

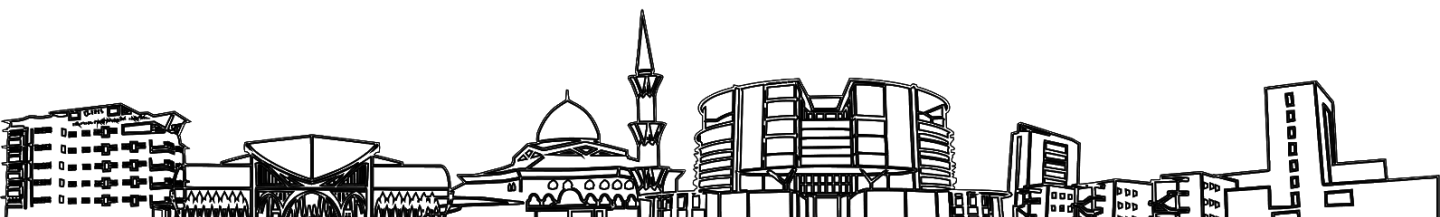
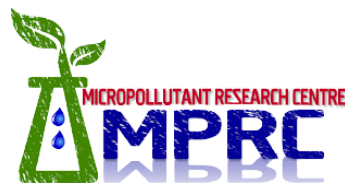
*Welcome to Institute for Integrated Engineering*

BULLETIN



**Jan – March 2022**

RESEARCH AND ACTIVITIES HIGHLIGHTS



**DIRECTOR OF THE INSTITUTE**



Assoc. Professor Dr. Nafarizal  
Bin Nayan



**Assistant Registrar**  
Mrs. Nur Faezah Binti  
Mohamed Noor



**Research Officer**  
Ms. Maizatulazrina  
Binti Yaakob



**Administrative Assistant**  
Mrs. Siti Aida Binti  
Md Noor



**Administrative Assistant**  
Mr. Mohamad Fadhil  
Bin Ja'afar



**Operation Assistant**  
Mrs. Nomi Binti Ab  
Latiff

**Head of MiNT-SRC**



Assoc. Professor Ir. Dr.  
Soon Chin Fhong

**Head of AMMC**



Assoc. Professor Dr.  
Anika Zafiah Binti  
Mohd Rus

**Head of RECESS**



Ts. Dr. Azizi Bin Yusoff

**Head of EMCenter**



Assoc. Professor Dr.  
Samsul Haimi Bin  
Dahlan

**Head of MPRC**



Assoc. Prof. Ts. ChM. Dr.  
Radin Maya Saphira Binti  
Radin Mohamed

**INTEGRATED GROUP (IG)**



Ts. Dr. Mohd Fahmy  
Bin Abdullah



Assoc. Prof. Dr.  
Mohd Zainizan Bin  
Sahdan

# Aims & Objectives

- To lead applied research in integrated engineering for green and sustainable development
- I<sup>2</sup>E is committed to conduct comprehensive research, consultation and innovation as a solution provider to the needs of the nation and global

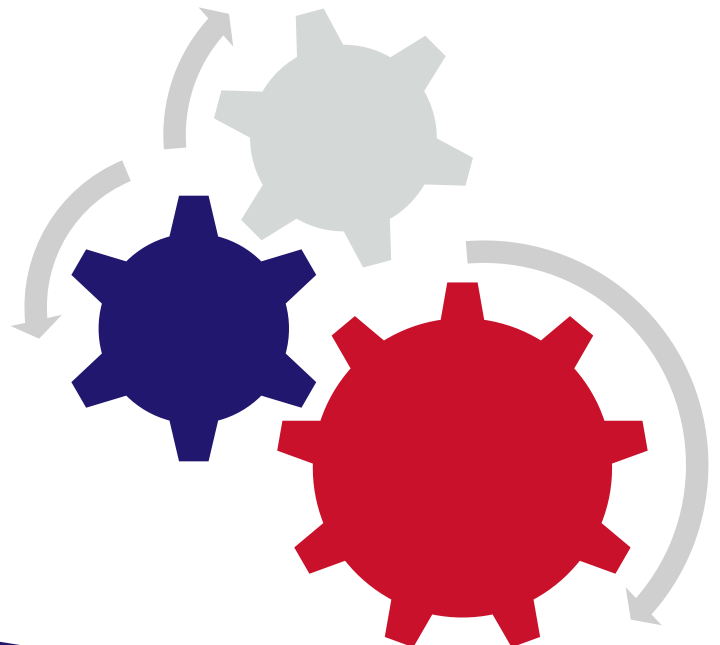


## Motto

Integrated Engineering Solution Provider

### *Words from director*

As the director of Institute for Integrated Engineering, I am proud to work the dedicated research teams from the Centre of Excellences (COEs). They have been working very hard to ensure that UTHM is contributing to the community.



**Director of Institute for Integrated Engineering**

Assoc. Professor Dr. Nafarizal, [nafa@uthm.edu.my](mailto:nafa@uthm.edu.my)

## WELCOMING NEW CENTRE OF EXCELLENCE (COE) TO IIE

**CENTRE OF RESPONSIBILITY**  
Pusat Tanggungjawab (PTj)

**VICE DIRECTOR OF IIE**  
(VACANT)

**DIRECTOR OF IIE**  
Assoc. Professor Dr. Nafarizal Bin Nayan

**CENTRE OF EXCELLENCE**



**HEAD OF MINT-SRC**  
Assoc. Professor Ir. Dr. Soon Chin Fhong

PRINCIPAL RESEARCHERS: 6  
AFFILIATE RESEARCHERS: 14  
ASSISTANT ENGINEER (JA29): 3



**HEAD OF AMMC**  
Assoc. Professor Dr. Anika Zafiah Binti Mohd Rus

PRINCIPAL RESEARCHERS: 9  
AFFILIATE RESEARCHERS: 8  
SENIOR ASSISTANT ENGINEER (JA36): 2



**HEAD OF RECESS**  
Ts. Dr. Azizi Bin Yusoff

PRINCIPAL RESEARCHERS: 9  
AFFILIATE RESEARCHERS: 16  
SENIOR ASSISTANT ENGINEER (JA38): 1  
ASSISTANT ENGINEER (JA29): 1



**HEAD OF EMCENTER**  
Assoc. Professor Dr. Samsul Haimi Bin Dahlan

PRINCIPAL RESEARCHERS: 6  
AFFILIATE RESEARCHERS: 5  
INSTRUCTOR (DV41): 1  
ASSISTANT ENGINEER (JA29): 1



**HEAD OF MPRC**  
Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed

PRINCIPAL RESEARCHERS: 9  
ASSISTANT ENGINEER (JA29): 1

**ADMINISTRATION DIVISION**



Senior Assistant Registrar (N44)  
Mrs. Nur Faezah Binti Mohamed Noor



Administrative Assistant (P/O)(N19)  
Mrs. Siti Aida Binti Md Noor



Administrative Assistant (P/O)(N19)(Contract)  
Mr. Mohamad Fadhil Bin Jaafar



Operation Assistant (N11)  
Mrs. Nomi Binti Ab. Latiff



Research Officer (Q41)  
Ms. Maizatulazrina Binti Yaakob

**INTEGRATED GROUP**



**HEAD OF OIG**  
Ts. Dr. Mohd Fahmy Bin Abdullah

PRINCIPAL RESEARCHERS: 6  
AFFILIATE RESEARCHERS: 1



**HEAD OF WATE**  
Assoc. Prof. Dr. Mohd Zainizan Bin Sahdan

PRINCIPAL RESEARCHERS: 5



### APPOINTMENT OF MICRO POLLUTANT CENTER OF EXCELLENCE (MPRC) HEAD

The Top Management of the Institute for Integrated Engineering (I<sup>2</sup>E) would like to congratulate Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira binti Radin Mohamed who has been appointed as the Head of Micro Pollutants Center of Excellence (MPRC), Universiti Tun Hussein Onn Malaysia (UTHM) effective 31 December 2021.

For information, MPRC has been upgraded to a Center of Excellence (CoE) from a mere Research Center (CoR). May the success of this MPRC be an inspiration to other Focus Group (FG) and Research Centers (CoR) to continue to excel in their field of expertise.

### TAHNIAH

**PROF. MADYA. TS. CHM. DR. RADIN  
MAYA SAPHIRA BINTI RADIN MOHAMED**

Alas Penerimaan sebagai

**Ketua Pusat**

**Pusat Kecemeraan Pencemar Mikro (MPRC)**

Berkuatkuasa 1 Disember 2021



Hopefully Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira binti Radin Mohamed continues to excel in her duties and responsible in driving the excellence of the MPRC to meet the benchmark set and become point of reference in the field of environmental and water engineering as well as micro-pollution expert.



## Dr. Air Supply Clean Water Sources to UPNM



Dr. Air team was established in early 2021, has now spread its wings to National Defense University of Malaysia (UPNM) to help provide clean water supply from hill water. According to the Managing Director of Ittihad Maju Jaya Sdn Bhd., Assoc. Prof. Dr. Mohd Zainizan Sahdan, this project aims to utilize the natural hill water resources in UPNM to be used as drinking water. The main problem of this water source is the high content of iron and manganese which cannot be solved with normal filtration. Dr. Air team was collaborated with researchers from UPNM under the Sustainable Water Supply Project monitored by its Deputy Vice Chancellor for Research, Brig Gen Prof. Ir. Dr. Norazman Mohamad Nor (B) and the system has installed in RMC building with two water dispenser machines complete with hot, cold and room temperature water have been installed. Containerized Water Filtration System® is a product that has obtained IP through UTHM and licensed to the University Publishing Company (STU), Ittihad Maju Jaya Sdn Bhd. The demand for this product will always increase as this product only requires low maintenance costs and is a local specialist product. The result of innovation at UTHM through Water Technology Engineering Integrated Group (WATE) under the auspices of the Institute for Integrated Engineering (I<sup>2</sup>E), has proven that the combination of industry and academia is able to produce a valuable product to be commercialize.



## PRINCIPAL RESEARCHER ACHIEVEMENT

### PATENT GRANTED FOR MINT-SRC & RECESS

Congratulations to Assoc. Prof. Ts. Dr. Mohd Khairul bin Ahmad for the successful registration of intellectual property (patent) through the project "Nanostructures Dye-Sensitized Solar Cell" with patent number MY-171785-A.

### TAHNIAH

**PROF. MADYA. TS. DR. MOHD KHAIRUL  
BIN AHMAD**

Atas Kejayaan Pendaftaran Harta Intelekt

**PATENT GRANTED "NANOSTRUCTURES DYE-SENSITIZED  
SOLAR CELL  
(MY-171785-A)**

29 Oktober 2019



### TAHNIAH

**PROF. MADYA. TS. DR. NORSHUHAILA  
BINTI MOHAMED SUNAR**

Atas Kejayaan Pendaftaran Harta Intelekt

**PATENT GRANTED "A DECOLORIZATION AGENT FOR  
TEXTILE DYES"  
(MY-188062-A)**

15 November 2021



Congratulations to Assoc. Prof. Ts. Dr. Norshuhaila Binti Mohamed Sunar for successful registration of intellectual property (patent) through the project "A Decolorization Agent for Textile Dyes" with patent number MY-188062-A.

### PRINCIPAL RESEARCHER OTHER APPOINTMENT

Congratulations Dr. Shazarel bin Shamsudin, Principal Researcher (PR) of AMMC which has been appointed as the Director of the Quality Management Office, Office of the Deputy Vice Chancellor (Strategy and Quality), Universiti Tun Hussein Onn Malaysia (UTHM) effective 1 January 2022. Hopefully Dr. Shazarel bin Shamsudin continues to excel in carrying out his duties and trust in driving the excellence of UTHM.

### TAHNIAH

**DR. SHAZAREL BIN SHAMSUDIN**

Atas Pelantikan sebagai

**Pengarah Pejabat Pengurusan Kualiti  
Pejabat Penolong Naib Canselor (Strategik dan  
Kualiti)**

Berkuatkuasa 1 Januari 2022



### PRINCIPAL RESEARCHER PROMOTION

Congratulations Assoc. Prof. Ts. Dr. Alvin John Lim Meng Siang, Assoc. Prof. Ts. Dr. Mohd Razali bin Md Tomari, Assoc. Prof. Ts. Dr. Rosniza Binti Hussin@Isa which had been promoted to Associate Professor Grade DS54 effective on January 2022. Hopefully, this promotion bring more courage to do well in research and innovation, thus bring Institute for Integrated Engineering to the highest level.

### TAHNIAH

**PROF. MADYA. TS. DR. ALVIN JOHN LIM  
MENG SIANG**

Atas Rasmian Pengkat

**PROFESOR MADYA GRED DS54**



### TAHNIAH

**PROF. MADYA. TS. DR. MOHD RAZALI  
BIN MD TOMARI**

Atas Rasmian Pengkat

**PROFESOR MADYA GRED DS54**



### TAHNIAH

**PROF. MADYA. TS. DR. ROSNIZA BINTI  
HUSSIN@ISA**

Atas Rasmian Pengkat

**PROFESOR MADYA GRED DS54**



## GOTONG-ROYONG 2.0 INSTITUTE FOR INTEGRATED ENGINEERING

Gotong royong 2.0 Institute of Integrated Engineering (I<sup>2</sup>E) for housekeeping and organize Research Center for Soft Soil 2 laboratory in Block E6. Highly congratulation to all I<sup>2</sup>E staff who involved in program, especially Director of I<sup>2</sup>E, Assoc. Prof. Dr. Nafarizal bin Nayan, Head of RECESS, Ts. Dr. Azizi bin Yusoff, Principal Researchers, Assistant Engineers and administrative staff. May this effort be blessed and pleased by Allah and be rewarded in hereafter. Thanks also to the Deputy Vice Chancellor (Research and Innovation) of UTHM, Prof. Dr. Mohd Shahir Shamsir bin Omar who was willing to sponsored the gotong-royong 2.0 food feast. May Allah bless Prof. Dr. Mohd Shahir Shamsir bin Omar in this world and the hereafter.



## MINT-SRC WEBINAR ON THE CHALLENGES IN LAKE WATER QUALITY MONITORING

### The challenges in lake water quality monitoring

Our honorable speaker, Dr. Zati is a senior researcher from Water Quality and Environment Research Centre National Water Research Institute of Malaysia (NAHRIM) Ministry of Environment and Water (KASA)



**DR. ZATI BINTI SHARIP**  
Unit Head (Lake and Reservoir Research)

Microelectronic and Nanotechnology-Shamsuddin Research Center (MiNT-SRC) are honored to organize online webinar on the challenges in lake water quality monitoring on 23<sup>rd</sup> January 2022.

This speaker for this webinar is an honorable Dr. Zati Binti Sharip, unit head for lake and reservoir research at National Water Research Institute of Malaysia (NAHRIM). This webinar was organized in conjunction with the Water Quality Research Consortium (UTHM, UUM and UPSI)

23RD JANUARY 2021 (SUNDAY)

9 a.m to 1.00 p.m.

<https://meet.google.com/wfn-cskw-tda>

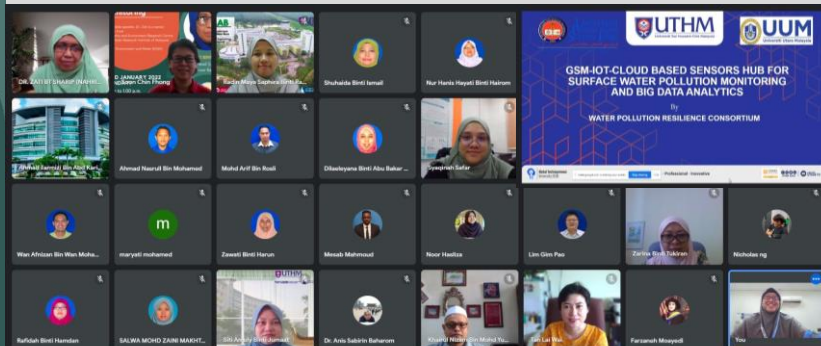
**LIVE**

@Water Quality Resilience Consortium

YOU ARE CORDIALLY INVITED TO JOIN OUR WEBINAR. STAFF TRAINING HOURS WILL BE RECORDED



**DR. FARHANAHANI MAHMUD**  
Moderator



## Mount Kinabalu Climb Experience

Institute for Integrated Engineering (I<sup>2</sup>E) top management and the I<sup>2</sup>E Staff Club would like to congratulate Prof. Dr. Yusri bin Yusof and Prof. Ir. Dr. Md Saidin bin Wahab on their achievement on successfully climbing Mount Kinabalu and reach the summit on 8<sup>th</sup> February 2022.

Prof. Dr. Yusri bin Yusof and Prof. Ir. Dr. Md Saidin bin Wahab are principal researcher at the Center for Manufacturing and Advanced Materials (AMMC).



Mount Kinabalu with a height of 4095 meters above sea level is the highest mountain in Southeast Asia. It is also the 20<sup>th</sup> highest mountain in the world by topographic position and is one of the highest peaks in the world that is easily traversed by most people. Congratulations and well done both!

## OIG ACTIVITIES AT UTHM MUAR LIVING LAB

OASIS Integrated Group (OIG) at Ayer Hitam Utara Forest Reserve with the Johor State Forestry Department and UTHM Living Lab Muar to share research activities to honorable Dato 'Hj. Zahari bin Ibrahim (Deputy Director General of Forestry Peninsular Malaysia), Dato 'Haji Salim bin Aman (Director of Johor State Forestry), Tuan Haji Mustaffa Kamal bin Haji Shamsudin (Muar District Officer), Tuan Haji Zainudin bin Abd Wahab (Director of Fisheries Department Johor) and delegations from JPSM and Muar District.

UTHM was also represented by Assoc. Prof. Dr Kamarul Zaki, Provost of UTHM Pagoh Campus, researchers from the Institute for Integrated Engineering, Ts. Dr. Azizi Yusoff and Dr Mohamad Faizal from Research Center for Soft Soils (RECESS). OIG and RECESS, UTHM will continue to be committed on achieving the aspirations of UTHM Muar Living Lab together with JPNJ, District office, and others to strengthen research and innovation.



Thus, became university for community. Thank you Dato Zahari and Dato Salim for presenting the certificate of appreciation to participants.



## RESEARCH & INNOVATION

### PEAT FIRE DETECTOR SYSTEM BY RECESS, UTHM



Congratulations Research Center for Soft Soils (RECESS), UTHM which has been successfully develops Peat Fire Detection System in an effort to deal with open fires in Muar. A group of researchers from Universiti Tun Hussein Onn (UTHM) was led by Ts. Dr. Nor Azizi bin Yusoff (Head of RECESS) was came up with their own innovations for peat fire monitoring and detection system that is capable of detecting changes in temperature and humidity in peatland areas as well as can be monitored using a smartphone. Thanks to the team of Johor State Forestry Department, Muar Johor District Office, Universiti Tun Hussein Onn Malaysia, TNCPi UTHM, Provost UTHM Pagoh, ICRC UTHM, Institute for Integrated Engineering, Research Center for Soft Soils, Mukim Ayer Hitam, Muar, Johor, Seri Sempadan Muar Johor Environmental Club - KASSS and all who work on this congregation.

### PAPER AWARD FOR EMC

Congratulations and well done to all researchers at the Research Center of Applied Electromagnetic (EMCenter) for receiving an awards on the **"BEST PAPER AWARD"** & **"EXCELLENT PAPER AWARD"** for the year 2021 by the IEEE Malaysia Section.

#### Excellent Paper Award 2021:

Inverted E-Shaped Wearable Textile Antenna for Medical Applications

#### Best Paper Award 2021:

Fully Fabric High Impedance Surface-Enabled Antenna for Wearable Medical Applications

It is hoped that this success will enhance high-impact research among researchers of Institute for Integrated Engineering and further increase the market rate of research products to industry and globally.



## RESEARCH GRANTS

**TAHNIAH**

**PROF. MADYA. TS. DR. MOHD RAZALI  
BIN MD TOMARI**

Penerima Geran Industri

**RF EMC CENTRE MALAYSIA SDN. BHD.**

**RM 26,000.00**

Effect of Electrostatic Discharge (ESD) on Electrical Vehicle (EV) Controller System Immunity



INSTITUTE FOR INTEGRATED ENGINEERING  
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**TAHNIAH**

**TS. DR. NORAINI BINTI MARSI**

Penerima Geran Sepadan RE-SIP 2022-2023

**BINTANG PACKAGING INDUSTRIES (M) SDN.  
BHD. & UTHM**

**RM 20,000.00**



INSTITUTE FOR INTEGRATED ENGINEERING  
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**TAHNIAH**

**PROF. TS. DR. AESLINA BT ABDUL  
KADIR**

Penerima Geran Kontrak Universiti

The Efficacy of Green Organic Fertilizer on the Growth and Health of Spiny Black Olive (*Bucida Molineti*)

**RM 10,000.00**

1 Mac 2022 sehingga 28 Feb 2023



INSTITUTE FOR INTEGRATED ENGINEERING  
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**TAHNIAH**

**PROF. MADYA. TS. CHM. DR. RADIN MAYA  
SAPHIRA BINTI RADIN MOHAMED**

Absor Kejuruan Menerima Geran Antarabangsa

Tapping the Values of Agricultural Waste for Resource Recovery and Empowering Circular Economy in Japan and ASEAN Countries

**JAPAN-ASEAN SCIENCE, TECHNOLOGY AND INNOVATION  
PLATFORM (JASTIP) – USD 4500**



INSTITUTE FOR INTEGRATED ENGINEERING  
UNIVERSITI TUN HUSSEIN ONN MALAYSIA

Congratulations and well done to all principal researchers from EMCenter, AMMC, and MPRC for receiving research grants either national or international fund. We hope research, innovation and commercialization among all researcher well developed and brings Institute for Integrated Engineering to the highest level. Congrats all.

No	Title	Researcher	Fund	Amount
1	Effect of Electrostatic Discharge (ESD) on Electrical Vehicle (EV) Controller System Immunity	Assoc. Prof. Ts. Dr. Mohd Razali Bin Md Tomari	RF EMC Center Malaysia Sdn. Bhd.	RM 26,000.00
2	Performance Of Sago Fine Waste (SFW) As Replacement Material In Bricks	Ts. Dr. Noraini Binti Marsi	Bintang Packaging Sdn. Bhd	RM20,000.00
3	The Efficacy of Green Organic Fertilizer on the Growth and Health of Spiny Black Olive ( <i>Bucida Molineti</i> )	Prof. Ts. Dr. Aeslina Binti Abdul Kadir	UTHM Contract Grants	RM10,000.00
4	Tapping the Values of Agricultural Waste for Resources Recovery and Empowering Circular Economy in Japan and ASEAN Countries	Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed	Japan-ASEAN Science, Technology and Innovation Platform (JASTIP)	USD 4500

**APPROVED**

## OUTSTANDING RESEARCHERS 2020-2021

Congratulations to all principal researcher of Institute for Integrated Engineering (I<sup>2</sup>E) for their outstanding achievement for year 2020 to 2021

1. Assoc. Prof. Ts. Dr. Adnan bin Zainorabidin, Principal Researcher of Research Center for Soft Soils (RECESS),
2. Ts. Dr. Noraini Binti Marsi, Principal Researcher of Advance Material and Manufacturing Center (AMMC),
3. Assoc. Prof. Ts. Dr. Mohd Khairul bin Ahmad, Principal Researcher of Microelectronic and Nanotechnology – Shamsuddin Research Centre (MiNT-SRC),
4. Prof. Ts. Dr. Aeslina binti Abdul Kadir, Principal Researcher of Micro Pollutant Center of Excellent (MPRC),
5. Dr. Nadirul Hasraf bin Mat Nayan, Principal Researcher of Oasis Integrated Group (OIG),
6. Ts. Dr. Suliadi Firdaus bin Sufahani, Principal Researcher of Oasis Integrated Group (OIG)

**“Congratulations on your well-deserved success”**



**TOP 10**

**OUTSTANDING RESEARCHERS FOR YEAR 2020-2021**

 <b>Sr. Dr. Noralfishah Binti Sulaiman</b> Fakulti Pengurusan Teknologi dan Perniagaan (FPTP)	 <b>Prof. Madya Ir. Ts. Dr. Shahiron Bin Shahidan</b> Fakulti Kejuruteraan Awam dan Alam Bina (FKAAB)
 <b>Prof. Madya Ts. Dr. Mohd Fadzelly Bin Abu Bakar</b> Fakulti Sains Gunaan dan Teknologi (FAST)	 <b>Dr. Nadirul Hasraf Bin Mat Nayan</b> Fakulti Teknologi Kejuruteraan (FTK)
 <b>Prof. Madya Ts. Dr. Adnan Bin Zainorabidin</b> Fakulti Kejuruteraan Awam dan Alam Bina (FKAAB)	 <b>Prof. Ts. Dr. Aeslina Binti Abdul Kadir</b> Fakulti Kejuruteraan Awam dan Alam Bina (FKAAB)
 <b>Prof. Madya Dr. Shahreen Binti Kasim</b> Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM)	 <b>Ts. Dr. Suliadi Firdaus Bin Sufahani</b> Fakulti Sains Gunaan dan Teknologi (FAST)
 <b>Ts. Dr. Noraini Binti Marsi</b> Fakulti Teknologi Kejuruteraan (FTK)	 <b>Prof. Madya Ts. Dr. Mohd Khairul Bin Ahmad</b> Fakulti Kejuruteraan Elektrik dan Elektronik (FKEE)

## TUNKU ABDUL RAHMAN UNIVERSITY WORK VISIT TO COE LABORATORIES

Tunku Abdul Rahman University (UTAR) representative was having a work visit to Centre of Excellence (CoE) laboratories facilities.

The visit was organized by Faculty of Technology Management & Business (FPTP) for research collaboration and partnership. We hope both parties find similarity and start engage in term of innovation, research and development for betterment of education in Malaysia.

The visit to CoE Laboratories was lead by Prof. Dr. Nafarizal bin Nayan (Director of I<sup>2</sup>E), followed by Ts. Dr. Nor Azizi bin Yusoff (Head of RECESS), Assoc. Prof. Ir. Dr. Soon Chin Fhong (Head of MiNT-SRC), CoE's assistant engineer, postgraduate student and administrative staff.



## HEAD OF AMMC

Institute for Integrated Engineering (I<sup>2</sup>E) would like to congratulate and welcome aboard Assoc. Prof. Dr. Anika Zafiah Binti Mohd Rus for re-appointment as Head of Advanced Materials and Manufacturing Center (AMMC).

Assoc. Prof. Dr. Anika Zafiah Binti Mohd Rus continue her duty as AMMC head effective on 1<sup>st</sup> March 2022 until 29<sup>th</sup> February 2024.

We believe that you can use your skills, work experience and talent in making our institute, especially advanced materials and manufacturing research to reach new heights of success.



## ATOMIC FORCE MICROSCOPY (AFM) WORKSHOP

Microelectronics and Nanotechnology-Shamsuddin Research Centre (MiNT-SRC) was successfully organized training workshop on atomic force microscopy (AFM) and online webinar with invited speaker from Park Systems PTE LTD, Philippine.

The training was sponsor by Park System PTE LTD and participants has an opportunity to carry out hands on experience handling AFM sample analysis which was guide by Assoc. Prof. Ir. Dr. Soon Chin Fhong, Head of MiNT-SRC and assisted by Madam Faezahana Mohkhter, Assistant Engineer at MiNT-SRC.

Atomic force microscopy (AFM) is a very-high-resolution type of scanning probe microscopy (SPM), with demonstrated resolution on the order of fractions of a nanometer, more than 1000 times better than the optical diffraction limit. Hopefully this training workshop will broaden opportunity for MiNT-SRC to commercialize their instrument for better research and innovation in UTHM.



## COMMUNITY SERVICE



### SULAM PROJECT AT SMK (P) TEMENGGONG IBRAHIM, BATU PAHAT

Service-Learning Malaysia - University for the Society (SULAM) Project at SMK (P) Temenggong Ibrahim, Batu Pahat, Johor on "Reinstallation of Malfunction LED Luminaire". Congratulations to MiNT-SRC and GSEnergy, UTHM team for this initiatives and involvement in volunteer work for community:

We wish you every success in your community service and duties as human being for future school betterment. May this SULAM project and your experience strengthen the aspiration of "University for Community" and fully utilize expertise in term of electrical and electronic to make school a better place. May all your kindness lift you to the new heights of success and prosperity. Thank you for making a difference in UTHM, it is the difference that we need.

***"Be The Change  
You Wish To See In  
The World"***



## INDUSTRY VISIT

### TEKNOWARE ASIA SDN. BHD. COLLABORATION VISIT



Teknoware Asia Sdn. Bhd. collaboration visit to Center of Excellence (CoE) laboratories facilities, Institute for Integrated Engineering (I<sup>2</sup>E), UTHM.

Teknoware Asia Sdn. Bhd. representative during visit session was led by Mr. Mohd Rafie Ya'acob (Engineering & Quality Manager), Madam Zariq Alya Anuar (Custom, HSE & Sustainability Officer), and Mr. Mohammad Nur Rasyid Samsudin (Teknoware Asia Project Manager).

While the UTHM team was led by Assoc. Prof. Dr. Nor Aziati binti Abdul Hamid, followed by Prof. Dr. Nafarizal bin Nayan (Director of I<sup>2</sup>E), Assoc. Prof. Ir. Dr. Soon Chin Fhong (Head of MiNT-SRC), Ts. Dr. Nor Azizi bin Yusoff (Head of RECESS), Ts. Dr. Noraini binti Marsi, Ts. Dr. Nik Normunira Binti Mat Hassan, assistant engineer, and I<sup>2</sup>E researchers.

Hopefully, this collaboration visit session can further strengthen research cooperation between the two parties.

### NANOMALAYSIA BERHAD (NMB) VISIT COE LABORATORIES



NanoMalaysia Berhad (NMB) visits to the Laboratories of the Center of Excellence (CoE), Institute for Integrated Engineering (I<sup>2</sup>E), Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor. The visit session was led by honorable Dr. Rezal Khairi Ahmad, Chief Executive Officer (CEO) of NanoMalaysia Berhad and accompanied by a delegation from NanoMalaysia Berhad, namely Mr. Mohamad Hafiz Zolkipli, Chief Operating Officer and their special officer.

Whereas, UTHM representative attends the visit session was Prof. Dr. Mohd Shahir Shamsir bin Omar, Deputy Vice Chancellor (Research and Innovation), Prof. Dr. Nafarizal bin Nayan, Director of I<sup>2</sup>E, Prof. Dr. Samsul Haimi bin Dahlan, Head of EMCenter, Dr. Xavier Ngu Toh Ik, Principal Researcher of EMCenter, UTHM officers and research representatives. We hope partnership between NMB and UTHM continues growing for development of research and innovation.

## PRODUCT DEMONSTRATION

### Taklimat dan Demonstrasi Produk "Mobile Compact Water Treatment Unit"

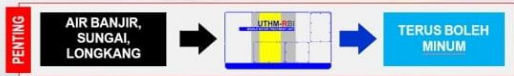
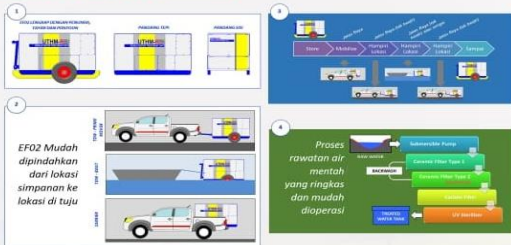
**Tarikh:** 31 Mac 2022

**Lokasi:** Makmal Fizik Tanah RECESS dan Perkarangan Bangunan Pusat Penyelidikan IIE (Bangunan F6) UTHM Parit Raja, Batu Pahat, Johor

**Masa:** 10.00 pagi-12.30 tengahari  
Semua dijemput hadir.

#### PENYELESAIAN SECARA BERGERAK KE LOKASI BENCANA UNTUK AIR TERAWAT

MEMPROSES AIR MENTAH DENGAN TURBIDITI TINGGI MENJADI AIR BERSIH TERAWAT SAMA ADA DI KAWASAN PEMINDAHAN BANJIR, OPERASI DAN KAWASAN LAIN YANG BERKENAAN



Mobile Compact Water Treatment Unit product demonstration was successfully held by Research Center for Soft Soils (RECESS) on 31<sup>st</sup> March 2022 in UTHM Research Building. This system was developed as an initiatives to treat water sources with high turbidity values.

The units are very suitable for emergency water treatment and water treatment during calamities, as temporary process-units, for water production during repair of a water treatment plant or flooding.

Mobile water treatment systems can be applied for the treatment of both surface water and groundwater. When these units are applied for groundwater treatment a lot of money is saved, because of the opportunity to perform the treatment on the spot, so that there is no need for transportation. Moreover, even very small particles can be removed from the water during treatment in a mobile compact water treatment unit.

*"Improve your water,  
Improved your life"*



*"Collaboration with RBI-  
MEEG"*



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No	Author	Title	Source	Volume	Doi
1	PM. Dr, Anika Zafiah Binti Mohd Rus	Chapter Books – Condition Monitoring of Wood Polymer Composite for Civil Engineering, Springer	Materials Letters	-	-
2	Norsuhailizah Sazali 1, Zawati Harun 1,* , Tijjani Abdullahi 1, Faiz Hafeez Azhar 1, Azlinnorazia Ahmad 1, Nurul Izwanie Rasli 2, Norazlianie Sazali	Potential of transforming sodalite from synthesis kaolin with a mild condition of the hydrothermal method,	<a href="#">Biointerface Research in Applied Chemistry</a>	12(6)	Doi: 10.33263/BRIAC126.73767393
3	Haziqatulhanis Ibrahim 1 , Norazlianie Sazali 1,* , Wan Norharyati Wan Salleh 2 , Nor Hasrul Akhmal Ngadiman 3 , Nor Akmal Fadil 4 , Zawati Harun 5	Outlook on the carbon-based materials for heavy metal removal,	<a href="#">Biointerface Research in Applied Chemistry</a>	12(4)	<a href="https://doi.org/10.33263/BRIAC124.53035323">https://Doi.org/10.33263/BRIAC124.53035323</a>
4	Norsuhailizah Sazali, Zawati Harun1, Tijjani Abdullahi, Noor Hasliza Kamarudin, Norazlianie Sazali, Mohd Riduan Jamalludin, Siti Khadijah Hubadillah, Siti Salwa Alias	The Route of Hydrothermal Synthesis Zeolite-A from the Low-Grade Perak kaolin, Malaysia, Silicon, 2022	Mineralogy		Doi: 10.1007/s12633-021-01620-4
5	Adam, A., Yusof, Y., Latif, K., Kadir, A.Z.A., Sam, TH., Ahmad, M.I.	Development of a Novel Open Platform Controller Machining Module for 3-Axis CNC Milling Machine,	Lecture Notes in Electrical Engineering	770	<a href="https://doi.org/10.1007/978-981-16-2406-3_63">https://doi.org/10.1007/978-981-16-2406-3_63</a>
6	Ahmad, M.I., Saif, Y., Yusof, Y	A case study: monitoring and inspection based on IoT for milling process,	International Journal of Advanced Manufacturing Technology	118(3-4)	<a href="https://doi.org/10.1007/s00170-021-07970-y">https://doi.org/10.1007/s00170-021-07970-y</a>
7	Ab. Nasir, A.F., Ibrahim, A.N., Ishak, I., Mat Yahya, N., Zakaria, M.A., P. P. Abdul Majeed,	The Implementation of a Novel Augmented Reality (AR) Based Mobile Application on Open Platform Controller for CNC Machining Operation,	Lecture Notes in Electrical Engineering	730	<a href="https://doi.org/10.1007/978-981-33-4597-3_22">https://doi.org/10.1007/978-981-33-4597-3_22</a>
8	Rosniza Hussin, M.H. Razali, Ainun Rahmahwati Ainuddin, Kamdi Zakiah, Ibrahim Siti Aida, Z. Harun	Green Synthesis of Nanostructured Zinc Oxide (ZnO) - Titanium Dioxide (TiO <sub>2</sub> ) Thin Films,	Key Engineering Materials	908	<a href="https://doi.org/10.4028/p-wqvg55">https://doi.org/10.4028/p-wqvg55</a>



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9	PM. Dr, Anika Zafiah	Chapter in book- Springer	Springer		
10	PM. Dr, Anika Zafiah	Optimization of Acoustic Properties Using Taguchi Method	submitted journal to springer entitled		
11	Noor Fifinatasha Shahedan , Mohd Mustafa Al Bakri Abdullah, Norsuria Mahmed, Liew Yun Ming, Shayfull Zamree Abd Rahim, Ikmal Hakem A Aziz, Aeslina Abdul Kadir, Andrei Victor Sandu, Mohd Fathullah Ghazali	Thermal Insulation and Mechanical Properties in The Presence of Glass Bubble in Fly Ash Geopolymer Paste.	Archives of Metallurgy and Materials. Polish Academy of Sciences.	67	<a href="https://doi.org/10.24425/a mm.2022.137493">https://doi.org/10.24425/a mm.2022.137493</a>
12	Mohd Ikmal Haqem Hassan, Aeslina Abdul Kadir, Intan Seri Izzora Arzlan, Mohd Razali Md Tomari, Noor Azizi Mardi, Mohd Fahrul Hassan, Mohd Mustafa Al Bakri Abdullah, M. Nabiałek, B. Jež	Recycling of PET Bottles into Different Types of Building Materials: A Review. Published in Archives of Metallurgy and Materials,	Archives of Metallurgy and Materials Polish Academy of Sciences.	67	DOI: <a href="https://doi.org/10.24425/a mm.2022.137488">https://doi.org/10.24425/a mm.2022.137488</a>
13	Article title: Assessment on The Physical, Mechanical Properties and Leaching Behavior of Fired Clay Brick Incorporated with Steel Mill Sludge.	Article title: Assessment on The Physical, Mechanical Properties and Leaching Behavior of Fired Clay Brick Incorporated with Steel Mill Sludge.	Archives of Metallurgy and Materials. Polish Academy of Sciences	67	DOI: <a href="https://doi.org/10.24425/a mm.2022.137491">https://doi.org/10.24425/a mm.2022.137491</a>
14	Paran Gani Najeeha Mohd Apandi ,Norshuhaila Mohamed Sunar ,Hazel Monica Matias-Peralta ,Ang Kean Hua ,Syahrin Neizam Mohd Dzulkifli	Outdoor phycoremediation and biomass harvesting optimisation of microalgae Botryococcus sp. cultivated in food processing wastewater using an enclosed photobioreactor.	Accepted to International Journal of Phycoremediation	3.2	<a href="https://doi.org/10.1080/15226514.2022.2033688">https://doi.org/10.1080/15226514.2022.2033688</a>
15	Dr. Faizal Tajul	BIJIH BESI   Bekas Pekerja Lombong Jadikan Rumah Mini Muzium.	Terbitan TV3 <a href="https://www.youtube.com/watch?v=DGpospgo7Iw">https://www.youtube.com/watch?v=DGpospgo7Iw</a>	-	-

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17	-	UTHM bangukan kit pengesan kebakaran hutan tanah gambut.	UTHM News		
18	Laupa Junus	TANAH RUNTUH, BENCANA APABILA ALAM TERLALU DIUSIK	<a href="https://jurnal.my/2022/03/16/tanah-runtu-bencana-apabila-alam-terlalu-diusik/">https://jurnal.my/2022/03/16/tanah-runtu-bencana-apabila-alam-terlalu-diusik/</a>		
19	Rosli Zakaria	Natural heritage under threat of extinction saved by hobbyists.	The Straits Times		
20	N. K. A. Hamed●M. K. Ahmad●N. H. H. Hairom●A. B. Faridah●M. H. Mamat●A. Mohamed●A. B. Suriani●C. F. Soon●F. I. M. Fazli●S. M. Mokhtar ●M. Shimomura	Photocatalytic degradation of methylene blue by flowerlike rutilephase TiO <sub>2</sub> film grown via hydrothermal method, Journal of Sol-Gel Science and Technology-published	Journal of Sol-Gel Science and Technology		<a href="https://doi.org/10.1007/s10971-021-05691-">https://doi.org/10.1007/s10971-021-05691-</a>
21	Alyaa Idrees Abdulmaged, Chin Fhong Soon,* , Balkis A. Talip , Siti Adibah Ahmad Zamhuri , Salama A. Mostafa and Wenbin Zhou,*	Characterization of Alginate–Gelatin–Cholesteryl Ester Liquid Crystals Bioinks for Extrusion Bioprinting of Tissue Engineering Scaffolds-Polymers	Polymers	14	<a href="https://doi.org/10.3390/polym14051021">https://doi.org/10.3390/polym14051021</a>
22	M. M. I. Megat Hasnan, G. P. Lim, N. Nayan, C. F. Soon, A. A. Abd Halim, M. K. Ahmad, S. M. Said, M. S. Mohamed Ali & I. M. Noor	The investigation of chlorpyrifos (Cpy) detection of PEDOT:PSS-MXene(Ti <sub>2</sub> CTX)-BSA-GO composite using P-ISFET reduction method	Polymer Bulletin Published		<a href="https://doi.org/10.1007/s00289-022-04105-5">https://doi.org/10.1007/s00289-022-04105-5</a>
23	Dr. Khairul Anuar bin Mohamad	Critical review on organic solar cells energy losses: Interface	submitted for Micromachines		

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24	Dr. Khairul Anuar bin Mohamad	Thermal and binding energy effects in organic solar cells <sup>a</sup> submitted for Journal of Electronic Materials	submitted for Journal of Electronic Materials		
25	Umni Kalsum Hasanah MohdNadzim <sup>a</sup> Nur Hanis HayatiHairom <sup>ab</sup> Mohamad Alif HakimiHamdan <sup>a</sup> Mohd KhairulAhmad <sup>b</sup> Aishah AbdulJalil <sup>cd</sup> Nurfatehah Wahyuni CheJusoh <sup>e</sup> SofiahHamzah <sup>f</sup>	Effects of Different Zinc Oxide Morphologies on Photocatalytic Desulfurization of Thiophene,	Journal of Alloys and Compounds, Elsevier		<a href="https://doi.org/10.1016/j.jallcom.2022.165145">https://doi.org/10.1016/j.jallcom.2022.165145</a>
26	Gim Paolim <sup>a</sup> Chin FhongSoon <sup>a</sup> A.A.Al-Gheethi <sup>b</sup> MarliaMorsin <sup>a</sup> Kian SekTee <sup>c</sup>	Recent progress and new perspective of MXene-based membranes for water purification	A review-Published online in Ceramics International	48	<a href="https://doi.org/10.1016/j.ceramint.2022.03.165">https://doi.org/10.1016/j.ceramint.2022.03.165</a>
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34	Noor Amira Sarani, Azini Amiza Hashim, Aeslina Abdul Kadir, Nur Fatin Nabila Hissham, Mohd Ikmal Haqem Hassan, Marcin Nabiałek, Bartłomiej Jez	Assessment on The Physical, Mechanical Properties and Leaching Behaviour of Fired Clay Brick Incorporated with Steel Mill Sludge.	Archives of Metallurgy and Materials, Polish Academy of Sciences.	67	
35	Noor Fifinatasha Shahedan, Mohd Mustafa Al Bakri Abdullah, Norsuria Mahmed, Liew Yun Ming, Shayfull Zamree Abd Rahim, Ikmal Hakem A. Aziz, Aeslina Abdul Kadir, Andrei Victor Sandu, Mohd Fathullah Ghazali	Thermal Insulation and Mechanical Properties in The Presence of Glass Bubble in Fly Ash Geopolymer Paste. Archives of Metallurgy and Materials,	Archives of Metallurgy and Materials, Polish Academy of Sciences.	67	
36	Siti Nor Hidayah Arifin, Radin Maya Saphira Radin Mohamed*, Adel Ali Al-Gheethi, Lai Chin Wei, G Yashni, Nurina Fitriani, Mu Naushad, Ahmad B Albadarin	Modified TiO <sub>2</sub> nanotubes-zeolite composite photocatalyst: Characteristics, microstructure and applicability for degrading triclocarban, Chemosphere 287, 132278,	Journal Chemosphere	287	DOI: 10.1016/j.chemosphere.2021.132278
37	Efaq Noman, Adel Al-Gheethi*, Radin Maya Saphira Radin Mohamed, Balkis Talip, Norzila Othman, Sohrab Hossain, Dai-Viet N Vo, Nayef Alduais	Inactivation of fungal spores from clinical environment by silver bio-nanoparticles; optimization, artificial neural network model and mechanism,	Environmental Research	204	DOI: 10.1016/j.envres.2021.111926
38	Abdullah Khaled Al-Buriah, Adel Ali Al-Gheethi, Ponnusamy Senthil Kumar, Radin Maya Saphira Radin Mohamed, Hanita Yusof, Abdullah Faisal Alsharif, Nasradeen A Khalifa	Elimination of rhodamine B from textile wastewater using nanoparticle photocatalysts: A review for sustainable approaches,	Chemosphere	287	

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