mold by statistical method.	Passed in 2010
Supervisor	Abdullah Atiq Arifin (G77171)	Energy absorption behavior on pultruded fiber e- glass/polyester composites under oblique loading for crash energy reduction.	Passed in 2010

Supervisor	Gan Tek Keong (G76979)	Influence of addition normal and fine filler on the microelectronic package gate chipping mechanism during degating process.	Passed in 2009
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Project Supervision Final Year Dissertation (Undergraduate Dissertation)

Role	Student Name	Thesis Title	Status
Supervisor	Zulizah Basri (A144160)	Powder Metallurgy Metal / Ceramic Composite Foam	In progress
Supervisor	Mohamad Afiq Abdul Rashid (A144142)	Numerical Simulation of Heat Emphasis Kenaf PP Composite	In progress
Supervisor	Nurul Izaan Abdullah Halid (A144177)	Compression of Metal Powder Metallurgy Materials / Ceramics	In progress
Supervisor	Najatul Amira Rahmat (A138390)	Ti Alloy-Wollastonite Composite through Powder Injection Molding	In progress
Supervisor	Lim Tsui Fang (A138245)	Production of Ti-6Al-4V / HA Composite Foamed using Space Holders by Powder Injection Molding Method	Passed in 2015
Supervisor	Lim Jou Hui	Process optimization Resin	Passed in 2015

	(A13816)	Transfer Molding (RTM): Physical and Mechanical Properties	
Supervisor	Muhammad Naqib Fazil Shuhaimi (A131128)	Temperature Effect on Electricity Berkonduksi Graphite Epoxy Composite for Fuel Cell Applications High Temperature Polymer Electrolyte Membrane (HT- PEMFC)	Passed in 2014
Supervisor	Mohd Nizam Syafiq Abdul Dali (A132333)	Production of Titanium- Hydroxyapatite (Ti-HA) Composite Foamed Sodium Chloride employ the space holder (NaCl) through the Powder Injection Molding Method	Passed in 2014
Supervisor	Ahmad Zafri Ab Aziz (A133411)	Production of Titanium- Hydroxyapatite (Ti-HA) Composite Foamed using Metal Injection Molding	Passed in 2014
Supervisor	Mohd Azri Mohd Latif (A125925)	Production Kenaf Polymer Composites reinforced through injection molding process	Passed in 2013
Supervisor	Lee Choy Fun (A128785)	Production of Titanium- Hydroxyapatite (Ti-HA) composite foamed through powder pressing method	Passed in 2013
Supervisor	Muhamad IzzatZahidin	Size effect of graphite to stack for PEMFC bipolar	Passed in 2013

(A128542)

Supervisor	See Ming Yik (A125925)	PMMA fiber production study using a modified electric spinning system: the effect of orientation	Passed in 2012
Supervisor	Muhamad Anwar Ramlee (A124429)	Thirst phenomenon for carbon nanotubes / graphite / epoxy composites	Passed in 2012
Supervisor	Mohamad Mustakiem Mohd Zaki (A123754)	CPC development comparison between compression and injection molding method	Passed in 2012
Supervisor	Muhamad Nazirul Muhammad (A123754)	Design and fabrication of jigs for surgical laposkropic	Passed in 2012
Supervisor	Teng Her Lee (A117177)	Optimization of electric spinning process through RSM	Passed in 2011
Supervisor	Seow Liang Hau (A118640)	Rheological and mechanical properties of carbon nanotubes composite / graphite / stainless steel SS316L / Polypropylene	Passed in 2011
Supervisor	Ho Ee Rene (A119294)	Electric flowability and corrosion phenomenon on carbon nanotube, graphite and stainless steel SS316L	Passed in 2011

		composites with polypropylene based	
Supervisor	MuhamadFathi Bin Sazzali (A119025)	Design of external repairers on the open fracture of the tibia bone	Passed in 2011
Supervisor	San Wei Koon (A110976)	Jig mechanism design and construction of a prototype knee surgery using the machine quickly prototyping	Passed in 2010
Supervisor	Siti Saniah Ab Karim (113572)	Development of electrical systems for spinning continuous polymeric fibers	Passed in 2010
Supervisor	Kuu Bi Yong (A110627)	Optimization of injection parameters for the process of MIM feedstock using 16 μ m SS316L, PEG, PMMA and stearic acid	Passed in 2010
Supervisor	Chin FoongKuan (A110860)	Phenomenon of rusting metal plate in the anode and cathode of PEMFC	Passed in 2010
Supervisor	Thiagu A/L Sevaraj (A111118)	Effect of chemical modification on the ability of carbon nanotubes to electrical conductivity in polymer composites	Passed in 2010
Supervisor	Nishata Royan A/P Rajendran Royan (A107765)	Development of high polymer composite electrical conductor with the addition of carbon nanotubes	Passed in 2009

Supervisor	Siti Rosilah Abdollah (A104112)	Factors affecting the rheological properties of the feed material SS316L / PMMA / PEG and green body density for μ MIM	Passed in 2009
Supervisor	Robihah Mohamad Radzak (A104077)	Study on the effects of bipolar plate injection molding parameters and the addition of graphite to the composition of the thermoplastic structures with computer simulation	Passed in 2009
Supervisor	Hasanallzwan Ab Wahab (107677)	Optimization of the production process PP polymer composites with carbon nanotubes with the addition of compression molding	Passed in 2009

8. TEACHING/EDUCATION WORKLOAD

Session	Average Teaching/Education Workload	
	Semester/1st term	Semester/2nd term
2018/19	4.5	4.5
2017/18	5.5	4.0
2016/17	4.5	4.0

2015/16	4.5	4.0
2014/15	4.5	4.0
2013/14	4.5	4.0
2012/13	7.5	7
2011/12	6	7
2010/11	10	7
2009/10	5.5	6
2008/09	3	6

9. PUBLICATIONS / WRITING IN CURRENT POST

Scopus update : 22/09/2020

H-Index: 31

Total Publication : 232 article

Year 2015 - 2020 = 176 (Q1=58, Q2=16, Q3=24, Q4=9, 105; ISI, 69 SCOPUS)

Citation = 2810

1. Azam FAA, Razak Z, Radzi MFKM, Muhammad N, Haron CHC and **Sulong AB**. Influence of Multiwalled Carbon Nanotubes on the Rheological Behavior and Physical Properties of Kenaf Fiber-Reinforced Polypropylene Composites. *Polymers*,12 (2020) 2083 (ISSN 2073-4360) (Q1)

2. Mohd Radzuan, NA, Tholibon, **Sulong, AB**, Muhamad, N., Haron, C.H.C. Effects of High-Temperature Exposure on the Mechanical Properties of Kenaf Composites. *Polymers*, 12(2020) 1643 (ISSN 2073-4360) (Q1)
3. Basir A., **Sulong AB**, Jamadon NH, Muhamad H. Bi-material micro-part of stainless steel and zirconia by two-component micro-powder injection molding. Rheological properties and solvent debinding behavior. *Metals*, 10(2020) 595. ISSN 2075-4701 (Q1)
4. Basir A., **Sulong AB**, Eshak E, Mas'ood NN, Jamadon NH & Muhamad N. Moldability of Nano Size Zirconia for Powder Injection Molding Process by Using PEG and PMMA Binders. *Jurnal Kejuruteraan (Journal of Engineering)*, 32(2) (2020), 335-339. ISSN: 0128-0198 (ESCI)
5. Azam FAA, Royan NRR, Yuhana NYY, Radzuan NAM, Ahmad S, **Sulong AB**. Fabrication of Porous Recycled HDPE Biocomposites Foam: Effect of Rice Husk Filler Contents and Surface Treatments on the Mechanical Properties. *Polymers*, 12 (2020) 475. ISSN 2073-4360 (Q1)
6. Basir, A., **Sulong, A.B.**, Jamadon, N.H. et al. Process Parameters Used in Macro/Micro Powder Injection Molding: An Overview. *Met. Mater. Int.* (2020). ISSN: 1598-9623 (Scopus)
7. Gong Y, Wang F, Al-Furjan MSH, (...), Chen G, **Sulong AB**. Experimental investigation and optimal 3D bioprinting parameters of sa-gel porous cartilage scaffold. *Applied Sciences*, 10 (2020) 768 ISSN 2076-3417. (Q1)
8. Mohd Radzuan, NA, Tholibon, **Sulong, AB**, Muhamad, N., Haron, C.H.C. New processing technique for biodegradable kenaf composites: A simple alternative to commercial automotive parts. *Composites Part B: Engineering*, 184 (2020) 107644 (Q1)

9. Akhtar, M.N., Javed, S., Ahmad, M., **Sulong, A.B.**, Khan, M.A. Sol gel derived MnTi doped Co₂W-type hexagonal ferrites: Structural, physical, spectral and magnetic evaluations. *Ceramics International*. 46 (2020) (6). ISSN: 0272-8842 (Q1)
10. Radzuan NAM, **Sulong AB**, Somalu MR, Abdullah AT, Husaini T, Rosli RE, Majlan EH, Rosli MI. Fiber orientation effect on polypropylene/milled carbon fiber composites in the presence of carbon nanotubes or graphene as a secondary filler: Application on PEM fuel cell bipolar plate. *International Journal of Hydrogen Energy*, 44 (2019) 30618-30626. ISSN: 03603199 (Q1)
11. Rosli RE, **Sulong AB**, WDaud WR, Zulkifley MA, Rosli MI, Majlan EH, Haque MA, Radzuan NAM. The design and development of an HT-PEMFC test cell and test station. *International Journal of Hydrogen Energy*, 44 (2019) 30763-30771 ISSN: 03603199 (Q1)
12. Radzuan, N.A.M., Ismail, N.F., Radzi, M.K.F.M., **Sulong AB** (...), Haron, C.H.C., Muhamad, N. Kenaf composites for automotive components: Enhancement in machinability and moldability. *Polymers*, 11(2019), 1707. ISSN: 20734360 (Q1)
13. Hanizam, H., Salleh, M.S., Omar, M.Z., **Sulong, A.B.** Effects of mechanical stirring and short heat treatment on thixoformed of carbon nanotube aluminium alloy composite. *Journal of Alloys and Compounds*, 788 (2019) 83-90 (Q1)
14. Hanizam, H., Salleh, M.S., Omar, M.Z., Sulong, A.B. Optimisation of mechanical stir casting parameters for fabrication of carbon nanotubes-aluminium alloy composite through Taguchi method. *Journal of Materials Research and Technology*. 8(2019), 2223-2231 (Q1)

15. Zakaria MY, Sulong AB, Muhamad N, Raza MR, Ramli MI. Incorporation of wollastonite bioactive ceramic with titanium for medical applications: An overview. *Materials Science & Engineering C*, 97 (2019) 884–895, ISSN: 0928-4931 (Q1)
16. Zakaria, M.Y., **Sulong, A.B.**, Muhamad, N., Ramli, M.I. Rheological properties of titanium-hydroxyapatite with powder space holder composite feedstock for powder injection moulding. *International Journal of Advanced Manufacturing Technology*, 102 (2019), 2591-2599 (Q2)
17. Ramli MI, **Sulong AB**, Muhamad N, Muchtara A, Zakaria MY. Effect of Sintering on The Microstructure And Mechanical Properties Of Alloy Titanium-Wollastonite Composite Fabricated By Powder Injection Moulding Process. *Ceramics International*, 45 (2019) (9): 11648-11653 ISSN: 0272-8842 (Q1)
18. Radzuan NAM, **Sulong AB**, Somalu MR. Influence The Filler Orientation On The Performance Of Bipolar Plate. *Sains Malaysiana*. 48 (2019) 669-676. ISSN: 01266039 (Q3)
19. Razak Z, **Sulong AB**, Muhamad N, Haron CHC, Radzi MKFM, Ismail NF, Tholibon D, Tharazi I. Effects of thermal cycling on physical and tensile properties of injection moulded kenaf/carbon nanotubes/polypropylene hybrid composites. *Composites Part B: Engineering*, 168 (2019) 159–165, ISSN: 1359-8368 (Q1)
20. Radzuan NAM, **Sulong AB**, Husaini T, Majlan EH, Rosli MI, Aman MF. Fabrication of multi-filler MCF/MWCNT/SG-based bipolar plates. *Ceramics International*, 45 (2019) 7413–7418, ISSN: 0272-8842 (Q1)

21. Radzuan NAM., **Sulong, A.B.**, Hui, D., Verma, A. Electrical conductivity performance of predicted modified fibre contact model for multi-filler polymer composite. *Polymers*. 11 (2019) (9) 1425. (Q1)
22. Tatt, T.K., Muhamad, N., Che Haron, C.H., **Sulong, A.B.** Influences of temperature and pressure to the green defects. *International Journal of Mechanical Engineering and Technology*. 1(2019), 186-192
23. Hanizam, H., Salleh, M.S., Omar, M.Z., **Sulong AB** (...), Yahaya, S.H., Siswanto, N. Effect of magnesium surfactant on wettability of carbon nanotube in A356 alloy composite. *Journal of Advanced Manufacturing Technology*. 2019; 13(2), 33-44 (Scopus)
24. Shan, L., Kadhum, A.A.H., Al-Furjan, M.S.H., (...), Takriff, M.S., **Sulong, A.B.** In Situ Controlled Surface Microstructure of 3D Printed Ti Alloy to Promote Its Osteointegration. *Materials*. 2019; 12(5),815 (Q2)
25. Haque, M.A., **Sulong, A.B.**, Majlan, E.H., (...), Husaini, T., Rosli, Oxygen reduction reaction behaviours of carbon nanotubes supporting pt catalyst for proton exchange membrane fuel cell. *Malaysian Journal of Analytical Sciences*. 23(2019), 147-154 (Scopus)
26. Haque, M.A., **Sulong, A.B.**, Majlan, E.H., (...), Husaini, T., Rosli, R. Physiochemical characteristics of solid electrolyte membranes for high-temperature PEM fuel cell. *International Journal of Electrochemical Science*. 14 (2019) (1), 371-386 (Q4)
27. Haque, M.A., **Sulong, A.B.**, Majlan, E.H., (...), Husaini, T., Rosli, R. Optimization of acid doped polybenzimidazole electrolyte membrane for high-temperature PEM fuel cell. *Malaysian Journal of Analytical Sciences*, 2018; 22(6), pp. 1065-1077(Scopus)

28. Dweiri R, Suherman H, **Sulong AB**, Al-Sharab JF. Structure-property-processing investigation of electrically conductive polypropylene nanocomposites. *Science and Engineering of Composite Materials*, 2018; 25(6) 1177-1186 ISSN:0334-181X (Q4)
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30. Ramli, M.I., **Sulong, A.B.**, Muhamad, N., Muchtar, A., Zakaria, M.Y. Optimization of injection molding parameter towards density of green part for titanium alloy-wollastonite composite. *Ceramics International*. 45(9), pp. 11648-11653
31. Mas'ood NN, **Sulong AB**, Muhamad N, Mohamed IF, Foudzi FM, Ramli MI, Salleh FM. Flow behavior and injectability of SS17-4PH with PS and PE binders in powder injection molding, *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, 2018; 49 (2): 121-125 ISSN: 22897879 (Scopus)
32. Akhtar MN, **Sulong AB**, Umer, A, Yousaf AB, Khan MA. Multi-component MWCNT/NG/EP-based bipolar plates with enhanced mechanical and electrical characteristics fabricated by compression moulding. *Ceramics International*, 2018; 44(12): 14457-14464 ISSN: 02728842 (Q1)
33. Ghoushji, M.J., Alebrahim, R., Zulkifli, R., **Sulong A.B** (...), Abdullah, S., Azhari, C.H. Crashworthiness characteristics of natural ramie/bio-epoxy composite tubes for energy absorption application. *Iranian Polymer Journal (English Edition)*. 2018; 27(8) 563-575 ISSN: 1026-1265

34. Ukwuez BE, **Sulong AB**, Muhamad N, Sajuri Z. Solvent de-binding of bi-material green component of two-component powder injection moulded stainless steel and zirconia. *International Journal of Mechanical and Mechatronics Engineering*, 2018; (18(3): 96-104 ISSN: 22272771 (Scopus)
35. Ismail NF, Muhamad N, **Sulong AB**, Haron CHC. Effects of alkali treatment on mechanical properties of epoxy composites reinforced kenaf fibre using compression moulding process. *International Journal of Mechanical and Mechatronics Engineering*, 2018; 18(3): 86-95 ISSN: 22272771 (Scopus)
36. Razak Z, **Sulong AB**, Muhamad N, Haron CHC, Md. Radzi MKF, Tholibon D, Tharazi I, Ismail NF. The effects of maleic anhydride grafted PP (MAPP) on the mechanical properties of injection moulded kenaf/CNTs/PP composites. *Sains Malaysiana*. 2018; 47(6): 1285-1291 ISSN: 01266039 (Q3)
37. Radzuan NAM, **Sulong AB**, Somalu M.R, Majlan EH, Husaini T, Rosli MI. Effects of die configuration on the electrical conductivity of polypropylene reinforced milled carbon fibers: An application on a bipolar plate. *Polymers*, 2018; 10(5),558 ISSN: 20734360 (Q1)
38. Kadiman NN, Romli JE, Muhamad N, **Sulong AB**, Foudzi FM. Optimization of sonication and magnetic stirrer parameter for copper-graphene composite's homogeneous dispersion from morphological properties. *Sains Malaysiana*. 47(5), pp. 1039-1043 (Q4)
39. Royan NRR, **Sulong AB**, Yuhana NY, Chen RS, Ab Ghani MH, Ahmad S. UV/O₃ treatment as a surface modification of rice husk towards preparation of novel biocomposites. *PLoS ONE*, 2018; 13(5),e0197345 ISSN: 19326203 (Q1)

40. Fayyaz A, Muhamad N, **Sulong AB**. Microstructure and physical and mechanical properties of micro cemented carbide injection moulded components. *Powder Technology*, 2018; 326: 151-158 ISSN:0032-5910 (Q1)
41. Yeang QW, **Sulong AB**, Tan SH. Asymmetric membrane containing electrospun Cu-BTC/poly(vinyl alcohol) for pervaporation dehydration of 1,4-dioxane. *Separation and Purification Technology*, 2018; 192: 240-252 ISSN: 1383-5866 (Q1)
42. Akhtar MN, **Sulong AB**, Akhtar MN, Khan MA. Systematic study of Ce³⁺ on the structural and magnetic properties of Cu nanosized ferrites for potential applications. *Journal of Rare Earths*, 2018; 36(2): 156-164 ISSN: 1002-0721 (Q2).
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45. Kadiman NN, Rashid MOA, Muhamad N, **Sulong AB**. Effects of sintering temperature on the physical and mechanical properties of injection-molded Copper/Graphene composite. *Journal of Advanced Manufacturing Technology*, 2018; 12(1): 49-60 ISSN:1985-3157 (Scopus)
46. Suherman H, **Sulong AB**, Zakaria MY, Royan N, Sahari J. Electrical conductivity and physical changes of functionalized carbon nanotube/graphite/stainless steel (SS316L)/polypropylene composites immersed in an acidic solution. *Songklanakarin Journal of Science and Technology*, 2018; 40(1): 105-112 ISSN:0125-3395 (Scopus)

47. Zakaria MY, **Sulong AB**, Ramli MI, Ukwueze B, Harun WSW, Mahmud RL. Fabrication of porous titaniumhydroxyapatite composite via powder metallurgy with space holder method, *Journal of Advanced Manufacturing Technology*, 2018; 12(1): 37-48 ISSN:1985-3157 (Scopus)
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49. Md Radzi, M.K.F., Muhamad, N., **Sulong, A.B.**, (...), Tholibon, D., Tharazi, I. Optimization of injection molding parameters: Improving mechanical properties of kenaf reinforced polypropylene composites. *Journal of Advanced Manufacturing Technology*. 2018; 12(2), 107-120 ISSN: 1985-3157 (Scopus)
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51. Lee SS, Yusof MR, Shamsudin S, **Sulong AB**, Ng AMH. Fabrication And Optimization Of Porous 3d Bioceramic Scaffold Using Gel Casting Method. *Regenerative Research*, 2018; 7(1) 2018 66-68 EISSN: 22320822 (Scopus)
52. Abdullah AA, Norita H, Azlina HN, **Sulong AB**, Mas'Ood NN. Preparation of SS316L MIM feedstock with biopolymer as a binder. *IOP Conference Series: Materials Science and Engineering*, 2018; 290(1),012076 ISSN:1757-8981 (Scopus)
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- injection-moulded car battery trays. *International Journal of Engineering and Technology(UAE)*, 2018; 7(3) 15-20 ISSN: 2227524X (Scopus)
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55. Rajendran Royan NR, **Sulong AB**, Yuhana NY, Ab Ghani MH, Ahmad S. Optimization of rHDPE reinforced rice husk composite processing by response surface method (RSM) | [Pengoptimuman pemprosesan komposit rHDPE berpenguat sekam padi dengan kaedah tindak balas permukaan (RSM)]. *Sains Malaysiana*, 2017; 46(10): 1749-1756 ISSN: 01266039 (Q3)
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57. Salleh FM, **Sulong AB**, Raza MR, Muhamad N, Fhang LT. Effect of space holders on fabrication of porous titanium alloy-hydroxyapatite composite through powder injection molding *Sains Malaysiana*, 2017; 46(9), pp. 1651-1657 ISSN: 01266039 (Q3)
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66. Gaaz TS, Kadhum AA, Michael PKA, Al-Amiery AA, **Sulong AB**, Nassir M, Jaaz AH. Unique halloysite nanotubes-polyvinyl alcohol-polyvinylpyrrolidone composite complemented with physico-chemical characterization. *Polymers*, 2017; 9(6),207 ISSN: 20734360 (Q1)

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National & Internal Conference

Total: 17

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2. Harun MR, Muhamad N, **Sulong AB** et al, Magnesium alloy metal injection molding using wax based binder system, in *Proc. Malaysian Powder Metallurgy & Particulate Materials Association MPM2A 2009, Kuala Lumpur (CD)*
3. **Sulong AB**, Muhamad N, Hakimi MI et al, Influence of additional acetone on feedstock and density of anum's body for micro metal injection molding, in *Proc. Malaysian Metallurgical Conference MMC2009, Penang (CD)*
4. Murtadhahadi, Muahamd N, **Sulong AB** at al, Temperature influence to solvent debinding of metal injection molding (MIM) components, *Proc. Advanced Manufacturing Research Group AMReG 2009, Putrajaya (CD)*
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9. Ibrahim MHI, Muhamad N,**Sulong AB**, Murtadhahadi, Jamaludin KR, Ahmat S, Nor NHM. Water Atomised Stainless Steel Powder for Micro Metal Injection Molding: Optimization of Rheological Properties, in *Proc. Malaysian Metallurgical Conference MMC 2008*, UKM, Malaysia, December 2008 (CD)
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14. Suherman H, **Sulong AB** and Sahari J, High Conductive Polymer Composite as Bipolar Plate for Polymer Exchange Membrane Fuel Cell (Pemfc): A Review, in *Proc. Advanced Manufacturing Research Group AMREG II*, Port Dickson, Malaysia, December 2008. (CD)
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17. Muhamad N, Murtadhahadi, Harun CHC, **Sulong AB**, Pembebanan serbuk yang optimum bagi bahan suapan daripada SS316L, PEG, PMMA dan AS bagi proses pengacuan suntikan logam (MIM) in *Seminar Advanced Manufacturing Research Group AMReG I*, Seremban 2008 (CD)

Book Chapters

1. **Sulong AB**, Tan SH, Park JH. Chapter 3 Synthesis and application of carbon nanotubes (CNTs), *Advances in Material Processing Volume 2*, 2009. ISBN 978-983-2781-01-1(v.2)
2. Yeang QW, **Sulong AB**, Tan SH. Application of functionalized carbon-based nanomaterials in membrane separation: carbon nanotubes and graphene, chapter in book *Chemical Functionalization of Carbon Nanomaterials: Chemistry* 2015, CRC Press, Taylor & Francis Group
3. **Sulong AB** et al. Effect of metal injection molding parameters on the intranetworking phase of novel hybrid material, 2014. *Directory of Research Projects FRGS*, Kementerian Pendidikan Malaysia.

10. PATENT/DESIGN SINCE THE CURRENT POST

No	Design Name	Researcher	Patent/copyright date
1	Virtual Training System for Newly Designed Jig and Fixture Usage in Computer Assisted Knee Replacement Surgery	HaslinaArshad, Abu Bakar Sulong , Nor Hamdan Nor Yahaya et. al	Copyright, PR220704 8 August 2011
2	Method and apparatus for Knee Arthroplasty	Abu Bakar Sulong , HaslinaArshad, Nor Hamdan Nor Yahaya et. al	Paten filing PI2011003770 11 August 2011
3	The novel screw (implant) using bioactive material (Titanium Alloy-Hydroxyapatite composite) fabricated from Powder Injection Molding Process.	Abu Bakar Sulong	File Number: UKM IKB/108/2/2213
4	Compressed titanium-bioceramic as bone implant	Abu Bakar Sulong , Ng Min Hwei	File Number: UKM IKB/108/2/1824
5	Porous Bioceramic integrated with polymer as bone implant.	Abu Bakar Sulong , Ng Min Hwei	File Number: UKM IKB/108/2/2003
6	Pseudowollastonite-mullite-silver biocomposite for bone replacement and the preparation method.	Abu Bakar Sulong , Ng Min Hwei, Roslinda Binti Shamsudin	File Number: UKM IKB/108/2/1860
7	Method for Fabrication of Titanium Alloy (Ti6Al4V)-	Abu Bakar Sulong	File Number: UKM

Hydroxyapatite (HA)
through Powder Injection
Molding as Material for Bone
Implant

IKB/108/2/942

11. RESEARCH GRANT SINCE THE CURRENT POST

Total research grant: 83

2020(4), 2019(7), 2018 (2), 2017 (12), 2016 (5), 2015 (7), 2014 (11), 2013 (14), 2012 (8),
2011 (8),2010 (4), 2009 (3), 2008 (2)

Jumlah dana (luar dan dalam UKM) dari 2008 ~ 2020 :

Jumlah: **RM 14,059,682**

Total funds according to year	
2020	RM 317,500
2019	RM 678, 500
2018	RM 162,760
2017	RM 1,251,000
2016	RM 289,500
2015	RM 478,000
2014	RM 1,805,400
2013	RM 2,222,222
2012	RM 2,100,000
2011	RM 1,058,600
2010	RM 1,688,400
2009	RM 1,607,800
2008	RM 400,000
2008 ~ 2012	RM 6,854,800
2013 ~ 2016	RM 4,795,122
2017~2018	RM 1,251,000

Total funds from external UKM (2013 ~ 2020):

2020 (RM0,00), 2019 (RM 272,650), 2018 (RM 92,760), 2017 (RM 457,700), 2016 (RM 126,500), 2015 (RM 130,000), 2014 (RM 1,340,400), 2013 (RM 1,338,200)

Total funds: RM 3,758,210.00

Total funds from internal UKM (2013 ~ 2020):

2020 (RM317,500), 2019 (RM405,850), 2018 (RM70,000), 2017 (RM 793,500), 2016 (RM 163,000), 2015 (RM 348,000), 2014 (RM 465,000), 2013 (RM 884,000)

Total funds: RM 3,446,850.00

Total funds as Project & Program Leader = RM 3,403,950.00

Role	Title of Research Project	Duration
Year 2020 Project Leader	Mechanism in Processability of Copper-Aluminium-Manganese Shape Memory Alloys (SMAs) Through Powder Injection Moulding (PIM) RM 100,000.00 (DIP-2020-008)	01/08/2020 Hingga 31/07/2022 (24 Bulan)
Project Leader	A New Generation of Titanium/hydroxyapatite/wollastonite Biocomposite Material for Orthopaedic Implant. RM 14,000.00 (DPB-2020-078)	17/08/2020 Hingga 16/02/2021 (6 Bulan)
Project Leader	GANJARAN PENERBITAN: ABU BAKAR BIN SULONG. RM 13,500.00 (GP-2020-K013437)	04/08/2020 Hingga 03/08/2022 (24 Bulan)
Co- researcher	Bonding of Polyamide Reinforced Carbon Fibre via Additive Manufacturing RM 50,000.00 (GGPM-2020-002)	01/08/2020 Hingga 31/07/2022 (24 Bulan)

Co-researcher	Nano-micro Bi-modal Powder Interaction on the Bonding Mechanism of Metal-Metal Bi-Material Formed by Two-Component Bi-Modal Micro-Powder Injection Moulding (2C-2M- μ PIM) RM 140,000.00 (GUP-2020-010)	01/08/2020 Hingga 31/07/2022 (24 Bulan)
Year 2019		
Project Leader	Radiation-Induced Grafting Of Electrospun Nanofiber Based Functionalized Natural Rubber for Membrane Application. RM 70,000.00 (GUP-2019-007)	01/10/2019 Hingga 30/09/2021(24 Bulan)
Project Leader	Kesan Penambahan Bahan Nano Terhadap Ketahanan Mekanikal Dan Fizikal Kenaf Polimer Komposit Bagi Aplikasi Automotif. RM 99,350.00 (MI-2019-022)	03/06/2019 Hingga 02/12/2020 (18 Bulan)
Project Leader	GANJARAN PENERBITAN: ABU BAKAR BIN SULONG. RM 57,500.00 (GP-2019-K013437)	24/05/2019 Hingga 23/05/2021 (24 Bulan)
Co-researcher	Effect of Metal-Ceramic (Bi-material) on Inter-surface Bonding by Micro Co-Powder Injection Molding (DIP-2019-009). RM100,000.00	01/10/2019 Hingga 30/09/2021 (24 Bulan)
Co-researcher	Mechanical Properties and Microstructural Evolution of Thixoformed Graphene Nanosheets Reinforced Aluminium Alloy Matrix Composites RM126,000.00 (FRGS/1/2019/TK03/UKM/01/1)	01/09/2019 Hingga 30/11/2021 (27 Bulan)
Co-	Interaction of energy concentration mechanism	

researcher	and deposition orientations on the appearance and performance of additive manufactured titanium alloy via selective laser melting. RM146,650.00 (FRGS/1/2019/TK03/UKM/02/5)	01/09/2019 Hingga 30/11/2021 (27 Bulan)
Co-researcher	Effect of heat treatment on the performance of additive manufactured titanium alloy via selective laser melting RM 49,000.00 (GGPM-2019-055)	01/10/2019 Hingga 30/09/2021 (24 Bulan)
Co-researcher	Potential use of copper-phosphorus based filler for joining porous metal to copper alloy via brazing process RM 30,000.00 (GGPM-2019-064)	01/10/2019 Hingga 30/09/2021 (24 Bulan)
Year 2018		
Co-researcher	The role and mechanism of non-reactive organics acids as recycled e-waste particles surface modifier. RM 92,760 (FRGS/1/2018/TK05/UKM/02/4)	01/01/2019- 31/12/2020
Co-researcher		
Co-researcher	Extra superplasticity of AA2618 alloy processed by high-pressure torsion RM70,000 (GUP-2018-150)	15/11/2018- 14/11/2020
Year 2017		
Project Leader	Prototype Development and Animal (Pre-Clinical) Study of Titanium Alloy/Hydroxyapatite Fixator Screw using Novel Material of Composite through Powder Injection Molding for Orthopaedic Implant RM235,000 (PRGS/1/2017/TK03/02/2)	15/08/2017 - 14/08/2019

Project Leader	Reka bentuk Dan Pengujian Prestasi Sel Tunggal Sel Fuel Membran Elektrolit Polimer Suhu Tinggi (HT-PEMFC). RM100,000 (MI-2017-004)	01/01/2018 - 31/12/2018
Co-researcher	Penambahbaikan sifat mudah dibiodegradasi, ketahanan haba, mekanikal dan rintangan pelarut bahan poliuretena sebagai alat pencuci paip industri RM70,000 (GUP-2017-041)	16/10/2017 - 15/10/2019
Co-researcher	Plat Dwikutub Ketumpatan Kuasa Tinggi untuk sel fuel dan sel elektrolisis. RM 90,000 (GUP-2016-084)	01/01/2017 - 31/12/2018
Project Leader	GANJARAN PENERBITAN: ABU BAKAR BIN SULONG. RM21,000 (GP-K013437)	01/05/2016 - 30/04/2020
Project Leader	Countermeasures in Strain Mismatch of Ceramic-Ceramic via Micro Co-Powder Injection Molding (μ -CoPIM). RM96,200 (FRGS/1/2017/TK03/UKM/02/1)	15/08/2017 - 14/08/2019
Co-researcher	Pencirian dan ketersauran sel fuel mikro berprestasi tinggi sebagai sumber kuasa bersih untuk pesaudara tanpa pemandu (UAV) di ruang udara Malaysia RM126,500 (FRGS/1/2016/TK09/UKM/03/1)	01/08/2016 - 31/07/2019
Co-researcher	Magnetic - Non-magenetic Layered Bi-material through Co-Powder Injection Moulding (Co-PIM) RM100,000(DIP-2016-009)	24/10/2016 - 23/04/2019
Co-researcher	Development of a bio-functionalized bone implant (metal-ceramic infused with active biomolecules) for bone defect RM87,500 (DCP-2017-001/3)	01/02/2018 - 31/01/2020

Co-researcher	Mesoporous scaffold β -wollastonite-magnetic nanoparticle-strontium composites as bone regeneration for osteoporosis purposes RM87,500 (DCP-2017-001/1)	01/02/2018 - 31/01/2020
Project Leader	Effect of repeated heating on powder metallurgy of additive manufactured titanium alloy through selective laser meltin RM150,000 (DIP-2017-001)	16/10/2017 - 15/10/2019
Project Leader	Development of Fixator Screw and Plate (Orthopedic Implant) using Novel Material of Composite Through Powder Injection Molding RM87,500 (DCP-2017-001/2)	01/02/2018 - 31/01/2020
Year 2016		
Project Leader	Rewards Publications: Abu Bakar bin Sulong, RM3,500 (GP-K013437)	1/5/2016 - 30/4/2018
Co-researcher	Metal-Ceramic Based Scaffolds and its Regulation on Stem Cell Behaviors in the Repair of Severed Rabbit's Fibula, Dana Fundamental PPUKM RM5,000 (FF-2016-094)	31/3/2016 - 30/3/2019
Co-researcher	Evaluation of the Efficacy Skeletal Tissue Repair using Polymer-bioceramics Seeded with Osteogenic Cells, Dana Fundamental PPUKM RM5,000 (FF-2016-111)	6/4/2016 - 5/4/2018
Co-researcher	Pencirian dan ketersauran sel fuel mikro berprestasi tinggi sebagai sumber kuasa bersih untuk pesaudara tanpa pemandu (UAV) di ruang udara Malaysia, Fundamental Research Grant Scheme (FRGS) RM126,500 (FRGS/1/2016/TK09/UKM/03/1)	1/8/2016 - 31/7/2019

Co-researcher	The investigation of fluid behaviour effects in high temperature proton exchange membrane fuel cell, Geran Universiti Penyelidikan RM149,500 (GUP-2016-041)	1/5/2016 – 30/4/2018
Year 2015		
Co-researcher	Development of Light Weight Materials for Ballistic Applications in Tropical Climates, Arus Perdana RM200,000 (AP-2015-016)	1/1/2016 – 31/12/2017
Co-researcher	Effects of graphene dispersion and orientation on mechanical and thermal properties of Copper/graphene composite through Powder injection Moulding, FRGS, RM130,000 (FRGS/1/2015/TK03/UKM/01/3)	2/11/2015-1/11/2018
Co-researcher	Advanced Copper/Graphene Composite for Thermal Management Application Using a Sustainable Powder Injection Moulding Proses, GUP, RM100,000 (GUP-2015-018)	1/6/2015 – 31/5/2017
Co-researcher	Structure-Property Relationship, Processing and Performance of Advanced Materials RM20,000.00 (DPP-2015-034)	15/6/2015 – 30/9/2016
Co-researcher	Sustainable Manufacturing Systems and Processes, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM14,000 (DPP-2015-039)	15/6/2015 – 30/9/2016
Co-researcher	Development of Copper Graphene Composite, Dana Pembangunan Penyelidikan Kumpulan	15/6/2015 – 30/9/2016

Penyelidikan RM9,000
(DPP-2015-049)

Co-
researcher Characterisation of Ni-SDCC Composite Anode 15/6/2015 –
Thin Film For Micro-Solid Oxide Fuel Cell, Dana 30/9/2016
Pembangunan Penyelidikan Kumpulan
Penyelidikan RM5,000
(DPP-2015-140)

Year 2014

Project Effect of Processing Parameters on Forming of 1/8/2014 –
Leader Novel Porous Metal-Ceramic Composite through 31/1/2017
Powder Injection Molding, RM200,000
(DIP-2014-006)

Co-
researcher Plat Metal Dwikutub untuk PEMFC, Geran 1/8/2014 –
Galakan Penyelidik Muda RM50,000 31/1/2017
(GGPM-2014-028)

Project Metal-Ceramic Composite: A New Generation 1/2/2015-
Leader Material for Bone Implant, TRGS Programme 31/1/2018
RM987,000
(TRGS/2/2014/UKM/02/4/1,
TRGS/2/2014/UKM/02/4/2,
TRGS/2/2014/UKM/02/4/3)

Project Effect of Processing Parameters on Novel Metal- 1/2/2015 –
Leader Ceramic Composite through Powder Injection 31/1/2018
Molding, TRGS RM353,400
(TRGS/2/2014/UKM/02/4/1)

Co-
researcher Sustainable Systems And Processes in 1/4/2014 –
Manufacturing, Dana Pembangunan 31/5/2015
Penyelidikan Kumpulan Penyelidikan RM30,000
(DPP-2014-036)

Co-researcher	Structure-Property Relationship, Processing and Performance of Advanced Materials, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM30,000 (DPP-2014-038)	1/4/2014 – 31/5/2015
Co-researcher	Development of Porous Metal via Metal Injection Moulding-Powder Space Holder, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM25,000 (DPP-2014-050)	1/4/2014 – 31/5/2015
Co-researcher	Development of a Micro Solid Oxide Fuel Cell Using Newly Developed Materials, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM30,000 (DPP-2014-144)	1/4/2014 – 31/5/2015
Co-researcher	Penambahbaikan Penedapan Stek PEMFC, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM25,000 (DPP-2014-151)	1/4/2014 – 31/5/2015
Co-researcher	Development of Screen-printed Ni-SDCC Composite Anode Thin Film for Micro-Solid Oxide Fuel Cell, GUP, RM55,000 (GUP-2014-070)	1/8/2014- 31/7/2016
Co-researcher	Pembangunan dan Kebolehlaksanaan Elemen Kompleksiti dalam Pengajaran dan Pembelajaran Kejuruteraan, PTS, RM20,000 (PTS-2014-038)	1/8/2014- 31/7/2016

Year 2013

Project Leader	Innovative System for efficient renewable Anergy Device, Arus Perdana RM600,000.00 (AP-2013-010)	1/11/2013- 31/10/2016
Project Leader	Powder co-injection molding (2C-PIM) of hybrid metal-ceramics powders, FRGS RM96,000.00 (FRGS/2/2013/TK01/UKM/02/3)	1/6/2013- 15/12/2016
Co- researcher	Micro powder Injection Moulding of Tungsten Colbalt Chromium and Co-Injection Moulding of Stainless and Zirconia, Iconic Collaboration RM400,000 (ICONIC-2013-003)	1/1/2014 – 30/6/2016
Co- researcher	Translucency and Improved Fracture Toughness of nanocrystalline oxide Ceramics by Morphology Control, Skim Geran Penyelidikan Fundamental (FRGS) RM86,000 (FRGS/1/2013/SG06/UKM/01/1)	1/4/2013 – 31/3/2015
Co- researcher	Structure-Property Relationship, Processing and Performance of Advanced Materials, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM60,000 (DPP-2013-033)	1/1/2013 – 31/3/2014
Co- researcher	Advanced Processed and Systems in Manufacturing Engineering, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM60,000 (DPP-2013-038)	1/1/2013 – 31/3/2014
Co- researcher	Microwave Sintering of Titanium (Ti) Alloy, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM50,000 (DPP-2013-053)	1/1/2013 – 31/3/2014
Co-	Pembangunan Bahan Elektrod & Elektrolit Bagi	1/1/2013 –

researcher	Sel Fuel Oksida Pepejal (SFPOP) Bersuhu Rendah & Sederhana, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM37,000 (DPP-2013-115)	31/3/2014
Co-researcher	Rekabentuk Pembuatan Stek Sel Fuel 3kW Dengan Sistem Katod Terbuka, Dana Pembangunan Penyelidikan Kumpulan Penyelidikan RM37,000 (DPP-2013-116)	1/1/2013 – 31/3/2014
Co-researcher	Yayasan Inovasi Malaysia (YIM) Grassroot Innovation Programme, Yayasan Inovasi Malaysia RM656,200 (EP-2013-015)	3/10/2012 – 31/12/2014
Project Leader	The roles of binder and filler characteristics on the achievement of high electrical conductivity and mechanical integrity in conductive polymer composites, FRGS RM100,000 (FRGS/1/2013/TK04/UKM/01/2)	1/1/2013 – 30/9/2016
Co-researcher	Pembangunan Pelan Pengukuran Pencapaian Hasil Pembelajaran Program Berdasarkan Petunjuk Prestasi dan Aras Taksonomi, Projek Tindakan/Strategik RM10,000 (PTS-2013-022)	1/7/2013 – 31/12/2014
Co-researcher	Pembangunan aspek rubrik untuk penilaian pembangunan kelestarian dan kejuruteraan kompleks dalam kursus kejuruteraan mekanik dan pembuatan, Projek Tindakan/Strategik RM10,000 (PTS-2013-023)	1/7/2013 – 31/12/2014
Project	Tuning of Programme Outcomes Based on	1/7/2013 –

Leader	Stakeholder's input, PTS RM20,000 (PTS-2013-163)	31/12/2014
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Year 2012

Co-researcher	Kenaf: Sustainable Material for Automotive Application LRGs Topdown RM1,500,000.00 (LRGS/TD/2012/USM-UKM/PT/05)	1/7/2012-30/6/2017
Project Leader	Novel Porous Composite (Titanium-Hydroxyapatite): Effect of Powder Injection Molding Process Parameters on Its Formability. RM50,000 (ERGS/1/2012/TK01/UKM/02/1)	1/6/2012-31/5/2015
Co-researcher	Parameter proses terhadap pemrosesan serbuk titanium dan pemesinan titanium RM350,000 Dana Impak Perdana (DIP-2012-29)	15/6/2012-15/6/2014
Co-researcher	Development of Fabrication Method for Porosity-free Beta type Ti-10%Mo-10%Cr Alloy as Novel Metallic Biomaterial RM70,000 (ERGS/1/2012/TK04/UKM/02/5)	1/6/2012-30/5/2015
Project Leader	Pengukuran dan Penilaian Secara Langsung Bagi Hasil Program (PO) dan Hasil Kursus (CO): Kesan Terhadap Penambahbaikan Berterusan RM10,000 (PTS-2012-007)	1/6/2012-31/8/2013
Co-researcher	Lonjakan Jurutera Profesional di Kalangan Ahli Akademik RM 10,000 (PTS-2012-008)	1/6/2012-1/9/2013
Project Leader	Pembangunan Kurikulum Berdasarkan Kaedah Penilaian Gambar Besar RM 10,000	1/6/2012-1/9/2013

(PTS-2012-097)

Project Leader	Dana Lonjakan Penerbitan RM 100,000 (UKM-DLP-2012-027)	1/5/2012- 30/4/2013
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Year 2011

Co- researcher	Characterization and Peridynamic Modeling of Shape Memory Alloy-based Self-Healing Composites Aerospace. RM225,000.00 (ERGS/1/2011/TK/UKM/01/2)	21/6/2011- 20/12/2013
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Co- researcher	Electrically Conducting Polymer Composites for Fuel Cell Bipolar Plate RM108,000.00 (ERGS/1/2011/TK/UKM/01/20)	21/6/2011- 21/6/2014
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Co- researcher	Two-hand glove-based system for grasping and manipulation or surgical instrument in virtual knee replacement surgery training, Geran Universiti Penyelidikan RM30,000 (UKM-GUP- 2011-251)	8/8/2011- 8/11/2012
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Co- researcher	Characterization and Evaluation of The Effect of Nano Powders in the Metal Injection Molding Process. RM 106,000.00 (ERGS/1/2011/TK/UKM/01/8)	21/6/2011- 21/6/2014
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Co- researcher	Effect of Vanadium Carbide (VC) on the Properties and Microstructure of Ultrafine Tungsten Carbide (WC-10Co) Component Produced by Micro Powder Injection Molding Process. RM196,400.00 (FRGS/1/2011/TK/UKM/01/6)	6/6/2011- 5/6/2014
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Co-researcher	Pengukuran Hasil Pembelajaran Menggunakan Model Rasch bagi Kursus Asas Jabatan di FKAB RM180,000 (PTS-2011-001)	1/4/2011 – 30/6/2012
Co-researcher	Pelaksanaan Program Dwi Ijazah Kejuruteraan Pembuatan dan Kejuruteraan Industri FKAB-FEP. UKM dengan UDE RM48,000 (PTS-2011-157)	1/9/2011-31/8/2013
Project Leader	Effect of Metal Injection Molding (MIM) Processing Parameters on the Intra Networking Phase of Novel Hybrid Materials. RM165,200.00 (FRGS/1/2011/TK/UKM/02/20)	6/6/2011-5/12/2013
Year 2010		
Co-researcher	Design, fabrication and performance test 5kW Cell Fuel Car. RM350,000.00 (UKM-AP-TK-08-2010)	1/10/2010-1/4/2013
Project Leader	A Novel process of Incorporating Chemical Surface Modified Stainless Steel/Carbon nanotubes in polymer Matrix Composites, RM30,000 (UKM-GGPM-NBT-078-2010)	1/6/2010 – 31/12/2012
Co-researcher	Creativity and innovation enhancement gifted students, PERMATA. RM958,400.00 (UKM-PERMATA-11-2010)	1/3/2010-28/2/2011
Co-researcher	Design and fabrication of surface topology as a tool for stem cells differentiation through morphological regulation. RM350,000.00 (GUP: UKM-AP-TKP-10-2010)	1/10/2010-30/9/2012

Year 2009

Co-researcher	Application of micro injection molding for fabrication of dental surgery components. RM827,800.00 (UKM-AP-NBT-11-2009)	1/7/2009- 30/6/2012
Project Leader	Development of a novel method to produce polymer fiber using electrospinning. RM50,000 (UKM-KK-02-FRGS0124-2009)	1/11/2009- 30/4/2012
Co-researcher	New Material in Cell Fuel and Hydrogen Energy. RM730,000 (UKM-AP-TK-05-2009)	1/7/2009- 30/6/2012

Year 2008

Project Leader	Design, Development, and fabrication of Jig for Computer Assisted Total Knee Replacement. RM250,000 (UKM-GUP-NBT-08-26-092)	1/6/2008- 31/5/2012
Co-researcher	Influence of improvement bipolar plate conductivity on the performance of stack for PEMFC. RM150,000.00 (UKM-GUP-TK-08-17-063)	1/6/2008- 30/6/2013

RESEARCH GROUP MEMBERSHIP

Role	Research Group	Duration
Group member	Advanced Manufacturing Research Group (AMReG) Advanced Materials Processing & Integrity UKM-OUP-NBT-26-118/2008	01/06/2008 - current
Group member	Advanced Materials Processing & Integrity (AMPI) UKM-OUP-NBT-26-115/2009	01/06/2008 - 31/12/2011

Group member	The Fuel Cell Plate Material and Manufacture Group UKM-OUP-TK-16-70/2009	11/03/2009 - current
Allied Researcher	Advanced Materials Processing & Integrity (AMPI) UKM-OUP-NBT-26-115/2009	1/1/2012-current
Group member	Precision Engineering Research Group UKM-OUP-2012-150	1/1/2012-current
Allied Researcher	UKM-CESMED	1/6/2011 - current

12. CONSULTATION / DEVELOPMENT SINCE THE CURRENT POST

Yayasan Inovasi Malaysia (YIM) –CESMED Malaysia

- 1) Smart Water Trap, Melaka. (RM10000)
- 2) Mesin Peleraian Padi, Serawak (RM10000)

13. CLINICAL WORK SINCE THE CURRENT POST

Nil

14. CONFERENCE / SEMINAR / WORKSHOP / KOLOKIU M / SYMPOSIUM SINCE THE CURRENT POST

No.	Title	Peranan	Tarikh & Tempat
1	5th INTERNATIONAL CONFERENCE ON POWDER METALLURGY IN	Presenter	18/02/2019 - 21/02/2019 Pune,

	ASIA + EXHIBITION (APMA2019)		India
2	Joint International Seminar of Universiti Kebangsaan Malaysia and Gifu University 2018	Presenter	Gifu, Japan 27/03/2018 - 31/03/2018
3	Penceramah Jemputan bagi dana penyeldik TRGS di UiTM	Invited Speaker	14 Februari 2018 UiTM Shah Alam
4	MJHEP Intelligent Research MIRAI 2018	Judge	5 Mac 2018 Bangunan MARA KL
5	Malaysia Lecture Competition 2018	Judge for Final Round	3 Mei 2018 UTM KL
6	Visiting Researcher at Hangzhou Dianzi University (HDU) and Zhejiang University, China for Research Colloboration	Visiting Professor	4- 10 Mei 2018 Chine
7	1ST INTERNATIONAL JOINT CONFERENCE ON ADVANCED MANUFACTURING TECHNOLOGY & SIMULATION (IJCAMTS 2018)	Keynote Speker	8-9 August 2018 UiTM Shah Alam
8	Visiting Professor in Bung Hatta University, Indonesia and Invitation as Keynote Speaker at 4th ENgineering Science and Technology International Conference 2018 (ESTIC)	Visiting Professor & Keynote Speaker	27- 31 August 2018 Indonesia
9	World Powder Metallurgy	Presenter and	16 - 20 Spetember

	2018 (PM2018)	Society representative	2018, China
10	National Symposium on Powder Metallurgy and Particulate Materials dan Kolaborasi Penyelidikan di ADTEC Taiping	Keynote Speaker	16-18 April 2018 UTP Perak
11	APMA-2017 The 4th International Conference on Powder Metallurgy in Asia	Presnter	9-11 April 2017, taiwan
12	4 th International Conference on the Fuel Cell & Hydrogen Technology	Presenter	12-13 April 2017, Putrajaya
13	The 4 th International Conference on Powder Metallurgy in Asia (APMA2017)	Presenter/Session Chair	9-11 April 2017, Taiwan
14	ICCE25, 25 th Annual International Conference on Composites or Nano Engineering Rome, Italy	Invited Speaker	16-22 July 2017, Rome, Italy
15	ICE-SEAM2017, 5ht Int. Conference and Exhibtion on Energy and Advamced Materials	Invited Speaker	16-19 October 2017, Melaka
16	Visiting Professor at Postgraduate Mechanical Engineering, University Sriwijaya, Palembang, Indonesia	Visiting Professor	17-20 October 2016, Palembang, Indonesia
17	AVoER-8 (Applicable Innovation of Engineering and Science Research), Universitas Sriwijaya, Palembang, Indonesia	Keynotes	19-20 October 2016, Palembang, Indonesia

18	AMPT2016 (Advanced Material Processing Technology), University Malaya, Malaysia	Keynotes	8-11 November 2016, Kuala Lumpur
19	ICFCM2016, 2016 Int. Con. On Frontiers of Composite Materials	Presenter/Session Chair	19-21 November 2016
20	Malaysia-Thailand-Japan International Conference on Science & Technology	Presenter	28-29 September 2016, Bangi
21	Advanced Processes & Systems in Manufacturing (APSIM2016)	Committee member (Secretary & Treasurer)	28-30 Aug, 2016, Putrajaya
22	Mesyuarat kumpulan penyelidikan di MJIT UTM KL	Participant	25 Aug 2016, UTM KL Semarak
23	Lawatan kolaborasi penyelidikan ke UM, UiTM dan Maju Saintifik	Coordinator & Researcher	24 Aug 2016, Petaling Jaya dan Shah Alam
24	ICPEAM2016 International Conference on Process Engineering & Advanced Materials	Presenter	15-17 Aug 2016, Kuala Lumpur
25	Symposium on Damage Mechanisms in Materials and Structures 2016 SDMMS2016	Participant	9 Aug 2016, Hotel Bangi-Putrajaya
26	Symposium and Exhibition of Addictive Manufacturing SAEM2016	Invited speaker	25-28 July 2016, Seberang Jaya, Pulau Pinang
27	24 th Annual International Conference on Composites or Nano Engineering	Inivited Speaker	17-23 July 2016, Haikou, China
28	Kerja lapangan di USM Nibong Tebal	Participant	8 June 2016, USM Nibong Tebal,

			Pulau Pinang
29	Post 11 th Asia Pacific Microscopy Workshop	Participant	31 May – 2 June 2016, UKM FST
30	Kolokium Penyelidikan JKMB 2016	Participant	8-10 April 2016, Port Dickson, Negeri Sembilan
31	Kolaborasi penyelidikan dan kerja lapangan di UTeM	Participant	29 March 2016, UTeM, Melaka
32	3 rd International Conference on Recent Advances in Automotive Engineering & Mobility Research	Presenter	30 November – 4 Disember 2015, Melaka
33	Advanced Powder Metallurgy Symposium 2015	Invited Speaker	16-17 November 2015, Pulau Pinang
34	The 3 rd International Conference on Powder Metallurgy in Asia (APMA2015)	Invited Speaker/Session Chair	6-13 November 2015, Kyoto, Japan
35	IMCER 2015	Presenter	17-20 Aug 2015, Kuantan
36	World Conference on Technology, Innovation and Entrepreneurship	Presenter/session chair	27 May – 3 June 2015, Istanbul, Turki
37	Training and CAE Simulations of Advanced Manufacturing Processes	Participant	27-29 March 2015, Port Dickson, Negeri Sembilan
38	PM15 International Conference on Powder Metallurgy & Particulate Materials	Invited Speaker/Session Chair	17-22 January 2015, Bombay, India
39	Android Training	Participant	29-31 December 2014, FTSM UKM

40	Kolaborasi penyelidikan di CTRM Melaka	Presenter	10 December 2014, CTRM Melaka
41	Jemputan untuk menghadiri program AKEPT strategic leadership development (A-SLEAD) in learning and teching: Student supervision level 1 (basic)	Participant	12-14 November 2014, Kampus AKEPT, Bandar Enstek, Negeri Sembilan
42	Bengkel Malaysia-CLMV Regional Cooperation in Technology Transfer and R&D Commercialisation	Participant	14-16 October 2014, Hotel Putra-Bangi
43	5 th MTERMS (Malaysian Tissue Engineering Regenative Medicine Society)	Participant	17-19 September 2014, Bangi
44	Bengkel Pembangunan Pelan Halatuju Graphene Kebangsaan	Participant	20-22 Aug 2014, A Famosa Melaka
45	VIVA External Examiner UTeM	Examiner	22 Aug 2014, UTeM
46	Viva: Pemeriksa Luar UTP	Examiner	14-15 Aug 2014, UTP
47	Autodesk Solution Day 2014	Participant	14 Aug 2014, Bukit Bintang, Kuala Lumpur
48	20 th World Hydrogen Energy Conference 2014	Presenter	15-20 June 2014, Gwanju, South Korea
49	9 th International Materials Technology Conference & Exhibition	Presenter	13-15 May 2014, Kuala Lumpur
50	Menjadi panel penilai EAC UTeM	Examiner	21-22 April 2014, UTeM, Melaka

51	Research Outcome Opportunity Workshop (Roow) Bil.1/2014 Anjuran Pusat Inovasi Kolaboratif (PIK)	Participant	14-15 April 2014, Danau UKM
52	CATIA V5 Animated Product Review (CAT-D01)	Participant	12-14 March 2014, MAWEA, Petaling Jaya
53	Perbincangan Penyelidikan dengan Prof David Hui (komposit)	Participant	6 March 2014, Hilton Petaling Jaya
54	Symposium on Additive Manufacturing	Participant	27 February 2014, UMP, Pahang
55	UKM Teaching and Learning Congress 2013	Participant	25-26 February 2014, Sama-sama Hotel KLIA
56	Bengkel Advanced Manufacturing Engineering Research Group (AMREG08) dan Persis 2014	Presenter/Session chair	13 February 2014, Pullman, Putrajaya
57	2 nd International Conference on Recent Advances in Automotive Engineering & Mobility Research (RECAR2013)	Presenter	16-18 December 2013, Kuala Lumpur
58	Bengkel Halatuju dan Pemantauan Institusi Sel Fuel 2013	Participant	13-15 December 2013, Gambang, Pahang
59	CATIA V5 professional preparation and examination	Participant	4-6 December 2013, Petaling Jaya
60	2 nd International Conference on Kenaf and Allied Fibres (ICKAF2013)	Presenter	3-5 December 2013, Kuala Lumpur

61	Bengkel Halatuju FKAB	Participant	29 November – 1 Disember 2013, Langkawi
62	Program Pembangunan Kepimpinan Inovatif & Transformasi Pensyarah Muda 2013	Participant	19-21 November 2013, Port Dickson, Negeri Sembilan
63	Benchmarking di USM	Participant	12 November 2013, USM Nibong Tebal
64	Seminar Tissue Engineering Centre PPUKM	Presenter	11 November 2013, PPUKM, Kuala Lumpur
65	2 nd International Conference on Powder Metallurgy in Asia 2013	Presenter	2-9 November 2013, Xiamen, China
66	4 th International Conference on the Fuel Cell & Hydrogen Technology	Presenter	6-11 October 2013, Yogyakarta, Indonesia
67	Bengkel Perancangan dan Halatuju Kumpulan Persis & AMReG	Presenter	14-16 September 2013, Johor Bahru
68	Kerja Lapangan di UTM Johor	Presenter	5-6 September 2013, UTM Skudai, Johor
69	Mesyuarat Penyelidikan LRGS di USM Nibong Tebal	Presenter	29 Aug 2013, USM Nibong Tebal
70	Simposium Teknologi Serbuk Kebangsaan	Presenter	29 Aug 2013, Hotel Equatorial Melaka
71	Kolaborasi dan kerja lapangan penyelidikan di Johor Bahru (UTM)	Presenter	26-27 Aug 2013, UTM Skudai, Johor

72	1 day workshop on complex problem solving	Participant	19 Aug 2013, Marriot Putrajaya
73	3 days intensive lead evaluator for accreditation	Participant	22-24 June 2013, Hotel Marriot, Putrajaya
74	Specialty polymers for high temperature and high pressure application in the oil and gas industry		14 June 2013, KLCC, Kuala Lumpur
75	1 st International Conference on Robust Quality Engineering	Presenter	22-25 April 2013, UTM Kuala Lumpur
76	Annual General Meeting IEM	Presenter	20 April 2013, Petaling Jaya
77	Research in Engineering Symposium (REES 2013)	Presenter	20 April 2013, Putrajaya
78	Mesyuarat/kerja lapangan dengan Kumpulan Penyelidik Komposit USM		4-5 February 2013, USM, Nibong Tebal
79	Seminar dan mesyuarat sehari metallurgi serbuk	Presenter	31 January 2013, Palm Garden, Putrajaya
80	Bengkel pemantauan kumpulan penyelidikan pembuatan termaju AMReG	Presenter	26-28 January 2013, Morib, Sepang
81	Kalobarasi penyelidikan dan kerja lapangan dengan India Institute of Technology Guwahati	Visiting Professor & Researchers Collaboration	29 Dec 2013 - 5 Jan 2012, IIT Guwahati, India
82	Powder Metallurgy World Congress & Exhibition (PM2012)	Presenter	15-18 December 2012, Yokohama, Japan
83	8 th Australasian Conference	Presenter	6-8 November 2012, Kuala Lumpur

	on Composite Materials		Lumpur
84	20 th International Conference on Composite & Engineering (ICCE20)	Presenter	22-26 July 2012, Beijing, China
85	Benchmarking Program at Dept of Industrial & System Engineering Program, National Universiti of Singapore	Coordinator & Researcher	15 May 2012, NUS, Singapore
86	Kerjasama penyelidikan dengan Institut Sel Fuel, UDE dan Sanggar Kerja Pembangunan Program Dwi Ijazah Kejuruteraan Pembuatan	Program Coordinator & Researcher	5-12 May 2012, Duisburg Essen UDE, Germany
87	5 th Powder Metallurgy Symposium & Exhibition 2011 (5 th PM)	Secretary	14-15 December 2011, Kuala Lumpur
88	Advanced Processes & System in Manufacturing (APSIM2011)	Secretary	14-15 December 2011, Kuala Lumpur
89	3 rd International Conference on Fuel Cell & Hydrogen Technology (ICFCHT2011)	Technical member (committee member)	22-23 November 2011, Kuala Lumpur
90	Malaysian Polymer International Conference 2011	Presenter	19-20 October 2011, Bangi
91	Bengkel Pembangunan Program Dwi Ijazah Pembuatan & Industri Universiti	Coordinator member	23 Sept 2011 Equatorial Bangi, Selangor
92	Sanggar Kerja Kumpulan Penyelidikan Pemprosesan Bahan Termaju dan Intergirti	Presenter	X Sept 2011, Selangor

	2011 (AMPI)		
93	Sanggar Kerja Kumpulan Penyelidikan Bahan dan Pembuatan Plat Sel Fuel 2011	Deputy Chairman	5 July 2011, Palm Garden, Putrajaya
94	Taguchi Method for Process & Product Optimization	Participant	21 June 2011, Puri Pujangga UKM
95	Nano Malaysia Summit & Expo 2011	Participant	14 June 2011, PWTC, Kuala Lumpur
96	Seminar Penulisan Jurnal Akademik peringkat Jabatan JKMB	Speaker	24 May 2011, JKMB, UKM
97	Bengkel Halatuju Nic Penyelidikan Tenaga Keterbaharuan UKM 2011	Participant	20 May 2011, N. Sembilan
98	Sanggar Kerja dan Kolokium JKMB 2011	Participant	13 May 2011, Gambang, Pahang
99	Seminar Penyelidikan JKMB-PPUKM	Chairman	14 April 2011, FKAB, UKM
100	8th International Conference on Composite Science & Technology (ICSST8)	Presenter	22 March 2011, Kuala Lumpur
101	Mesyuarat dan Kerja Lapangan untuk MPM2A, AMREC SIRIM	Committee member	13 Feb 2011, Kulim
102	Bengkel DELMIA	Participant	13 Jan 2011 JKMB, UKM
103	Sanggar Kerja & Pemantauan Kumpulan Penyelidikan Pembuatan Termaju 2010 (AMReG)	Participant	26-28 Dec 2010, Sungkai, Perak
104	Energy & Green Technology	Participant	24 Nov 2010,

	Symposium 2011		Kuala Lumpur
105	4th Malaysian Powder Metallurgy Symposium (4th MPMS) and MMC 2010	Presenter	22 Nov 2010, Pulau Pinang
106	The 2nd UKM-NUT Joint Seminar 2010	Presenter	11 Oct 2010, FKAB, UKM
107	Program Pemantapan Akademik JKMB	Secretary	11 Oct 2010, Hulu Langat, Selangor
108	Sanggar Kerja Kumpulan Penyelidikan Bahan & Pembuatan Plat, Institut Sel Fuel 2010	Participant	3 Aug 2010, Palm Garden Putrajaya
109	International Conference on Precision Engineering ICoPE2010 & 13th ICPE	Participant	28 July 2010, Singapore
110	Latihan bagi persediaan perkhemahan PERMATA PINTAR bulan 12/2010	Coordinator	5 June 2010, UKM
111	Bengkel Penambahbaikan Program Sarjana JKMB	Participant	13 March 2010, Melaka
112	Pemantau Penyelidikan GUP Peringkat Universiti	Presenter	5 Feb 2010, Seremban
113	Bengkel Pemantauan Penyelidikan Kumpulan Proses Persis 2010		21 Jan 2010 Hotel Equatorial Bangi
114	Kolokium dan sanggar kerja sel fuel 2009	Secretariat	18 Dec 2009, Pulau Pinang
115	Seminar “Nanoteknologi dalam komposit dan tekstil” dari Prof David Hui, Chief Editor	Participant	14 Dec 2009, UTHM, Johor

	Composite Part B, Elsevier		
116	Advances in Material and Processing Technologies AMPT 2009	Presenter	26 Oct 2009, UIA, Kuala Lumpur
117	AMPI Roadmap Workshop II,	Participant	21 Aug 2009, Residence Hotel, Bangi
118	Seminar Penyelidikan Berkala Institut Sel Fuel	Presenter	17 Aug 2009, Putrajaya
119	3rd Powder Metallurgy Symposium & Exhibition 2009	Presenter	12 Aug 2009, Kuala Lumpur
120	The 17th Annual International Conference on Composite/ Nano Engineering ICCE-17	Presenter	25 July 2009, Hawaii, USA
121	Bengkel Halatuju& Pemantapan Struktur Pusat Penyelidikan Automotif	Participant	17 July 2009, Melaka
122	Sanggar Kerja AMReG 2009	Treasurer	15-16 July 2009, 29 July 2009 Pulau Pangkor, 2009
123	Bengkel Kecemerlangan Budaya Ilmu 2009	Deputy Chairman	18 July 2009 Hutan Pendidikan Alam UKM
124	Flexible Automation and Intelligent Manufacturing 19th International Conference	Presenter	4 July 2009, Middlesbrough, UK
125	Lawatan Teknikal dan Mesyuarat Kolaborasi Penyelidikan UKM (AMPI) dan LPSB	Presenter	29 June 2009, Unlam, Kalimantan Selatan, Indonesia
126	International Conference on Advances in Mechanical	Presenter	24 June 2009, Concorde Hotel,

	Engineering (ICAME) 2009		Shah Alam
127	4th International Conference on Recent Advances in Materials, Minerals, Environment and 2nd Asian Symposium on Material and Processing	Presenter	1 June 2009, P. Pinang
128	Kolokium JKMB 2009	Participant	29 May 2009, Negeri Sembilan
129	Bengkel Penulisan Manuskrip & Tesis	Moderator	18 April 2009, Hotel Uniten, Selangor
130	Bengkel Kumpulan Automotif	Participant	25 March 2009, MINES Resort City
131	Pemantapan Akademik Mahasiswa Muslim	Secretary	20 March 2009, Hulu Langat
132	Lawatan Penyelidikan ke National University of Singapore dan Nanyang Technology University	Participant	17 March 2009, Singapura
133	Jangkauan Penyelidikan antara AMPI (Advanced Material Processing & Integrity, UKM) dengan Alexandria University, Egypt	Participant	20 Dec 2008, Egypt
134	Seminar II – Kumpulan Penyelidikan Pembuatan Termaju 2008 (AMReG 2008)	Committee member	17 Dec 2008, Port Dickson, Negeri Sembilan
135	Seminar Kumpulan Penyelidikan Pembuatan Termaju 2008 (AMReG'08)	Committee member	15-16 Dec 2008 Port Dickson
136	Malaysian Metallurgical Conference (MMC 2008)	Presenter	3 Dec 2008, Danau UKM

137	Jangkauan Penyelidikan ke Membrane Research Unit	Participant	1 Dec 2008, UTM, Johor
138	Kolokium Pertama Institut Sel Fuel 2008	Participant	21 Nov 2008, Langkawi, Kedah
139	Seminar on Design Engineering Rubber Components	Participant	3 Nov 2008, SgBuloh, Selangor
140	Jangkauan & Lawatan Penyelidikan antara LIPI (Indonesia Society of Nanotechnology) & ITB (Institute Technology Bandung) dengan AMPI (Kumpulan Bahan Termaju, UKM)	Presenter	26 Oct 2008, Indonesia
141	Engineering Postgraduate Conference	Panel	22 Oct 2008, Residence Inn, Kajang
142	The 5th International Conference on Advanced Material & Processing (ICAMP-5)	Presenter	1 Sept 2008, Harbin, China
143	6th International Material Technology Conference & Exhibition	Presenter	25 August 2008, Park Royal, KL
144	Polymeric Nanofibres Towards Biomedical Applications	Chairman	19 Aug 2008 FKAB, UKM
145	Seminar on Instrumentation and Diagnostics Measurement on Engine Testing 2008	Participant	2 July 2008, Putrajaya
146	Kajian Lapangan Kerja Perundingan di Seoul	Participant	17 June 2008, Icheon, South Korea
147	Seminar I- Kumpulan	Committee member	12 June 2008,

	Penyelidikan Pembuatan Termaju 2008 (AMReG 08)		Royale Bintang, Seremban
148	Re-treat Kumpulan Nic Tenaga Keterbaruan	Participant	2 May 2008, Putrajaya
149	Re-treat "Fuel Efficiency Concept Car" Putrajaya	Participant	2 May 2008, Putrajaya
150	Bengkel PASTRAN NASTRAN	Participant	24 April 2008, JKMB, UKM
151	Bengkel Penyelidikan Projek "Structurally Optimized & Fuel Efficient Concept Car"	Participant	21 April 2008 Putrajaya 2008
152	Technical Talk on Controlling Dispersion to Yield Functional Nanocomposites Materials and Products by Dr. Stuart Bateman from CSIRO Materials Science and Engineering, Australia	Participant	11 April 2008, Petronas Twin Tower, Kuala Lumpur
153	Manufacturing Group Retreat	Committee member	10 March 2008, Grand River View Hotel, Kelantan
154	Bengkel Jurnal oleh Thomson Scientific	Participant	21 Feb 2008, PTSL, UKM

15. ADMINISTRATION / CONTRIBUTION TO THE DEPARTMENT / FACULTY/ UNIVERSITY SINCE THE CURRENT POST

I. Membership in Committee

Committee	Level	Status Involvement	Duration
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AJK Kompilasi peraturan siswazah UKM	Universiti	Comittee	2017-2018
AJK Penilaian Kendiri bagi Swa-akreditasi	Universiti	Comittee	2017 - 2021
Chief Editor Jurnal Kejuruteraan	Universiti	Chief Editor	2017 - 2020
JKMB Accreditation Coordinator	Department	Coordinator	2015 - 2017
UP3 Secretary	Department	Coordinator	2015 - current
Committee Member for External Thesis Evaluator	Department	Coordinator	2015 - current
KRA1 Committee member	Fakulti/Universiti	Committee member	2014 - current
Program Coordinator Bachelor of Manufacturing Engineering	Department	Coordinator	2011 - current
Preparation Committee Report Department Self	Department	Committee member	2010 - current
Improvements Committee for Teaching and Learning Unit (UP3)	Department	Committee member	2011 - current

JKMB Program Accreditation Committee Member	Department	Committee member	2009- current
Student Development Committee member	Department	Committee member	2008-2011
Newsletter Committee Member	Department	Committee member	2008 - 2011

II. Mentor kepada undergraduate students (2008 ~ 2018)

1. Abdul Rasyid Bin And Rahim (A161500)
2. Muhamad Hamizan Bin Mohd Nasir (A158267)
3. Nursyazleen Ghazali (A160546)
4. Nurul Syafiqah Zulkefly (A154289)
5. Irfan Fikri (A156431)
6. Amirul Muklish Abdul Azam (A149685)
7. Nadhirah Hsyah Abd Jamal (A150367)
8. Nor Zalilah Nordin (A150731)
9. Muhammad Arsyad Hafizudddin (A144144)
10. Muhammad Amiral Ashraff Ilias (A144159)
11. Mohd Faridzal Jamaluddin (A144173)
12. HafiyyanZharfan Bin Mansor(A135965)
13. Ahmad Zukri Bin Abd Rahman (A138019)
14. Chen Kok Kheong(A138216)
15. Kong Teck Lee (A133074)
16. Loh Wei Lie (A134068)
17. Mohd SalehudinFafmin Bin Mat Salleh(A135455)
18. Nor Zawani Binti Abu Bakar (A1285396)
19. Mohd Hafis Bin Mazeri(A128942)
20. Mohd Syaswan Bin Jaafar (A130969)
21. NorhidayahFathirah Binti Ramli (A122038)

22. Neo Ming Cherg(A124209)

23. Mohamad Amir Shafiw Bin Mohd Tahir (A124787)

III. Evaluator reports & Industrial Training Student Presentations (2013 ~ 2016)

- More than 30 students from the Department of Mechanical & Materials Engineering

IV. Academic Audit

Internal Examiner for MSc and PhD Thesis -not update for 2019-2020

No	Year	Level	Institution	Name	Thesis Title
1	2018	MSc	UiTM	Nur Zarifah Bt Razali	Characterization of Nanosilicon/epoxy composite due to different sonication method
2	2018	MSc	USM	Kanchana MOtham	MICROSTRUCTURE, MECHANICAL PROPERTIES, AND CORROSION BEHAVIOUR OF CRYOROLLED LOW CARBON STEEL SUBJECTED TO HEAT TREATMENT
3	2018	MSc	UTP	Abqaat Naseer	GRAFTING OF METALLIC OXIDES ON GRAPHENE NANOPATELETS FOR DEVELOPMENT OF REINFORCED COPPER COMPOSITES VIA POWDER INJECTION MOLDING

4	2018	MSc	UTM	<u>Law Jieh</u>	Design Of Mold Runner System For Relay Components Via Plastic Injection
5	2018	PhD	UTM	Nur Syazana Rashidi	PET Electrospun Nanofiber for small diameter vascular
6	2018	MSc	UiTM	Nurulaini binti borhan	The effect on the physical and mechanical properties of casuarina equisetifolia filled unsaturated polyester composites
1	2017	MSc	UiTM	Farah Nordyana Bt Azizl Rahman	The Physical and Mechanical Properties of Rice Husk/Recycle Plasticized PVC Composite at various filler loadings and particle size.
2	2017	MSc	UMP	Khairul Ihsan Yaakob	Optimization of pulse mode fibre laser welding parameters on mechanical properties of 22MNB5 boron steel
3	2017	PhD	UTP	Krishnan a/l Subramaniam	Range of Motion (ROM) induced by shape memory alloy (SMA) actuation on stewart platform for foot/ankle rehabilitation.
4	2015	PhD	IIT Guwahati India	Surya Singh	Direct Electrochemical Reduction of Gaseous Carbon Dioxide to Value Added Products:

					Investigations on Electro-catalysts
5	2015	PhD	SOA University, India	Pragyan Mohanty	Study of microstructural and mechanical properties of metal matrix and ceramic matrix nanocomposites.
6	2015	PhD	SOA University, India	Sachi Kanta Kar	Study on the size effect of SiC particulates in Metal Matrix Composites (MMCs) Processing.
7	2016	MSc (G02953)	Mekanikal, UTP	Eza Syahera binti Zulkarnain	Effects of Nano-sized Boron Nitride on Thermal Decomposition Behavior of Epoxy-based Intumescent Coating
8	2016	MSc (P68168)	JKMB, UKM	Theng Kai Yuan	Pembangunan Zirkonia (Y-TZP) Bersifat Lut Cahaya untuk Aplikasi Korana Pergigian
9	2016	MSc (GS1264)	Institute of Tropical Forestry and Forest Product (INTROP UPM)	Farah Hanan binti Abd Malek	Pultruded Hybrid Kenaf/Glass Fiber Reinforced Phenolic Resin Composites: The Effect of Additives on Mechanical, Thermal and Morphology Properties
10	2016	MSc (P75046)	JKMB, UKM	Chin Chuin Hao	Fabrication of Y-TZP Berkelucahayaan High-Through Slurry Casting Method and isostatic pressing Cold Korana Dental Applications

11	2016	PhD (P53291)	JKMB, UKM	Armin Rajabi Nasirabadi	A Facial Modified Synthesis of TiC and TiC _{0.7} N _{0.3} Nanopowders
12	2016	PhD (P59414)	JKMB, UKM	Siow Ping Chuan	Development, Characterization and Performance Evaluation of tools Tungsten carbide (WC-6Co) Coated with TiCN for Process Lathe Stainless Steel AISI-347
13	2016	Convert from MSc to PhD (2014 649744)	Mechanical , UiTM	Nur Hidayatul Nadhirah binti Almi Asham Shah	The Effect of Processing Conditions of Ti-Nb as Phase, Microstructure, Hardness and Compression Strength
14	2016	MSc	Mechanical , UteM	Loh Xiao Huo	Examine Mechanical Properties of Kenaf/Polypropylene (K/PP) Composite using Design of Experiment Analysis
15	2016	MSc	Institute of Tropical Forestry and Forest Product (INTROP UPM)	Ahmad Khuzairi	Effect of Cationic, Anionic and non-ionic Surfactants on the Properties of HDPE/LDPE/Celulose Biocomposites
16	2015	MSc	Sains Gunaan, UiTM	Nor Azreen Abu Bakar	Effect of nanofillers on the mechanical performance of natural rubber latex high strength coated fabrics

17	2015	PhD	Mechanical , UNITEN	Yassin Mustafa Ahmed	Modelling and Optimization of Multi- passes Welding of Titanium Alloy By Response Surface Method
18	2015	MSc (2012 986249)	Chemical, UiTM	Nurul Huda M Ali	Injection Moulding of Synthesized Hydroxyapatite Powder from Clamshell
19	2014	MSc (P62301)	Mekanikal, UKM	Noorfaezah Amat	Colloidal Zirconia Nano Powder Processing for Dental Applications
20	2014	PhD (P43824)	Mekanikal, UKM	Mohd Zaid bin Abu Yazid	Machinability of Inconel 718 On High Speed Machining In Berkuantiti Minimum lubrication conditions
21	2014	MSc	Mekanikal, UteM	Mohd Shakir bin Ahmad	Development of Hybrid Fillers on Graphite/Polupropylene Composite Bipolar Plate for Polymer Electrolyte Membrane Fuel Cell
22	2014	MSc	Mekanikal, UTP	Muhamad Irfan Shirazi	Fiber Orientation in Metal Injection Molded Short Carbon Fiber Reinforced Copper Matrix Composites
23	2014	PhD (P57323)	Institut Sel Fuel, UKM	Dedi Rohendi	Development of Membrane Electrode Assembly for High Current Density Mobile PEMFC Using Spray

					Method
24	2014	PhD (P46892)	FST, UKM	Norita binti Hassan	Development of Metal Injection Molding Feedstock using Thermoplastic Natural Rubber (TPNR) as Biocomposite Backbone Binder
25	2014	PhD (P48971)	JKMB, UKM	Mohd Amri Sulaiman	High speed machining of titanium alloy Ti-6Al-4V ELI in minimum quantity lubrication conditions
26	2013	Sarjana (P52201)	JKMB, UKM	Zaliha Wahid	Mold Filling Process Simulation in Metal Injection Molding Process
27	2013	PhD (P49870)	JKMB, UKM	Hamimah AB Rahman	LaSrCoFeO-SDC nano composite as a cathode for solid oxide fuel cell low-temperature
28	2013	PhD (P47066)	JKMB, UKM	Cheow Siu Leong	Passivated Low Reflection Nano-structured Solar Cell
29	2012	PhD	JKMB, UKM	Jovial Mahyoedin	Pengacuanan Suntikan Polypropylena composite containing graphite and black carbon using injection molding
30	2012	PhD (P42490)	JKMB, UKM	Nor Hafiez Bin Mohamad Nor	Optimization of Powder Injection Molding Process on Ti-6Al-4V Using Kernel Stearin-Based Binder
31	2011	MSc	JKMB,	Nor Azilan	Relations between

			UKM	Bin Jaafar	mechanical properties & morphology of rubber soles boned silk
32	2011	MSc (G77141)	JKMB,UK M	Nur'Asyiqin binti Idris	Design of school furniture that incorporates secondary school children anthropometric data
33	2011	PhD (P37157)	JKMB, UKM	Mohd Zulkefli Selamat	Effect of mechanical deformation and optimization of manufacturing processes on the properties of the graphite-composite polypropylene
34	2011	MSc (GP0048)	JKMB, UKM	Norjamalullai I bin Tamri	Study of Kanban system implementation in small and medium enterprise
35	2010	MSc (G71423)	JKMB, UKM	Norlida binti Musa	Study of using equipment and information communication technology (ICT) in teaching and learning among lecturers Industrial Training Institute Kuala Lumpur
36	2010	MSc (P39561)	JKMB, UKM	Hooman Abolhasani	Development of a strach based binder for metal injection molding
	2010	MSc (G77099)	JKMB, UKM	Goh Chun Wai	Design of robot hand for industrial application
37	2010	MSc (G71426)	JKMB, UKM	Suzana binti Mohammed Zohdi	Less Participitation from Industry Encourages the National Dual Training System (SLDN) from

38	2009	MSc	JKMB, UKM	Sri Yulis M. Amin (P34078)	Employer Perspective Debinding solution for metal injection molding proce
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V. Academic Referee

Referee for Academic and Indexed Journal Paper

Year	Title of academic & indexed journal papers
2017	UTM Program Evaluator Executive Diploma in Manufacturing Engineering Technology (UTM Razak School)
2016	External assessor UNIKL EPROM Bachelor of Engineering Technology (Hons) in Tool and Die
2015	External assessor GMI Diploma in Prodcution Technology (Mould Technology)
2015	External assessor UniKL Bachelor of Engineering Technology (Hons) in Tool and Die
2016	KPT Fund Center Evaluator 2016 25 proposals been evaluated
2017	KPT Fund Center Evaluator 2017
2017	KPT Fund Evalutor for IPT (UMP) 6 proposals been review
2016	KPT Fund Evalutor for IPT (Politeknik) 6 proposal been review
2016	Assessing Academic promotion UiTM lecturer DS54 for UiTM
2015-2018	Mentor RACE project UMP Investigation of the rigidity of CoCrMo Cellular Structure Fabricated

- by Selective Laser Melting Process for Potential Dental Applications
- 2016 Assigned as Guest Editor for Special Issue in Int. J. of Manufacturing and Technology Management (IJMTM Scopus)
There are 20 manuscripts had been evaluated, and 16 manuscripts will be published
- 2017 Preparation of acrylonitrile-butadiene-styrene (ABS)/polylactic acid (PLA) biomass alloys and their physical properties
Journal: Composites Part B (ISI, Q1)
- 2017 Progressive failure analysis of 3D woven composites at the meso-micro scale
Journal : Composites Part B (ISI, Q1)
- 2017 Solvent-thermal debinding of micro powder injection molded 316L stainless steel microchannel parts
Journal of Materials Processing Technology (ISI, Q1)
- 2016 Injection molding as unit process for LCA: Energy intensity of injection molding different materials at different scales
Journal : Composites Part B (ISI, Q1)
- 2016 Effect of Nano Powder Ratio in Bimodal Powder Mixture on Powder Injection Molding
Journal: Powder Technology (ISI, Q2)
- 2016 As editorial member Jurnal Kejuruteraan UKM, 10 journals
- 2015 Fabrication of WC-Co Cutting Tool by Powder Injection Molding
Journal: International Journal of Precision Engineering and Manufacturing (ISI, Q3)
- 2015 Effects of Injection Parameters on Green Part Mechanical Properties for Metal Injection Molding
Journal: Sains Malaysiana (ISI, Q3)
- 2015 Investigation on relationship between porosity and spacer content of

- titanium foams
Journal: Materials and Design (ISI, Q1)
- 2014 Properties and corrosion behavior of bronze -40%w used in fishing tackles application
Journal: Jordon Journal of Mechanical & Industrial Engineering (SCOPUS)
- 2014 Experimental investigation of operating parameters on PEM Fuel Cell
Journal: Int. J. of Vehicle Design (Scopus)
- 2014 Multi-attribute optimization of machining process parameters in Powder Mixed Electro- Discharge Machining using TOPSIS and Grey Relational Analysis
Journal: Engineering Science and Technology: an International Journal (ISI, Q3)
- 2014 Effects of size and shape originated synergism of carbon nano fillers on the electrical and mechanical properties of conductive polymer composites
Journal: Composites Science and Technology (ISI, Q1)
- 2014 Enhanced solar light photocatalytic performance of N, S-codoped TiO₂ prepared by sol-gel method using ammonium thiocyanate
Journal: Materials Science and Engineering B (ISI, Q1)
- 2014 Adsorption behavior of Cd²⁺ on Polyacrylonitrile/Modified Hydroxyapatite grafting composite Materials
Journal: Journal of Hazardous Materials (ISI, Q3)
- 2014 For Peer Review Flow Property and Melt Density of PLLA/PEG Blends
Journal: Journal of Elastomers & Plastics (ISI, Q3)
- 2013 Carbon-polymer composite bipolar plate for HT-PEMFC
Journal: Fuel Cells (ISI, Q1)
- 2013 The Effect of Flow Type and Chemical Functionalization on the

- Dispersion of Carbon Nanofibers in Polypropylene
Journal: Composites Part A (ISI, Q1)
- 2013 An experimental investigation on mechanical properties, machinability and surface morphology of brass reinforced epoxy composites
Journal: Journal of Reinforced Plastics and Composites (ISI, Q1)
- 2013 Carbon Nanotubes/Carboxymethyl Chitosan/Mineralized Hydroxyapatite Composite Coating on Ti-6Al-4V Alloy for Improved Mechanical and Biological Properties
Journal: Industrial & Engineering Chemistry Research (ISI, Q3)
- 2012 Assigned as Guest Editor for Special Issue in Jurnal Teknologi (Scopus)
"Advances Processing & Systems in Manufacturing" ISSN 0127-9696 No. 59 (Sciences & Engineering) Suppl (2), November 2012
There are 50 manuscripts had been evaluated, and 44 had been published
- 2012 Fabrication and Performance Evaluation of PLA-based Hybrid Biocomposite
Journal: Iranian Polymer Journal (ISI Q2 and Scopus)
- 2012 The Thermal and Flexural Properties of Room Temperature Cured PMMA grafted natural Rubber toughed epoxy layered silicate Nanocomposite
Journal: Iranian Polymer Journal (ISI Q2 and Scopus)
- 2012 Characterization of feedstock properties of metal injection molded WC-Co with Palm Stearin Binder System
Journal: Sains Malaysiana (ISI Q4 and Scopus)
- 2012 Influence of iron on phase stability and corrosion resistance of Ti-15% Cr Alloy
Journal: Sains Malaysiana (ISI Q4 and Scopus)

- 2012 Characterization of TiCN and TiCN/ZrN Coatings for Cutting Tool Application
Journal: Ceramics International (ISI Q1 and Scopus)
- 2012 Failure mode analysis of carbide cutting tools due to machining of titanium alloy
Journal: Ceramics International (ISI Q1 and Scopus)
- 2012 The Effect of Flow Type and Chemical Functionalization on the Dispersion of Carbon Nanofibers in Polypropylene
Journal: Composite Part A (ISI Q1 and Scopus)
- 2011 The Effect of Flow Type and Chemical Functionalization on the Dispersion of Carbon Nanofibers in Polypropylene
Journal: Composite Part A (ISI Q1 and Scopus)
- 2010 An Etching Characterization Method for Revealing the Plastic Deformation Zone in a SUS303 Stainless Steel
Journal: Journal of Material Science (ISI Q2 and Scopus)
- 2010 Water Based Mud Lifting Capacity Improvement by Multiwall Carbon Nanotubes Additive
Journal: Journal petroleum gas & engineering (Scopus)
- 2009 Application's of nano carbon polymer composite from agricultural based materials
Journal: NANO (ISI Q2 and Scopus)

Proceeding Papers Referee

Year	Title of proceeding papers
2016	Technical Committee APSIM2016, Advanced Processing and System in Manufacturing - 15 Manuscripts
2017	Technical Committee iMEDiTEC 2017, Int. Medical Device & Technolgy Conference, UTM
2016	Technical Committee Advanced Material Conference AMC2016

(SIRIM)- 6 Manuscripts

2016 Technical Committee Material Science and Engineering Technology (ICMSET2016), University of Tokyo - 6 Manuscripts

2015 Reviewer for ReCAR2015 - 6 Manuscripts

2014 Technical Committee for National Conference on Mechanical Engineering (Politeknik Malaysia) - 15 Manuscripts

2013 MESPIC2013, UTeM - 3 Manuscripts

2011 *5th Powder Metallurgy and Particulate Symposium & Exhibition*

1. Influence of composition and sintering temperature on density for pure titanium foams
2. The effect of backbone polymer on impurity contents, phase transformation temperatures (PPTs) and microstructure of MIM NiTi alloy using a water soluble binder system
3. Effect of Stearic Acid on Rheological Properties of 316L Feedstock for Metal Injection Moulding
4. Characterization of Feedstock Properties of PIM WC-Co with Palm Stearin Binder System
5. Analysis of Load and Time on Tribological Characteristics of Semi-Metallic Brake Pads

Advanced Processing & System in Manufacturing (APSIM2011)

6. A survey on benchmarking barriers in oil palm industry
7. Tool Design Analysis for Springback Prediction
8. A Study on Lean Manufacturing Implementation in Malaysian Automotive Component Industry
9. Evaluation of Tool Wear Rate Based on RSM in EDM of Ti5Al2.5Sn through Graphite Electrode
10. The Effect of Milling Parameters on Laminated Carbon Fibre Reinforced Plastic (CFRP)

The 3rd International Conference on Fuel Cell & Hydrogen

Technology(2011)

11. Preparation and electrochemical performance of $Ba_{0.2}Sr_{0.8}Co_{0.8}Fe_{0.2}O_{3-\delta}$ cathode material for intermediate temperature solid oxide fuel cells
12. $La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}$ - Based cathodes for SDC-carbonate composite electrolyte
13. Preparation and Fabrication of Ag-Bi₂O₃ Composite Cathode on Stainless Steel Substrates by Slurry Painting Method
14. High performance of LSCM based anodes using scalable alternative to the classical impregnation technique

2008 *Regional Engineering Postgraduate Conference (EPC) 2008*

1. Epoxidised natural rubber (ENR) - alumina nanoparticle composites: the cure characteristics
2. Gas jet measurement from a spark plug fuel injector (SPFI) in spark ignition engine

VI. Other Related Tasks

Field of tasks	Activities and Level
Documentation	<ul style="list-style-type: none"> • KP SAR Coordinator (Manufacturing Program) 2016 • SAR Coordinator KM (Mechanics Program) 2017 • Curriculum Review Committee KM 2014 • Chairman of the Curriculum Review KP 2014 • AJK (committee member) - collection of information and the provision of Chapter 4 - Academic document EAC 2012 (Department) • AJK (committee member) - The collection of information and the provision of Chapter 4 - Academic document EAC 2010 (Department) • AJK (committee member) - Coaching

	curriculum committee for undergraduate manufacturing engineering and master of technology management 2011 (Department)
Teaching	<ul style="list-style-type: none"> - Integrated Project Coordinator for 3rd year students (Manufacturing program) - 1st semester session 2009/2010 - 1st semester session 2008/2009 - 1st semester session 2010/2011 - Accompany students to factory visits for academic purpose (2008 ~ 2016): <ul style="list-style-type: none"> • DK Komposit, Melaka • Proton, Shah Alam • DRB Hicom Die Casting, Shah Alam • DRB Hicom Polymer, Shah Alam
Students services	<ul style="list-style-type: none"> - Counsel student development activities (department) - Student motivation CGPA < 2.5 (2008) - Student motivation CGPA < 2.5 (2009) - Camping for Muslim students (2009) - Camping for Muslim students (2010)

6. COMMUNITY SERVICE

Activity	Level	Duration
Flight Sciences course coordinator for the National Intelligent Program (PERMATA)	National	2010 - 2015
School Holiday Camping Coordinator for PERMATA Pintar program (Science of Flight Course)	National	2010 -2015
School Holiday Camping Coordinator for PERMATA Pintar program (Science of	National	2011

Flight Course)

Committee member for PERMATA Pintar Exhibition in KLCC (2011)	National	2011
Technical committee member for SIRIM, Safety of Machinery (TC/W/1)	National	2011
Malaysian Powder Metallurgy & Particulate Association (Secretary)	National	2009 – current
Ceramah Motivasi bagi lepasan SPM di Banting	National	2015 & 2016
Committee for SIRIM Standard for Gold (chairman)	National	2017

17. NETWORK AND EXTERNAL RELATIONS

Academic network

- **Prof Dr. David Hui, University of New Orleans, USA.** Research cooperation in the field of nano composites research since 2009.
- **Prof Dr. Seong Jin Park, Pohang University of Science and Technology, South Korea.** Research cooperation in powder metal injection molding (Powder Injection Molding) since 2011.
- **Prof Dr. Hidetoshi Miura, Kyushu University, Japan.** Research cooperation in powder injection molding (PIM) since 2009.
- **Prof Dr. Anglika Heinzl, University Duisburg-Essen, Germany.** Research cooperation in the field of material development for bi-polar plates for Proton Exchange Membrane Fuel Cell (PEMFC) through the Institute for Fuel Cell SMEs since 2009.

- **Dr Affaf Alloufi, Alexandria University, Egypt.** Research cooperation in the field of production of nano fibers with electrical spinning method (electrospinning) since 2009.
- **Prof Dr Ying Yang and Dr Ian Wimpenny, Keele University.** Research cooperation on the development cooperation scaffold (scaffold) with electric spinning through Tissue Engineering Center PPUKM since 2010.
- **Nagaoka University of Technology (NUT), Japan melalui Prof Dr Y Mutoh.** Research cooperation with research groups AMPI UKM (Advanced Material Processing & Integrity) since 2008
- **Dr Tan Soon Huat, Universiti Sains Malaysia.** Research cooperation in the field of chemical processes for nano-composites since 2010
- **Prof Anil Verma, IIT Delhi, India** Research cooperation in the field of material development for bi-polar plates for Proton Exchange Membrane Fuel Cell (PEMFC) through the Institute for Fuel Cell SMEs since 2009.
- **Dr Muhanad Furjan, Hangzhou Dianzi University** Research cooperation in powder metal injection molding (Powder Injection Molding) since 2016.

Industry Network

- **Rahim L. Muhamud, RS Advanced Technology Sdn Bhd.** Research collaboration on the manufacturing process of powder metallurgy (since 2011)
- **Dr Ibrahim Mutlay, Graphen Chemical Industries, Turkey.** Research collaboration on the use of nano materials in nano composites (since 2011)
- **Micro Precision Machining SdnBhd,** in Kajang, through field research projects for the injection molding composite materials and metal injection process (since 2012)

- **HicomDiecastingSdn. Bhd.** in Shah Alam, through consulting projects carried out starting in 2010 and through the efforts of faculty to collaborate in research with the industry (since 2011)
- **OSATech Sdn Bhd** , Dr Hyzan Implant Screw fabricator

Research Affiliations in UKM

- AMReG (Advanced Manufacturing)
- Precision Engineering
- AMPI (Advanced Material Processing & Integrity)
- Cell Fuel Institute UKM
- Tissue Engineering Center PPUKM
- FST UKM
- Orthopedic Dept PPUKM
- MINT