

A quarterly palm oil newsletter brought to you by  
IChemE Palm Oil Processing Special Interest Group


# POPSIG

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# 2018 Q1 POPSIG Newsletter



Palm Oil Processing Special Interest Group

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## Editor's Message

A new year sees a change in the POPSIG committee that has served since its formation in August 2015. We thank them for their contributions over nearly three years that helped POPSIG chalk up a number of successes. We are grateful to BP Chow, KK Khoo, Toh Seong Hin and Prof. Dr Robiah Yunus for their staunch support. Some members will stay on providing continuity and using the IChemE Member Group Manual we have created several positions to be more specific in the role of members as well as cater for different age groups. Hong Wai Onn stays on as chair, Liew Sin Lu as event coordinator, Prof Dr Chong Mei Fong and Qua Kiat Seng as exco members and Mohan Balasingam for IChemE office. Assoc. Prof. Dr Wu Ta Yeong is now the new secretary. Oscar Ting based in Ireland comes in as email campaign manager whilst the first member of the editorial board is Tan Hui Min. The new vacancies that are waiting to be filled are treasurer, webmaster, data coordinator, second editorial board member and one exco members. Please come forward and volunteer and you need not be based in Malaysia given the global internet connectivity.

The first POPSIG webinar outside Malaysia will be run from Bogota in Colombia by Prof Paulo Cesar Narvaez Rincon from the National University of Colombia. In the last issue of the POPSIG newsletter we pointed out that Colombia is the fourth largest producer of palm oil with the greatest potential to grow. Details of the June webinar are at the end of this newsletter.

At the end of last year Monash University Malaysia announced the Monash-Industry Palm Oil Education and Research (MIPO) platform for university-industry-government cooperation aimed to improve the competitiveness and sustainability of the palm oil industry in the country and beyond. It will have expertise in four clusters viz food innovation and security, social and environmental sustainability, waste to wealth & palm oil production and derivatives. POPSIG congratulates Monash University Malaysia on this initiative and offers its support to help move the palm oil industry forward.

POPSIG's first seminar last year was successfully held in Kuala Lumpur in conjunction with 100 Years of Palm Oil in Malaysia. This year's Regional Palm Oil Processing Seminar will move to Pasir Gudang, Johor with the theme "Value addition in the Palm Oil Downstream sector." Pasir Gudang and its surrounding is an important cluster of palm oil processing and the organizing committee has lined up an exciting programme. Details are in a preliminary flyer in this newsletter.

Members of IChemE who have not yet chosen your free SIG please sign up for POPSIG and those who are not yet members of IChemE please contact Mohan Balasingam, [mbalasingam@icheme.org](mailto:mbalasingam@icheme.org). Remember you need not be a chemical engineer, you only need to be interested in palm oil processing.

We hope you enjoy reading these and the full selection of articles in this issue. Follow us on Facebook and LinkedIn.

Guest Editor  
**Qua Kiat Seng**

# A Conversation with Datuk Franki Anthony Dass



The first commercial palm oil plantation was established in 1917 in Tennamaram Estate, Batang Berjuntai, Selangor and on May 18, 2017 a special event was held at this Sime Darby estate to celebrate the 100<sup>th</sup> Anniversary of Malaysian Palm Oil. This year on February 13 after the celebrations had cooled down Mohan Balasingam, Regional Manager SEA at IChemE and Qua Kiat Seng, IChemE in Malaysia board member managed to meet up with Datuk Franki Anthony Dass, Chief Advisor and Value Officer at Sime Darby Plantation.

In this capacity, he is responsible for providing coaching on technical and strategic matters and mentoring the next generation of leaders, leading the execution and culture transformation as well as ensuring progress on value creation initiatives. Previously he was CEO, Plantation.

We thanked Datuk Franki and Sime Darby for their support at IChemE Malaysia Awards 2017 by sponsoring the Palm Oil Industry Award. The award recognizes the best project implemented and demonstrates innovation, successful delivery and a technical, commercial, safety and/or environmental benefit.



Datuk Franki has four decades experience in the plantation sector and it is easy to pick up his keenness on improvements and innovation as we talked. As the plantation sector is experiencing labor shortages mechanization and automation in the field is key to overcoming the issues. He pointed out that he has seen small engineering contractor companies coming up with innovative solutions that sometimes larger firms were unable to solve. In fact Datuk Franki has laid out his vision for a digital plantation of the future in a video. It is a fully integrated and automated estate with sensors in each plant recording its life history and with robots and autonomous vehicles for applying fertilizers and harvesting. The artificial intelligence platform allows the estate manager to manage large group of estates remotely. Longer working hours is possible to significantly increase productivity. He says the possibilities are endless.

We shared with Datuk Franki the tremendous contributions chemical engineers have made in the refining and oleochemical sectors of the palm oil industry and that process engineering capability can benefit particularly the milling sector. We discussed the importance of understanding the biology of the palm fruit and then using process engineering knowledge to extract out as much oil as possible and thereby minimizing the oil loss. We have invited Datuk Franki to speak to POPSIG members and share his vision of a digital plantation.



## Four Decades of Oleochemicals in ASEAN

The first POPSIG evening talk for 2018 was on Wednesday 28/2/18 at Monash University Malaysia. It was “Four Decades in ASEAN : Process Engineering and Innovation in the Oleochemical Industry” by Qua Kiat Seng, AOMG Advisor and founder member of POPSIG. The talk was attended by 40 at Monash and 22 from Malaysia, UK, Denmark, Finland, Ireland, Singapore and South Africa participating in the simultaneous webinar.

Whilst the oleochemical industry is 200 years old it started in ASEAN only four decades ago and in this short time there has been unprecedented progress. One area is in process engineering and Qua’s talk tracked these developments and innovations. Many challenges remain, such as overcapacity, low margins as well low crude oil prices. Nevertheless the industry has shown resilience and process engineering and innovations will continue to overcome some of these issues. The future of the industry lies in multi-purpose plants and bioprocessing with the line between oleochemicals and petrochemicals blurring.

This talk was based on a presentation given at the PIPOC 2017 conference on 14-17 November 2017. An article broadly based on this was published in OFI (Oils & Fats International) Magazine in February 2018 (Volume 34 No 2).

Mr G C Tan, MD at Pacific Oleochemicals followed the talk via the webinar. He said, “This is an excellent documentation of the oleochemical industry in ASEAN. With half the world’s oleochemical capacity residing in ASEAN, its importance will continue to grow.”

Dr Christina Phang, IChemE in Malaysia Board Chair commented, “I was very pleased to see the active participation of members in response to Mr Qua’s thought provoking presentation. I hope to see continued interest and engagement in upcoming events as there are a number of issues that Chemical Engineers in Malaysia should passionately champion in advancing the palm oil sector both locally and abroad.”



1 Qua began his talk with the history of oleochemicals.

2 Qua ended his talk answering why there was no fatty amine production in ASEAN.



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3 With Dr Christina Phang , IChemE in Malaysia Board Chair 2018—19.

4 Tawana Muchatuta from Zimbabwe with his wife. "The insights into how the challenges facing the industry o a socioeconomic level affect the evolution of the process technology were particularly interesting."

5 Chemical engineering undergraduates from the University of Malaya. L to R Loi Jia Xing, Teoh Wei Jian, Yap Loo Swan and Lai Ke Qin.

6 Dr Yap Yeow Hong from UTAR found the topic to be very interesting and commended POPSIG for being able to draw a decent crowd in the evening.

7 L to R Nick Ng, Consultant, Gaia Tech Venture, Dr Phang and Prof Dr Mike Cloke (former Director SEA, IChemE).

8 Dr Chew Thean Yean (back to camera) from Sydney in conversation with Sivabalan Palanjandy, Technical Director, Midasutara Engineering.



## POPSIG members elected to the IChemE in Malaysia board 2018-9

We are pleased to note that two POPSIG members have been elected to the current board of IChemE in Malaysia. They were nominated and voted in by IChemE members who recognized their contributions to IChemE in Malaysia.



**Hong Wai Onn is Honorary Secretary**

Hong Wai Onn is a Chartered Chemical Engineer, Chartered Member and Professional Process Safety Engineer of the Institution of Chemical Engineers (IChemE). He is also a Corporate Member of the Institution of Engineers, Malaysia (IEM). In addition, he has been an active Project Management Institute (PMI) member and Project Management Professional (PMP)® credential holder since 2013.

Hong Wai Onn is currently a Technical Service Manager of Novozymes Malaysia Sdn Bhd. Prior to that, he held positions as Project Manager for Sibelco Malaysia Sdn Bhd and Senior Engineer for Genting Plantations Berhad. His work experience covered not only Malaysia, but also overseas countries such as Indonesia, Lao PDR, Papua New Guinea, and Philippines.

He is the Chairman of IChemE Palm Oil Processing Special Interest Group. He sits on the Industry Advisory Panel for Chemical Engineering at Monash University Malaysia. He received his degree in Bachelor of Engineering with Honours from the University Malaysia Sabah in 2006.



**Qua Kiat Seng is a board member**

He has a 32 year career in operations in the palm oil industry covering oil refining, foods, oleochemicals, soap and toiletries. He worked for Unilever, ICI and KLK in Malaysia and overseas. Before he retired he was GM of Uniqema Malaysia Sdn Bhd.

Subsequently he advised IChemE in Malaysia for a decade on a part-time basis. He guest lectured on sustainable palm oil processing to chemical engineering undergraduates at Monash University Malaysia. He continues to volunteer at IChemE as founder member of POPSIG as well as its board member 2018-9.

He is part-time advisor to the ASEAN Oleochemical Manufacturers Group and is its representative on the RSPO SC T&T as well its sub-group Oleochemicals and its Derivatives.

Qua says, "The palm oil industry continues to grow in importance and needs the input of chemical engineers to make it sustainable and safe. I hope more members and friends will come forward to make this a reality."

# Thank you Avanna Tan

Avanna Tan, Membership Marketing Executive, IChemE left on 15/3/18. Avanna has supported POPSIG from the day of its inception on 3/8/15. Being based in Singapore did not deter her from providing us excellent support in Kuala Lumpur and being present at our evening talks. One of her notable achievements was to turn the evening talks into a live talk cum webinar which means that we are able to reach out not only to people outside the Klang valley in Malaysia but to the rest of the world. There were occasions when there were as many webinar participants as those present in the lecture theatre of Monash University Malaysia. We will miss her and the POPSIG committee wishes her the very best in her future endeavors.



- 1 Avanna flanked by Unnithan on the left and Hong on the right at Unnithan's talk on 10/4/17. This was the first POPSIG live talk cum webinar.
- 2 Liew Sin Lu, POPSIG committee member, managed the 28/2/18 live talk cum webinar in KL with Avanna running it from Singapore.
- 3 At this talk on 18/9/17 attended by 90 physical participants there were another 73 online via the webinar from 27 countries.
- 4 Avanna was always present to distribute the awards at the IChemE Malaysia Awards. Last year ExcelVite received the Palm Oil Industry Award.

## RSPO new Head of Certification is another Chemical Engineer

Jan van Driel, who spoke at a POPSIG evening talk on 19/9/16 on “Transforming the market to make sustainable palm oil the norm”, has retired. Aminah Ang Bee Fui has from 2/1/18 taken over as the Head of Certification at RSPO. Aminah graduated in 1991 with a First Class Honours (B Eng (Hons)) in Chemical Engineering from the University College of Swansea. After a brief stint in the plastics industry she joined SIRIM (Standard and Industrial Research Institute of Malaysia) and has remained there until recently. Interestingly her first role there was as a research officer in the pilot plant developing cosmetics and toiletries from palm oil. Her latest role at SIRIM was as Head (Sustainability Certification Scheme) which experience dovetails into the RSPO role as she was responsible for managing RSPO, MSPO and the RSPO Supply Chain Certification. She is also an expert in the energy management and managed EnMS certification. She was also a lead auditor for EMS, CDM, EnMS and CFP.

POPSIG caught up with her and asked her three questions.

1. IChemE in its technical strategy document “Chemical Engineering Matters” chemical engineers seek to improve the quality of life by making processes more sustainable and safer. There are numerous platforms related to palm oil sustainability. We ask how you see the role of RSPO, ISPO and MSPO in ensuring that palm oil is sustainable.

*These standards been developed to ensure sustainability in palm oil cultivation and its supply chains. The goals are the same. Although the principles and criteria are structured differently across the standards, they cover a similar set of general themes such as legal compliance, environmental responsibilities, social responsibilities and business practices.*

2. What do you think chemical engineers can do in the palm oil industry to make it more sustainable?

*To support/encourage the use of certified palm oil in the processes.*

3. As Head of Certification at RSPO what are your priorities?

*Facilitate the RSPO certification of the members. These are done through providing interpretation of the standards and guidance document.*





# **Regional Palm Oil Processing Seminar: Value addition in the Palm Oil Downstream sector**

**Date: 5 September 2018**

**Venue: Renaissance Hotel, Permas Jaya**

The Palm Oil industry is a key contributor to the GDP of Malaysia. In 2018, it is expected to contribute about RM 80 Billion.

The Palm Oil refining industry continues to be the workhorse of the industry but is faced with low or negative margins. Despite refining more than 25 million MT/yr, this industry faces stiff competition from its Indonesian counterparts and has a low capacity utilisation.

The Oleochemical industry in Malaysia produces about 2.7 Million MT/yr of Oleochemicals and is primarily producing Fatty Acids, Fatty Alcohols and Glycerine and is also under price pressure.

The 3<sup>rd</sup> downstream sector Biodiesel that is facing huge hurdles due to tariff and non-tariff barriers in the export market. This sector has been mainly dependent on the Government B7 blending mandate.

There is an urgent need for the Palm downstream sector to focus on value addition to improve margins and stay ahead of competition. In this regard emphasis on new R&D commercialisation, new market applications and differentiation is essential.

Sustainability is another big issue that the industry is grappling with and the recent MSPO initiative is a step in the right direction to get a National Sustainability recognition for Malaysia.

This seminar will feature eminent speakers who will share their knowledge on value addition through processing, sustainability, financing, branding, addressing food safety issues such as the 3-MCPD & GE, leveraging artificial intelligence and big data. Besides presentations there will also be a forum for participants to efficiently connect with the speakers as well as the audience.

Practitioners in the entire Palm Oil supply chain will find this focussed Seminar on Palm Oil Processing very interesting, fruitful and rewarding. It would also be a good networking opportunity for professionals from the entire supply chain to come together and share their knowledge and experience.



# 15 OCTOBER ICHEME MALAYSIA AWARDS 2018



The IChemE Malaysia Awards celebrate excellence, innovation and achievement in the chemical and process industries.

This year, there are eight categories available to enter and sponsor at the IChemE Malaysia Awards, including two categories unique to Malaysia - the **Palm Oil Industry Award** and new this year, the **Student Chapter Award**.

Excellent **Networking Opportunities**



**Recognizes and rewards** excellence in various Chemical Engineering fields



Not one – but **EIGHT** awards to enter and sponsor in Malaysia



New Award given **only in Malaysia!**



For more info, go to:

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



## Q2 Diary of Events

Evening Talk : **Novel Process for Palm Phytonutrient Extraction- Locally Produced,  
Internationally Recognized**

Speaker : WH Leong from ExcelVite Sdn Bhd, winner of IChemE 2017 Palm Oil Industry Award

Date : 9 May 2018

Time : 18:00 - 20:30 (GMT+8)

Location : Monash University Malaysia, Bandar Sunway, Subang Jaya, Malaysia

Webinar : **Biodiesel production using Liquid – Liquid Film Reactors**

Speaker : Prof Paulo Cesar Narvaez Rincon from National University of Colombia

Date : 25 June 2018

Time : 18:00 - 20:30 (GMT+8)

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