

# ANNUAL REPORT

Center of Excellence  
Geopolymer & Green Technology  
School of Materials Engineering

# 2014





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## VICE CHANCELLOR SPEECH



**BRIG. GEN. DATUK PROF. DR.  
KAMARUDIN HUSSIN**  
Vice Chancellor  
Universiti Malaysia Perlis

Bismillahirahmanirrahim. In the name of Allah, Most Compassionate and Merciful

Alhamdulillah, I am grateful to Allah S.W.T as our Center of Excellence Geopolymer & Green Technology (CEGeoGTech), Universiti Malaysia Perlis is able to publish our Annual Report CEGeoGTech Year 2014. This publication is a reference for all CEGeoGTech staff to identify, understand and evaluate the efficiency and organizational effectiveness. We need to keep reminding ourselves that this is a continuous process which we hope to produce competitive and high impact researches.

The year 2014 was a year filled with challenges, but with all the spirit and determination we have managed to brave it through. CeGeoGTech has achieved all the targets by also contributing more than **15 percent** from UniMAP publications. CEGeoGTech also have garnered **110 awards** from international and national exhibition (**64 Golds, 8 Silvers, 13 Bronzes** and **25 Special Awards**). At the same time also, a few of our researchers receive national and international recognition such as I and Assoc. Prof. Dr. Che Mohd Ruzaidi Ghazali receiving **Top Research Scientist Malaysia** (TRSM 2014), Dr. Mohd Mustafa Al Bakri Abdullah appointed as **Honorary Associate Researcher** at Gheorge Asachi Technical University of Iasi, Romania. Besides, good financial management will ensure the best planning in the field of research and management.

To maintain our success, human resource is a key element. An efficient research officer will produce good and quality research. Therefore, well organized plan is important for both research and management as a way to strengthen our CEGeoGTech. We have always tried to develop human potential whereby opportunities were given to our staff to attend conferences or workshop organized by UniMAP or external parties with the aim to improve staff productivity. If we can successfully improve our staff, it will definitely improve their productivity and quality which in the end would contribute towards the university's mission and vision.

Finally, I would like to convey my deepest appreciation to the Center of Excellence Geopolymer & Green Technology, School of Materials Engineering for the support and enthusiasm to contribute ideas, expertise, energy and time in order to realize the publication of this annual report. I hope that this continuous effort can produce human capital that is able to meet the aspirations and vision of the country.

Thank you.

# SPEECH FROM DEAN, SCHOOL OF MATERIALS ENGINEERING



**DR. KHAIREL RAFEZI AHMAD**  
Dean  
School of Materials Engineering

Assalamualaikum and Good Day.

Alhamdulillah, thankful to Allah S.W.T as our Center of Excellence Geopolymer & Green Technology (CEGeoGTech), Universiti Malaysia Perlis able to publish our Annual Report CEGeoGTech Year 2014. Indeed, the publication of this annual report CEGeoGTech gives an overview of the activities and also contribution in implementing and organizing various programs through the year.

CEGeoGTech under the School of Materials Engineering has gained many successes such as high impact journal publication, organizing the technical workshop, and the latest is organizing an international conference. In addition,

CEGeoGTech also obtained research grant from international and within the country. CEGeoGTech policy is to realize a center of excellence that provide quality services and develop innovation.

The year 2014, marked accompanied by wide of memory through joy and pain that would etched as a history. However, history should be used to analyse the strength and weaknesses to develop new strength for the year 2015. Publication of this Annual Report CEGeoGTech 2014 can be referenced and guide for the performance of this center of excellence. Therefore, let us unite and work together to make improvement in order to improve the performance and quality of research.

Finally, the year 2014 showed distinctive moments, tremendous excellent performances and let us build admirable personality and more committed to work in achieving UniMAP as an academic and research institution that is competitive in the international arena.

Thank you.



# CENTER OF EXCELLENCE GEOPOLYMER & GREEN TECHNOLOGY (CEGeoGTech)

## 1.0 INTRODUCTION

Center of Excellence Geopolymer & Green Technology (CEGeoGTech) lead by Vice Chancellor UniMAP, Brig. Gen. Datuk Prof. Dr. Kamarudin Hussin. CEGeoGTech located at the School of Materials Engineering, Kompleks Pusat Pengajian Jejawi 2, Taman Muhibbah, 02600 Arau, Perlis. CEGeoGTech has been established on July 2011 with the intention to induce innovation in green material technology among researchers in Universiti Malaysia Perlis.

CEGeoGTech are able combining their expertise and skills in various fields to support the academic structure in the generation of human capital that contributes to the development of high quality research. This center also can become a pillar of academic activities, especially regarding research, development and innovation.

CEGeoGTech have 8 fields of research includes:

- Geopolymer
- Polymer Recycling
- Electronic Materials
- Ceramic
- Metallurgy
- Electrochemistry Materials
- Environmental
- Manufacturing and Design

## 2.0 VISION, MISION AND OBJECTIVE OF CEGeoGTech

### 2.1 Vision

To be among the world's best in green technology towards achieving UniMAP as an academic institution that contribute to the development of high quality research.

### 2.2 Mission

Develop environmental friendly product using natural polymeric materials.

### 2.3 Objective (s)

- Research activities are implemented together to develop technology-related innovation cycle of the green materials especially in green technology.
- Research and development of green technology into advance international stage.

### 3.0 KEY PERFORMANCE INDICATOR (KPI) CEGeoGTech 2015

CEGeoGTech has set several targets as Key Performances Indicator (KPI) for the year 2015.

This target includes several criteria to be achieved as follows:

1. Doctor Philosophy Students : Total 20 Persons
2. Master Students : Total 30 Persons
3. International Grants Funding : RM 200,000.00
4. National Grants Funding : RM 500,000.00
5. Conferences Organizes : 3
6. Journal Publications : 200 Papers Scopus Index with 10% High Impact Journal
7. Books : 10
8. Patents : 5 International and National (Granted or Filing)
9. High Community Impact Corporate Social Responsibility (CSR) Program or Activity

10. Increase International Collaboration and Networking Through Research and Publication





## 4.0 CEGeoGTech STAFFS

### 4.1 Research Advisors



**Prof. Dr. Kamarudin Hussin**  
Vice Chancellor  
Unimap  
Director of CEGeoGTech



**Prof. Dr. Ir. Djwantoro Hardjito**  
Senior Lecturer,  
Civil and Construction Department  
Universiti Petra Kristian, Surabaya  
Indonesia



**Prof. Dr. Mohammed Bin Hussain**  
Director  
National Program for Advanced  
Materials and Building Systems,  
King Abdul Aziz City for Science and  
Technology (KACST)



**Prof. In - Joo Chin**  
Professor of Polymer Science and  
Engineering Inha University,  
Korea Selatan



**Prof. Dr. Joseph Davidovits**  
Founder  
Geopolymer Institute  
State Quentin, Perancis



**Prof. Dr. Ali Hussain Reshak**  
Professor, South Bohemia University,  
Czech Republic



**Assoc. Prof. Dr. Kazuhiro Nogita**  
Director  
Nihon Superior Centre for the  
Manufacture of Electronic Materials  
(NS CMEM)  
The University of Queensland,  
Australia



**Prof. Dr. Eng. Petrica VIZUREANU**  
Director  
Department of Technologies and  
Equipment for Materials Processing  
Faculty of Materials Science &  
Engineering Technical University of  
Iasi, Romania



**Assoc. Prof. Dr. Dai Phu Huynh**  
Vice-Director  
National Key Laboratory of Polymer  
and Composite Materials, Vietnam &  
Ho Chi Minh City University of  
Technology, Vietnam

## 4.2 Main Researchers



**Dr. Mohd Mustafa Al Bakri Abdullah**  
Senior Lecturer  
Leader, Geopolymer



**Dr. Khairul Rafezi Ahmad**  
Dean  
School of Materials Engineering



**Assoc. Prof. Dr. Che Mohd Ruzaidi Ghazali**  
Dean  
Centre of Engineering & Innovation & FETech



**Assoc. Prof. Dr. Kairul Nizar Ismail**  
Dean  
School of Environmental Engineering



**Liyana Jamaludin**  
Teaching Engineer  
School of Materials Engineering



**Shaiful Rizam Shamsudin**  
Lecturer  
Leader, Electrochemistry of Green Materials



**Ruhiyuddin Mohd Zaki**  
Lecturer  
Leader, Green Metallurgy



**Faizul Che Pa**  
Senior Lecturer  
Leader, Green Ceramic



**Dr. Luqman Musa**  
Senior Lecturer  
Leader, Green Polymer Recycling



**Dr. Norainiza Saud**  
Senior Lecturer  
Acting Leader, Electronic Materials



**Dr. Ragunathan Santiago**  
Senior Lecturer  
Leader, Geo & Green Environment



**Shayfull Zamree Abd Rahim**  
Senior Lecturer  
Leader, Green Design & Manufacture



## ANNUAL REPORT 2014

Center of Excellence Geopolymer & Green Technology School of Materials Engineering

### 4.3 Associate Researchers



**Mazlan Mohamed**  
Universiti Malaysia Kelantan  
Advanced Materials



**Assoc. Prof. Dr. Aeslina Abdul Kadir**  
Universiti Tun Hussain Onn Malaysia  
Environmental Engineering



**Dr. Andrei Victor Sandu**  
Gheorghe Asachi Technical  
University of Iasi, Romania  
Advanced Materials



**Dr. Ir. Januarti Jaya Ekaputri**  
Institut Teknologi Sepuluh Nopember  
Geopolymer



**Dr. Tran Van Mien**  
Ho Chi Minh City University of  
Technology, Vietnam Geopolymer



**Dr. Xuan Viet Cao**  
Ho Chi Minh City University of  
Technology, Vietnam  
Polymer

### 4.4 Fellow Staffs



**Farah Farhana Zainal**  
PhD Candidate



**Rafiza Abd Razak**  
PhD Candidate



**Zarina Yahya**  
PhD Candidate



**Mohammad Firdaus  
Abu Hashim**  
PhD Candidate



**Wan Mastura Wan Ibrahim**  
PhD Candidate



**Shamala A/P Ramasamy**  
PhD Candidate



**Romisuhani Ahmad**  
PhD Candidate

#### 4.5 Member of Main Researchers

1.	Dr. Azlin Fazlina Osman Geopolymer	26.	Lokman Hakim Ibrahim Green Polymer Recycling
2.	Mohammad Tamizi Selimin Geopolymer	27.	Saiful Nizwan Mohd Salleh Green Polymer Recycling
3.	Dr. Kahtan S. Mohammed Geopolymer	28.	Prof. Azmi Rahmat Electrochemistry of Green Materials
4.	Mukridz Md Mohtar Geopolymer	29.	Dr. Nazree Derman Electrochemistry of Green Materials
5.	Mohd Arif Anuar Mohd Salleh Electronic Packaging Materials	30.	Farah Farhana Zainal Electrochemistry of Green Materials
6.	Azmi Kamardin Electronic Packaging Materials	31.	Dr. Muhammad Asri Idris Electrochemistry of Green Materials
7.	Azida Azmi Electronic Packaging Materials	32.	Nur Maizatul Shima Adzali Electrochemistry of Green Materials
8.	Muhammad Hafiz Zan@Hazizi Electronic Packaging Materials	33.	Rohaya Abdul Malek Electrochemistry of Green Materials
9.	Dr. Norainiza Saud Green Polymer Recycling	34.	Assoc. Prof. Dr. Fazlul Bari Electrochemistry of Green Materials
10.	Nurul Raziana Abdul Razak Electronic Packaging Materials	35.	Kamrosni Abdul Razak Electrochemistry of Green Materials
11.	Dr. Sharifah Shahnaz Syed Bakar Electronic Packaging Materials	36.	Salmie Suhana Che Abdullah Electrochemistry of Green Materials
12.	Haiza Haroon Green Metallurgy	37.	Juyana Wahab Electrochemistry of Green Materials
13.	Dr. Dewi Suriyani Che Halin Green Metallurgy	38.	Norazian Mohamed Noor Geo & Green Environment
14.	Aimi Noorliyana Hashim Green Metallurgy	39.	Norlia Mohamad Ibrahim Geo & Green Environment
15.	Murizam Darus Green Metallurgy	40.	Roshazita Che Amat Geo & Green Environment
16.	Mohd Tajuddin Mohd Idris Green Metallurgy	41.	Dr. Tengku Nuriati Tengku Izhar Geo & Green Environment
17.	Assoc. Prof. Dr. Abdullah Chik Green Ceramic	42.	Dr. Fahmi Muhammad Ridzwan Geo & Green Environment
18.	Noorina Hidayu Jamil Green Ceramic	43.	Dr. Sam Sung Ting Geo & Green Environment
19.	Shahrizam Saad Green Ceramic	44.	Mohd Fathullah Ghazali Green Design & Manufacture
20.	Wan Mohd Arif Wan Ibrahim Green Ceramic	45.	Mohd Nasir Mat Saad Green Design & Manufacture
21.	Dr. Nik Noriman Zulkepli Green Polymer Recycling	46.	Norshah Afizi Shuaib Green Design & Manufacture
22.	Dr. Rozyanty Rahman Green Polymer Recycling	47.	Mohamed Faisol Mohamed Nor Green Design & Manufacture
23.	Muthmirah Ibrahim Green Polymer Recycling	48.	Irfan Abd Rahim Green Design & Manufacture
24.	Muhammad Salihin Zakaria Green Polymer Recycling	49.	Dr. Norhafiza Mohammad Green Design & Manufacture
25.	Ahmad Azrem Azmi Green Polymer Recycling	50.	Mustaqqim Abdul Rahim Geo & Green Environment



# ANNUAL REPORT 2014

Guru of Excellence Green Polymer & Green Technology School of Materials Engineering

## 4.6 Postgraduate Students

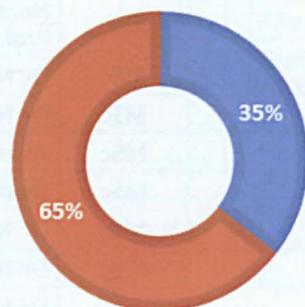
	Name	Program	Supervisor(s)
1.	Shaiful Rizam Shamsudin	PhD	Prof. Dr. Azmi Rahmat Dr. Mohd Nazree Derman
2.	Rafiza Abd Razak	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Khairul Nizar Ismail Assoc. Prof. Dr. Mohd Mustafa Al Bakri
3.	Zarina Yahya	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Khairul Nizar Ismail Assoc. Prof. Dr. Mohd Mustafa Al Bakri
4.	Alida Abdullah	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Mohd Mustafa Al Bakri
5.	Farah Farhana Zainal	PhD	Prof. Dr. Kamarudin Hussin Prof. Dr. Azmi Rahmat
6.	Yusrina Daud	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr Che Mohd Ruzaidi Dr. Azlin Fazlina Osman
7.	Ir Nik Faris Bin Nik Abdullah	PhD	Dr. Nik Noriman Zulkepli
8.	Romisuhani Ahmad	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Mohd Mustafa Al Bakri
9.	Faizul Che Pa	PhD	Assoc. Prof. Dr. Abdullah Chik
10.	Ruhiyuddin Md Zaki	PhD	Assoc. Prof. Dr. Abdullah Chik
11.	Shahrizam Saad	PhD	Assoc. Prof. Dr. Abdullah Chik
12.	Ali Basheer Azeez	PhD	Dr. Kahtan S. Mohammed
13.	Azlinda Binti Abdul Ghani	PhD	Dr. Ragunathan Santiogo
14.	Shamala A/P Ramasamy	PhD	Prof. Dr. Kamarudin Hussin
15.	Wan Mastura Wan Ibrahim	PhD	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr Che Mohd Ruzaidi Assoc. Prof. Dr. Mohd Mustafa Al Bakri
16.	Syed Zafer Firdaus Syed Putra	PhD	Dr. Rozyanti Rahman Dr. Luqman Musa
17.	Mohamad Firdaus Abu Hashim		Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Mohd Mustafa Al Bakri Assoc. Prof. Dr Aeslina Abdul Kadir
18.	Mazlan Mohamed	PhD	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Dr. Rozyanti Rahman
19.	Teoh Pei Ying	PhD	Dr. Ngoc Uy Lan Dr. Rozyanti Rahman
20.	Nur Firdaus Mohamed Yusof	PhD	Assoc. Prof. Dr. Hakimah Osman Dr. Rozyanti Rahman
21.	Meor Ahmad Faris Meor Tajuddin	PhD	Assoc. Prof. Dr. Mohd Mustafa Al Bakri
22.	Emy Aizat Azimi	PhD	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Dr. Liew Yun Ming
23.	Ikmal Hakem Aziz	PhD	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Dr. Heah Cheng Yong
24.	Liyana Jamaludin	MSc	Prof. Dr. Kamarudin Hussin
25.	Zawawi Mahim	MSc	Dr. Norainiza Saud
26.	Flora Somidin	MSc	Dr. Norainiza Saud Mohd Arif Anuar Mohd Salleh
27.	Muhammad Faheem Mohd Tahir	MSc	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr Che Mohd Ruzaidi
28.	Muhd Izzat Ahmad	MSc	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr Che Mohd Ruzaidi
29.	Rita Mohd Said	MSc	Dr. Norainiza Saud
30.	Nor Ain Jaya	MSc	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Assoc. Prof. Dr Che Mohd Ruzaidi

	Name	Program	Supervisor (s)
31.	Zawawi Mahim	MSc	Dr. Norainiza Saud Nurul Razliana Abdul Razak
32.	Sayyidah Amnah Musa	MSc	Dr. Norainiza Saud
33.	Sharifah Aminah Ismail	MSc	Noorina Hidayu Jamil Prof. Dr. Kamarudin Hussin
34.	Norhayanti Mohd Nasir	MSc	Dr. Norainiza Saud
35.	Mohd Izrul Izwan Ramli	MSc	Dr. Norainiza Saud
36.	Fatin Afeeqa Mohd Sobri	MSc	Assoc. Prof. Dr Che Mohd Ruzaidi
37.	Lokman Hakim Bin Ibrahim	MSc	Dr. Nik Noriman Zulkepli
38.	Nik Zakaria Bin Mik Yahya	MSc	Dr. Nik Noriman Zulkepli
39.	Muhammad Ridhwan Bin Jamalul Nasir	MSc	Dr. Nik Noriman Zulkepli
40.	Nur Fatin Binti Mohd Haniff	MSc	Dr. Nik Noriman Zulkepli Mohammad Salihin Zakaria
41.	Afiratul Adilah Binti Adnan	MSc	Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting
42.	Norhafizah Binti Zaharuddin	MSc	Dr. Nik Noriman Zulkepli
43.	Nor Munirah Binti Rohaizad	MSc	Dr. Nik Noriman Zulkepli Mohammad Salihin Zakaria
44.	Mohd Hazwan Bin Subli	MSc	Dr. Nik Noriman Zulkepli Dr. Mohd Firdaus Omar
45.	Ainatun Nadhirah Binti Azmi	MSc	Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting
46.	Mohd Hisham Bin Mokhtar	MSc	Dr. Sam Sung Ting Dr. Nik Noriman Zulkepli
47.	Nur Adibah Binti Mohd Nor	MSc	Dr. Sam Sung Ting Dr. Nik Noriman Zulkepli
48.	Sharifah Zaleha Syed Zubir	MSc	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Prof. Dr. Fauziah Ahmad
49.	Noor Fifinatasha Shahedan	MSc	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Assoc. Prof. Dr Che Mohd Ruzaidi
50.	Lokman Hakim Ibrahim	MSc	Dr. Nik Noriman Zulkepli
51.	Mohd Nasir Mat Saad	MSc	Assoc. Prof. Dr. Khairul Azwan Ismail
52.	Norhamidah Zakaria	MSc	Murizam Darus
53.	Nurul Syafiqah Hasni	MSc	Noorina Hidayu Jamil Assoc. Prof. Dr. Abdullah Chik
54.	Ranggita Dwi Affandi	MSc	Dr. Ragunathan Santiago
55.	Mustaffa Bin Zainal	MSc	Dr. Ragunathan Santiago
56.	Yuhaida Ismail	MSc	Dr. Rozyanti Rahman
57.	Norazian Mohamad	MSc	Dr. Rozyanti Rahman
58.	Haliza Jaya	MSc	Dr. Mohd Firdaus Omar Dr. Nik Noriman Zulkepli
59.	Nur Suhaili Abdul Wahab	MSc	Dr. Mohd Firdaus Omar Dr. Nik Noriman Zulkepli
60.	Siti Norbaya Kasa	MSc	Dr. Mohd Firdaus Omar
61.	Farehah Azmi	MSc	Prof. Dr. Azmi Rahmat
62.	Hazrin Jahidi Jaafar	MSc	Prof. Dr. Azmi Rahmat
63.	Nisrin Adli	MSc	Nurul Razliana Abdul Razak
64.	Ainmardiana Ahmad Basri	MSc	Dr. Sharifah Shahnaz Syed Bakar
65.	Laila Mardiah Deraman	MSc	Assoc. Prof. Dr. Mohd Mustafa Al Bakri Dr. Liew Yun Ming



### PERCENTAGE OF POSTGRADUATE STUDENTS BY COURSES

■ PhD ■ MSc



Graph 1: Percentage of Postgraduate Students by Courses

#### 4.7 Graduated Students



Che Mohd Ruzaidi Ghazali  
PhD



Mohd Mustafa Al Bakri  
PhD



Omar A.K.A Abdulkareem  
PhD



Heah Cheng Yong  
PhD



Liew Yun Ming  
PhD



Alaba Aladeji Araoyinbo  
PhD

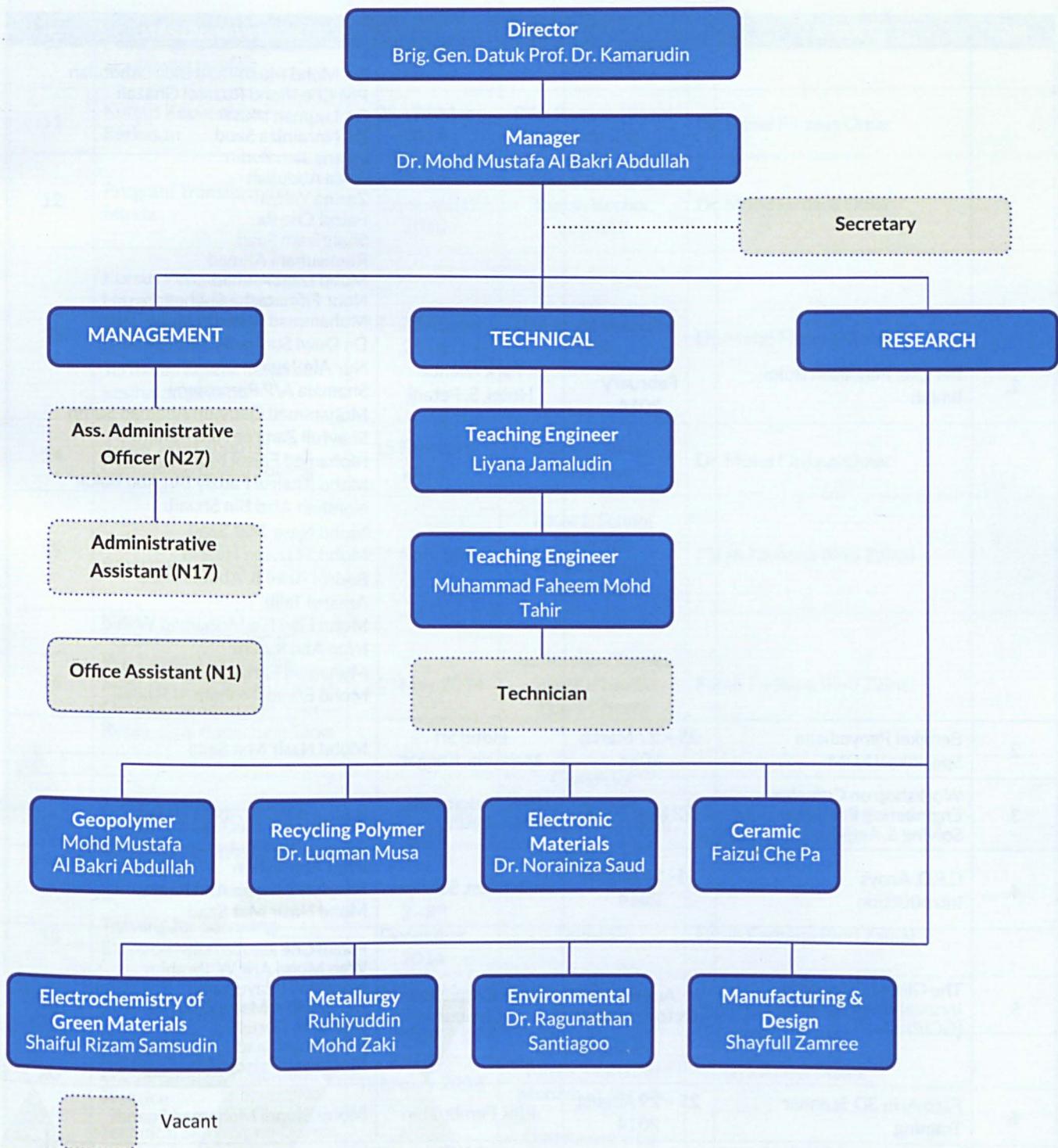


Wan Mastura Wan Ibrahim  
MSc



Zarina Zawawi  
MSc

## 5.0 ORGANISATION CHART CEGeoGTech



## 6.0 MANAGEMENT AND HUMAN RESOURCES

### 6.1 Courses Attended and Organized by CEGeoGTech

NO	COURSES	DATE	VENUE	PARTICIPANT
1.	Bengkel Penulisan Buku Ilmiah	13 – 16 February 2014	Park Avenue Hotel, S. Petani	Dr. Mohd Mustafa Al Bakri Abdullah PM Che Mohd Ruzaidi Ghazali Dr. Luqman Musa Dr. Norainiza Saud Liyyana Jamaludin Alida Abdullah Zarina Yahya Faizul Che Pa Shahrizam Saad Romisuhani Ahmad Muhd Izzat Ahmad Noor Fifinatasha Shahedan Muhammad Faheem Mohd Tahir Dr. Dewi Suriyani Che Halin Nur Ain Jaya Shamala A/P Ramasamy Muhammad Qauyum Ahamad Suffin Shayfull Zamree Abd Rahim Mohamed Faisol Mohamed Nor Mohd Khairul Fadzly Bin Abu Bakar Norshah Afizi Bin Shuaib Mohd Nasir Mat Saad Mohd. Hazwan Hussin Badrul Azmi B. Abdul Holed Amarul Talib Mohd Fitri Bin Mohamad Wahid Irfan Abd Rahim Muhamad Farizuan Rosli Mohd Efendi Mohamad Suandi
2.	Bengkel Penyediaan Spesifikasi FDM	25 – 27 March 2014	Hotel Sri Malaysia, Kangar	Mohd Nasir Mat Saad
3.	Workshop on Complex Engineering Problem Solving & Activities	22 May 2014	PPK Mekatronik, Pauh	Badrul Azmi B. Abdul Holed
4.	C.F.D. Ansys Introduction	11- 14 August 2014	Shah Alam, Selangor	Irfan Abd Rahim Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad
5.	The Global Cleantech Innovation Programme (GCIP)	August – October 2014	SME Corp. Kuala Lumpur	Faizul Che Pa Wan Mohd Arif W. Ibrahim Noorina Hidayu Jamil Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed Nor
6	Faro Arm 3D Scanner Training	25 – 29 August 2014	PPK Pembuatan	Mohd Efendi Mohamad Suandi
7	Training on Ergonomics	29 Sept - 1 Okt 2014	ILQAM UiTM Shah Alam	Muhamad Farizuan Rosli
8	Seminar Hari Buluh Sedunia 2014	29 – 30 September 2014	TH Hotel, Alor Setar, Kedah	Faizul Che Pa Wan Mohd Arif W. Ibrahim Noorina Hidayu Jamil Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed Nor

NO	COURSES	DATE	VENUE	PARTICIPANT
9	Microcontroller Design Introduction Training	22 Nov 2014	Kuala Lumpur	Irfan Abd Rahim
10	Kursus Pengajaran dan pembelajaran untuk staf akademik UniMAP	10 - 18 Februari 2014	Bilik Seminar 1, Taman Kechor, UniMAP	Dr. Mohd Firdaus Omar
11	Kursus Kepimpinan Berkesan	25 - 26 Mac 2014	Bilik Seminar Pusat Kaunseling	Dr. Mohd Firdaus Omar
12	Program Transformasi Minda	9 - 13 December 2013	Bilik Seminar 1, Taman Kechor, UniMAP	Dr. Mohd Firdaus Omar
13	Kursus Pengenalpastian Hazad, Penilaian dan Pengawalan Risiko (HIRARC) Terhadap keselamatan dan kesihatan pekerja	18 - 20 August 2014	Universiti Malaysia Perlis	Dr. Mohd Firdaus Omar
14	1-Day Workshop on Complex Problem Solving	15 February 2014	Marriot Hotel, Putrajaya	Dr. Mohd Firdaus Omar
15	Talk on Journal Writing by American Chemical Society	25 <sup>th</sup> April 2014	DKM1, School Materials Engineering, UniMAP	Farah Farhana Binti Zainal
16	Scopus & ScienceDirect Workshop: Getting the Most out of ScienceDirect & Optimizing Scopus as Your Research & Publishing Tools	21 <sup>th</sup> May 2014	Auditorium Tuanku Syed Faizuddin Putra Library	Farah Farhana Binti Zainal
17	X-Ray Diffraction Hands - on Workshop: Data Analysis using Xpert Highscore Plus	12 - 12 <sup>th</sup> June 2014	Computer Laboratory, Institut Matematik Kejuruteraan UniMAP	Farah Farhana Binti Zainal Rohaya Abdul Malek
18	Training for Scanning Electron Microscope, JEOL	3 - 8 <sup>th</sup> December 2014	UniMAP	Farah Farhana Binti Zainal
19	Research Progress Seminar	6 <sup>th</sup> November 2014	Hotel Bangi- Putrajaya	Juyana Binti A Wahab
20	BEM Mandatory Course- Engineering Management Practice	26 - 27 <sup>th</sup> February 2014	Bilik Seminar Tun Dr Mahathir Mohamad, Seriab.	Rohaya Abdul Malek
21	Technical Seminar on Design and Application of Steel Fiber Reinforced	18 <sup>th</sup> April 2014	IEM Secretariat Penang	Rohaya Abdul Malek
22	BEM Mandatory Course- Code of Ethics and Regulation	28 - 29 <sup>th</sup> April 2-14	Bilik Seminar Tun Dr Mahathir Mohamad, Seriab.	Rohaya Abdul Malek
23	BEM Mandatory Course- Safety and health at work	24-25 <sup>th</sup> June 2014	Bilik Sumber PPK Mekatronik	Rohaya Abdul Malek
24	FESEM Refresher Training	8 - 10 July 2014	Makmal FESEM, PPKB UNIMAP	Shaiful Rizam Shamsudin

NO	COURSES	DATE	VENUE	PARTICIPANT
25	Talk on Advances in Lead - Free Solder Alloys for Micro - Electronic Applications Keynote speaker by Dr. Kazuhiro Nogita	7 April 2014	Meeting room	Mohd Arif Anuar Bin Mohd Salleh Dr. Norainiza Binti Saud Dr. Nazree Bin Derman Nurul Razliana Binti Abdul Razak Mohd Hafiz Bin Zan @ Hazizi Mohd Izrul Izwan Bin Ramli Rita Binti Mohd Said Norhayanti Binti Mohd Nasir Zawawi Bin Mahim
26	Talk on Journal Writing	24 April 2014	Dewan Kuliah Muhibah	Mohd Izrul Izwan Bin Ramli Rita Binti Mohd Said Norhayanti Binti Mohd Nasir Zawawi Bin Mahim
27	X-ray Diffraction Hands - on Workshop: Data Analysis using Xpert High score plus	12-13 Jun 2014	Computer Lab, UniMAP Mathematic Engineering Institute, Pauh.	Mohd Izrul Izwan Bin Ramli Rita Binti Mohd Said

## 6.2 Research Exhibition Attend and Organized by CEGeoGTech

NO	EXHIBITION	DATE	VENUE	PARTICIPANT
1.	Ekspo Rekacipta dan Pameran Penyelidikan UniMAP 2013	7 January 2014	Dewan Pauh Putra, UniMAP	Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Liyana Jamaludin Zarina Yahya Mohd Firdaus Abu Hashim Romisuhani Ahmad Nur Ain Jaya Noor Fifinatasha Shahedan Sharifah Zaliha Syed Zubir Muhammad Faheem Mohd Tahir Muhd Izzat Ahmad Dr. Mohd Firdaus Omar Dr. Kahtan S. Mohammed Ali Basheer Azeez Dr. Rozyanty Rahman Mohd Khairul Fadzly Bin Abu Bakar Norshah Afizi Bin Shuaib Shayfull Zamree Abd Rahim Mohamed Faisol Mohamed Nor Dr. Nik Noriman Zulkepli Dr. Dewi Suriyani Che Halin Alida Abdullah Noorina Hidayu Jamil Faizul Che Pa Wan Mohd Arif W. Ibrahim Rohaya Abdul Malik Dr. Norainiza Saud Nurul Razliana Abdul Razak Zawawi Mahim Aimi Noorliyana Hashim Heah Cheng Yong Mukridz Mokhtar Mohd Nasir Mat Saad Mohd. Hazwan Hussin Badrul Azmi B. Abdul Holed Amarul Talib Mohd Fitri Bin Mohamad Wahid Shaiful Rizam Shamsudin Farehah Azmi Prof. Azmi Rahmat

NO	EXHIBITION	DATE	VENUE	PARTICIPANT
2.	Malaysian Technology Expo (MTE 2013)	20-22 February 2013	PWTC	Dr. Mohd Mustafa Al Bakri Abdullah Farah Farhana Zainal Aimi Noorliyana Hashim Dr. Mohd Firdaus Omar Dr. Norainiza Saud Zawawi Mahim Mohd Izrul Izwan Ramli
3.	National Innovation and Invention Competition Through Exhibition 2014 - iCompEx'14	24 - 25 March 2014	Politeknik Sultan Abdul Halim Mu'adzam Shah, Jitra, Kedah	Faizul Che Pa Dr. Mohd Firdaus Omar
4.	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2013	Moscow, Russia	Che Mohd Ruzaidi Ghazali Dr. Nik Noriman Zulkepli Mohd Fathullah Ghazli @ Ghazali Norshah Afizi Bin Shuaib Mohd
5.	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8 - 10 May 2014	KLCC	Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Liyana Jamaludin Alida Abdullah Zarina Yahya Heah Cheng Yong Romisuhani Ahmad Nur Ain Jaya Liew Yun Ming Mukridz Mokhtar Muhammad Faheem Mohd Tahir Mohamed Faisol Mohamed Nor Muhd Izzat Ahmad Aimi Noorliyana Hashim Noorina Hidayu Jamil Wan Mohd Arif Wan Ibrahim Shahrizam Saad Faizul Che Pa Shayfull Zamree Abd Rahim Mohd Khairul Fadzly Bin Abu Bakar Dr. Kahtan S. Mohammed Ali Basheer Azeez Mohd Nasir Mat Saad Dr. Ragunathan Santiagoo Dr. Sam Sung Ting Dr. Luqman Musa Dr. Rozyanty Rahman Shaiful Rizam Shamsudin Rohaya Abdul Malik Farehah Azmi Prof. Azmi Rahmat
6.	European Exhibition of Creativity and Innovation (EUROINVENT 2014)	9 - 11 May 2014	Iasi, Romania	Dr. Mohd Mustafa Al Bakri Abdullah Dr. Mohd Firdaus Omar Alida Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Mohd Fathullah Ghazli @ Ghazali
7.	International Material Technology Conference & Exhibition (IMTCE)	13 - 16 May 2014	PWTC, Kuala Lumpur	Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Dr. Nik Noriman Zulkepli Alida Abdullah
8.	Korea International Women's Invention Exposition 2014 (KIWIE)	16 - 19 May 2014	Seoul, South Korea	Sharifah Zaliha Syed Zubir Romisuhani Ahmad Aimi Noorliyana Hashim Noorina Hidayu Jamil
9.	Macau International Innovation & Invention Expo 2014	June 2014	Macau	Airmardiana Ahmad Basri



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NO	EXHIBITION	DATE	VENUE	PARTICIPANT
10.	2014 International Youth Invention Contest (IYIC)	6 - 11 August 2014	Seoul, Korea	Alida Abdullah Dr. Mohd Mustafa Al Bakri Abdullah
11.	Pertandingan Rekacipta dan Inovasi Institusi Pengajian Tinggi Swasta (PERINTIS 2014)	10 September 2014	Infrastructure University, K.Lumpur	Romisuhani Ahmad Shamala A/P Ramasamy Noor Fifinatasha Shahedan Nur Ain Jaya Mohd Firdaus Abu Hashim Muhammad Faheem Mohd Tahir Wan Mastura Wan Ibrahim Meor Ahmad Faris Meor Ahmad Tajudin Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali
12.	Intervarsity High Strength Geopolymer Competition (IHGC 2014)	10 - 12 October 2014	Universiti Teknologi Petronas (UTP)	Muhammad Faheem Mohd Tahir Romisuhani Ahmad Noor Fifinatasha Shahedan Shamala A/P Ramasamy Meor Ahmad Faris Meor Ahmad Tajudin Nur Ain Jaya Ali Basheer Azzez Muhammad Firdaus Abu Hashim Laila Mardiah Deraman Sharifah Zaliha Syed Zubir Farah Farhana Zainal Wan Mastura Wan Ibrahim
13.	MyInovasi 2014	16 October 2014	Putrajaya	Badrul Azmi B. Abdul Holed Irwan Abd Rahim
14.	British Invention Show (BIS)	22 - 25 October 2014	London, United Kingdom	Dr. Mohd Mustafa Al Bakri Abdullah
15.	Malaysian Road Conference - Invention & Innovation Exhibition (MRC-IIE) 2014	10 - 12 November 2014	Sunway Pyramid Convention Centre	Muhammad Faheem Mohd Tahir Rafiza Abd Razak Sharifah Zaliha Syed Zubir
16.	BioMalaysia Conference & Exhibition 2013	19 - 21 November 2014	KLCC, Kuala Lumpur	Wan Mohd Arif W. Ibrahim Noorina Hidayu Jamil Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed Nor Dr. Ragunathan Santiagoo Dr. Mohd Firdaus Omar
17.	The 8th International Exhibition of Inventions Kunshan - IEIK 2014	19 - 22 November 2014	Kunshan, China	Dr. Mohd Mustafa Al Bakri Abdullah Shayfull Zamree Abd Rahim Wan Mohd Arif Wan Ibrahim Dr. Norhafiza Mohammad
18.	Program Inovasi MARA	26 November 2014	Dewan 2020, Kangar	Mohd Khairul Fadzly Bin Abu Bakar Mohd Nasir Mat Saad
19.	Seoul International Invention Fair (SIIF 2013)	28 November - 1 December 2014	COEX, Seoul, Korea	Dr. Rozyanty Abd Rahman Dr. Ragunathan Santiagoo
20.	Green Technology Research Exposition (GTReX 2014)	4 Disember 2014	Duxton Hotel Saigon, Vietnam	Aimi Noorliyana Hashim Dr. Mohd Firdaus Omar Laila Mardhiah Deraman Noor Fifinatasha Shahedan Meor Ahmad Faris Meor Tajudin Yusrina Daud Mohd Izrul Izwan Ramli Norhayamti Mohd Nasir Rita Mohd Said Dr. Nazree Derman Mohd Arif Anuar Mohd Salleh

NO	EXHIBITION	DATE	VENUE	PARTICIPANT
21.	Kaohsiung International Invention Exhibition (KIE 2014)	19 – 21 December 2014	Kaohsiung, Taiwan	Dr. Mohd Mustafa Al Bakri Abdullah Dr. Liew Yun Ming Shamala A/P Ramasamy
22.	Exhibition of Non-Destructive Test Technology	16th December 2014	School Materials Engineering, UniMAP	Farah Farhana Binti Zainal

### 6.3 Conference Attend and Organized by CEGeoGTech

NO	CONFERENCE	DATE	VENUE	PARTICIPANT
1.	International Postgraduate Conference on Engineering & Management (IPCEM)	25 - 26 <sup>th</sup> January 2014	UniMAP Pauh Putra	Farah Farhana Binti Zainal
2.	Malaysia – Indonesia Geopolymer Symposium (MIGS 2014)	11 - 12 May 2014	PWTC, Kuala Lumpur	Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Liyana Jamaludin Alida Abdullah Zarina Yahya Heah Cheng Yong Liew Yun Ming Romisuhani Ahmad Nur Ain Jaya Noor Fifinatasha Shahedan Wan Mastura Wan Ibrahim Mukridz Mokhtar Muhammad Faheem Mohd Tahir Muhd Izzat Ahmad Shamala A/P Ramasamy Rafiza Abd Razak Farah Farhana Zainal Yusrina Daud
3.	The 4th International Malaysia - Ireland Joint Symposium on Engineering, Science and Business 2014 (IMiEJS2014)	25 - 26 June 2013	Penang, Malaysia	Liyana Jamaludin Alida Abdullah Mohd Izrul Izwan Ramli Norhayati Mohd Nasir Rita Mohd Said Zawawi Mahim Syyidah Amnah Musa
4.	International Conference of Functional Materials and Metallurgy 2014 (ICoFM 2014)	17 - 18 September 2014	Flamingo Hotel, Penang	Dr. Rozyanty Rahman Shaiful Rizam Shamsudin Rohaya Abdul Malik Juyana Wahab Nurul Razliana Abdul Razak Mohd Izrul Izwan Ramli Norhayati Mohd Nasir
5.	8 <sup>th</sup> MUCET 2014	10 – 11 November 2014	Melaka	Dr. Mohd Firdaus Omar
6.	Advanced Material Conference (AMC)	25 - 26 November 2014	Bayview Hotel, Langkawi	Dr. Ragunathan Santiago Azlinda Abdul Ghani

NO	CONFERENCE	DATE	VENUE	PARTICIPANT
7.	International Conference on Advanced Materials and Engineering Technology (ICAMET 2014)	4 – 5 December 2014	Ho Chi Minh, Vietnam	Prof Dr. Kamarudin Hussin Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Rafiza Abd Razak Zarina Yahya Alida Abdullah Dr. Khairel Rafezi Ahmad Nor Fifinatasya Shahidan Faizul Che Pa Muhammad Qauyum Zawawi Meor Ahmad Faris Meor Tajudin Shayfull Zamree Abd Rahim Nur Ain Jaya Dr. Du Ngoc Uy Lan Yusrina Daud Heah Cheng Yong Liew Yun Ming Mohd Nasir Mat Saad Dr. Mohd Firdaus Omar Mohd Izrul Izwan Ramli Norhayamti Mohd Nasir Rita Mohd Said Syyidah Amnah Musa Fatin Afeeqa Mohd Sobri Mohd Arif Anuar Mohd Salleh Dr. Mohd Nazree Derman
8.	Scientific Conference of Microscopy Society Malaysia (SCMSM)	10 – 12 December 2014	Universiti Teknologi Petronas	Dr. Ragunthan Santiago Mustaffa Zainal

## 7.0 INTERNATIONAL AND NATIONAL RESEARCH GRANTS

### 7.1 International Grants

NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
1.	Nanocomposite to Expand Applications of Non - Metallic Materials	Saudi Aramco Oil & King Abdul Aziz City for Science and Technology (KACST)	RM 2.2 million	December 2012 - December 2015	PM Dr. Che Mohd Ruzaidi Ghazali Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Norazian Mohamed Noor Dr. Azlin Fazlina Osman Mohd Arif Anuar Mohd Salleh Liyana Jamaludin
2.	Skill Development on Product Design Engineering and Prototype Fabrication from Rubber Mold	Industry Grant	RM 30,000.00	April 2013 - April 2016	Shayfull Zamree Bin Abd. Rahim Mohd Nasir Mat Saad Professor Dr. Kamaruddin Hussin Mohd Mustafa Al Bakri Abdullah Mohamed Faisol Mohamed Nor Mohd Fathullah Ghazli @ Ghazali Irfan Abd. Rahim Norshah Afizi Shuaib
3.	Consultancy on Analysis of Plastic Material Flow into Injection Molds and Optimize the Injection Molding Parameters	Industry Grant	Rm 35,000.00	April 2013 - April 2016	Shayfull Zamree Bin Abd Rahim Mohd Nasir Mat Saad Professor Dr. Kamaruddin Hussin Mohd Mustafa Al Bakri Abdullah Mohamed Faisol Mohamed Nor Mohd Fathullah Ghazli @ Ghazali Irfan Abd. Rahim Norshah Afizi Shuaib
4.	The Development of Grinding Technology Optimization and The Investigation of Aluminium Surface Oxidation.	KPTech - UniMAP Research Project Jepun	RM 200,000	November 2013 - October 2014	Noorina Hidayu Jamil PM. Che Mohd Ruzaidi Ghazali PM. Dr. Abdullah Chik Dr. Mohd Nazree Derman Dr. Zuraidawani Che Daud Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Juyana A. Wahab Wan Mohd Arif W. Ibrahim Mohamed Faisol Mohamed Nor
5.	Development of Composite Lead - Free Solder (Students Sponsorship)	International Industrial Grant by Nihon Superior Co. Ltd Jepun	RM 218,000	2013 - 2014	Mohd Mustafa Al Bakri Abdullah Mohd Arif Anuar Mohd Salleh Norainiza Saud Kamarudin Hussin Che Mohd Ruzaidi Ghazali Sharifah Shahnaz Syed Bakar Muhammad Hafezi Zan Flora Somidin Azmi Kamardin
6.	Development of Composite Lead - Free Solder	International Industrial Grant by Nihon Superior Co. Ltd Jepun	RM 120,000	2013 - 2016	Mohd Mustafa Al Bakri Abdullah Mohd Arif Anuar Mohd Salleh Norainiza Saud Kamarudin Hussin Che Mohd Ruzaidi Ghazali Sharifah Shahnaz Syed Bakar Muhammad Hafezi Zan Flora Somidin Azmi Kamardin



NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
7.	Lightweight Brick With Geopolymer System Using Fly Ash and Bottom Ash From Indonesia	International Industrial Grant by Aneka Teknik Indonesia	RM 80,000	March 2013 - March 2014	Mohd Mustafa Al Bakri Abdullah Muhammad Faheem Mohd Tahir Sonny Natali Prof. Dr. Kamarudin Hussin Assoc. Prof. Che Mohd Ruzaidi Ghazali Assoc. Prof. Dr. Khairul Nizar Ismail Wan Mastura Wan Ibrahim Alida Abdullah Dr. Aeslina Abd Kadir
					RM 2,883,000

## 7.2 National Grants

NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
1.	Fundamental Study on structural, mechanical, optical and electrical properties of green glass composite from rice husk and palm ash formed at lower temperature	Fundamental Research Grant Scheme (FRGS)	RM 105,000	January 2014 - December 2016	Shahrizam Saad PM. Dr. Abdullah Chik Noorina Hidayu Jamil Faizul CHe Pa Ruhiyuddin Mohd Zaki Murizam Darus Wan Mohd Arif W. Ibrahim
2.	New Technique for Soil Stabilization Using Geopolymerization Method	Fundamental Research Grant Scheme (FRGS)	RM 122,000	January 2014 - December 2016	Dr. Mohd Mustafa Al Bakri PM Che Mohd Ruzaidi Ghazali Dr. Norazian Mohamed Noor Alida Abdullah
3.	Correlation Studies of Processing Parameter and Properties of Continuous Fiber Geopolymer Composite via Filament Winding Process	Fundamental Research Grant Scheme (FRGS)	RM 119,000	January 2014 - December 2016	PM Che Mohd Ruzaidi Ghazali Dr. Mohd Mustafa Al Bakri Prof Dr. Kamarudin Hussin Alida Abdullah
4.	Sustainable Construction Product Development To Meet The highway, Transport & Society Related Environmental Challenges	MTUN Grant	RM 86,000.00	25 June 2012 - 24 Jun 2014	Dr. Rozyanty Rahman
5.	Experimental and numerical predictions on rate sensitivity properties of particulate natural filler reinforced composites	Fundamental Research Grant Scheme (FRGS)	RM 113,000	2013 - 2014	Dr. Mohd Firdaus Omar Dr. Nik Noriman Zulkepli
6.	The Utilization of Durian Husk and Seed As A Bio Polymer Renewable Material For The Commercial Production Of Biodegradable And Compostable Packaging Products	Knowledge Transfer Programme, KTP 'Flagship Project - Industry'	RM 47,000.00	2012 - 2014	Dr. Rozyanty Rahman

NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
7.	Dynamic mechanical behaviour and strain rate sensitivity of natural fiber reinforced composites: A new paradigm of properties measurement and prediction	Research Acculturation Collaborative Effort (RACE), Kementerian Pengajian Tinggi	RM 50,000	2014 - 2016	Dr. Mohd Firdaus Omar Dr. Nik Noriman Zulkepli
8.	Development of new knee surface for total joint replacement	Insetif Jurnal Penyelidikan	RM 15,000	2014 - 2015	Dr. Mohd Firdaus Omar
9.	Rate sensitivity of polymeric materials under various loading rates	Insetif Jurnal Penyelidikan	RM 15,000	2014 - 2015	Dr. Mohd Firdaus Omar
10.	Preparation of Ultra Low Thermal Conductivity RH - Glass as a Coating Material Developed from Agricultural Waste	Research Acculturation Collaborative Effort (RACE), Kementerian Pengajian Tinggi	RM 53,000.00	January 2014 - December 2015	Noorina Hidayu Jamil Prof. Madya Dr. Abdullah Chik Dr. Yeoh Cheow Keat Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Wan Mohd Arif W. Ibrahim Shahrizam Saad Prof Zainal Arifin Ahmad
11.	Fundamental Study of Geopolymer Materials as Protection Coatings Application	Research Acculturation Collaborative Effort (RACE), Kementerian Pengajian Tinggi	RM 44,000	November 2012 - November 2014	Mohd Mustafa Al Bakri Abdullah Prof. Madya Dr. Azura A. Rashid PM Che Mohd Ruzaidi Ghazali Mohd Arif Anuar Mohd Salleh Liyan Jamaludin Alida Abdullah
12.	Study of Electromagnetic Wave Absorption in Recycled Glass Doped with Conductive Elements	RAGS Grant, Kementerian Pengajian Tinggi	RM 56,300	2013 - 2015	PM Abdullah Chik Shahrizam Saad
13.	Structure and Property Correlation of $Ba_{1-x}Sr_xCo_1-Y FeYO_2$ as a Cathode for Intermediate - Temperature Solid Oxide Fuel Cell (IT - SOFC)	RAGS Grant Kementerian Pengajian Tinggi	RM 61,300.00	December 2012 - December 2014	Murizam Bin Darus Dr. Mohd Sobri Idris Dr. Rozana Aina Osman Dr. Muhammad Asri Idris Faizul Che Pa Ruhiyuddin Mohd Zaki Nurhamidah Zakaria
14.	Fundamental Study on Mud Volcano As Artificial Aggregate Using Geopolymer Method	Research Acculturation Collaborative Effort (RACE), Kementerian Pengajian Tinggi	RM 42,800	November 2012 - November 2014	PM Che Mohd Ruzaidi Ghazali Mohd Mustafa Al Bakri Prof. Dr. Ir. Wan Hamidon Wan Badaruzzaman Prof. Madya Dr. Zulkifli Mohamad Ariff Rafiza Abdul Razak Zarina Yahya
15.	Synthesis of Economical and Green Xylitol From Biomass in Enzymatic Membrane Reactor by Locally Produced Xylose Reductase	COE MTUN Grant Kementerian Pengajian Tinggi	RM 51,600	June 2012 - June 2014	Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Prof. Madya Che Mohd Ruzaidi Ghazali
16.	Exploratory on An Innovation Hybrid Microwave Asisted Rapid Sintering Process for Fabrication of Nanocomposite Solder Material	ERGS Grant Kementerian Pengajian Tinggi	RM 50,000	June 2012 - June 2014	Mohd Arif Anuar Mohd Salleh Prof. Dr. Zainal Ariffin Ahmad Dr. Nik Noriman Zulkepli Mohd Mustafa Al Bakri Abdullah Muhammad Hafiz Hazazi @ Zan



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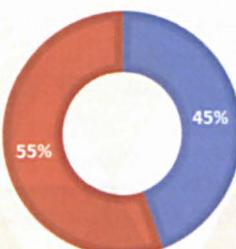
Center of Excellence Development & Green Technology School of Chemical Engineering

NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
17.	Natural Organic Surface Finish For Electronic Metallization Applications	KPT Grant Kementerian Pengajian Tinggi	RM 126,000	July 2012 - July 2014	Mohd Arif Anuar Mohd Salleh Dr. Nik Noriman Zulkepli Mohd Mustafa Al Bakri Prof. Dr. Zainal Ariffin Ahmad
18.	Development of a Novel Green Nanocomposite Solder	KPT Grant Kementerian Pengajian Tinggi	RM145,000	July 2012 - July 2014	Dr. Sharifah Shahnaz Syed Abu Bakar Mohd Arif Anuar Mohd Salleh Mohd Mustafa Al Bakri Dr. Nik NorimanZulkepli Muhammad Hafiz Hazazi @ Zan
19.	Kinetic studies of Biodegradable Thermoplastic Polymer for Recycling Activities	FRGS Grant Kementerian Pengajian Tinggi	RM 65,000	19 April 2013 - April 2015	Dr. Raganathan Santiagoo P.M. Dr. Khairul Nizar Ismail Roshazita Che Amat Dr. Sam Sung Ting Dr. Nasrul Hamidin
20.	Study on Binding Properties of Bottom Ash from Malaysia Municipal Solid Waste Incineration	FRGS Grant Kementerian Pengajian Tinggi	RM 48,450	June 2012 - June 2014	Roshazita Che AMat Norlia Mohamad Ibrahim Dr. Khairel Rafezi bin Ahmad Nur Liza Rahim
21.	Preparation and Properties of Biodegradable Polymer with Spear Grass as Pro- oxidant	ERGS Kementerian Pengajian Tinggi	RM 73,000	1 June 2012 - June 2014	Dr. Sam Sung Ting Dr. Nik Noriman bin Zulkepli Mohd Salihin Zakaria
22.	AgroPlast - Production of Low Cost Biodegradable Mulch Film for Agricultural Application	Knowledge Transfer Programme (KTP)	RM 104,000	November 2013 - 2015	Dr. Sam Sung Ting Dr. Nik Noriman bin Zulkepli Mohd Salihin Zakaria
23.	Fundamental Study of Robust Novel Lead - Free Zn-Sn-Al- Mg/Si3N4 Hybrid Nanocomposite High Temperature Solder Under Thermal Cyclic Loading	RAGS Grant Kementerian Pengajian Tinggi	RM 48,000	December 2012 - December 2014	Dr. Norainiza Saud Dr. Nazree Derman Mohd Nazree Derman
24.	Isolation and characterization bacteria degrading PHA-paddy straw biocomposites in composted soil	FRGS Grant Kementerian Pengajian Tinggi	RM 61,000	1 November 2013 - 2015	Dr. Sam Sung Ting Dr. Nik Noriman bin Zulkepli Dr. Ragunathan A/L Santiagoo Khadijah Hanim binti Abdul Rahman Mohamad Fahrurrazi Tompong
25.	Fundamental Study on Interaction Behaviour between Hydrated Lime and CO2 using Novel Technology: Turbo - Mixing Reactive Precipitation	RAGS Grant Kementerian Pengajian Tinggi	RM 49,200	August 2013 - August 2015	Aimi Noorliyana Hashim
26.	A Study on Physical Separation Processes of Comminution Fines Waste Printed Circuit Boards	STG (9001 - 00347)	RM 11,000	2012 - 2013	Aimi Noorliyana Hashim

NO.	RESEARCH TITLE	TYPE OF GRANT	VALUE	DURATION	NAME OF RESEARCHER
27.	Pyrolysis of Novel Biobased Filler From Dendrocalamus Pendulus For Rubber Compounding	RAGS Grant Kementerian Pengajian Tinggi	RM 53,000	October 2013 – October 2015	Mohd Salihin Zakaria
28.	Derivation of Carbon Nanowires from Electrospinning of Photoresist Polymer.	Fundamental Research Grant Scheme (FRGS)	RM 100,000	January 2014 - January 2016	Dr. Sharifah Shahnaz Syed Bakar
29.	Study on Corrosion Protection in High Resistivity Environmental Medium by Serial Galvanic Cell	RAGS Grant Kementerian Pengajian Tinggi	RM 48,000	2013 - 2015	Rohaya Abdul Malek Khairel Rafezi Ahmad Azmi Rahmat
30.	Corrosion Study on Sn-9(Al-Zn) Solder via Potentiodynamic Polarization	RAGS Grant Kementerian Pengajian Tinggi	RM 60,000	2014 - 2016 (2 tahun)	Muhammad Firdaus Mohd Nazeri
31.	Study on Impurities Kinetic at Surface-Interface Region for Enhancement of Photocatalytic Activity of TiO <sub>2</sub> Solid Oxide in Water Splitting Process.	FRGS Grant Kementerian Pengajian Tinggi	RM 103,000	2014 - 2016 (3 tahun)	Muhammad Asri Idris
32.	Optimization of Novel Electroless cobalt nanoparticles deposit onto hydroxyapatite powder without sensitization and activation steps.	FRGS Grant Kementerian Pengajian Tinggi	RM 135,000	2 tahun 2014 - 2016	Azmi Rahmat
33.	Intermetallic Compound Growth Mechanism of SnCu Based Composite solder during Thermal Cyclic Loading for High Temperature Application in Semiconductor Packaging	FRGS Grant Kementerian Pengajian Tinggi	RM 101,000	June 2014 - June 2017	Nurul Razliana Abdul Razak Dr. Norainiza Saud Dr. Mohd Nazree Derman
			RM 2,318,850		

### PERCENTAGE OF INTERNATIONAL AND NATIONAL GRANTS

■ National ■ International



Graph 2: Percentage of International and National Grants



## 8.0 PUBLICATIONS

### 8.1 Journals

NO	TITLE OF PAPER	INDEX & IF
1.	Irfan Abd Rahim, Mohd Zarhamdy Mohd Zain and Nor Zelawati Asmuin. Study on Energy Converter from Waste Heat Automobile Engine (2014) Applied Mechanics and Materials 663 pp 317-321	Scopus
2.	Nasir, S.M., Ismail, K.A, Shayfull, Z., Shuaib, N.A., Comparison between single and multigates for minimization of warpage using taguchi method in injection molding process for ABS material (2014) Key Engineering Materials, v. 594-595, pp. 842- 851.	Scopus
3.	Shuaib, N.A., Fathullah, M., Shayfull, Z., Nasir, S.M., Hamzas M.F.M.A. Warpage analysis between straight and conformal cooling channels on thin shallow shell, Key Engineering Material, 2014, volume 594-595, pp 676 - 685.	Scopus
4.	Nur Ismalina Haris, Md. Saidin bin Wahab, Amarul Talip. Failure Analysis of Conveyor Chain Links: A Case Study Applied Mechanics and Materials (ISSN 1660-9336) Volume 465-466, 2014, Pages 725-729	Scopus
5.	Z. Shayfull, S. Sharif, Azlan Mohd Zain, M.F. Ghazali and R. Mohd Saad Potential of Conformal Cooling Channels in Rapid Heat Cycle Molding: A Review, Advances in Polymer Technology, Vol.33, 1, 2014.	Scopus IF: 2.147
6.	Z. Shayfull, S. Sharif, Azlan Mohd Zain, R. Mohd Saad and M.A. Fairuz, Warpage analysis with straight drilled and conformal cooling channels on front panel housing by using taguchi method, Key Engineering Materials 594, 593-603, 2014.	Scopus
7.	Shahrizam Saad, Faizul Che Pa, Mohd Mustafa Al-Bakri Abdullah, Ruhiyuddin Mohd Zaki and Murizam Darus, Effect of Pyrolysis Temperature on The Synthesis of Carbon Fiber from Natural Organic Waste, Key Engineering Materials Vols. 595-595 (2014), pp. 128-132.	Scopus
8.	C.P. Faizul, C. Abdullah, B. Fazlul and H.J. Noorina, Extraction of Silica from Palm Ash using Organic Acid Leaching Treatment, Key Engineering Materials Vols. 595-595 (2014), pp. 329-333.	Scopus
9.	H.J. Noorina, W.H. Xian, W.M. Arif, C.P. Faizul and M.Z. Ruhiyuddin, Production of Silicon Carbide via Grinding and Heat Treatment Process, Key Engineering Materials Vols. 595-595 (2014), pp. 740-744.	Scopus
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## 8.2 Books

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4.	Mohd Mustafa Al Bakri Abdullah, Liyana Jamaludin, Muhammad Faheem Mohd Tahir & Mohd Najmuddin Mohd Hassan, (2014), <b>Engineering and Technology Research</b> , Trans Tech Publication, Switzerland (ISSN 1660-9336)
5.	Badrul Azmi Abdul Holed, Muhamad Farizuan Rosli, Mohd Effendi Muhammad Suandi, Norshah Afizi Bin Shuaib (2014), <b>Sejarah Seni dan Apresiasi Rekabentuk</b> , Penerbitan UniMAP
6.	Alida Abdullah, Shahrizam Saad, Abdullah Chik, Mohd Mustafa Al Bakri Abdullah & Muhammad Qauyum Zawawi Ahamad Suffin (2014), <b>Asas Seramik</b> , Penerbitan UniMAP.
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8.	Luqman Musa, Rozyanty Rahman, Muthmirah Ibrahim, Nur Firdaus Mohamed (2014) <b>Pemprosesan Polimer Termoset</b> , Penerbitan UniMAP
9.	Sam Sung Ting, Nik Noriman Zulkepli, Mohd Firdaus Omar (2014) <b>Polimer Terbiodegradasi</b> , Penerbitan UniMAP
10.	Nik Noriman Zulkepli, Sam Sung Ting, Mohd Firdaus Omar (2014) <b>Asas Teknologi Getah</b> , Penerbitan UniMAP

## 8.3 Proceedings

1.	S. M. Nasir, K.A. Ismail, Z. Shayfull, M.A. Fairuz, "Warpage Analysis of Single and Dual Gates Designed for Injection Moulding using Response Surface Methodology", <i>The 3<sup>rd</sup> The International Conference on Advanced Material Engineering &amp; Technology 2014 (ICAMET 2014)</i> , 4 – 5 December 2014, Ho Chi Minh City, Vietnam.
2.	Faizul Che Pa, Abdullah Chik & MD. Fazlul Bari, "Synthesis of Zeolites from Treated Oil Palm Ash", <i>The 3<sup>rd</sup> International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam.
3.	Syarifah Aminah Ismail, Noorina Hidayu Jamil, H. Kamarudin and Mohd Arif Anuar Mohd Salleh, "Extraction of Tin (Sn) from Solder Dross by using Hydrochloric Acid Leaching Treatment", <i>The 3<sup>rd</sup> International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam.
4.	Syarifah Aminah Ismail, Noorina Hidayu Jamil, H. Kamarudin and Mohd Arif Anuar Mohd Salleh, "Extraction of Tin (Sn) from Solder Dross by using Citric Acid Leaching Treatment", <i>The 3<sup>rd</sup> International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam.
5.	A. Chik, S. Saad, C.K. Yeoh, R. M. Zaki and F. Che Pa, "Ab initio Calculations of Electronic and Magnetic Properties of ALMnO <sub>3</sub> Perovskite Manganites", <i>The 3<sup>rd</sup> International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam
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7.	A. Chik, S. Saad, F. Che Pa, C.K. Yeoh and R. M. Zaki, "First Principles Calculations of Magnetic Properties of LaMnO <sub>3</sub> and La <sub>2/3</sub> Al <sub>1/3</sub> MnO <sub>3</sub> Perovskite Manganites", <i>The 3rd International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam.
8.	Shahrizam Saad, "Effect of Sintering Temperature on the Properties of Carbon Fiber Reinforced Copper-Zinc Alloy Composite", <i>The 3rd International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Ho Chi Minh City, Vietnam.
9.	Azlinda Abdul Ghani, Ragunathan Santiago, Tunku Alisha Zanariah Tunku Ozir, Sam Sung Ting, Hanafi Ismail, "Effects of APS silane on tensile properties of Polypropylene (PP)/ Recycled Acrylonitrile Butadiene Rubber (NBRr)/ Banana Skin Powder (BSP) Composites" <i>Advanced Material Conference (AMC)</i> , 25 <sup>th</sup> -26 <sup>th</sup> November 2014, Bayveiw Hotel, Langkawi, Malaysia
10.	Azlinda Abdul Ghani, Ragunathan Santiago, Tunku Alisha Zanariah Tunku Ozir, Sam Sung Ting, Hanafi Ismail, "Chemical Reaction and Morphology of Polypropylene (PP)/ Recycled Acrylonitrile Butadiene Rubber (NBRr)/ Banana Skin Powder (BSP) Composites with $\gamma$ -APS" <i>Advanced Material Conference (AMC)</i> , 25 <sup>th</sup> -26 <sup>th</sup> November 2014, Bayveiw Hotel, Langkawi, Malaysia.
11.	Ragunathan Santiago, Mustaffa Zainal2, Sam Sung Ting1, Hanafi Ismail, Sarah Ramli, "Effect of Polypropylene Maleic Anhydride (PPMAH) as a Compatibilizer in Polypropylene (PP)/ Sugarcane Bagasse (SCB) Composites" <i>International Conference on Advanced Material Engineering &amp; Technology (ICAMET)</i> , 4 <sup>th</sup> -5 <sup>th</sup> December 2014, Ho Chi Minh, Vietnam.
12.	Ragunathan Santiago, Sam Sung Ting, Azlinda Abdul Ghani, Hanafi Ismail, Awiezan Mislan" Effects of Epoxidized Nature Rubber on High Density Polyethylene/ Recycled Acrylonitrile Butadiene Rubber/ Banana Skin Powder Composites" <i>International Conference on Advanced Material Enggining &amp; Technology (ICAMET)</i> , 4 <sup>th</sup> -5 <sup>th</sup> December 2014, Ho Chi Minh, Vietnam.
13.	Nurliayana Ariffin, Ragunathan Santiago, Sam Sung Ting, Hanafi Ismail" Effects of Oven Ageing on Linear Low Density Polyethylene (LLDPE)/ Recycled Acrylonitrile Butadiene Rubber (NBRr)/ Rice Husk Powder (RHP) Composites" <i>International Conference on Advanced Material Enggining &amp; Technology (ICAMET)</i> , 4 <sup>th</sup> -5 <sup>th</sup> December 2014, Ho Chi Minh, Vietnam.
14.	Ragunathan Santiago, Kamarudin Hussin, Sam Sung Ting, Azlinda Abdul Ghani, Hanafi Ismail, Amirul Faiz Hashim" Properties of High Density Polyethylene (HDPE)/ Recycled Acrylonitrile Butadiene Rubber (NBRr)/ Banana Skin Powder (BSP) Composites: Oven Ageing" <i>International Conference on Advanced Material Enggining &amp; Technology (ICAMET)</i> , 4 <sup>th</sup> -5 <sup>th</sup> December 2014, Ho Chi Minh, Vietnam.
15.	Ragunathan Santiago, Sam Sung Ting, Hanafi Ismail, Mastura Jaafar" Tensile Properties of Linear Low Density Polyethylene (LLDPE)/ Recycled Acrylonitrile Butadiene Rubber (NBRr)/ Rice Husk Powder (RHP) Composites" <i>International Conference on Advanced Material Enggining &amp; Technology (ICAMET)</i> , 4 <sup>th</sup> -5 <sup>th</sup> December 2014, Ho Chi Minh, Vietnam.
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17.	Ragunathan Santiago, Latifah Omar, Mustaffa Zaina, Sam Sung Ting, Hanafi Ismail, "Effects of Aminopropyltriethoxysilane ( $\gamma$ -APS) on Tensile Properties and Morphology of Polypropylene (PP), Recycle Acrylonitrile Butadiene Rubber (NBRr) and Sugarcane Bagasse (SCB) Composites" <i>Scientific Conference of Microscopy Society Malaysia (SCMSM)</i> , 10 <sup>th</sup> -12 <sup>th</sup> December 2014, Unveristi Teknologi PETRONAS, Perak, Malaysia.
18.	Mohd Firdaus Omar, Mohamad Hazwan Subli, Nik Noriman Zulkepli, Mohd Mustafa Al Bakri, Sam Sung Ting. Experimental Investigation on Mechanical and Morphology Properties of Ultra-High Molecular Weight Polyethelene (UHMWPE)/ Chitosan-Zinc Oxide (ZnO) Hybrid Composites (2014) 8 th <i>MUCET 2014</i> , Melaka, Malaysia
19.	Noor Fifnatasha Shahedan, Mohd Mustafa Al Bakri Abdullah, Che Mohd Ruzaidi Ghazali, Kamarudin Hussin, Mohammed Binhussein, Mohammed Al Husaini, Siti Salwa. Comparison Characterization of Geopolymer Source Materials for Coating Application <i>The 3rdThe International Conference on Advanced Material Engineering &amp; Technology 2014 (ICAMET 2014)</i> , 4 - 5 December 2014, Ho Chi Minh City, Vietnam.
20.	A. R. Rafiza, A.M. Mustafa Al Bakri, H. Kamarudin, I. Khairul Nizar, D. Hardjito, W.H. Wan Badaruzzaman, and Y. Zarina, "Mechanical Properties of Artificial Lightweight Geopolymer Aggregate (ALGA) Concrete using Volcano Mud with Various Sintering Temperature", <i>The 3rd International Conference on Advanced Material Engineering &amp; Technology 2014 (ICAMET 2014)</i> , 4 - 5 December 2014, Ho Chi Minh City, Vietnam.
21.	Ali Basheer Azeez, Kahtan S. Mohammed and A. M. Mustafa Al Bakri, Kamarudin Hussin; The influence of Boron on the Radiation Shielding performance of Concretes; <i>International Postgraduate Conference on Engineering and Management 2014, (IPCEM2014)</i> , 25 - 26 January 2014 at Lecture Hall Complex Unimap, Pauh, Perlis.
22.	Kahtan S. Mohammed, Ali Basheer Azeez, A. M. Mustafa Al Bakri, Kamarudin Hussin, and Azmi B. Rahmat; Effect of particle size of W-brass composite on gamma-ray absorption coefficient; <i>The 3rd International Conference on Advanced Material Engineering &amp; Technology 2014(ICAMET 2014)</i> , 4 - 5 December 2014, Ho Chi Minh City, Vietnam



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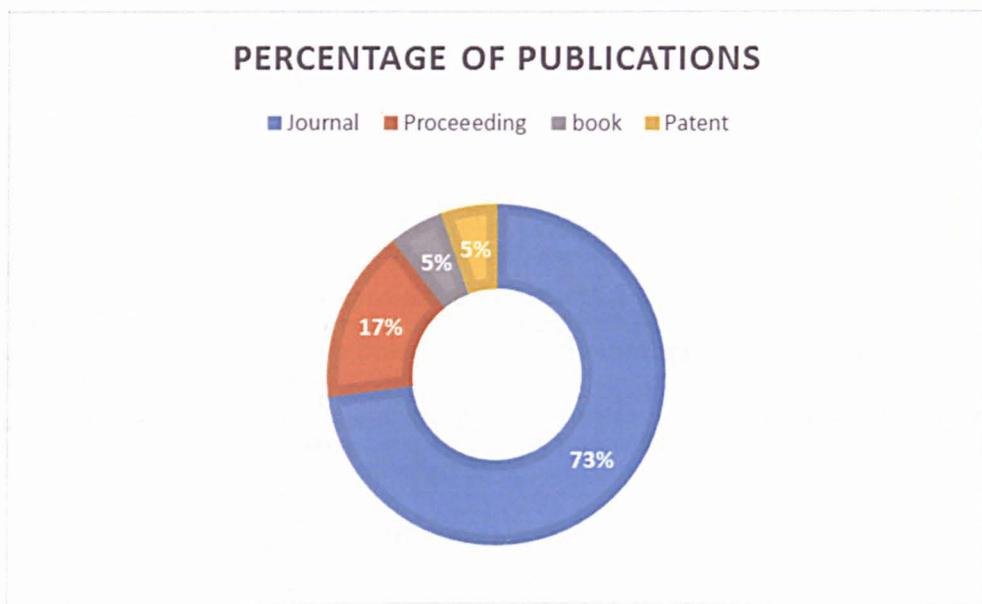
23.	Z. Ahmad, H.D Rozman & A.R Rozyanty," Influence of Montmorillonite Treated with Cetyl Trimethyl Ammonium Bromide in Epoxy-Kenaf Composite," <i>3rd International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 Dec 2014, Ho Chi Minh, Vietnam.
24.	A.R Rozyanty, M.Y Nur Firdaus & L. Musa. Kenaf Bast - Unsaturated Polyester Composite: The Effect of Different Alkaline Treatment Condition on Tensile Propertie. <i>International Conference of Functional Materials and Metallurgy (2014) (ICoFM 2014)</i> , 17-18 Sep 2014, Flamingo Hotel, Penang
25.	Luqman Musa, Syed Zhafer Firdaus, Kamarudin Hussin & Poh Beng Teik - Effect of Hybrid Tackifiers on Viscosity, Peel Strength and Shear Resistance of Natural Rubber and Epoxidized Natural Rubber-based Pressure Sensitive Adhesives, <i>3rd International Conference on Advanced Material Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 Dec 2014, Ho Chi Minh, Vietnam.
26.	Mohd Firdaus Omar, Lu Yew Wei, Mohd Mustafa Al Bakri Abdullah, Kamarudin Hussin, Effect Of Hybrid Fillers On The Thermal Properties Of UHMWPE/Chitosan-ZnO Composites, <i>3rd International Conference on Advanced Materials Engineering &amp; Technology (ICAMET 2014)</i> , 4-5 December 2014, Duxton Hotel, Ho Chi Minh City.
27.	Mohd Firdaus Omar, Mohamad Hazwan Subli, N.Z. Noriman, Sam Sung Ting, Mohd Mustafa Al Bakri Abdullah, Experimental Investigation On Mechanical And Morphology Properties Of Ultra-High Molecular Weight Polyethelene (UHMWPE)/Chitosan-Zinc Oxide (ZnO) Hybrid Composites, <i>8th MUCET 2014</i> , 10 - 11 November 2014, Melaka
28.	Omar M.F., Wahab A., Suhaili N., Akil H.M., Ahmad Z.A., Rasyid M.F.A., et al. Effect of Surface Modification on Strain Rate Sensitivity of Polypropylene/Muscovite Layered Silicate Composites, <i>Malaysia-Indonesia Geopolymer Symposium (MIGS 2014)</i> 12 <sup>th</sup> May 2014, PWTC, Kuala Lumpur
29.	Omar M.F., Jaya H., Akil H.M., Ahmad Z.A., Rasyid M.F.A., Noriman N. Effect of Organic Modification on Dynamic Compression Properties of Polypropylene/Muscovite Layered Silicate Composites. <i>Malaysia-Indonesia Geopolymer Symposium (MIGS 2014)</i> 12 <sup>th</sup> May 2014, PWTC, Kuala Lumpur
30.	A.A. Azrem, N.Z. Noriman, Sam.S.T, Ruzaidi C.M., M.F. Omar, H. Rosniza. The Effects of TOR as a Compatibilizer on Tensile and Morphological Properties of Styrene Butadiene Rubber/recycled Chloroprene Rubber (SBR/CR) Blends. <i>The 4th International Malaysia-Ireland Joint Symposium on Engineering, Science and Business (IMiEJS) 2014</i> . 25-26 June 2014, Penang, Malaysia.
31.	Ahmad Azrem Azmi, Nik Noriman Zulkepli, Mohd Firdaus Omar, Kamarudin Hussin. The Effects of Different Fillers on Mechanical and Morphological Properties of SBR/CR Blends. <i>The 3<sup>rd</sup> International Conference on Advanced Material Engineering &amp; Technology 2014 (ICAMET 2014)</i> . 4-5 December 2014. Ho Chi Minh City, Vietnam

## 8.4 Patents

NO.	RESEARCH TITLE	PATENT NO (FILING)	NAME OF RESEARCHER
1.	A Geopolymer Composition for Coating Application	Malaysia Patent Filing PI 2014702295	Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Kamarudin Hussin Noor Fifinatasha Shahedan Liyana Jamaludin Shamala A/P Ramasamy Mohammed Binhussein Akeel Al-Akeel Turki Aloibaly Mohammed Alhusaini Andrei Victor Sandhu
2.	A Cathodic Protection System Comprising An Electrochemical Cell Connected To An Anode Buried In The Ground And A Metal Structure To Be Protected	Malaysia Patent Filing PI 2014701894	Shaiful Rizam Shamsudin Mohd Fadzli Abdul Khir Azmi Rahmat Rohaya Abdul Malek Mohd Hashahrin Firdaus Az'ri Mohd Mustafa Al Bakri Abdullah Mohd Nazree Derman

NO.	RESEARCH TITLE	PATENT NO (FILING)	NAME OF RESEARCHER
3.	Nanocomposite with Thermoplastic Material and Fillers and Method of Preparation Thereof	PI2014702066	Azlin Fazlina Osman Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Yusrina Mat Daud Kamarudin Hussin Mohammed Binhussain Akeel Al-Akeel Noor Fifinatasha Shahedan Turki Aloibaly Mohammed Alhusaini
4.	Fibre-Reinforced Polymer Nanocomposite and Method of Preparation Thereof	PI2014702062	Azlin Fazlina Osman Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Yusrina Mat Daud Kamarudin Hussin Mohammed Binhussain Akeel Al-Akeel Noor Fifinatasha Shahedan Turki Aloibaly Mohammed Alhusaini
5.	Building Block For Use In Constructing A Building	US20140223848	Mohammed A. Bin Hussain Abdulaziz Adel Kurdi Mohammed Abdullah Muhawes Bader Saad Alnasban Saad Alnasban Bader Zaid Bin Juwayr Zaid Mohd Mustafa Al Bakri Abdullah Mohammad Tamizi Selimin
6.	Volcano ash solid geopolymer composite and a method of producing the same	PCT/MY2013/000201	Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Kamarudin Hussin Rafiza Abdul Razak Zarina Yahya Khairul Nizar Ismail Alida Abdullah Muhammad Faheem Mohd Tahir Djwantoro Hardjito Antioni
7.	Volcano ash solid geopolymer composite and a method of producing the same	Granted WIPO WO2014081277 A1	Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Kamarudin Hussin Rafiza Abdul Razak Zarina Yahya Khairul Nizar Ismail Alida Abdullah Muhammad Faheem Mohd Tahir Djwantoro Hardjito Antioni
8.	A method of producing a bacterial inoculum using the rumen of a ruminant animal	Granted WIPO WO 2012118365 A1	Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Kamarudin Hussin Norazian Mohamed Noor Akmal Hadi Ma'Radzi Syazni Zainul Kamal Mohamad Jaafar Sahari Salehuddin Sabran Ahmad Taufik Suhami Hafiz Ab Halim

NO.	RESEARCH TITLE	PATENT NO (FILING)	NAME OF RESEARCHER
9.	KENAF-TANK: As Green And High Performance Composites	PI2013000352	Rozyanty Rahman Hakimah Osman Nasaruddin Mohamad Noor Ismail Ibrahim
10.	Reduction of carbon dioxide in the manufacturing of composite construction materials	Granted US8580029 B2	Mohd Mustafa Al Bakri Abdullah Che Mohd Ruzaidi Ghazali Kamarudin Hussin Mohammed A. Bin Hussain Norazian Mohamed Noor Mohammad Tamizi Selimin



Graph 3: Percentage of Publications

## 9.0 CEGeoGTech ACHIEVEMENT IN SCOPUS, RESEARCHGATE AND GOOGLE SCHOLAR

### 9.1 SCOPUS Ranking (Top 500 Only)

No.	NAMA PENYELIDIK	Scopus Publication		Scopus Ranking 2013 UniMAP	Total Paper & h Index 2013	Scopus Ranking 2014 UniMAP	Total Paper & h Index 2014
		2013	4102				
1.	Prof. Dr. Kamarudin Hussin Geopolymer	95	39	5	176 & 10	3	228 & 12
2.	Mohd Mustafa Al Bakri Abdullah Geopolymer	75	29	8	110 & 8	6	158 & 9
3.	Dr. Nik Noriman Zulkepli Green Polymer Recycling	27	16	33	42 & 6	28	63 & 7
4.	Assoc. Prof. Che Mohd Ruzaidi Ghazali Geopolymer	26	8	28	50 & 4	29	61 & 7
5.	Assoc. Prof. Dr Khairul Nizar Ismail Geopolymer	24	6	22	52 & 6	30	60 & 8
6.	Mohd Arif Anuar Mohd Salleh Electronic Packaging Materials	32	9	University of Queensland	38 & 3	44	44 & 3
7.	Dr. Nazree Derman Electrochemistry of Green Materials	15	13	60	24 & 3	46	43 & 3
8.	Dr. Sam Sung Ting Geo & Green Environment	16	8	52	25 & 4	58	39 & 6
9.	Prof. Azmi Rahmat Electrochemistry of Green Materials	16	13	62	24 & 3	59	38 & 4
10.	Dr. Khairel Rafezi Ahmad Green Metallurgy	15	9	68	23 & 3	64	35 & 4
11.	Rafiza Abdul Razak Geopolymer	13	4	50	28 & 3	67	34 & 6
12.	Dr. Luqman Musa Green Polymer Recycling	10	-	48	28 & 6	82	28 & 8
13.	Zarina Yahya Geopolymer	11	5	78	20 & 3	85	27 & 6
14.	Alida Abdullah Geopolymer	9	10	106	15 & 1	87	25 & 2
15.	Dr. Ragunathan Santiago Geo & Green Environment	4	7	136	12 & 2	94	23 & 3
16.	Shayfull Zamree Abd Rahim Green Design & Manufacture	3	5	Universiti Teknologi Malaysia	15 & 2	115	20 & 3
17.	Dr. Heah Cheng Yong Geopolymer	7	-	81	19 & 6	119	19 & 7
18.	Dr. Liew Yun Ming Geopolymer	7	-	82	19 & 6	121	19 & 7
19.	Assoc. Prof. Dr. Fazlul Bari Electrochemistry of Green Materials	4	-	88	24 & 8	126	18 & 9
20.	Muhammad Faheem Mohd Tahir Geopolymer	7	4	195	8 & 1	127	18 & 2
21.	Norazian Mohamed Noor Geo & Green Environment	7	3	133	12 & 3	140	17 & 3
22.	Liyana Jamaludin Geopolymer	9	4	165	10 & 1	150	16 & 2



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No.	NAMA PENYELIDIK	Scopus Publication		Scopus Ranking 2013 UniMAP	Total Paper & h Index 2013	Scopus Ranking 2014 UniMAP	Total Paper & h Index 2014
		2013	4102				
23.	Dr. Kahtan S. Mohammed Geopolymer	8	8	206	10 & 1	152	16 & 2
24.	Dr. Mohd Firdaus Omar Green Polymer Recycling	2	2	-	-	160	15 & 5
25.	Mohd Fathullah Ghazali Green Design & Manufacture	0	1	128	12 & 2	177	13 & 3
26.	Farah Farhana Zainal Electrochemistry of Green Materials	2	1	-	1 & 0	217	11 & 3
27.	Dr. Azlin Fazlina Osman Geopolymer	4	3	268	6 & 3	223	11 & 3
28.	Dr. Dewi Suriyani Che Halin Green Metallurgy	3	3	225	7 & 1	241	10 & 1
29.	Norlia Mohamad Ibrahim Geo & Green Environment	5	2	357	7 & 0	242	10 & 0
30.	Dr. Muhammad Asri Idris Electrochemistry of Green Materials	1	1	177	9 & 3	243	10 & 3
31.	Faizul Che Pa Green Ceramic	6	2	222	7 & 1	269	9 & 1
32.	Roshazita Che Amat Geo & Green Environment	5	3	334	4 & 0	294	8 & 0
33.	Assoc. Prof. Dr. Abdullah Chik Green Ceramic	2	2	252	6 & 0	298	8 & 0
34.	Shahrizam Saad Green Ceramic	5	2	-	2 & 0	313	8 & 0
35.	Shaiful Rizam Shamsudin Electrochemistry of Green Materials	5	-	244	9 & 1	364	7 & 1
36.	Dr. Nur Maizatul Shima Adzali Electrochemistry of Green Materials	2	4	-	1 & 0	378	6 & 0
37.	Ahmad Azrem Azmi Green Polymer Recycling	4	2	342	4 & 0	388	6 & 1
38.	Dr. Rozyanty Rahman Green Polymer Recycling	2	2	321	5 & 2	428	6 & 2
39.	Dr. Norainiza Saud Electronic Packaging Materials	6	6	323	9 & 1	432	6 & 0
40.	Salmie Suhana Che Abdullah Electrochemistry of Green Materials	1	2	403	5 & 0	449	5 & 0
41.	Lokman Hakim Ibrahim Green Polymer Recycling	3	1	355	3 & 0	477	5 & 0

## 9.2 ResearchGate Ranking

### What is ResearchGate?

ResearchGate was built by scientists, for scientists. It started when two researchers discovered first-hand that collaborating with a friend or colleague on the other side of the world was no easy task. The network was founded in 2008 by physicians Dr. Ijad Madisch and Dr. Sören Hofmayer, and computer scientist Horst Fickenscher. Five years later, more than 3 million researchers are already using it to present themselves and make their research visible. We've made it our mission to give science back to the people who make it happen and to help researchers build reputation and accelerate scientific progress. Why ResearchGate?

- **Share your publications**, access millions more and publish your data
- **Get stats** about views, downloads and citations of your research
- **Find the right job** using our research-focused job board
- **Connect and collaborate with colleagues**, peers, co-authors and specialists in your field
- **Ask questions, get answers** and find solutions to research problems

### What is RG Score?

The RG Score is a metric that measures scientific reputation based on how all of your research is received by your peers. Here you'll find information about the aim of the RG Score and an overview of how it's calculated. We designed and built the RG Score to adapt to the needs of the research community.

### How does the RG Score work?

We believe that researchers are best placed to evaluate each other's work, and that you should receive credit for all of your research, whether published or not. With this in mind, our algorithm looks at how both your published research and your contributions to ResearchGate are received by your peers. Here's how it works.

### Contributions

A contribution is anything you share on ResearchGate or add to your profile. So whether it's your questions and answers, a published paper you add to your profile or the negative results and raw data you upload, anything you contribute can count towards your RG Score.

### Interactions

Interactions form the basis of your RG Score. Not only does our algorithm look at how your peers receive and evaluate your contributions, it also looks at who these peers are. This means that the higher the scores of those who interact with your research, the more your own score will increase. Your published research is then factored in to reflect your current standing within the scientific community.

### Reputation

With the RG Score, reputation is passed from researcher to researcher, allowing you to build and leverage your reputation based on anything you choose to contribute.


**CEGeoGTech Researchers RG Score Ranking**

No.	Researcher	Total Impact 2013	RG Score 2013	Total Impact 2014	RG Score 2014
1.	<b>Prof. Dr. Kamarudin Hussin</b> Geopolymer	145.38	33.71	166.84	36.01
2.	<b>Dr. Mohd Mustafa Al Bakri Abdullah</b> Geopolymer	25.06	26.70	40.2	31.92
3.	<b>Dr. Nik Noriman Zulkepli</b> Polymer Recycling	-	-	22.95	20.71
4.	<b>Dr. Mohd Firdaus Omar</b> Polymer Recycling	-	-	25.67	19.74
5.	<b>Assoc. Prof. Dr Khairul Nizar Ismail</b> Geopolymer	10.62	10.51	20.39	19.71
6.	<b>Dr. Kahtan S. Mohammed</b> Geopolymer	7.03	9.59	21.8	19.06
7.	<b>Dr. Sam Sung Ting</b> Polymer Recycling	-	-	17.82	19.05
8.	<b>Assoc. Prof. Dr. Che Mohd Ruzaidi Ghazali</b> Geopolymer	7.53	11.84	13.27	18.90
9.	<b>Prof Azmi Rahmat</b> Electrochemistry of Green Materials	-	-	20.52	17.90
10.	<b>Dr. Luqman Musa</b> Polymer Recycling	-	-	15.9	16.32
11.	<b>Rafiza Abdul Razak</b> Geopolymer	9.62	12.36	11.19	15.75
12.	<b>Assoc. Prof. Dr. Md Fazlul Bari</b> Electrochemistry of Green Materials	-	-	20.26	15.37
13.	<b>Dr. Nazree Derman</b> Electrochemistry of Green Materials	-	-	20.35	14.82
14.	<b>Zarina Yahya</b> Geopolymer	6.83	10.78	9.1	13.78
15.	<b>Dr. Azlin Fazlina Osman</b> Geopolymer	16.35	11.50	19.12	13.63
16.	<b>Dr. Ragunathan Santiagoo</b> Geo & Green Environment	-	-	8.23	13.40
17.	<b>Dr. Mohamad Kahar Ab Wahab</b> Polymer Recycling	-	-	11.49	13.26
18.	<b>Dr. Liew Yun Ming</b> Geopolymer	7.36	8.78	11.00	13.06
19.	<b>Dr. Heah Cheng Yong</b> Geopolymer	7.97	9.43	10.46	12.65
20.	<b>Dr. Khairel Rafezi Ahmad</b> Green Metallurgy	-	-	10.55	11.95
21.	<b>Shayfull Zamree Abd. Rahim</b> Green Design & Manufacture	-	-	3.68	9.80
22.	<b>Ali Basheer Azeez</b> Geopolymer	2.79	4.60	7.25	8.76
23.	<b>Alida Abdullah</b> Geopolymer	0.61	6.39	0.54	8.56
24.	<b>Mohd Arif Anuar Mohd Salleh</b> Electronic Packaging Materials	-	-	0.68	8.09
25.	<b>Liyana Jamaludin</b> Geopolymer	2.46	5.40	2.34	7.77

No.	Researcher	Total Impact 2013	RG Score 2013	Total Impact 2014	RG Score 2014
26.	Dewi Suriyani Che Halin Electronic Packaging Materials	-	-	3.14	7.67
27.	Mohd Fathullah Ghazali Green Design & Manufacture	-	-	2.19	7.29
28.	Dr. Rozyanty Abd Rahman Polymer Recycling	-	-	4.9	6.94
29.	Dr. Norazian Mohamed Noor Geo & Green Environment	-	-	1.37	6.62
30.	Shamala Ramasamy Geopolymer	-	-	4.14	6.17
31.	Faizul Che Pa Green Ceramic	-	3.23	0.19	5.30
32.	Muhammad Faheem Mohd Tahir Geopolymer	-	2.54	-	4.73
33.	Shaiful Rizam Shamsudin Electrochemistry of Green Materials	-	-	0.66	4.60
34.	Mohd Nasir Mat Saad Green Design & Manufacture	-	-	0.19	4.37
35.	Romisuhani Ahmad Geopolymer	-	-	2.24	3.60
36.	Noorina Hidayu Jamil Green Ceramic	-	-	2.73	3.57
37.	Muhsin Izzat Ahmad Geopolymer	2.46	3.42	2.34	3.41
38.	Norshah Afizi Shuaib Green Design & Manufacture	-	-	-	3.32
39.	Dr. Muhammad Asri Idris Electrochemistry of Green Materials	-	-	2.11	3.24
40.	Ahmad Azrem Azmi Polymer Recycling	-	-	-	3.23
41.	Salmie Suhana Che Abdullah Electrochemistry of Green Materials			-	3.17
42.	Dr. Norainiza Saud Electronic Packaging Materials			0.68	3.16
43.	Lokman Hakim Ibrahim Polymer Recycling			-	2.74
44.	Flora Somidin Electronic Packaging Materials	0.54	2.16	0.68	2.68
45.	Farah Farhana Zainal Electrochemistry of Green Materials	Registered		-	2.51
46.	Ruhiyuddin Mohd Zaki Green Metallurgy			0.19	2.23
47.	Juyana A Wahab Electrochemistry of Green Materials			-	2.23
48.	Dr. Nur Maizatul Shima Adzali Electrochemistry of Green Materials			0.48	1.97
49.	Mohammad Tamizi Selimin Geopolymer			-	1.97
50.	Norlia Mohamad Ibrahim Geo & Green Environment			-	1.31



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No.	Researcher	Total Impact 2013	RG Score 2013	Total Impact 2014	RG Score 2014
51.	<b>Wan Mohd Arif Wan Ibrahim</b> Green Ceramic			0.19	1.17
52.	<b>Muhammad Salihin Zakaria</b> Polymer Recycling			-	1.16
53.	<b>Murizam Darus</b> Green Metallurgy			-	1.16
54.	<b>Shahrizam Saad</b> Green Ceramic			-	1.16
55.	<b>Yusrina Mat Daud</b> Geopolymer			-	1.16
56.	<b>Haiza Haroon</b> Green Metallurgy			-	1.15
57.	<b>Aimi Noorliyana Hashim</b> Green Metallurgy	Registered		2.24	-
58.	<b>Rohaya Abdul Malek</b> Electrochemistry of Green Materials			0.19	

## UniMAP ResearchGate

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Kangar, Perlis, Malaysia

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Asian Journal of Social Science 04/2011 - 7  
355 Downloads
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International Journal of Marketing Studies, 01/2011.  
186 Downloads
- Effects of Oil Price Shocks on the Economic Sectors in Malaysia  
International Journal of Energy Economics and Policy 01/2013, 3(4):360-366  
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01/2011.  
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International Journal of Business and Management, 02/2011.  
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4 31.92 → 33.50
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-  U. Hashim  
4 35.65 → 163.05
-  Hazry Desa  
4 19.18 → 19.79
-  Mohd Fareq Abd Malek  
4 32.76 → 130.35
-  Che Mohd Ruzaidi  
4 18.90 → 13.27
-  Norazian Mohamed Noor  
4 6.62 → 1.37

**H. Kamarudin**

PhD, Mineral Engineering  
Vice Chancellor  
Universiti Malaysia Perlis - Centre of Excellence for Geop...  


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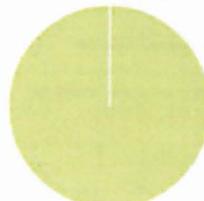
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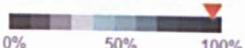
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Center of Excellence Geopolymer & Green Technology School of Materials Engineering

## Center of Excellence Geopolymer and Green Technology ResearchGate

The screenshot shows the ResearchGate homepage with the following details:

- Group Name:** Centre of Excellence for Geopolymer and Green Tech...
- University:** Universiti Malaysia Perlis
- Members:** 26 (indicated by a badge)
- Overview:** Overview, Contributions, Members, Member Stats
- Publication downloads last week:** (No specific data shown)
- TOP DOWNLOADED PUBLICATIONS:**
  - Strength of Concrete Based Cement Using Recycle Ceramic Waste As Aggregate
  - Review on Soil Stabilization Techniques
  - Simultaneous determination of preservatives (benzoic acid, sorbic acid, methylparaben and propylparaben) in foodstuffs using high performance liquid chromatography.
  - PRELIMINARY STUDY ON BAGASSE FIBRE WITH POLYSTYRENE AS A POLYMER COMPOSITES
  - The Potential Of Recycled Ceramic Waste As Coarse Aggregates For Concrete
- POPULAR MEMBERS by publication downloads:**
  - Mohd Mustafa Al Bakri Abdullah (31.92)
  - H. Kamarudin (36.01)
  - Arif Salleh (8.09)
  - Alida Abdullah (8.56)
  - Rafiza Abdul Razak (15.75)
  - Zarina Yahya (13.78)
  - Md F Bari (15.37)
  - Sharifah Zaliha Syed Zuber (7.77)
  - Liyana Jamaludin (7.77)
  - Muhammad Faheem Mohd Tahir (4.73)

The screenshot shows the ResearchGate profile page for Mohd Firdaus Omar:

- Profile Picture:** Mohd Firdaus Omar
- Name:** Mohd Firdaus Omar
- Degree:** PhD
- Title:** SENIOR LECTURER
- Institution:** Universiti Malaysia Perlis - Centre of Excellence for Geopolymer and Green Technology
- RG SCORE:** 19.74
- Publications:** 2 publications were recently added to your profile. [Review updates](#)
- Article:** Effect of Organic Modification on Dynamic Compression Properties of Polypropylene/Muscovite Layered Silicate Composites
- Authors:** Mohd Firdaus Omar, haliza jaya, hazizan md aikil, Zainal Arifin Ahmad, Mohd Fadli Ahmed Rashid, N.Z. Noriman
- Source:** Materials Science Forum Q1/2015, 903:282-287.
- Actions:** Download, Bookmark

### 9.3 Google Scholar

#### What is Google Scholar?

Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites. Google Scholar helps you find relevant work across the world of scholarly research. Features of Google Scholar are;

- Search all scholarly literature from one convenient place
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- Check who's citing your publications, create a public author profile

#### How are documents ranked?

Google Scholar aims to rank documents the way researchers do, weighing the full text of each document, where it was published, who it was written by, as well as how often and how recently it has been cited in other scholarly literature.

#### CEGeoGTech Researchers Google Scholar Ranking

No.	Researcher	2013				2014			
		Total Article	Citations	h Index	i10 Index	Total Article	Citations	h Index	i10 Index
1.	Prof. Dr. Kamarudin Hussin Geopolymer	442	472	11	13	564	882	14	28
2.	Dr. Mohd Mustafa Al Bakri Abdullah Geopolymer	197	188	7	4	355	433	10	11
3.	Assoc. Prof. Dr. Che Mohd Ruzaidi Ghazali Geopolymer	87	84	6	2	146	190	8	5
4.	Dr. Khairel Rafezi Ahmad Green Metallurgy	40	30	3	0	105	82	6	1
5.	Dr. Nik Noriman Zulkepli Polymer Recycling					99	159	7	7
6.	Norazian Mohamed Noor Geo & Green Environment	49	33	3	1	66	61	4	2
7.	Dr. Mohd Nazree Derman Electrochemistry of Green Materials	43	12	2	0	54	30	3	0
8.	Shaiful Rizam Shamsudin Electrochemistry of Green Materials	41	5	1	0	52	5	2	0
9.	Rafiza Abdul Razak Geopolymer	37	63	5	2	51	148	7	4
10.	Alida Abdullah Geopolymer	34	13	2	0	50	20	2	0
11.	Zarina Yahya Geopolymer	35	56	4	2	46	120	6	4
12.	Faizul Che Pa Green Ceramic					32	7	2	0

No.	Researcher	2013				2014			
		Total Article	Citations	h Index	i10 Index	Total Article	Citations	h Index	i10 Index
13.	Liyana Jamaludin Geopolymer	19	7	1	0	29	22	2	1
14.	Dr. Mohd Firdaus Omar Polymer Recycling					27	262	7	5
15.	Shayfull Zamree Abd. Rahim Green Design & Manufacture					26	63	5	2
16.	Muhammad Faheem Mohd Tahir Geopolymer	15	3	1	0	17	10	1	0
17.	Dr. Mohamad Kahar Ab Wahab Polymer Recycling					12	27	3	1
18.	Omar A. Abdulkareem Geopolymer					12	23	4	0
19.	Ahmad Azrem Azmi Polymer Recycling					11	0	0	0
20.	Dr. Ragunathan Santiago Geo & Green Environment					9	35	4	1
21.	Lokman Hakim Ibrahim Polymer Recycling					8	0	0	0
22.	Mukridz Md Mohtar Geopolymer					2	0	0	0


**Kharel Rafezi Ahmad**

 School of Materials Engineering, Universiti Malaysia Perlis  
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Citation indices	All	Since 2010
Citations	82	80
h-index	6	6
i10-index	1	1



Title	Cited by	Year
The sensing mechanism and detection of low concentration acetone using chitosan-based sensors Tl Nasution, I Nainggolan, SD Hutagalung, KR Ahmad, ZA Ahmad Sensors and Actuators B: Chemical 177, 522-528	10	2013
The influence of alumina particle size on sintered density and hardness of discontinuous reinforced aluminum metal matrix composite KR Ahmad, KR Ahmad, SB Jamaludin, SB Jamaludin, LB Hussain, ... Jurnal Teknologi (A) 42 (A), 49-57	9	2005
Wettability, electrical and mechanical properties of 99.3 Sn-0.7 Cu/Si3N4 novel lead-free nanocomposite solder M Salleh, MA Anuar, MH Hazizi, K Hussin, KR Ahmad Advanced Materials Research 277, 106-111	8	2011
Comparative study of corrosion behavior of AA2014/15 Vol% Al2O3p and AA2009/20 Vol% SiCw SB Jamaludin, Z Yusoff, KR Ahmad Portugaliae Electrochimica Acta 26 (3), 291-301	7	2008
Room temperature anodization of aluminum and the effect of the electrochemical cell in the formation of porous alumina films from acid and alkaline electrolytes	6	2012

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Shaiful Rizam Shamsudin

Uda Hashim

Sabar D. Hutagalung

Ramani Mayappan

Norzailawati Mohd Noor

## 10.0 ACADEMIC RECOGNITIONS

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
1.	International Socrate Awards in Education	European Business Assembly (EBA)	30 December 2014 Viena, Austria	Prof. Dr. Kamarudin Hussin
2.	Top Research Scientist Malaysia (TRSM 2014)	Academy Science of Malaysia (ASM)	8 December 2014 Kuala Lumpur	Prof. Dr. Kamarudin Hussin Assoc. Prof. Dr. Che Mohd Ruzaidi Ghazali
3.	Tokoh Inovasi Jalinan IPTA	Ministry of Education Malaysia	20 October 2014 Putrajaya	Dr. Mohd Mustafa Al Bakri Abdullah
4.	Lincoln Peace Award	Korea University Inventor Association (KUIA)	10 August 2014 Seoul, Korea	Prof. Dr. Kamarudin Hussin
5.	Award for Outstanding Contribution to Education	World Chancellors & Vice Chancellors Congress & Awards	27 June 2014 Mumbai, India	Prof. Dr. Kamarudin Hussin
6.	Honorary Doctorate	Karabuk Uiversity, Turkey	30 May 2014 Turkey	Prof. Dr. Kamarudin Hussin
7.	Honorary Associate Researcher	Gheorghe Asachi Technical University of Iasi, Romania	24 May 2014 Iasi, Romania	Dr. Mohd Mustafa Al Bakri Abdullah
8.	IMM Green Technology Award	Institute of Materials Malaysia (IMM)	16 May 2014 PWTC, Kuala Lumpur	Dr. Mohd Mustafa Al Bakri Abdullah Dr. Nik Noriman Zulkepli
9.	Excellence Award, 2014	Faculty of Materials Science and Engineering Gheorghe Asachi Technical University of Iasi, Romania	12 April 2014 Perlis	Dr. Mohd Mustafa Al Bakri Abdullah
10.	Invited Lecture at Faculty of Civil Engineering	Institut Teknologi Sepuluh Nopember (ITS) Indonesia	9-12 Mac 2014	Dr. Mohd Mustafa Al Bakri Abdullah
11.	Editorial Board	International Journal of Conservation Science (IJCS) - <a href="http://ijcs.uaic.ro">http://ijcs.uaic.ro</a>	2014 - sekarang	Dr. Mohd Mustafa Al Bakri Abdullah

## 11.0 AWARDS AND ACHIEVEMENTS

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
1.	Gold - Eco-Friendly Lightweight Honeycomb Drainage System	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Mohd Firdaus Bin Omar Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Dr. Lugman Musa Muhammad Salihin Zakaria
2.	Gold - I - AcvoN	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
3.	Gold - Environment Friendly Anti-Radiation Vest For Protection Against Gamma Ray Photons	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Kahtan S. Mohammed



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NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
4.	Gold - Heavy Duty And Eco-Friendly Hybrid Composite	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Rozyanty Rahman Dr. Luqman Musa Nur Firdaus Mohamed Yusof Muhammad Faheem Bin Mohd Tahir Syed Zafer Firdaus Bin Syed Putra Dr. Zuliahani Ahmad
5.	Gold - Fully Protected System For Reinforcement Bar In Geopolymer Concrete	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Farah Farhana Zainal
6.	Gold - Low Cost Home Automation System	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Khairul Fadzly Bin Abu Bakar Amarul Talip Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad Badrul Azmi Abdul Holed Norshah Afizi Shuaib Irfan Abd Rahim
7.	Gold - Cera - Cool	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Noorina Hidayu Jamil Wan Mohd Arif W. Ibrahim Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed
8.	Gold - Roadside Wind & Pressure Energy Harvester	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Norshah Afizi Bin Shuaib
9.	Gold - Design Of Milled Groove Square Shape (MGSS) Conformal Cooling Channels In Injection Molding Processes	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Shayfull Zamree Abd Rahim
10.	Gold - Eco Activated Charcoal Fiber Sheet	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Aimi Noorliyana Hashim
11.	Gold - Silica Gel: Utilization Of Industrial Waste Slag As A Sustainable Source	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Aimi Noorliyana Hashim
12.	Gold - The Novel Usage Of Phoenix Dactylifera (Palm Date) Seeds	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	PM Dr. Che Mohd Ruzaidi Ghazali
13.	Gold -Geopolymerization Technology For Soil Stabilization Application	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Mohd Mustafa Al Bakri Abdullah
14.	Gold - Alkali-Activated Boiler Ash Composites	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Zarina Yahya Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin PM Dr. Khairul Nizar Ismail Rafiza Abd Razak Alida Abdullah
15.	Gold - Towards Greenconstruction Materials: Geopolymer Composite Brick Fabrication Machine Vol. 2.0	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Mohd Mustafa Al Bakri Abdullah

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
16.	Gold - Geopolymer Composite Radiation Shielding Panel	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Liyana Jamaludin Dr. Mohd Mustafa Al Bakri Prof. Dr. Kamarudin Hussin Ali Basheer Azzez
17.	Gold - GEO-CLAY BRICK: Green Unfired Clay Geopolymer High Strength Brick	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mukridz Md Mohtar
18.	Gold - Rice Husk Ash Geopolymer Glass Ceramic	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Alida Abdullah
19.	Gold - Fire-Shield Paint	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Heah Cheng Yong Dr. Liew Yun Ming Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin
20.	Silver - APRS I-Gate Using For Amateur Radio	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Amarul Talip Mohd Hazwan Hussin Mohd Khairul Fadzly Abu Bakar Mohd Nasir Mat Saad Shayfull Zamree Abd Rahim Norshah Afizi Shuaib Muhamad Farizuan Rosli Irfan Abd Rahim Mohd Fathullah Ghazali Badrul Azmi Abdul Holed Nur Ismalina Haris
21.	Silver - Portable, Rechargeable and Foldable Inspection Light	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Badrul Azmi B. Abdul Holed
22.	Silver - SPERINGAG-VULCAN	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
23.	Silver - EcoFIRES	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
24.	Silver - CY-GREEN POLYBAG	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
25.	Silver - ReNitFloor	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
26.	Silver - Ghump	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Nik Noriman Bin Zulkepli
27.	Silver - Automated Soil Filler Machine For Nursery Firm	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Nasir Mat Saad Shayfull Zamree Bin Abd Rahim Norshah Afizi Bin Shuiab Mohd Fidzwan Bin Md Amin Hamzas Amarul Bin Talip Khairul Fadzly Bin Abu Bakar Badrul Azmi Abdul Holed



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NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
28.	Silver - Fish Stick F fingering Machine	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Nasir Mat Saad Che Mohd Ruzaidi Bin Ghazali Shayfull Zamree Bin Abd Rahim Mohamed Faisol Mohamed Nor Mohd Fidzwan Bin Md Amin Hamzas Norshah Afizi Bin Shuaib Amarul Bin Talip Khairul Fadzly Bin Abu Bakar Badrul Azmi Abdul Holed
29.	Silver - Shrimp Paste Drier	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Nasir Mat Saad Shayfull Zamree Bin Abd Rahim Norshah Afizi Bin Shuaib Mohd Fidzwan Md Amin Hamzas Amarul Bin Talip Khairul Fadzly Bin Abu Bakar Badrul Azmi Abdul Holed
30.	Silver - Fault Lamp Indicator	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Shayfull Zamree Abd Rahim
31.	Silver - High-Value Geopolymer Glass- Ceramic	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Prof. Dr. Kamarudin Hussin
32.	Silver - Aluminium-Based Amorphous Alloy: A Non-Crystalline Metal	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Fitri Bin Mohamad Wahid
33.	Bronze - Portable Mass Antenna With Rotator Using For Amateur Radio	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Amarul Talip Mohd Hazwan Hussin Mohd Khairul Fadzly Abu Bakar Mohd Nasir Mat Saad Shayfull Zamree Abd Rahim Norshah Afizi Shuaib Muhamad Farizuan Rosli Irfan Abd Rahim Mohd Fathullah Ghazali Badrul Azmi Abdul Holed Nur Ismalina Haris
34.	Bronze - Portable Home Vacuum Packing Machine	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Khairul Fadzly Bin Abu Bakar Amarul Talip Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad Badrul Azmi Abdul Holed Norshah Afizi Shuaib Irfan Abd Rahim
35.	Bronze - Mechanical Fruits Wrapping And Harvesting Device	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Mohd Nasir Mat Saad Shayfull Zamree Bin Abd Rahim Norshah Afizi Bin Shuaib Mohd Fidzwan Bin Md Amin Hamzas Amarul Bin Talip Khairul Fadzly Bin Abu Bakar Badrul Azmi Abdul Holed
37.	Bronze - A-KneeJS	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Mohd Firdaus Bin Omar Dr. Mohd Firdaus Omar Prof. Hazian Md Akil Dr. Nik Noriman Zulkepli Mohamad Hazwan Subli

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
38.	Bronze - Granulated Solder Ball Production Machine: Ultrasonic Technology	Ekspo Rekacipta UniMAP 2013	7 January 2014, Pauh Putra, UniMAP	Dr. Mohd Mustafa Al Bakri Abdullah
39.	Gold - PulFMAP: A New Generation Of Lightweight Structural	Malaysia Technology Expo (MTE)	20-22 February 2014, PWTC	Dr. Mohd Firdaus Omar Prof. Hazian Md Akil Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Prof. Dr. Kamaruddin Hussin Muhammad Salihin Zakaria Mohd Lokman Hakim Ahmad Azrem Azmi Mohamad Hazwan Subli Nik Zakaria Nik Yahya Muhammad Ridhwan Jamalul Nasir Mohd Hafiz Zamri Muhammad Razak Osman
40.	Gold - Green High Temperature Composite Solder	Malaysia Technology Expo (MTE)	20-22 February 2014, PWTC	Dr. Norainiza Saud
41.	Gold & Japan Special Award- GeoBRICK MACHINE: Towards Green Construction Materials	Malaysia Technology Expo (MTE)	20-22 February 2014, PWTC	Dr. Mohd Mustafa Al Bakri Abdullah
42.	Silver - Fully Protected System For Reinforcement Bar In Geopolymer Concrete	Malaysia Technology Expo (MTE)	20-22 February 2014, PWTC	Farah Farhana Zainal
43.	Bronze - Eco Activated Charcoal Fiber Sheet	Malaysia Technology Expo (MTE)	20-22 February 2014, PWTC	Aimi Noorliyana Hashim
44.	Gold & Special Award SPWIR Poland - Geopolymer Composite	17th Moscow International Salon of Inventions and	1 - 4 April 2014	Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin
45.	Radiation Shielding Panel	Innovation Technologies		Dr. Kahtan S. Mohammed Muhammad Faheem Mohd Tahir PM. Dr. Che Mohd Ruzaidi Ali Basheer Aziz Muhd Izzat Ahmad
46.	Gold & Special Award Archemeds Special Award - Roadside Wind & Pressure Energy Harvester	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Norshah Afizi Bin Shuaib Irfan Bin Abd Rahim Shayfull Zamree Bin Abd Rahim Mohd Nasir Bin Mat Saad Mohd Fidzwan Bin Md Amin Hamzas Amarul Bin Talip Mohd Khairul Fadzly Bin Abu Bakar Mohd Fathullah Ghazli@Ghazali Badrul Azmi Bin Abdul Holed
47.	Gold - Multi-Objective Optimization of Plastic Injection Molding Process	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Mohd Nasir Bin Mat Saad Khairul Azwan Ismail Shayfull Zamree Bin Abd Rahim Mohd Fathullah Ghazli@Ghazali Norshah Afizi Bin Shuaib



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NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
48	Gold & Archemeds Special Award - Continous Fiber - Geopolymer Composite Via Filament Winding	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	PM Dr. Che Mohd Ruzaidi Ghazali Dr. Mohd Mustafa Al Bakri Prof. Dr. Kamarudin Hussin Alida Abdullah Muhammad Faheem Mohd Tahir Mohammad Firdaus Abu Hashim
49.	Gold & Taiwan Special Award - Greenplast - Novel Oxo- Biodegradable Plastics Using Natural Pro- Oxidant	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Mohd Firdaus Omar Muhammad Salihin Zakaria Lokman Hakim Ibrahim Ahmad Azrem Azmi Nik Zakaria Nik Yahya Muhammad Ridhwan Jamalul Nasir Mohd Syukry Othman
50.	Silver - Low Cost Home Automation System	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Mohd Khairul Fadzly Bin Abu Bakar Amarul Bin Talip Shayfull Zamree Bin Abd Rahim Mohd Nasir Bin Mat Saad Mohd Fidzwan Bin Md Amin Hamzas Norshah Afizi Bin Shuaib Badrul Azmi Abdul Holed Irfan Abd Rahim Mohd Fathullah Ghazli@Ghazali
51.	Silver - Portable APRS Igate Using For Amateur Radio	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Amarul Bin Talip Mohd Khairul Fadzly Abu Bakar Shayfull Zamree Bin Abd. Rahim Mohd Nasir Bin Mat Saad Norshah Afizi Bin Shuaib Mohd Fidzwan Bin Md Amin Hamzas Irfan Abd. Rahim Badrul Azmi Abdul Holed Mohd Fathullah Ghazli@Ghazali Nur Ismalina Binti Haris
52.	Silver - Industrial Solid Waste Brake Pad	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	PM Dr. Che Mohd Ruzaidi Ghazali Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Prof. Dr. Shamsul Baharin Jamaludin Alida Abdullah Mohammed Faisol Mohammed Nor
53.	Silver - Pulfmap – A New Generation Of Lightweight Structural	17th Moscow International Salon of Inventions and Innovation Technologies	1 - 4 April 2014	Dr. Mohd Firdaus Omar Hazizan Md Akil Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Prof. Dr. Kamarudin Hussin Muhammad Salihin Zakaria Mohd Lokman Hakim Ahmad Azrem Azmi
54.	Gold - Geopolymer Composite Radiation Shielding Panel	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Liyana Jamaludin Dr. Mohd Mustafa Al bakri Abdullah Prof. Dr. Kamarudin Hussin Rafiza Abdul Razak Ali Basheer Azzez Muhammad Faheem Mohd Tahir PM Dr. Che Mohd Ruzaidi Ghazali Mohd Firdaus Abu Hashim

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
55.	Gold – I-ACVON	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Nik Noriman Zulkepli Muhammad Salihin Zakaria Dr. Sam Sung Ting Dr. Mohd Firdaus Omar Dr. Mohd Kahar Abd Wahab Ahmad Azrem Azmi Lokman Hakim Ibrahim Nik Zakaria Nik Yahya Muhd Ridhwan Jamalul Nasir Mohd Hazwan Subli
56.	Gold – From Waste to Wealth: Boiler Ash Geopolymer Composite	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Zarina Yahya Dr. Mohd Mustafa Al Bakri Abdullah Prof Dr. Kamarudin Hussin Dr. Khairul Nizar Ismail Rafiza Abd Razak Alida Abdullah
57.	Gold – Fire Shield Paint: A New Technology Approach	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Mohd Mustafa Al Bakri Abdullah Dr. Heah Cheng Yong Dr. Liew Yun Ming Prof Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali Dr. Norazian Mohamed Noor Alida Abdullah
58.	Gold – Environment Friendly Anti – Radiation Vest For Protection Against Gamma Ray Photons	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Kahtan S. Mohammed Dr. Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Ali Basheer Azzez Dr. Nik Noriman Zulkepli PM Dr. Che Mohd Ruzaidi Ghazali
59.	Gold – A Novel Geopolymer Ceramic Matrix Composites	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Alida Abdullah Dr. Mohd Mustafa Al Bakri Abdullah Muhd Izzat Ahmad PM Dr. Che Mohd Ruzaidi Ghazali
60.	Gold – Heavy Duty and Eco Friendly Hybrid Composite	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Rozyanty Rahman Dr. Luqman Musa Muhammad Faheem Mohd Tahir Nur Firdaus Mohamed Yusof Syed Zhafer Firdaus Syed Putra Dr. Zuliahani Ahmad
61.	Gold – Geo-Clay Brick: Green Unfired Clay Geopolymer High Strength Brick	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Mukridz Md Mohtar Dr. Mohd Mustafa Al Bakri Abdullah Prof Dr. Kamarudin Hussin Mohamad Tamizi Selimin Muhammad Faheem Mohd Tahir Dr. Aeslina Abdul Kadir Nur Syarmira Che Aziz Nuraini Che Pin
62.	Gold – Geopolymerization Technology for Soil Stabilization Application	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Mohd Mustafa Al Bakri Abdullah Sharifah Zalihah Syed Zubir Prof Dr. Kamarudin Hussin Prof. Mohammed Bin Hussain Muhammad Faheem Mohd Tahir Prof Dr. Fauziah Ahmad Dr. Norazian Mohamed Noor Noor Fifin Natasha Shahedan



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NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
63.	Gold - CERA-COOL: Low Thermal Conductivity Eco-Glass Coating Materials	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Noorina Hidayu Jamil Wan Mohd Arif W. Ibrahim Faizul Che Pa Ruhiyuddin Mohd Zaki Shahrizam Saad Murizam Darus Mohamed Faisol Mohamed Noor
64.	Gold – A New Design of Conformal Cooling Channels (Milled Groove Square Shape) in Injection Molding Processes	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Shayfull Zamree Abd Rahim Prof. Dr. Safian Sharif Dr. Azlan Mohd Zain Rozaimi Mohd Saad Mohd Nasir Mat Saad
65.	Gold – Alkali Activated Slag Cement For Sustainable Development	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Aimi Noorliyana Hashim Noor Mariamadzliza Mohd Nan Noor Azira Mohd Noor Kamrosni Abdul Razak Prof Dr. Kamarudin Hussin
66.	Gold – ANCFREQ: A Novel Active Noise Cancellation Frequency Analyser For Magnetic resonance Imaging.	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Dr. Ragunathan Santiago Allan Melvin Andrew Prof. R. Ali Yeon Shakaff Sumathy Muniandy Prof. Hanafi Ismail Dr. Sam Sung Ting
67.	Silver – External Galvanic Powering System For Corrosion Protection	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Shaiful Rizam Shamsudin Rohaya Abdul Malek Prof. Azmi Rahmat Farah Farhana Zainal Farehah Azmi Chek Idrus Omar
68.	Bronze – GSM X1 Smart Home Automation System	International Invention, Innovation and Technology Exhibition (ITEX 2014)	8- 10 May 2014, KLCC	Mohd Khairul Fadzly Abu Bakar Amarul Talip Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad Mohd Fidzwan Md Aman Hamzas Badrul Azmi Abdul Holed
69.	Gold - Geopolymerization Method for Soil Stabilization Application	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Sharifah Zaliha Syed Zuber Dr. Fauziah Ahmad Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Prof. Mohammed Bin Hussain Muhammad Faheem Mohd Tahir Noor Fifinatasha Shahedan
70.	Gold & KIWIE Special Price - Korea Intellectual Property Office (KIPO)-Eco-Slag Cement	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Aimi Noorliyana Hashim Kamrosni Abdul Razak Noor Azira Mohd Noor Noor Mariamadzliza Mohd Nan Dr. Mohd Mustafa Al Bakri Abdullah
71.	Gold - AgriGlas: From Agricultural Waste To Glass & Ceramic Product	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Noorina Hidayu Jamil Faizul Che Pa Ruhiyuddin Mohd Zaki Shahrizam Saad Murizam Darus Wan Mohd Arif Wan Ibrahim Mohamed Faisol Mohamed Nor

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
72.	Silver - A Novel Geopolymer Ceramic	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Romisuhani Ahmad Dr. Mohd Mustafa Al Bakri Abdullah Muhd Izzat Ahmad Prof. Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali Alida Abdullah Nur Ain Jaya
73.	Silver - Anti Radiation Geopolymer Composite	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Dr. Mohd Mustafa Al Bakri Abdullah Sharifah Zalihah Syed Zuber Prof. Dr. Kamarudin Hussin Ali Basheer Aziz Muhammad Faheem Mohd Tahir Dr. Kahtan S. Mohammed PM Dr. Che Mohd Ruzaidi Ghazali
74.	Silver - EcOdor Buster	Korea International Women Invention Exposition (KIWIE)	16 -19 May 2014, COEX, Seoul Korea	Aimi Noorliyana Hashim Faizul Che Pa PM Dr. Che Mohd Ruzaidi Ghazali
75.	Gold - Towards Green Construction Materials: Geopolymer Composite Brick Fabrication Machine Vol. 2.0	EUROINVENT 2014	20 – 25 May 2014, Romania	Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin Prof Mohammed Bin Hussain Mohammad Tamizi Selimin PM Dr. Che Mohd Ruzaidi Ghazali Muhammad Faheem Mohd Tahir Wan Mastura Wan Ibrahim
76.	Gold & Honor of Invention World Invention Intellectual Property Association, Taiwan - SSDEM©: Statistical Software for Filling Missing Observations and Fitting Distribution in Air Pollutant Monitoring Data	EUROINVENT 2014	20 – 25 May 2014, Romania	Dr. Norazian Mohamed Noor Dr. Mohd Mustafa Al Bakri Abdullah Prof. Ahmad Sukri Yahya Wong Yee Shian
77.	Gold & Euroinvent Women Inventor Award - Fly Ash Artificial Geopolymer Aggregate Using Low Temperature	EUROINVENT 2014	20 – 25 May 2014, Romania	Alida Abdullah Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali Rafiza Abd Razak Mohd Faheem Mohd Tahir Ku Amirul Ku Yen
78.	Gold - BioxdPlast - A novel natural pro-oxidant for biodegradable plastic	EUROINVENT 2014	20 – 25 May 2014, Romania	Dr. Mohd Firdaus Omar Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Mohd Salihin Zakaria Lokman Hakim Ibrahim Ahmad Azrem Azmi Nik Zakaria Nik Yahya Muhammad Ridhwan Jamalul Nasir
79.	Gold & "Lucian Blaga" University of Sibiu Special Award, Romania - PulFF- A New Sustainable Lightweight Structural	EUROINVENT 2014	20 – 25 May 2014, Romania	Dr. Mohd Firdaus Omar Haziran Md Akil Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting Prof. Dr. Kamarudin Hussin Mohd Salihin Zakaria Lokman Hakim Ibrahim Ahmad Azrem Azmi
80.	Gold & Crotian Inventors Association Award - Novel Red Phosphor for LEDs and Displays	EUROINVENT 2014	20 – 25 May 2014, Romania	Mohd Fathullah Ghazali Prof. Jack Silver Prof. Dr. Kamarudin Hussin Shayfull Zamree Abd Rahim Norshah Afizi Shuaib



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NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
81.	Silver – Improving Quality and Productivity In Rapid Heat Cycle Molding with A New Design Of Conformal Cooling Channels	EUROINVENT 2014	20 – 25 May 2014, Romania	Shayfull Zamree Abd Rahim Safian Sharif Prof. Dr. Kamarudin Hussin Azlan Mohd Zain Rozaimi Mohd Saad Mohd Fathullah Ghazali
82.	Silver – Nanocomposite Solder Material Fabricated using Innovative Hybrid Microwave Assisted Rapid Sintering	EUROINVENT 2014	20 – 25 May 2014, Romania	Alida Abdullah Dr. Mohd Mustafa Al Bakri Abdullah Flora Somidin Mohd Arif Anuar Mohd Salleh Prof. Dr. Kamarudin Hussin Dr. Norainiza Saud
83.	Gold & Hong Kong Special Award – Novel Geo-green Coat	PERINTIS 2014	10 September 2014	Noor Fifinatasha Shahedan Shamala A/P Ramasamy Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Prof. Dr. Kamarudin Hussin Liyana Jamaludin
84.	Silver – A Novel Geopolymer Ceramic	PERINTIS 2014	10 September 2014	Romisuhani Ahmad Nur Ain Jaya Muhd Izzat Ahmad PM Dr. Che Mohd Ruzaidi Ghazali
85.	Semi Final - KENAF-SEPTANK" : Green Hybrid Septic Tank and High Performance Composite	Global Cleantech Innovation Programm Malaysia Competition	Sept 2014, SME Corp, KL SENTRAL	Dr. Rozyanty Rahman Dr. Luqman Musa Dr. Sharifah Shahnaz Syed Abu Bakar Nur Firdaus Mohamed Yusof Syed Zafer Firdaus Syed Putra
86.	Special Award - Most Consistent Geopolymer Strength Award	Intervarsity High Strength Geopolymer Competition (IHGC 2014)	10 – 12 October 2014	Meor Ahmad Faris Meor Ahmad Tajudin Nur Ain Jaya Noor Fifinatasha Shahedan
87.	Gold, Double Gold Award (User Category), Double Gold Award (Industry Category) – Anti Corrosion Coatings	British Invention Show (BIS 2014)	22 – 25 October 2014	Dr. Mohd Mustafa Albakri Abdullah Farah Farhana Zainal Prof. Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali Liyana Jamaludin
88.	Gold – Synthesis of Cuprous Oxide Thin Film for the Photoelectrochemical Cell (PEC) Application	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	Dr. Dewi Suriyani Che Halin Haiza Haroon Mohd Arif Anuar Mohd Salleh Prof. Dr. Kamarudin Hussin Dr. Khairel Rafezi Ahmad Noor Azira Mohd Nor
89.	Gold – High Chemical Resistance Geopolymer Pipeline	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	Dr. Mohd Mustafa Al Bakri Abdullah Muhd Izzat Ahmad Prof. Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali Dr. Norazian Mohamed Noor Muhammad Faheem Mohd Tahir Liyana Jamaludin

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
90.	Silver – New Multipurpose Artificial Infills	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	Dr. Nik Noriman Zulkepli Dr. Luqman Musa Dr. Sharifah Shahnaz Syed Bakar Dr. Sam Sung Ting Muhammad Salihin Zakaria Ahmad Azrem Azmi Lokman Hakim Ibrahim Nik Zakaria Nik Yahya Muhammad Ridhwan Jamalul Nasir
91.	Silver – Ultimate TMM CU-C Composite for Electronic Packaging Application	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	Azmi Kamardin Azida Azmi Dr. Mohd Nazree Derman Mohd Tamizi Selimin Mohd Arif Anuar Mohd Salleh Mohd Tajudin Mohd Idris
92.	Bronze – Novel Geopolymer Binder Friction Composite	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	PM Dr. Che Mohd Ruzaidi Ghazali Prof. Dr. Kamarudin Hussin Dr Mohd Mustafa Al Bakri Abdullah Mohamed Faisol Mohamed Noor Alida Abdullah
93.	Bronze – Fruit Wrapping and Harvesting Device	12th International Innovation Exhibition (ARCA 2014), Zagreb Croatia	15-18 October 2014	Mohd Nasir Mohd Saad Norshah Afizi Shuib Shayfull Zamree Abd Rahim Mohd Farizuan Rosli Mohd Fathullah Ghazali
94.	Winner Northern Region	MyInovasi, Putrajaya	16 October 2014	Badrul Azmi Abdul Holed Shayfull Zamree Abd Rahim Irfan Bin Abd Rahim Amarul Talib Mohd. Khairul Fadzly Abu Bakar Mohd Effendi Muhammad Suandi Muhamad Farizuan Rosli Mohd Nasir Mat Saad
95.	Gold - Soil Treatment and Stabilization for Soil Foundation Road	Malaysian Road Conference - Invention and Innovation Exhibition (MRC-IIE) 2014	10 – 12 November 2014	Sharifah Zalihah Syed Zubir Dr. Mohd Mustafa Al Bakri Abdullah Prof Mohamed Bin Husaain Prof Dr. Kamarudin Hussin Prof Dr. Fauziah Ahmad Muhammad Faheem Mohd Tahir
96.	Bronze – Geopolymer Artificial Aggregate As Road Based Application	Malaysian Road Conference - Invention and Innovation Exhibition (MRC-IIE) 2014	10 – 12 November 2014	Rafiza Abd Razak Alida Abdullah Dr. Mohd Mustafa Al Bakri Abdullah Prof Dr. Kamarudin Hussin PM Dr. Khairul Nizar Ismail Prof Dr. Djwantoro Hardjito Zarina Yahya
97.	Bronze - GEOPOLYMER CONCRETE FOR SIDEWALK: Towards Green Construction Materials	Malaysian Road Conference - Invention and Innovation Exhibition (MRC-IIE) 2014	10 – 12 November 2014	Muhammad Faheem Mohd Tahir Dr. Mohd Mustafa Al Bakri Abdullah PM Dr. Che Mohd Ruzaidi Ghazali Prof. Dr. Kamarudin Hussin Prof Mohamed Bin Hussain Wan Mastura Wan Ibrahim



# ANNUAL REPORT 2014

Center of Excellence in Green Technology School of Sustainable Engineering

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
98.	Silver- SUPER-UHLM: Ultimate-Polymer Larvacide Membrane For Denggi Fever	BioMalaysia & Bioeconomy Asia Pacific Conference & Exhibition 2014	19 – 21 November 2014	Dr. Ragunathan Santiagoo Prof. Dr. Kamarudin Hussin Pn. Siti Hafizah Abd. Mutalep Prof. Dr. Hanafi Ismail Dr. Sam Sung Ting Mdm. Sumathy Muniandy Mr. Allan Melvin Andrew Mr. Ericson Kanagaru Cik. Zlinda Abdul Ghani
99.	Bronze Medal - CeraDen-AgriGlass: A Ceramic Block Material for Solid Crown/Bridge Dental Restoration Application	BioMalaysia & Bioeconomy Asia Pacific Conference & Exhibition 2014	19 – 21 November 2014	Wan Mohd Arif W. Ibrahim Noorina Hidayu Jamil Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed Nor
100.	Gold Award (GSM Temperature Alert System To Detect Human Body Temperature)	International Exhibition on Invention Kunshan (IEIK 2014), Kunshan, China 2014	19 – 22 November 2014	Mohd Khairul Fadzly Abu Bakar Amarul Talip Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad Badrul Azmi Abdul Holed Norshah Afizi Shuaib Irfan Abd Rahim
101.	Gold- Pdigi & Igate	International Exhibition on Invention Kunshan (IEIK 2014), Kunshan, China 2014	19 – 22 November 2014	Amarul Talip Shayfull Zamree Abd Rahim Mohd Khairul Fadzly Abu Bakar Mohd Nasir Mat Saad Badrul Azmi Abdul Holed Norshah Afizi Shuaib Irfan Abd Rahim
102.	Bronze Medal, Leading Innovation Award from International Intellectual Property Netwrok Forum & Special Award from Korea University Invention Association - Improving Productivity and Quality In Conventional and Rapid Heat Cycle Molding With A New Design of Conformal Cooling Channels.	International Exhibition on Invention Kunshan (IEIK 2014), Kunshan, China 2014	19 – 22 November 2014	Shayfull Zamree Abd Rahim Mohd Nasir Mat Saad
103.	Silver Medal, Special Prize From Korea Invention Promotion Association and Best Invention Special Award from the 1st Institute Inventors and Researchers in i.r.Iran - KENAF-SEPTANK": Green Hybrid Septic Tank and High Performance Composite	Seoul International Invention Fair 2014 – SIIF 2014	28 November – 01 December 2014 Seoul, Korea	Dr. Rozyanty Rahman Nur Firdaus Mohamed Yusof Nasaruddin Mohamed Noor
104.	Silver Medal – GG Powder	Seoul International Invention Fair 2014 – SIIF 2014	28 November – 01 December 2014 Seoul, Korea	Noorina Hidayu Jamil Wan Mohd Arif W. Ibrahim Faizul Che Pa Ruhiyuddin Mohd Zaki Murizam Darus Shahrizam Saad Mohamed Faisol Mohamed Nor

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
105.	Silver- WEC-BREAKER: Novel Electro-Aquatic Circuit Breaker In Flood Prone Area From E- Waste	Seoul International Invention Fair 2014 – SIIF 2014	28 November – 01 December 2014 Seoul, Korea	Dr. Ragunathan Santiago Prof. Dr. Kamarudin Hussin Mr. Allan Melvin Andrew Vasanthan Maruthapillai Prof. Dr. Hanafi Ismail Dr. Sam Sung Ting
106.	Bronze- Health Risk Assessment In Human Environment	Seoul International Invention Fair 2014 – SIIF 2014	28 November – 01 December 2014 Seoul, Korea	Zuraini Mohd Ideris Dr. Ragunathan Santiago Dr. Nasrul Hamidin
107.	Bronze- AGRINIPRO	Seoul International Invention Fair 2014 – SIIF 2014	28 November – 01 December 2014 Seoul, Korea	Dr. Sam Sung Ting Dr. Nik Noriman Zulkepli Muhammad Syarhabil Ahmad Ragunathan Santiago Mohd Firdaus Omar Prof. Hanafi Ismail Muradibah Mohd Amer Ainatun Nadhirah Azmi Wang Jing
108.	Gold & Special Award - KeFREC: An Alternative Material For Light Weight Structural Applications	Green Technology Research Exposition (GTReX)	4 December 2014	Dr. Mohd Firdaus Omar Prof Hazian Md Akil Dr. Nik Noriman Zulkepli Dr. Sam Sung Ting
109.	Gold -ECO-Dour Buster	Green Technology Research Exposition (GTReX)	4 December 2014	Aimi Noorliyana Bt Hashim PM Dr. Che Mohd Ruzaidi Bin Ghazali Faizul Bin Che Pa Mohd Darus Bin Daud
110.	Gold - A Novel Lead-free Solder Paste Composite	Green Technology Research Exposition (GTReX)	4 December 2014	Rita Mohd Said Nor Hayanti Mohd Nasir Norainiza Saud Mohd Arif Anuar Mohd Salleh Dr Mohd Mustafa Al Bakri Abdullah
111.	Silver - NaNO-PCC	Green Technology Research Exposition (GTReX)	4 December 2014	Aimi Noorliyana Bt Hashim Mohd Darus Bin Daud Prof Azmi Rahmat
112.	Silver - Novel GeoGreen-Coat	Green Technology Research Exposition (GTReX)	4 December 2014	Noor Fifin Natasha Binti Shahedan Dr. Mohd Mustafa Al Bakri Abdullah Prof Dr Kamarudin Hussin Shamala A/P Ramasamy Prof Madya Dr. Che Mohd Ruzaidi Ghazali
113.	Silver - Geopolymer Concrete for Sidewalk	Green Technology Research Exposition (GTReX)	4 December 2014	Laila Mardhiah Deraman Wan Mastura Wan Ibrahim Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr Kamarudin Hussin Prof. Mohammed Bin Hussein
114.	Silver – Steel Fiber Geopolymer	Green Technology Research Exposition (GTReX)	4 December 2014	Meor Ahmad Faris Meor Tajudin Dr. Mohd Mustafa Al Bakri Abdullah Prof. Dr. Kamarudin Hussin PM Dr Khairul Nizar Ismail Ratnasy Muniandy



# ANNUAL REPORT 2014

Center of Excellence Green & Green Technology School of Materials Engineering

NO.	AWARD	PROGRAMME	DATE & VENUE	WINNER
115.	Silver - Green High Strength Composite Solder	Green Technology Research Exposition (GTReX)	4 December 2014	Mohd Izrul Izwan Bin Ramli Fatin Afeeqa Binti Mohd Sobri Norainiza Saud Mohd Arif Anuar Mohd Salleh Dr. Mohd Mustafa Al Bakri Abdullah
116.	Silver - A Novel Environmental Low Cost High Purity Sn Extraction Process From Solder Dross	Green Technology Research Exposition (GTReX)	4 December 2014	Syarifah Aminah Bt Ismail Noorina Hidayu Jamil Mohd Arif Anuar Mohd Salleh Prof. Dr. Kamarudin Hussin Dr. Mohd Mustafa Al Bakri Abdullah
117.	Gold & Green Technology Award - APP©: Statistical Software for Predicting Air Pollutant	Kaohsiung International Invention Exhibition (KIE 2014)	19 – 21 December 2014	Dr. Norazian Mohamed Noor
118.	Gold, Special Award Thailand Award for Best International Invention – Fire Shield Paint	Kaohsiung International Invention Exhibition (KIE 2014)	19 – 21 December 2014	Dr. Liew Yun Ming Dr. Mohd Mustafa Al Bakri Abdullah Dr. Heah Cheng Yong Prof. Dr. Kamarudin Hussin
119.	Silver – Novel Green-Coat	Kaohsiung International Invention Exhibition (KIE 2014)	19 – 21 December 2014	Shamala A/P Ramasamy Dr. Mohd Mustafa Al Bakri Prof Dr. Kamarudin Hussin PM Dr. Che Mohd Ruzaidi Ghazali

## 12.0 RESEARCH COLLABORATIONS

### 12.1 Memorandum of Understanding and Agreement

NO.	ORGANISATION	DATE AND VENUE	AIM
1.	Konsorsium Riset Geopolimer Indonesia (KORIGI)	January 2014, Surabaya, Indonesia	To Develop artificial aggregate With Geopolymer System Using Sidoarjo Mud Volcano From Indonesia
2.	Institut Teknologi Sepuluh Nopember (ITS)	January 2014, Surabaya, Indonesia	To collaborate in enhancing academic and staff/human resource including research
3.	Institut Kemahiran Tinggi PERDA (PERDA-TECH)	10 Mei 2014 Institut Kemahiran Tinggi PERDA (PERDA-TECH)	To collaborate in enhancing academic and staff/human resource including research.
4.	National Key Laboratory of Polymer and Composite Material, Vietnam	6 December 2014 Sheraton Saigon Hotel, Vietnam	To collaborate in polymer composite expertise
5.	Ho Chi Minh City University of Science	6 December 2014 Sheraton Saigon Hotel, Vietnam	To enhance academic and staff/human resource including research
6.	Faculty of Material Science & Engineering "Gheorghe Asachi" Technical University of Iasi, Romania	6 December 2014 Sheraton Saigon Hotel, Vietnam	To collaborate in developing geopolymer and advanced materials research
7.	Ho Chi Minh City University of Technology	6 December 2014 Sheraton Saigon Hotel, Vietnam	To collaborate in enhancing academic and staff/human resource including research
8.	Industrial University of Ho Chi Minh	6 December 2014 Sheraton Saigon Hotel, Vietnam	To collaborate between industry university and research university

### 12.2 Research Advisory and Associate Researcher

NO.	NAME	ORGANISATION	AIM
1.	Prof. Dr. Eng. Petrica VIZUREANU	Department of Technologies and Equipment for Materials Processing Technical University of Iasi, Romania	Research Advisor on Advanced Metallurgy
2.	Assoc. Prof. Dr. Dai Phu Huynh	National Key Laboratory of Polymer and Composite Materials, Vietnam & Ho Chi Minh City University of Technology, Vietnam	Research Advisor on Polymer
3.	Dr. Ir. Januarti Jaya Ekaputri	Institut Teknologi Sepuluh Nopember	Associate Researcher on Geopolymer
4.	Dr. Tran Van Mien	Ho Chi Minh City University of Technology, Vietnam	Associate Researcher on Geopolymer
5.	Dr. Xuan Viet Cao	Ho Chi Minh City University of Technology, Vietnam	Associate Researcher on Polymer



### 12.3 National Services

NO.	ORGANISATION/PROGRAMME	DATE & VENUE	PURPOSE
1.	Kolej Mara Kuala Nerang, Kedah	23 January 2014	Jury for FUSION 2014
2.	Members of Islamic Relief Malaysia (IRM) 1. Mohd Nasir Mat Saad	Whole year 2014	Charity service for Perlis citizen
3.	Members of Technical Purchasing Committee 1. Badrul Azmi Abdul Holed 2. Mohd Nasir Mat Saad	Whole Year 2014	Preparation and Identify Specification of Tender Document for Setting up Rapid Prototyping Lab and Equipments
4.	Advisor of Curriculum Development for Dip. Tech. in Product Design 1. Badrul Azmi Abdul Holed 2. Shayfull Zamree Abd Rahim	Whole Year 2014	Preparation of Curriculum Document for setting up new academic program and for certifications by MQA.
5.	Sekolah Menengah Teknik Alor Setar, Kedah 1. Liyana Jamaludin 2. Faizul Che Pa	May 2014	Guiding school on innovation programmes. Organized talk on innovation.
6.	Sekolah Kebangsaan Sena, Perlis	Whole Year 2014	Jury for Science Exhibition Fair Provide Advisory Services and Technical Assistance to Jurutera Muda Tunas Club
7.	Kolej Mara Kuala Nerang, Kedah	23 January 2014	Jury for FUSMIF 2014
8.	Kementerian Pendidikan Malaysia 1. Mohd Mustafa Al Bakri Abdullah 2. Alida Abdullah 3. Zarina Yahya 4. Liyana Jamaludin 5. Noorina Hidayu Jamil 6. Wan Mohd Arif Wan Ibrahim	Park Avenue Hotel, Sungai Petani	Fasilitator for Bengkel Penyelidikan dan Pembangunan (R&D) dan Inovasi Sekolah Berprestasi Tinggi
9.	Sekolah Kebangsaan Presint 11(1) Putrajaya, Kuala Lumpur 1. Muhamad Farizuan Rosli 2. Shayfull Zamree Abd Rahim 3. Badrul Azmi Abdul Holed 4. Mohd Effendi Muhammad Suandi	15 October 2014	Jury for Carnival Science and mathematics
10.	Fasilitator 1. Shayfull Zamree Abd Rahim 2. Mohd Mustafa Al Bakri Abdullah 3. Alida Abdullah	12 November 2014, Sek. Keb. Sultan Idris II, Kuala Kangsar, Perak,	Launching MYRIS Club

## 13.0 FINANCIAL REPORT

### 13.1 Budget

BUDGET (RM)	EXPENSES (RM)	BALANCE (RM)	PERCENTAGE OF EXPENSES (%)
400,000.00	291,242.49	108,757.51	72.81
400,000.00 (Vot 35)	306,811.90	93,188.10	76.70

Note: Most of the budget was obtain from International Grant

### 13.2 Financial Support

PROGRAMME/ACTIVITIES	INCOME (RM)	EXPENSES (RM)	BALANCE (RM)
1. International Conference Advanced Material Engineering & Technology (ICAMET 2014), 4- 5 December 2014, Ho Chi Minh, Vietnam	178,628.96	136,774.80	41,854.16



## 14.0 SPECIAL REPORTS

### 14.1 Workshop on Writing Scientific Book

- Date: 14 – 16 February 2014
- Venue: Park Avenue Hotel, Sungai Petani, Kedah
- Organizer: CeGeoGTech & School of Materials Engineering UniMAP
- Chairman: Dr Mohd Mustafa Al Bakri Abdullah
- Total Number of books: 12



## 14.2 Malaysia – Indonesia Geopolymer Symposium (MIGS 2014)

- Date: 11-12 May 2014
- Venue: PWTC, Kuala Lumpur
- Organizer: CeGeoGTech
- Co-Organizer: National Key Laboratory of Polymer and Composite Materials, Vietnam & Ho Chi Minh City University of Technology, Vietnam
- Chairman: Dr Mohd Mustafa Al Bakri Abdullah
- Total Number of papers: 60





### 14.3 3rd International Conference Advanced Materials Engineering & Technology (ICAMET 2014)

- Date: 4-5 December 2014
- Venue: Ho Chi Minh, Vietnam
- Organizer: CeGeoGTech, School of Materials Engineering and Faculty of Engineering Technology
- Chairman: Dr Mohd Mustafa Al Bakri Abdullah
- Total Number of Papers: 238
- Number of Paper Publish in Applied Mechanic & Material Journal: 238



#### 14.4 Green Technology Research Exposition (GTReX)

- Date: 4 December 2014
- Venue: Ho Chi Minh, Vietnam
- Organizer: CeGeoGTech and Malaysian Research & Innovation Society (MyRIS)
- Chairman: Dr Mohd Mustafa Al Bakri Abdullah
- Number of Inventions: 30





## ANNUAL REPORT 2014

Center of Excellence Geopolymer & Green Technology School of Materials Engineering

### 15.0 ACTIVITIES



MoU signing between CeGeoGTech, UniMAP and Konsorsium Riset Geopolimer Indonesia (KORIGI)

Venue : Hotel Alana Surabaya

Date : 16 January 2014



Meeting CeGeoGTech with CREAM CIDB Executive Director Prof. Ir. Dr. Zuhairi Abd. Rahman

Venue : CIDB, Kuala Lumpur

Date : 18 February 2014



Meeting Establishment Malaysia Geopolymer Network (MyGen)

Venue : Anjung UniMAP, Kuala Lumpur

Date : 19 February 2014



CeGeoGTech Collaboration Meeting With FRIM Lead By Dr Rahim Sudin

Venue : FRIM, Kuala Lumpur

Date : 19 February 2014



Research Progress for International Research Grant with Director King Abdul Aziz Science City & Technology (KACST)

Venue : Prince Hotel, Kuala Lumpur

Date : 17 February 2014



Meeting CeGeoGTech with Institute For Infrastructure Engineering Sustainable Management (IIESM)  
Venue : Universiti Teknologi Mara (UiTM)  
Date : 18 February 2014



Discussion with Prof Adam Rylski from Lodz University Poland  
Venue : Universiti Malaysia Perlis  
Date : 20 February 2014



Malaysia Technology Expo (MTE)  
Venue : PWTC, Kuala Lumpur  
Date : 20 – 22 February 2014



Meeting CEGeoGTech With AAM For UniMAP-MODENAS Racing Challange 2014  
Venue : AAM, Kuala Lumpur  
Date : 20 February 2014



Prof Adam Rylski, Lodz University of Technology  
Lecture and Lab Visit  
Venue : University Malaysia Perlis  
Date : 24 February 2014



Invited Lecture and UniMAP Promotion at  
Institut Teknologi Sepuluh Nopember (ITS)  
Surabaya  
Venue : ITS, Surabaya  
Date : 10 February 2014



The 17th Moscow International Salon of  
Inventions and Innovation Technologies  
“Archimedes”  
Venue : Moscow, Russia  
Date : 31 March - 7 April 2014



Nihon Malaysia MD and Advisor Visit UniMAP  
VC Office  
Venue : Universiti Malaysia Perlis  
Date : 14 April 2014



Nihon Malaysia MD Visit to CEGeoGTech and  
Talk by AP Dr Kazuhiro Nogita  
Venue : Universiti Malaysia Perlis  
Date : 14 April 2014



International Invention, Innovation and  
Technology Exhibition (ITEX 2014)  
Venue : KL Convention Centre (KLCC)  
Date : 8 - 10 May 2014



Talk by Prof Jadambaa Temuujin From Mongolian  
Academy Of Sciences  
Venue: Anjung UniMAP, Kuala Lumpur  
Date: 11 May 2014



Meeting with MyGeopolymer Committee  
Venue : Anjung UniMAP, Kuala Lumpur  
Date : 12 May 2014



MoU Signing between CeGeoGTech and  
Mongolian Academy Of Sciences  
Venue : PWTC, Kuala Lumpur  
Date : 12 May 2014



European Exhibition of Creativity and Innovation  
(EUROINVENT 2014)  
Venue : Romania, Poland  
Date : 9 - 11 May 2014



International Material, Technology Conference  
& Exhibition (IMTCE)  
Venue : PWTC, Kuala Lumpur  
Date : 13 - 16 May 2014



Korea International Women Invention  
Exposition (KIWIE 2014)  
Venue : Seoul, South Korea  
Date : 16 - 19 May 2014



UniMAP - MODENAS Racing Challenge 2014  
Venue: Litar Perlumbaan Antarabangsa  
UniMAP Date: 6-8 June 2014



Mesyuarat Penyelarasan Laporan R&D UniMAP-KACST

Venue : Hotel Movenpick, Makkah  
Date : 14 July 2014



Programme : The Global Cleantech Innovation Programme (GCIP)

Venue : SME Corp, Kuala Lumpur  
Date : 26 August 2014



Programme: Pertandingan Rekacipta dan Inovasi Institusi Pengajian Tinggi Swasta (PERINTIS 2014)

Venue: Infrastructure Universiti KL  
Date: 10 September 2014



Programme: MyInovasi Boot Camp 2014

Venue: Putrajaya

Date: 11-12 October 2014



Programme: Intervarsity High Strength Geopolymer Competition (IHGC 2014)

Venue: Universiti Teknologi Petronas

Date: 10-12 October 2014



Programme: Malaysian Road Conference-Invention and Innovation Exhibition (MRC- IIE) 2014

Venue: Sunway Pyramid Convention Centre  
Date : 10-12 November 2014



Programme : BioMalaysia & Bioeconomy Asia

Pacific Conference & Exhibition 2014

Venue : Kuala Lumpur Convention Centre

Date : 19 – 21 November 2014

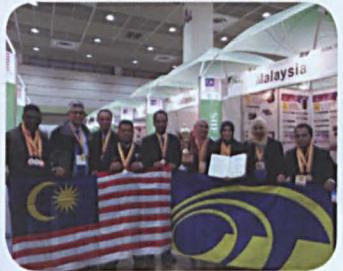


Programme : 8th International Exhibition of

Inventions Kunshan - IEIK 2014

Venue : Kunshan, China

Date : 19 – 22 November 2014



Programme: Seoul International Invention Fair

(SIIF 2014)

Venue: COEX, South Korea

Date: 28 Nov – 1 December 2014

## NEWSPAPER CLIPS

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## Text Books Published By UniMAP Set To Enter Romanian Market

KANGAR, Dec 7 (Bernama) – Text books published by Universiti Malaysia Perlis (UniMAP) are set to enter the Romanian market once they are translated into the European country's national language.

UniMAP vice-chancellor Prof Datuk Dr Kamarudin Hussin said the university was taking proactive steps to market text books it published to foreign countries and Romania was the first country to be chosen.

"At the same time, books authored by academics in Romania will also be translated into Bahasa Malaysia so that they can be marketed in Malaysia," he was quoted as saying in a statement issued by UniMAP here today.

The statement said UniMAP and the Engineering and Materials Science Faculty of Gheorghe Asachi Technical University of Iasi Romania (TUIASI) signed an agreement to realise the collaboration on the sidelines of the International Conference on Advanced Materials Technology (ICAMET) 2014 in Ho chi Minh City in Vietnam today.

UniMAP was represented by Kamarudin while TUIASI by Professor Eng. Dr Petrica Vizureanu, the director of its Department of Technology and Material Processing Equipment, diwakili Pengarah Jabatan Teknologi dan Peralatan Pengolahan Bahan.

- BERNAMA



## 34 scientists get top award

&gt; For pushing the boundary of research

BY NAIKAL JAH AND ANDY ANVILLY  
[naikal@bernama.com](#)

KUALA LUMPUR: Prime Minister Datuk Seri Najib Razak yesterday conferred the Top Researchers Malaysia CTRIM award on 34 research scientists.

They were given the recognition for pushing the boundaries of research and development, discover new knowledge, make discoveries, create value-added opportunities and translate their research into meaningful outcomes that significantly contribute to the socio-economic transformation of the nation.

They were given the recognition for pushing the boundaries of research and development, discover new knowledge, make discoveries, create value-added opportunities and translate their research into meaningful outcomes that significantly contribute to the socio-economic transformation of the nation.

Mohd Zainal Abidin Ah Kadir

Also receiving the award are Prof Dr Nurulaini Abd Rahim (UM), Prof Dr Noorafiza A. Rahman (UM), Prof Dr Razmizah T. Sulaiman (UM), Prof Dr Ahmad Hafizuddin (UM), Prof Dr Rosnah Mohd Zain (UM), Prof Dr S. V. Venkateswaran (UM), Prof Dr Shamsida Duri, Prof Dr Siti Hajar (UM), Prof Dr Syed Bee A.O. Ahmad (UM), Prof Dr Syed Faridah Kamarudin (UM), Prof Dr Yee See Hwang (UM), Prof Dr Zainal Abidin (UM), Prof Dr Zainal Abidin (UM) and Prof Dr

Ahmad Tahar Bin Wahid (UM).

Meanwhile, Najib said Malaysia needs to be at the top of the innovation index in the global competitiveness index and global innovation index.

He said this can be achieved through the implementation of the National 5-Axis and the National Policy on Science, Technology and Innovation 5-axis initiatives.

He was quoted as saying in a statement by the Coordinating Ministry of Education of the Academy of Sciences Malaysia and Top Researchers Scientists Malaysia in a press conference, yesterday.

## Penyelidik UniMAP terima pengiktirafan antarabangsa

KUALA LUMPUR 22 Nov. - Penyelidik Universiti Malaysia Perlis (UniMAP), Dr. Norhafiza Muhammed berjaya mengharumkan nama negara apabila produk ciptaan mereka untuk membantu pesakit jantung mendapat pengiktirafan dari tiga negara dalam Pameran Reka Cipta Antarabangsa Ke-8 (IEIK 2014) yang diadakan di Kunshan, China baru-baru ini.

Hasil penyelidikan Norhafiza melalui produknya iaitu model *Smoothed Particle Hydrodynamics* untuk aplikasi pemesanian mikro laser menerima anugerah khas daripada Persatuan Perekat Cipta Poland (Spwir), Persatuan Reka Cipta Universiti Korea (KUIA) serta Persatuan Promosi Reka Cipta dan Inovasi Indonesia (Innopia) dalam pameran tersebut.

Norhafiza berkata, kejayaan tersebut membuktikan semangatnya untuk terus menghasilkan penyelidikan yang lebih baik dan mampu memberi manfaat kepada masyarakat.

"Alhamdulillah, kajian yang saya jalankan ini bertujuan menyelamatkan lebih ramai nyawa pesakit jantung yang semakin meningkat di negara ini melibatkan penstruktur permukaan jaringan logam

menggunakan laser.

"Fungsi utama penstruktur adalah untuk memudahkan proses endotiliasi pada jaringan logam bagi menghasilkan tindak balas bersesuaian pada tisu biologikal dengan peningkatan prestasi jantung yang lebih baik," katanya dalam satu kenyataan kepada Mingguan Malaysia hari ini.

Sebanyak 32 negara mengambil bahagian dalam pameran yang bermula Selasa lalu itu, antaranya tuan rumah China, Hungary, Jerman, Russia, Sweden, Romania, Mesir, Brazil, Slovenia dan Malaysia dengan penglibatan lebih daripada 2,000 pakar inovasi.

Selain itu, UniMAP turut menampilkan lima lagi anugerah khas pada IEIK 2014 menerusi produk ciptaan Noorina Hidayu Jamil; Mohd. Khairul Fadzly Abu Bakar; Amarul Talip; Wan Mohd. Arif Wan Ibrahim dan Shayfull Zamree Abd. Rahim.

Tidak ketinggalan, hasil penyelidikan dua pelajar doktor falsafah selian Naib Canselor UniMAP, Datuk Prof. Dr. Kamarudin Hussin iaitu Rafiza Abdul Razak dan Shamsa Ramasamy, masing-masing turut menerima pingat emas pada pameran tersebut.



Mohd Najib Tun Razak  
@NajibRazak

Well done to our 4 UniMAP researchers for making us proud by winning 7 awards at the 2014 British Invention Show [bit.ly/1spMYq3](http://bit.ly/1spMYq3)

4:26 PM · 27 Oct 14

94 RETWEETS 69 FAVORITES



KAMARUDIN HUSSIN

## Inovasi UniMAP raih emas di Moscow

KUALA LUMPUR 6 April - Universiti Malaysia Perlis (UniMAP) meraih enam pingat emas dan empat pingat perak dalam *The 17th Moscow International Salon of Inventions and Innovation Technologies (Archimedes)* yang berakhir semalam di Sokolniki Convention and Exhibition Centre, Russia.

Pertandingan yang disertai lebih dari 20 buah negara termasuk Kanada, Croatia dan Taiwan serta beberapa buah negara Afrika itu turut menyaksikan delegasi penyelidik UniMAP meraih enam anugerah khas.

Naib Canselor UniMAP, Brigadier Jeneral Datuk Prof. Dr. Kamarudin Hussin melahirkan rasa bangga dengan kejayaan meraih 10 pingat (enam emas, empat perak) berserta enam anugerah khas daripada lebih 900 produk

yang dipertandingkan.

"Penyelidik dari Fakulti Teknologi Kejuruteraan (FTK) yang baru ditubuhkan penghujung tahun lalu antara penyumbang pingat (dua emas, dua perak) dan dua anugerah khas menerusi empat penyertaan yang dihantar.

"Penyumbang pingat iaitu Dekan FTK, Prof. Madya Dr. Che Mohd. Ruzaidi meraih emas menerusi produk inovasinya, *Continuous Fiber Geopolymer Composite Via Filament Winding* yang turut berjaya meraih Anugerah Khas Moscow manakala Timbalan Dekan FTK, Dr. Nik Noriman Zulkepli yang juga berjaya meraih Anugerah Khas Taiwan menerusi produknya *Greenplast-Novel Oxo-Biodegradable Plastic using Natural Pro-Oxidant*," katanya dalam kenyataan, di sini

hari ini.

Dr. Kamarudin juga berbangga dengan kejayaan penyelidik dari Pusat Pengajian Pembangunan Insan dan Telekomunikasi (IKOM) yang turut menyumbangkan satu pingat emas meskipun sedang dalam cuti belajar.

"Tiga lagi pingat emas dan anugerah khas disumbangkan oleh penyelidik dari Pusat Kecemerlangan Geopolymer dan Teknologi Hijau (CEGeoGTech) dan Pusat Pengajian Kejuruteraan Pembuatan," katanya.

Archimedes merupakan perhimpunan tahunan penyelidik di Moscow yang berlangsung selama empat hari dengan mengadakan seminar, pembentangan projek-projek teknologi serta pertandingan inovasi dan reka cipta.

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## UniMAP bags seven British Invention Show awards in London

Bernama | Updated: October 27, 2014  
(First published on: October 27, 2014 08:13 MYT)

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**UniMAP**

Universiti Malaysia Perlis bags seven BIS awards in London - File Photo

heads turned with his invention of 'Anti Corrosion Coatings' product. His presentation also received the Double Gold Award in the 'Users' category and Double Gold Award in the 'Industry' category.

Environment-friendly products, based on wastes from industrial plants and which serve as corrosion coating, also received a special recognition from the Romanian Inventors Forum (RIF), UniMAP said in a statement, Sunday.

**KANGAR:** Four Universiti Malaysia Perlis (UniMAP) researchers made history in the international arena after bagging seven awards at the British Invention Show (BIS) 2014 exhibition held in London's Barbican exhibition centre.

The two-day event saw, PhD student Farah Farhana Zainal's research product walked away with three awards.

Faculty of Engineering Technology (FETech) senior lecturer Dr Mohd Mustafa Al Bakri Abdullah made

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**KANGAR:** Two Universiti Malaysia Perlis (UniMAP) lecturers have received accolades in Romania.

Faculty of Engineering Technology (FETech) deputy dean (student affairs) Alida Abdullah bagged a special research award for women at the sixth European Exhibition of Creativity and Innovation (EUROINVENT 2014) organised by the Romanian Research Association in Iasi from May 21 to 24.

UniMAP head of delegation to EUROINVENT, Dr Mohd Mustafa Al-Bakri Abdullah, was appointed honorary associate researcher by the Technical University of Iasi (TUI), Romania for a two-year term.

UniMAP vice-chancellor, Datuk Prof Dr Kamarudin Hussin, said the achievements of both researchers from the Centre of Excellence Geopolymer & Green Technology (CEGeoGTech) remained in line with the institution's mission.

NEWS PAPER CLIPS



#### UniMAP Woman Researcher Wins Special Award in China

KUALA LUMPUR, Nov 22 (Bernama) – Universiti Malaysia Perlis (UniMAP) researcher Dr Norhafiza Muhammad has made Malaysia proud at the international arena when she won three special awards at the '8th International Exhibition of Invention (IEIK)' in Kunshan, China.

UniMAP, in a statement, said Norhafiza, the recipient of the National Fellowship award for women by L'Oréal Malaysia last Oct 30 had won the special award at IEIK through her product invention - 'Smoothed Particle Hydrodynamics', a micro laser machining application.

The innovative invention has received recognition from three countries, namely the Association of Polish Inventors and Rationalists (Poland), Korea University Invention Association (South Korea) and Indonesian Invention and Innovation Promotion Association.

According to the statement Norhafiza, a lecturer at UniMAP's Centre of Excellence Geopolymer and Green Technology (CEGeoTech) said the success gave her encouragement to produce better research that could benefit the people.

"Alhamdulillah, my study involving the structure of the surface of the metal network through the use of laser is aimed at saving the lives of more heart patients who are increasing in Malaysia," he said.

A total of 32 countries worldwide took part in the exhibition, including host, China.

UniMAP also received various IEIK 2014 special awards via product inventions - 'Agriglass: From Agricultural Waste to Glass and Ceramic Product' by Noorina Hidayah Jame, 'GSM Temperature Alert System' by Mohd Khanul Fadzly Abu Bakar and research findings by Amarul Talip, namely PDigi and iGate, said the statement.

- BERNAMA

**MegaKampus**

## UniMAP kembangkan teknologi geopolimer

Mendalamai teknologi konkrit polimer di Mongolia untuk diguna pakai di Malaysia

**U**NIVERSITI Malaysia Perlis (UniMAP) berharap mengembangkan penyelidikan dan teknologi geopolimer ini dalam bidang bahan konkrit dalam masa depan akan memberi sumbangan pembangunan yang berasaskan teknologi hijau di Malaysia.

Dr Mohd Bakar, Brig Jen. Datuk Prof. Dr. Kamardin Husin berkata, penggunaan konkrit simen biasa dalam pembinaan mempunyai kekurangan seperti percorocaman alam sekitar dengan pembebasan Karbon Dioksida (CO<sub>2</sub>).

Kata dia, penyelidikan UniMAP membuat Perak menjadi pusat geopolimer & Teknologi Hijau (CEGeoTech) yang diketuai oleh Pensyarah Kanan Fakulti Sains dan Teknologi Dr Mohd. Mustafa Al Bakri Abdullah telah menghasikan penyelidikan konkrit hijau tanpa simen yang dapat mengurangkan pergesiasian CO<sub>2</sub>.

"Selain itu, kerjaya membentuk fokus terhadap penyelidikan konkrit geopolimer berdasarkan abu terbang (fly ash) di Mongolia yang dipercayai mempunyai kandungan kalium dan kadar manusia atau yang boleh dimanfaat dan dilaksanakan dengan penyelidikan yang dijalankan oleh CEGeoTech UniMAP."

"Abu terbang atau tanah liat yang digunakan merupakan sifat-sifat seperti komposit berperisa dan kerap seperti simen biasa dan kerjasama ini diharap dapat membantu UniMAP mendalamai perkembangan teknologi konkrit geopolimer di Mongolia untuk digunakan dengan perkembangan teknologi di

**KAMARUDIN Husin (kanan) bertukar dokumen perjanjian dengan Jambanba Temsujin sambil disaksikan Abu Bakar Mohamed Diah semasa Simposium Malaysia-Indonesia Geopolimer di Putrajaya Dangun Dunia Putra, Kuala Lumpur baru-baru ini.**

Malaysia. Ia merupakan perjanjian pertama UniMAP dengan Mongolia, dan kini amat berharap lnya akan membuka lebih banyak peluang dan jirigen kerjasama antara kedua-dua pihak selepas ini," katanya dalam majlis perasmian perjanjian persefahaman (MoU) antara UniMAP dengan Mongolian Academy Of Sciences (MAS) baru-baru ini.

Dalam perjanjian itu, UniMAP diwakili oleh Dr. Kamardin manakala MAS diwakili Ketua Susut Institute of Chemical and Chemical Technology (Dr. Jadihmet Temsujin dengan disaksikan Timbalan Menteri Sains, Teknologi dan Inovasi (MOSTI), Datuk Dr. Abu Bakar

**Mohammed Firdaus**, Perwakilan Ibu Bapa berpentaka Malaysia-Indonesia Geopolimer Symposium anjuran CEGeoTech UniMAP dan Universiti Malaysia Perlis (UniMAP) & Pengurusan Mampan (GIESM) Universiti Teknologi Mara (UiTM) dengan kerjasama Persatuan Penyelidik dan Pengelajah MyGeoPolymer dan Konvensyen Riset Geopolimer Indonesia (KORGID) di Putrajaya pada hari ini.

MIGC menghimpunkan lebih 70 peserta dari IPT, Malaysia dan Indonesia dengan tujuan meningkatkan bilangan ahli bangku Geopolimer di seluruh dunia.

Hadir sama, Pakar Geopolimer dari Universiti Indonesia Surabaya, Prof. Dr. Ir. Divyantoro Hardjito.

Dalam Ucapannya, Dr. Abu Bakar menggesa institut pengajian di negara ini untuk mencipta produk bahan baru terutama yang mampu menyumbang kepada perkembangan ekonomi negara.

Menurut beliau, sejajar perkembangan dan perekodan masa negara perlu bersedia dengan penciptaan produk bahan baru terutama yang dapat dikenalpasti dalam kehidupan sehari-hari.

“Pada akhirnya, kita perlu kontinjen menjalankan kerjasama strategik dengan pihak-pihak baru terutama yang mampu memberikan ilmu baru yang bermakna,”

“Persefahaman ini akan memberi bahan dan kerjaya dengan pihak luar ini secara tidak langsung membantu negara mencapai sasaran 72 salin bagi setiap 10,000 warga ketika mampu dicapai,” katanya.



## Mesin GeoBrick menghasilkan bata berkualiti

**Kuala Lumpur:** Sekumpulan penyelidik Universiti Malaysia Perlis (UniMAP) mereka bentuk Mesin GeoBrick yang menghasilkan bata atau batu geopolimer dengan jangka hayat panjang dan berkualiti, sekali guna memenuhi keperluan seniata industri pembentukan.

Kepala penyelidikan berpasrah Khamid Fadzly (CEGeoTech) Kepala Jurulatih M&E Mamatza Al Bakri Abdullah, menyekata penyelidikan ini buka jalan Prof. Datuk Dr. Kamarudin Husin, Prof. Madya Dr. Mohd Razali Ghazali, Mohammad Faheem, Mohd Zulqurni Mokbel Tarmizi Zulman.

Nasir Gandomi UniMAP, Prof. Datuk Dr. Kamarudin Husin, berkata penemuan

penyelidikan dan pembangunan untuk menambah baik Mesin GeoBrick dari semasa ke semasa," katanya.

### Nilai pasaran tinggi

Mohd Mustafa Al Bakri berkata, Pusat Kebermerlantasan Geoteknologi dan Teknologi Hijau (CEGeoTech) UniMAP pengluar tunggal Mesin GeoBrick yang memiliki nilai pasaran tinggi.

Beliau berkata, mesin itu juga praktikal dengan kos



Mesin GeoBrick yang menghasilkan bata berkualiti.

rendah dan reka bentuknya, mempunyai teknologi sejajar yang disokong Pertubuhan Standard Arab Saudi (SASO), efisien dan berkapasiti tinggi, serta boleh dioperasikan dengan mudah.

"Produk berkualiti turut menarik minat sebuah syarikat Indonesia, Aneka Teknik untuk nombor komersial penghasilan batu batu geopolimer Mesin GeoBrick, di mana memorandum perjanjian berkenaan soal tarikh ditentukan pada November lalu," katanya.

Beliau berkata, kelebihan bahan mentah seperti tanah liat, abu terbang, tanah merah, arang batu dan pasir yang boleh digunakan dalam pembentukan batu atau batu meriam tanaman, kerap menggunakan faktor ini untuk memperbaiki



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## NASIONAL

### Penyelidik UniMAP raih anugerah khas di China

November 22, 2014

KUALA LUMPUR - Penyelidik Universiti Malaysia Perlis (UniMAP) Dr Norhafiza Muhammad mengharumkan nama Malaysia di peringkat antarabangsa apabila meraih tiga anugerah khas pada "8th International Exhibition of Invention (IEIK)" di Kunshan, China.

### UniMAP anjur perbelanjaan kereta formula

19 Mei 2014



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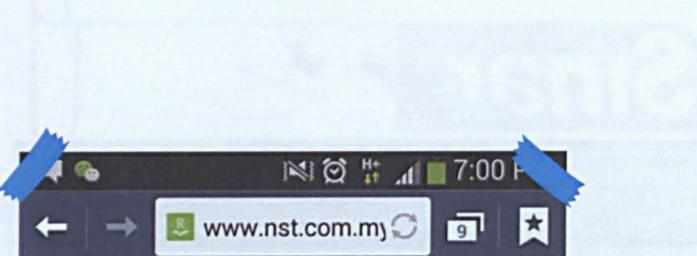
alam kenyataan hari ini berkata, penerima anugerah Felo ian untuk wanita L'Oreal pada 30 Okt lepas, telah il anugerah khas di IEIK produk ciptaannya 'Smoothed vdrodynamics' iaitu aplikasi

KANGAR - Universiti Malaysia Perlis (UniMAP) akan menganjurkan perlumbaan kereta formula 'UniMAP-Modenas Racing Challenge 2014' di Litar Antarabangsa UniMAP di Pauh Putra selama dua hari mulai 6 Jun.

Perlumbaan itu anjuran Fakulti Teknologi Kejuruteraan dan penyelidik Green Design and Manufacture (GDM) Research Group serta Center of Excellence Geopolymer and Green Technology (CEGeoGTech) dan Pusat Pengajian Kejuruteraan Pembuatan UniMAP, mendapat kerjasama Motosikal dan Enjin Nasional Sdn Bhd (Modenas).

Pengarah program itu Shayfull Zamree Abd Rahim berkata memang menjadi hasrat Naib Canselor UniMAP Datuk Prof Dr Kamarudin Hussin membangunkan program-program yang mencetus minat pelajar dan belia terhadap sukan permotoran.

Dalam kenyataan hari ini beliau berkata kereta formula yang bertanding hanya



## NEW STRAITS TIMES ONLINE

### PM congratulates UniMAP for big win at 2014 British Invention Show

27 OCTOBER 2014 @ 6:49 PM  
BY ZAHRATULHAYAT MAT ARIF

**ALOR STAR:** Prime Minister Datuk Seri Najib Razak today congratulated Universiti Malaysia Perlis (UniMAP) for the achievement and recognition it received at the 2014 British Invention Show.

"Well done to our four UniMAP researchers for making us proud by winning seven awards at the 2014 British Invention Show," Najib said in his tweet today.

The four day show which began on Wednesday (Oct 22) also saw participants from 10 countries including United Kingdom, Australia, Romania, Poland, Taiwan, Croatia, Bahrain and Iran.

## 4 penyelidik UniMAP tempa nama di BIS, London

Oleh SHOLINA OSMAN  
pengarang@utusan.com.my

### ■ KANGAR 27 OKT.

**E**MPAT penyelidik Universiti Malaysia Perlis (UniMAP) sekali lagi menempa nama di peringkat antarabangsa apabila meraih tujuh anugerah di pameran British Invention Show (BIS) 2014 yang berlangsung di Barbican Exhibition Centre, London semalam.

Nabil Canselornya, Prof. Datuk Dr. Kamarudin Hussin berkata, dengan tema inovasi mesra alam, produk reka cipta *Anti Corrosion Coating* yang dibentangkan Pensyarah Kanan Fakulti Teknologi Kejuruteraan (FETech), Dr. Mohd. Mustafa Al Bakri Abdullah dipilih untuk menerima *Double Gold Award* bagi kategori reka bentuk melalui inovasinya *Intelligent Peripheral Hemodynamic Assessment and Diagnosis Tool (I-PHAD)*.

"Produk tersebut turut menerima anugerah khas *Euroivent Gold Medal*," katanya dalam kenyataan di sini hari ini.

Katanya, UniMAP turut menerima anugerah yang sama menerusi inovasi *Triple Play Services Zero Cross Correlation for FTTH OCDMA System*, hasil penyelidikan Pensyarah Kanan PPK Komputer, Dr. Amir Razif Jamil Abdullah.

"Prof. Ir. Dr. Rezuwan Kamaruddin melalui inovasinya *Greenhouse*

yang dijadikan bahan salutan anti karat itu juga menerima pengiktirafan anugerah khas daripada Romanian Inventor Forum (RIF).

"UniMAP juga terus cemerlang dalam BIS apabila produk penyelidikan Pensyarah Kanan Pusat Pengajian Kejuruteraan (PPK) Mechatronik laju Dr. Shahriman Abu Bakar menerima anugerah *Double Gold Award* bagi kategori reka bentuk melalui inovasinya *Intelligent Peripheral Hemodynamic Assessment and Diagnosis Tool (I-PHAD)*.

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"Prof. Ir. Dr. Rezuwan Kamaruddin melalui inovasinya *Greenhouse*

with Fertigation in Tropics menerima anugerah khas daripada Halle Pro Invention Foundation, Poland.

"Pencapaian yang diterima oleh universiti dalam pameran terbesar dunia ini adalah daripada kegiatan penyelidik yang terlibat serta pihak pengurusan Pusat Pengurusan Penyelidikan dan Inovasi (PPPI) UniMAP," jelasnya.

Memurah bilau, para penyelidik bukan sahaja menyertai pameran semata-mata tetapi mendapatkan pendekaran dalam mencari jaringan dan ber Kongsi pengetahuan dengan masyarakat luar.

Tambahnya, selain itu, menerusi pameran itu, penyelidik berpeluang mendapatkan nasihat dan teguran terutama menerusi komen dan pandangan juri untuk penambahan baik dalam penyelidikan.

Lebih 10 negara menyertai pameran tahun ini, antaranya tuan rumah United Kingdom, Australia, Romania, Poland, Taiwan, Croatia, Bahrain dan Iran.



EMPAT penyelidik UniMAP, dari kiri, Shahriman Abu Bakar, Amir Razif Jamil Abdullah, Rezuwan Kamaruddin dan Mohd. Mustafa Al Bakri Abdullah menunjukkan anugerah yang dimenangi mereka sewaktu pameran British Invention Show 2014 di London, Britain, semalam.

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and also individual and organisation involves directly and indirectly on contribution to CEGeoGTech