

# IChemE in Malaysia

## Introduction to Palm Oil Processing SIG



Dr Viknesh Andiappan, CEng MChemE  
Deputy Chair  
IChemE POPSIG

# The patron of IChemE Malaysia

Her Royal Highness  
Queen of Perak Darul  
Ridzuan, Tuanku Zara  
Salim



# Advancing chemical engineering worldwide

- More than 37,000 members based in 100 countries
- Offices in Australia, New Zealand, Singapore, Malaysia and the UK
- Leading accrediting body for university courses and company training
- Publisher of The Chemical Engineer
- International events and training provider
- Award Chartered Chemical Engineer status
- Award Professional Process Safety Engineer status





Palm Oil Processing Special Interest Group



# We gratefully acknowledges our sponsors





# Who are we?

- Palm Oil Processing Special Interest Group (POPSIG) is one of the communities of IChemE members.
- POPSIG was formed on 3<sup>rd</sup> August 2015 in Kuala Lumpur, Malaysia to provide a forum for the exchange of ideas, the sharing of experiences and encouraging innovation in the palm oil processing industry.
- Volunteers passionate about the palm oil industry & process engineering.
- Not limited to chemical engineers.



# 5 YEARS OF EXCELLENCE HAPPY ANNIVERSARY

3 AUGUST 2015 - 3 AUGUST 2020


IChemE


Palm Oil Processing  
Special Interest Group

IChemE  
Palm Oil Processing  
Special Interest Group


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FIFTH  
ANNIVERSARY

 [icheme.org](http://icheme.org)

 IChemEPOPSIG

 [ichemepopsig](https://www.instagram.com/ichemepopsig)

 IChemEPOPSIG



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CHEMICAL  
ENGINEERING  
WORLDWIDE



# Our objectives are...

- share and promote best practices
- encourage innovation in processing oil palm products
- promote professional aspects of the palm oil industry
- act as a focal point for all those interested in the process aspects of oil palm processing





# Our activities include...

- technical seminars, forums, workshops, webinars and physical evening talks



# Our activities include...

- site visits





# Our activities include...

- newsletters



# Our activities include...

- student bursaries



- It is a financial assistance for undergraduate and postgraduate students to attend scientific conferences, workshops or forums which are related to palm oil processing
- The main objectives of such assistance are to spur the students' motivation and support their research in palm oil processing
- Each bursary is worth RM1,000.





# Our activities include...

- Outreach activities



# Our activities include...

- IChemE Malaysia Palm Oil Industry Award





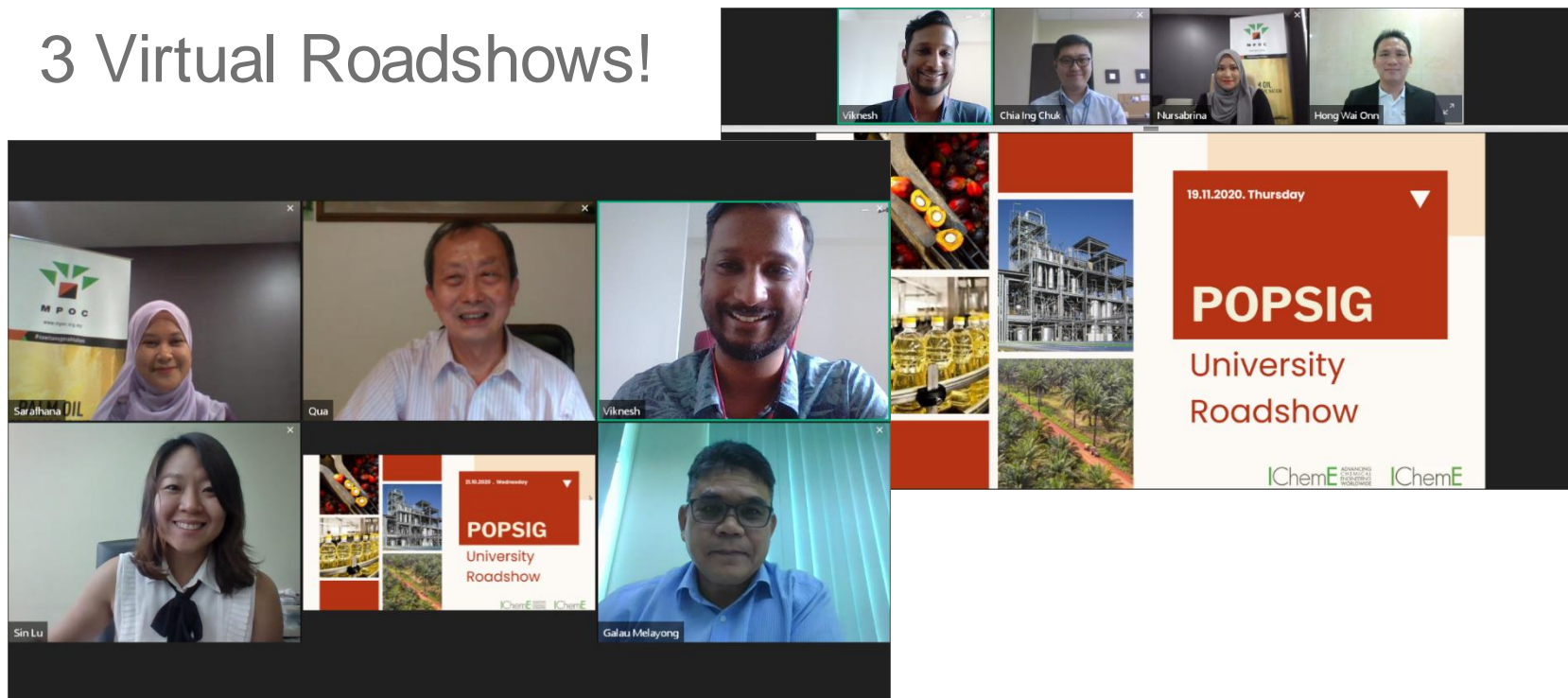
# University Roadshow 2019/2020

- 24 universities with chemical engineering
- Understanding palm oil
- Opportunities in the palm oil processing industry



# University Roadshow 2019/2020

- 3 Virtual Roadshows!



- Curtin, Swinburne, UMS, Segi, UTM, UPM, UMP, UTM

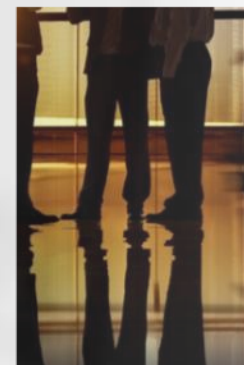
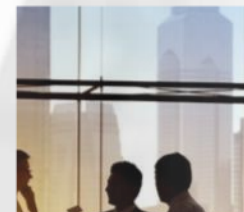
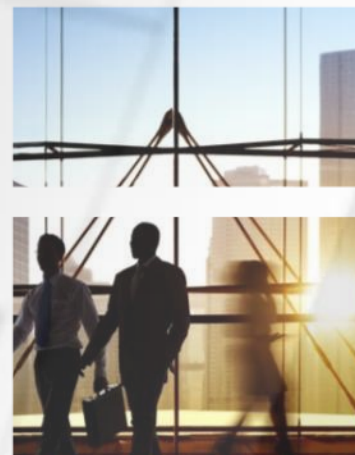
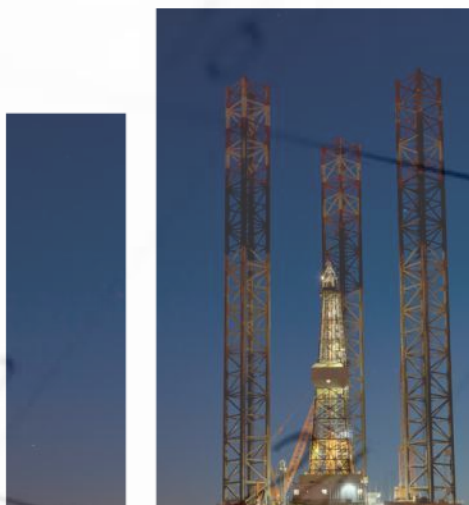
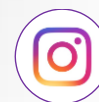




# IChemE

Palm Oil Processing  
Special Interest Group

- Free of charge and open to all.
- Please visit our IChemE website and Social Media for more details.



## Upcoming Events

# September 15



## IChemE

Palm Oil Processing  
Special Interest Group

*MPOC Science and Sustainability Engagement Series 4*

## Palm Carotenoids in Human Nutrition and Health



**Assoc Prof Dr Norhaizan Mohd Esa (UPM), Assoc Prof Dr Tony Ng Kock Wai,  
Assoc Prof Dr Nyam Kar Lin (UCSI), Dr Radhika Loganathan (MPOB)**

*Moderator: Anthony K Veerayan*



Update on current scientifically proven information of the nutritional and health benefits of carotenoids from Malaysian Red Palm Oil.



Register via **[bit.ly/mpocwebinarseries-06](https://bit.ly/mpocwebinarseries-06)**



15:00-17:00  
(MYT/GMT+8)



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# September 20

## IChemE

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### Circular Economy for Oil Palm Biomass Industry: Concept to Modelling



Fundamentals for circular palm oil value chain



**Dr How Bing Shen**

Lecturer, Swinburne University of Technology Sarawak Campus, Malaysia



Register via **[bit.ly/3hz56Cr](https://bit.ly/3hz56Cr)**



18:30-19:30  
(MYT/GMT+8)



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WORLDWIDE

# September 28



## IChemE

Palm Oil Processing  
Special Interest Group

*MPOC Science and Sustainability Engagement Series 5*

## Towards Digitalisation of Malaysian Sustainable Palm Oil



**Brittany Zajic** (*Planet*), **Pedro Carrillo Donaire** (*ec2ce*), **Jeslyn Wong** (*E+H*),  
**Apunam Singh** (*113 Industries*), **Jenna Monocello Kerr** (*113 Industries*)



Address the current and emerging sustainability issues & developments in digitalising the palm oil industry



Register via **[bit.ly/mpocwebinarseries-07](https://bit.ly/mpocwebinarseries-07)**



15:00-17:00  
(MYT/GMT+8)



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# October 04

## IChemE

Palm Oil Processing  
Special Interest Group

### Malaysian Palm Oil Sustainability Certification Effort through MSPO – Getting The Right Fact on Palm Oil



Main issues in palm oil sustainability, concept and role of traceability and transparency, the way forward



**Mr Mohammad Hafezh Abdul Rahman**

Chief Executive Officer, Malaysian Palm Oil Certification Council (MPOCC)



Register via **[bit.ly/3CT5WCH](https://bit.ly/3CT5WCH)**



18:30-19:30  
(MYT/GMT+8)



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# November 09

## IChemE

Palm Oil Processing  
Special Interest Group

### Environmental Sustainability in the Palm Oil Sector in Malaysia: Impacts, Challenges and Way Forward



Show how the palm oil sector responds to environmental sustainability that is at the forefront of national development



**Mr Randolph S. Jeremiah**

Senior Environmental Consultant, Director, ERE Consulting Group



Register via **[bit.ly/38RXENx](https://bit.ly/38RXENx)**



18:30-19:30  
(MYT/GMT+8)



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# Coming Soon: October – December



# Your Feedback

- Please enter your feedback in the MS Form
- Survey will close at 12:00, **20 September 2021**  
Monday MYT/GMT+8
- Link: [bit.ly/3A8sKwA](https://bit.ly/3A8sKwA)

## Survey





**Online Quiz**

Due at 12:00 MYT today

**Best Post-Event Report Award**

Due at 23:59, 16 September 2021 MYT

**POPSIG Article Honorarium**

Due at 23:59, 20 September 2021 MYT



**Awards and Competitions**

# Online Quiz (Happening Now)

- Cash Prize: RM50
- Started at 09:30 am, and **end at 12:00 pm.**
- Multiple choice questions
- TOTAL: 19 questions
  - 4 – Introduction to POPSIG
  - 5 – The Role of Chemical Engineers in Palm Oil Industry
  - 5 – MPOC: Palm Oil – Are they good for you?
  - 5 – SOPB: Introduction and Virtual Site Visit
- You can change the responses until 12:00 pm.
- Link: <https://forms.gle/yJzGx6QmxTJ1rnSG9>



# Best Event Report Award

IChemE

Palm Oil Processing  
Special Interest Group

## Best Event Report Award for University Roadshow



- Submit within 14 days.
- Selected report will be published in POPSIG Newsletter.



Deadline: 23:59, **16 Sep 2021**, Tuesday (MYT/GMT+8)



popsigmalaysia@gmail.com (Subject: Report Sep 2021)



Format: Pictures and texts (max 2 pages, 2-3 pictures)



- ❖ RM200 Cash Prize
- ❖ Certificate of Achievement
- ❖ Publish in Newsletter



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WORLDWIDE



# Report: Format

- Font size: **Times New Roman 12pt, 1.5 spacing.**
- The main content pages must be
  - **A4-sized**, with **Normal Margin**
  - Fully text only, and **maximum of 2 pages**
  - Reference to the content of the presentation is not mandatory
- In Appendix (on additional pages):
  - **Minimum 1** (and max 3) clear pictures, tables, graphs, or artworks with caption
- Detailed requirements are available here: **[bit.ly/3sbtxcO](https://bit.ly/3sbtxcO)**



# Report: Eligibility and Information

- POPSIG welcomes the applications from undergraduate and postgraduate students only from the 5 universities in Sabah and Sarawak, Malaysia.
- You could work **individually** or in a **team**.
- The content must:
  - Be **true, accurate and technically written**
  - Be **original** and have not been previously submitted
  - Be **inclusive**
- Some examples of report in Newsletter Issue 17 (Jan-Jun 2021).



# Report: Examples

ICHEM POPSIG Newsletter, Issue 17

## Virtual Site Tour: Visit to Dia-Chemical Sdn. Bhd. By POPSIG-UTAR.

On 22nd February 2021, a two-hour presentation and virtual tour of Dia-Chemical Sdn. Bhd., followed by a Question and Answer (Q&A) session took place in Zoom online platform. This event is hosted by UTAR IChemE Student Chapter. The event started at 3pm and ended at 5pm. Dia-Chemical Sdn Bhd established in year 2006 and this company specialises in providing innovative solutions for water and wastewater treatment.

Professor Ir Dr Chong Mei Fong, introduced Dia-Chemical Sdn. Bhd, followed by Dr Viknesh Andiappan who introduced the Palm Oil Processing Special Interest Group (POPSIG), and Mr Vincent Tiang Soon Thai who gave a speech on the role of chemical engineers in palm oil industry.



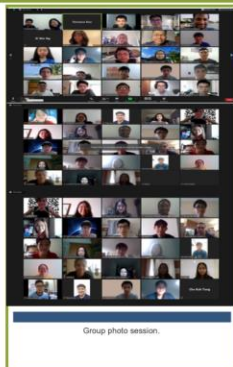
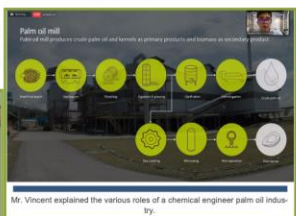
Prof. Ir. Chong Mei Fong introduces Dia-Chemical Sdn. Bhd.



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After the introductions, a virtual tour of the laboratory and production, followed by a Q&A session took place. All the participants showed responsive interaction with the speakers.

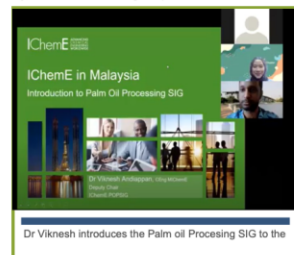
ICHEM members, non-members and lecturers from the Department of Chemical Engineering of UTAR attended the event. A total of 212 IChemE members, 29 non-members, 2 staff and 60 invited guests attended this virtual session.



Group photo session.

## Virtual Site Tour: IChemE Student Chapter Festival UM-Nottingham

POPSIG Virtual Site Tour was the featured event on the second day of IChemE Student Chapter Festival which takes place on the 10th March 2021. The festival is a virtual global event jointly organised by IChemE Malaysia, IChemE Student Chapter Universiti Malaysia and IChemE Student Chapter University of Nottingham Malaysia with a total of 137 engineering undergraduate participants from different universities all around the world. The festival started with an introduction about IChemE Palm Oil Processing (POPSIG) by Dr Viknesh Andiappan, the Deputy Chair of POPSIG to help students gain an in-depth understanding about the POPSIG community, activities and incoming competitions.



Next, the participants were introduced to the roles of chemical engineers in the palm oil processing industry by Ir Hong Wai Onn, the EXCO for POPSIG. Due to the ever-increasing human population which was estimated to reach a total of 9 billion by year 2050, palm oil is said to be an alternative to meet the growing needs of oils and fast on shrinking arable lands. Palm was highlighted to outmatch all other oil crops in terms of efficiency per unit land as only 1/10 of land size is required to produce the same amount of oil. Besides, palm oil after the oleochemical process is versatile in usage to produce a range of consumer products. It was emphasized during the session that the role of a chemical engineer is to improve quality of life with the knowledge learnt in the multidisciplinary field of study by building sustainable and safer processes. Future opportunities for chemical engineers also lie in automation as we welcome the 4th Industrial Revolution. A skilled chemical engi-

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ICHEM POPSIG Newsletter, Issue 17

ICHEM POPSIG Newsletter, Issue 17

## UiTM-UniMAP University Roadshow

On 25<sup>th</sup> May 2021, a two-hour university roadshow had been successfully hosted by Universiti Teknologi MARA (UiTM) IChemE Student Chapter and Persatuan Pelajar Fakulti Teknologi Kejuruteraan Kimia Universiti Malaysia Perlis (FTK UniMAP).



A total of 43 participants from Universiti Teknologi MARA (UiTM) and 300 participants from Universiti Malaysia Perlis (UniMAP) attended this event.

The event started with the introduction of IChemE-POPSIG by Dr Viknesh Andiappan, where the participants get to know more about IChemE-POPSIG. Then, the event continues with the sharing session by the Malaysian Palm Oil Council (MPOC) panel, Mr. Ahmad Shahdan bin Kasim, which enlightened the participants about the real-working situation in this industry. Furthermore, the participants get some insightful information about the roles of chemical engineers in the palm oil industries from Mr. Prasath Ramani. In the last session presented

by Ms. Tharshinye Soomaran, the participants get to know how to become chartered IChemE member. The objectives of this event is to enhance the interaction between IChemE-UiTM Student Chapter, and IChemE POPSIG, to provide a platform for students to get the new and current knowledge from palm oil industries, and to increase the engagement of university with industry and IChemE.

POPSIG is glad to have few knowledgeable speakers who gave a sharing experience sessions with the participants who attended in this university roadshow webinar. The invited speakers are Dr Viknesh Andiappan (Deputy Chair of IChemE POPSIG & Assistant Professor at Heriot-Watt University Malaysia), Mr Ahmad Shahdan bin Kasim (Senior Executive in Science, Environment, and Sustainability Division (SESOD) in Malaysian Palm Oil Council (MPOC), Mr Prasath Ramani (Industrial Technology Specialist at Novozymes Malaysia Sdn Bhd), and Ms Tharshinye Soomaran (Associate Fellow of Malaysian Institute of Management & Country Manager at IChemE based in Kuala Lumpur).

POPSIG will be working with more universities in Malaysia for the upcoming 2022 University Roadshow. Stay updated with the event on the IChemE POPSIG website.



Group photo of speakers during the University Roadshow.

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Full information

[bit.ly/3IfiUCH](https://bit.ly/3IfiUCH)

**IChemE** ADVANCING CHEMICAL ENGINEERING WORLDWIDE

# Report: Submission and Deadline

- The applicant must submit **both**:
  - **Application Form** (Microsoft Word or PDF) **AND**
  - **Report** (Microsoft Word or Microsoft Project)
- By email to [popsigmalaysia@gmail.com](mailto:popsigmalaysia@gmail.com).
- The submission ...
  - Opens from 00:00 hours on 14 September 2021 (MYT/GMT+8)
  - **Closes at 23:59 hours on 16 September 2021 (MYT/GMT+8).**





# POPSIG Article Honorarium



IChemE

Palm Oil Processing  
Special Interest Group

## POPSIG Honorarium (Student) for Best Palm Oil-themed Article



Theme: “**Correcting the Misperception on Palm Oil**”.  
Aim to disseminate correct information about palm oil.



Deadline: 23:59, **20 Sep 2021**, Tuesday (MYT/GMT+8)



popsigmalaysia@gmail.com (Subject: POPSIG Article Sep 2021)



More information at [bit.ly/31iJ9OT](https://bit.ly/31iJ9OT).



- ❖ RM200 Cash Prize
- ❖ Certificate of Achievement
- ❖ Publish in Newsletter



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# Article: Format

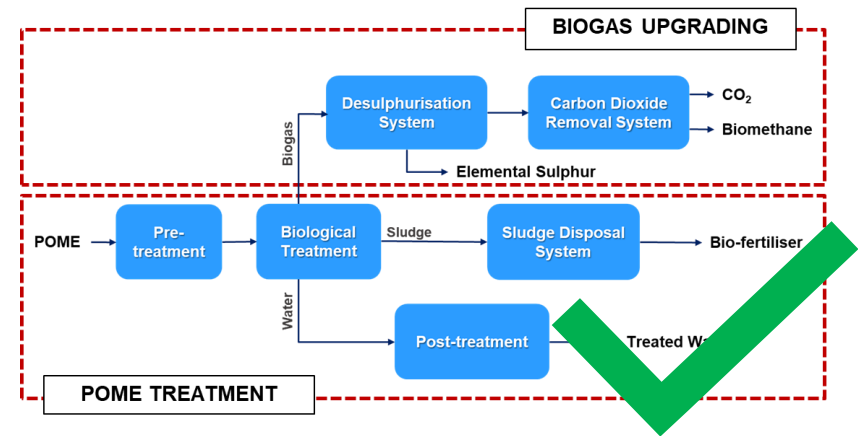
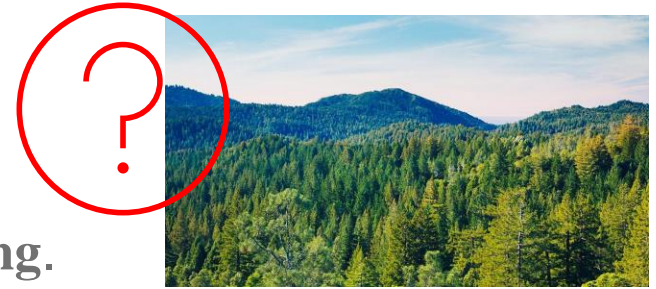
- Font size: **Times New Roman 12pt, 1.5 spacing.**

- The main content pages must be

- **A4-sized, with Normal Margin**
- Fully text only, and **2 to 3 pages** required
- Referenced where necessary

- In Appendix (on additional pages):

- **Minimum 1** (and max 3) graphics, tables, graphs or artworks with caption
- The appended materials must be clear, meaningful, informative and related



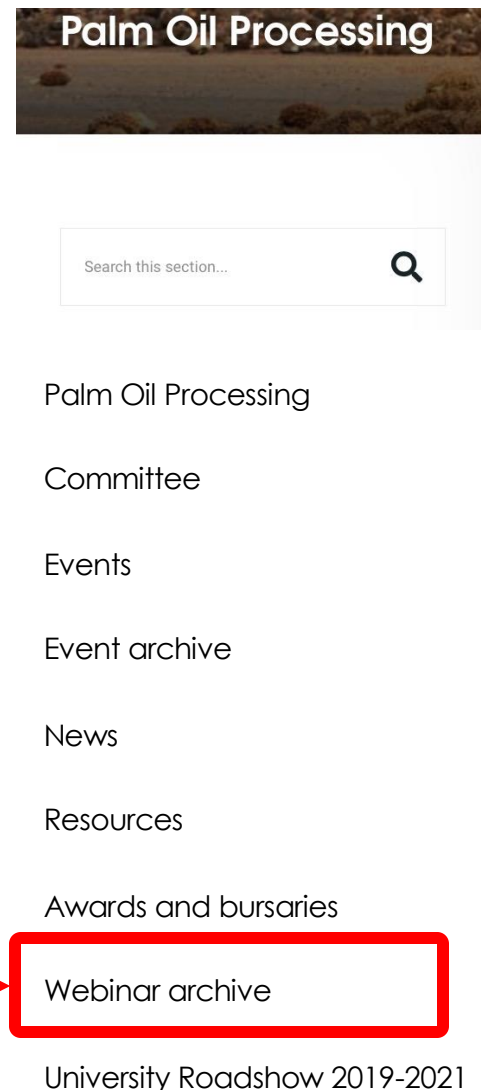
# Article: Eligibility and Information

- POPSIG welcomes the applications from undergraduate and postgraduate students only from the 5 universities in Sabah and Sarawak, Malaysia.
- Theme: **Correcting the Misperception on Palm Oil**
- The content must:
  - Be **original** and have not been previously submitted
  - Be referenced where necessary
  - Demonstrate clear connection to the theme and your article's title



# Article: Useful Reading

- Webinar archive stores informative slides
- Useful as background reading
- Content in webinar archive should not be used for reference
- Reference source should have been peer-reviewed



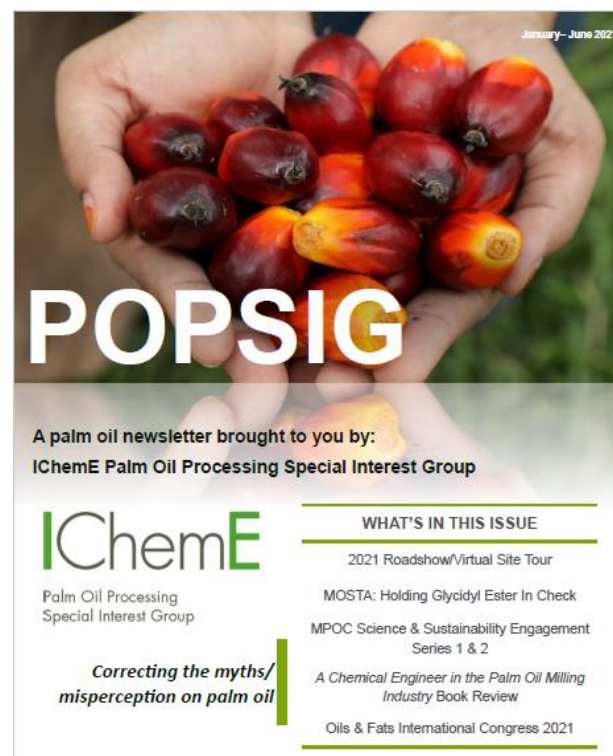


# Article: Submission and Deadline

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  - **Article** (Microsoft Word or Microsoft Project)
- By email to [popsigmalaysia@gmail.com](mailto:popsigmalaysia@gmail.com).
- The submission ...
  - Opens at 00:00 hours on 01 September 2021 (MYT/GMT+8)
  - **Closes at 23:59 hours on 20 September 2021 (MYT/GMT+8).**



# IChemE POPSIG Newsletters



Full information

[bit.ly/3lfiUCH](https://bit.ly/3lfiUCH)

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# Awards and Bursaries 2021

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Palm Oil Processing CHEMICAL  
Special Interest Group ENGINEERING  
WORLDWIDE

2021 POPSIG BURSARY  
Student  
Research  
Project

**FINAL CALL: due tomorrow**

Email : [popsigmalaysia@gmail.com](mailto:popsigmalaysia@gmail.com)



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# Awards and Bursaries 2021



**POPSIG STUDENT BURSARY 2021**

**Introduction**

1. Provides financial assistance for students to attend relevant workshops
2. To support their research
3. Make the events more enjoyable

**Requirement**

1. Eligible to all palm oil processing related activities

**RM4000 max per event**

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SCAN ME



IChemE ADVANCING CHEMICAL ENGINEERING WORLDWIDE

IChemE

Palm Oil Processing Special Interest Group

**POPSIG Best Final Year Design Project Award**

**RM2000/ STUDENT'S PROJECT**

**Introduction:**

1. Final year undergraduate student
2. Submit application form, design report and supervisor's confirmation report
3. Deadline: 30 September every year

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SCAN ME

**Application closed for 2021**



IChemE Palm Oil Processing SIG

# *Best Final Year Design Project Award*

## *2021*

Announcement on 15 September 2021, 09:00 MYT



Presented  
by

**IChemE** ADVANCING  
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**IChemE**  
Palm Oil Processing  
Special Interest Group

Sponsored  
by



**Desmet Ballestra (M) Sdn Bhd**



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# Winners of FYDP Awards

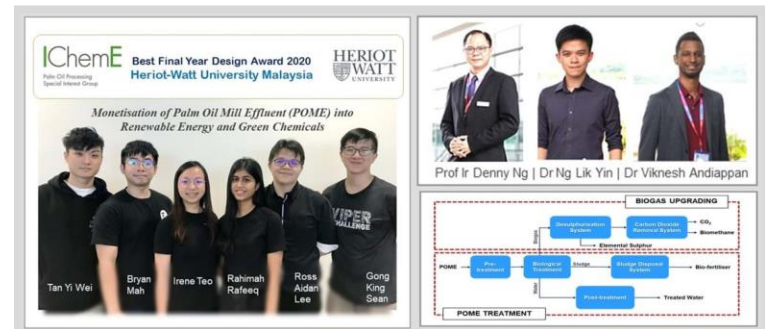
## 1<sup>st</sup> FYDP: 2019

- Universiti Teknologi Malaysia
- Project: “Biodiesel Production using Subcritical Water and Supercritical Methanol Treatment”



## 2<sup>nd</sup> FYDP: 2020

- Heriot-Watt University Malaysia
- Project: “Monetisation of Palm Oil Mill Effluent (POME) into Renewable Energy and Green Chemicals”



# HWO Individual Project Award 2021

HONG WAI ONN

## Individual Project Award

One award will be awarded annually to an undergraduate who completes an outstanding research related to the palm oil processing industry focusing on efficiency, process safety and/or environmental responsibility.

Application duration: 1 February – 30 September

[hongwaionn.com/society](http://hongwaionn.com/society)





# POPSIG Climate Change Action Plan

- IChemE recently presented its position on climate change
- POPSIG developed CCAP that outline plans and initiatives for contributing to this position
- Provide your feedback via our survey form below by 20<sup>th</sup> September.

Survey form

[bit.ly/2YEiM85](https://bit.ly/2YEiM85)



Full information

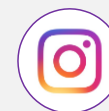
[bit.ly/2X9O9a8](https://bit.ly/2X9O9a8)



# Join POPSIG!

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IChemE Palm Oil Processing Special Interest Group

Contact us

popsigmalaysia@gmail.com



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[www.icheme.org/membership/communities/special-interest-groups/palm-oil-processing-sig/](http://www.icheme.org/membership/communities/special-interest-groups/palm-oil-processing-sig/)



Thank you