

POPSIG

RESEARCH & DESIGN SHOWCASE

2022

3rd Announcement

26 September 2022

Monday

9:00 am to 4:00 pm MYT

Matahari I, Level 3, Bangi Resort Hotel
Bandar Baru Bangi, Selangor, Malaysia

HIGHLIGHTS

- Electro-catalyst ●
- Photocatalytic degradation ●
- Green solvent ●
- Co-pyrolysis ●
- Biodiesel, P-HENS ●
- Black soldier fly larvae ●
- CO₂ adsorption ●
- Glycerin pitch ●

popsig



POPSIG RESEARCH & DESIGN SHOWCASE 2022

TIME

PROGRAMME

Welcome Session

- 8:30 am** Registration
- 9:00 am** Arrival of VIPs
- 9:10 am** Opening Remark
Professor Ir Dr Chong Mei Fong
Chair of POPSIG
- 9:20 am** Keynote Speech
YBrs Dr Ruslan Abdullah
Director, Science, Environment and Sustainability Division,
Malaysian Palm Oil Council

Session 1: Research Seminar (2021 recipients)

- 9:30 am** Paper 1: Synthesis of Carbon Nanoparticles from Oil Palm Empty Fruit Bunch as Electro-catalyst for Energy Storage
Brenda Lim Ai-Lian
Process Engineer at ExxonMobil &
Master of Engineering Science graduate from
Universiti Tunku Abdul Rahman
- 9:45 am** Paper 2: Palm Oil Mill Effluent Waste Treatment using TiO₂/Ti₃C₂T_x MXene Composite Aerogel via Photocatalytic Degradation Process
Jocelyn Lim Jean Yi
BEng. (Hons) in Chemical Engineering student
Xiamen University Malaysia
- 10:00 am** Paper 3: Thermogravimetric Analysis and Combined Kinetic Study on the Pyrolysis of Empty Fruit Bunches Lignin Extracted using Sucrose-malic Acid-water Low Transition Temperature Mixture
Jonathan Cheng Lin Yang
Master of Engineering (by Research) student
Swinburne University of Technology, Sarawak Campus
- 10:15 am** Paper 4: The Potentials of Co-pyrolysis of Empty Fruit Bunch and Disposable Face Mask Wastes
Melvin Wee Xin Jie
Doctor of Philosophy candidate
Curtin University Malaysia

- 10:30 am** Coffee Break & Networking

POPSIG RESEARCH & DESIGN SHOWCASE 2022

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PROGRAMME

Discussion Forum

10:45 am

Moderator:
Professor Lam Hon Loong
Professor, University of Nottingham Malaysia

Panellists:

1. *Brenda Lim Ai-Lian, Universiti Tunku Abdul Rahman*
2. *Jocelyn Lim Jean Yi, Xiamen University Malaysia*
3. *Jonathan Cheng Lin Yang, Swinburne University of Technology*
4. *Melvin Wee Xin Jie, Curtin University Malaysia*

11:45 am

Prize-giving Ceremony for 2021 POPSIG Student Research Project Bursary

Desmet Ballestra (Malaysia) Sdn Bhd &
Malaysian Oleochemical Manufacturers Group

11:55 am

Group Photo-taking Session

12:00 pm

Lunch & Networking

Funtasia Restaurant, Level 1, Bangi Resort Hotel

Session 2: Design Showcase (2022 recipients)

1:00 pm

Special Address

Mr Khoo Kiak Kern
Managing Director of Desmet Ballestra (Malaysia) Sdn Bhd

1:15 pm

Paper 5: Sustainable Production of Palm Oil-derived Biodiesel

Abdulqader Mohammed Alawi Bin Sahl, Thuppahimudalige
Chandeepa Lakshith Fernando, Bong Zhang Ying, Tharindu Dayan
Buddhika Siyambalapitiya, Osob Abdullahi Mohamud, Shaffaf
Thajudheen (Swinburne University of Technology Sarawak Campus)

1:30 pm

Q&A Session

Moderator:
Professor Lam Hon Loong
Professor, University of Nottingham Malaysia

1:45 pm

Prize-giving Ceremony for 2022 POPSIG Best Final Year Design Award

Desmet Ballestra (Malaysia) Sdn Bhd

POPSIG RESEARCH & DESIGN SHOWCASE 2022

TIME

PROGRAMME

Session 3: Research Showcase (2022 recipients)

2:00 pm Paper 6: Valorisation of Blended Palm Oil Mill Effluent (POME) Sediment and Oil Palm Frond (OPF) as the Substrate for Black Soldier Fly Larvae (BSFL)

*Yeow Teck Ann
BEng (Hons) in Chemical Engineering student
Xiamen University Malaysia*

2:20 pm Paper 7: CO₂ Adsorption Study of Concurrent Activated and Modified Palm Kernel Shell Derived Activated Carbon

*Lai Jia Yen
Doctor of Philosophy candidate
Swinburne University of Technology, Sarawak Campus, Malaysia*

2:40 pm Paper 8: Potential of Glycerin Pitch (GP) in Mixed Culture Polyhydroxyalkanoate (PHA) Production: Component Characterizations and Organic Loading Rate Optimization

*Ng Wai Lun
Doctor of Philosophy candidate
Taylor's University, Lakeside Campus, Malaysia*

3:00 pm Discussion Session

*Moderator:
Professor Lam Hon Loong
Professor, University of Nottingham Malaysia*

3:15 pm Prize-giving Ceremony for 2022 POPSIG Student Research Project Bursary

Malaysian Palm Oil Council

Closing Session

3:30 pm Closing Speech

*Professor Ir Dr Chong Mei Fong
Chair of POPSIG*

3:35 pm Coffee Break & Networking

4:00 pm End of 2022 POPSIG Research & Design Showcase

GUESTS OF HONOUR



YBrs Dr Ruslan Abdullah

Director
Science, Environment and Sustainability Division
Malaysian Palm Oil Council



Khoo Kiak Kern

Managing Director
Desmet Ballestra (Malaysia) Sdn Bhd



Leong Tat Loong

General Manager
Process and Production Control
KLK Industrial Holdings Sdn Bhd
(Representative - Chairman of MOMG)



Michael Ng Foo Yuen

Assistant Manager
Science, Environment and Sustainability Division
Malaysian Palm Oil Council



Chia Ing Chuk

Refining Technology Leader for
Oils, Fats and Oleochemical
Desmet Ballestra (Malaysia) Sdn Bhd

SPEAKERS (SESSION 1)



Brenda Lim Ai-Lian

Master of Engineering Science (completed),
Department of Chemical Engineering,
Lee Kong Chian Faculty of Engineering and
Science, Universiti Tunku Abdul Rahman



Jocelyn Lim Jean Yi

BEng. (Hons) in Chemical Engineering (Y3),
School of Energy and Chemical Engineering,
Xiamen University Malaysia



Jonathan Cheng Lin Yang

Master of Engineering (by Research),
Research Centre for Sustainable Technologies,
Faculty of Engineering, Computing and Science,
Swinburne University of Technology Sarawak



Melvin Wee Xin Jie

Doctor of Philosophy candidate,
Department of Chemical and Energy
Engineering, Faculty of Engineering and Science,
Curtin University Malaysia

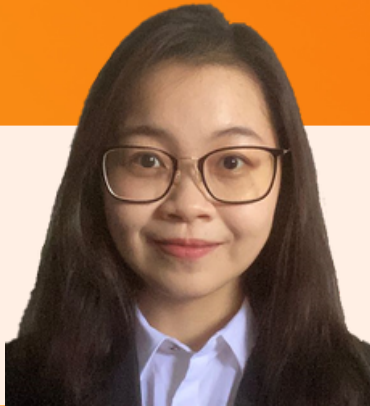
SPEAKERS (SESSION 2)



Abdulqader Mohammed Alawi
Bin Sahl



Thuppahimudalige Chandeepla
Lakshith Fernando



Bong Zhang Ying



Tharindu Dayan
Buddhika Siyambalapitiya



Shaffaf Thajudheen



Osob Abdullahi Mohamud

Bachelor of Engineering (Honours) in Chemical Engineering
Swinburne University of Technology
Sarawak Campus, Malaysia

SPEAKERS (SESSION 3)



Yeow Teck Ann

BEng. (Hons) in Chemical Engineering (Y2),
School of Energy and Chemical Engineering,
Xiamen University Malaysia



Lai Jia Yen

Doctor of Philosophy candidate,
Faculty of Engineering, Computing and Science,
Swinburne University of Technology,
Sarawak Campus, Malaysia



Ng Wai Lun

Doctor of Philosophy candidate,
School of Computing Science and Engineering,
Faculty of Innovation and Technology,
Taylor's University, Lakeside Campus, Malaysia

SPONSORS



Desmet Ballestra (Malaysia) Sdn Bhd

The Desmet Ballestra Group is the world leader in developing, engineering and supplying technologies, processing plants and proprietary equipment for Food, Feed & Greenfuel (Oilseeds, Oils & Fats; Oleochemicals, HVO & Biodiesel; Rosedowns Pressing; Stolz Animal Feed & Agro Food).



Malaysian Palm Oil Council (MPOC)

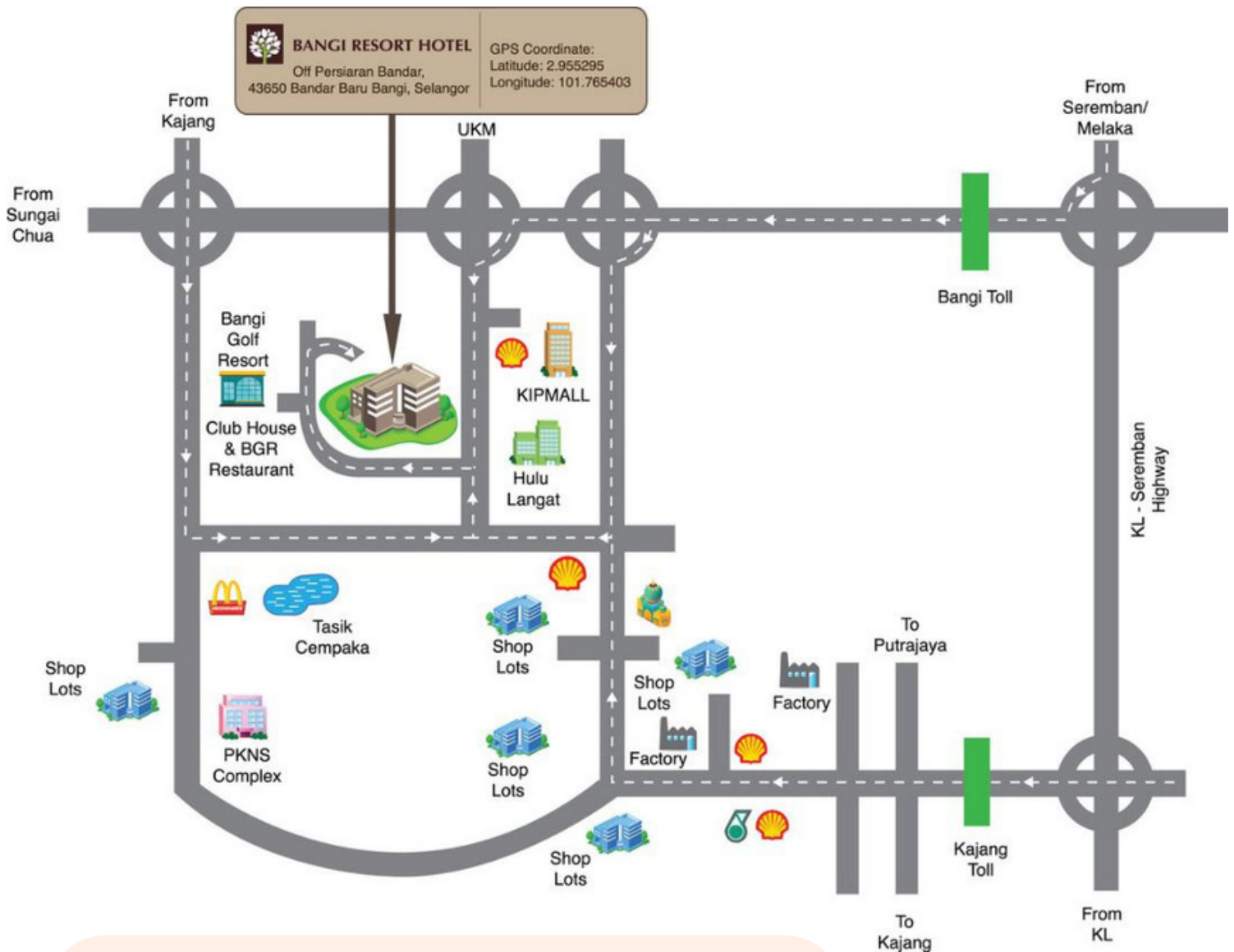
MPOC is a corporate body with a mission to promote the market expansion of Malaysian palm oil and its products by enhancing the image of palm oil and creating better acceptance through awareness of various technological and economic advantages (techno-economic advantages) and environmental sustainability.



Malaysian Oleochemical Manufacturers Group (MOMG)

MOMG was established in January 1984. At present, it has 10 members in Malaysia. MOMG members are involved in the production of basic oleochemicals namely fatty acids, methyl esters, fatty alcohols and glycerine and are either owned by local plantation companies or joint-ventures with multinationals.

How to Get There



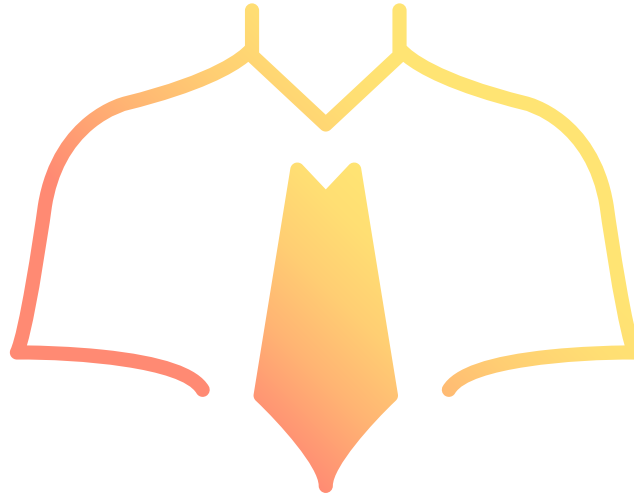
1. Exit from the highway via Kajang Toll or Bangi Toll
2. Head to Persiaran Bandar
3. Turn into Jalan Golf
4. Turn right at the junction and enter Bangi Resort Hotel
5. Parking lots are on your left
6. Additional parking lots are available at Bangi Golf Resort, with free bus shuttle

From MPOC,
Desmet Ballestra,
KLK

INFORMATION

www.bangiresorthotel.com

Dress Code



CASUAL SMART



INFORMATION

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