

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

POPSIG

IChemE

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Editor's Message

2016 has been a highly successful first full year for POPSIG as a provisional SIG of IChemE and in 2017 is now a full fledged SIG. We look forward to IChemE members signing up for POPSIG as their first or even second SIG as you pay your 2017 subscription. The first 10 signups in early October 2016 saw 2 from Australia, 3 from Malaysia, 1 from The Netherlands and 3 from United Kingdom reflecting the global interest in palm oil.

2017 promises to be an exciting year and the POPSIG committee has lined up a very full programme for the year. It is a year that Malaysia celebrates 100 years of palm oil and to mark this centenary POPSIG will host a day long seminar reviewing the process achievements made as well as the process improvements sought after in the next decade. It will be rounded off with a panel discussion by distinguished personalities in the palm oil industry who will also appraise the contribution of chemical engineers to the palm oil industry.

In this issue we cover the annual RSPO RT 14 in Bangkok which started with hard hitting comments from the Co-chair of RSPO.

At IChemE in Malaysia Awards, Sime Darby stole the limelight for the palm oil industry. But the achievement of the palm oil industry did not end here. At IChemE Global Awards in the UK, FGV Applied Technologies Sdn Bhd along with their partners from UK and Germany won the Food and Drink Award 2016 for 'Vegetable oil purification'. Our congratulations to these deserving winners.

The last POPSIG evening talk for the year focused on biomass and the management of its supply chain. POPSIG members attended the PORAM annual dinner renewing acquaintances. POPSIG member Prof Dr Chong reports on the Seminar on Environmental Mainstreaming of Palm Oil Mill Sector. This seminar was organized by the Department of Environment, Malaysia to encourage self-regulation.

We look forward to your continued support as we continue to bring you quality events to attend and network.

We hope you enjoy reading these and the full selection of articles in this issues. Follow us on [Facebook](#) and [LinkedIn](#). You can also email us, ATan@icheme.org directly with your thoughts and critique.

Editor

Hong Wai Onn

Diary of Events



Webinar : **Re-engineering Current Palm Oil Degumming Process**
 Speaker : Muhammad Saiful Nidzam Ismail
 Date : 27 February 2017
 Time : 18:00 - 20:30 (GMT+8)
 Location : Monash University Malaysia, Bandar Sunway, Subang Jaya, Malaysia

Evening Talk : **Introduction to the Palm Oil Industry**
 Speaker : Hong Wai Onn
 Date : 27 March 2017
 Time : 16:00 - 17:00 (GMT+8)
 Location : Webinar

RT14 2016 Bangkok, Thailand 8 - 10th November 2016

RT14 was held against a somber backdrop with the recent demise of His Majesty King Bhumibol Adulyadej, the King of the Kingdom of Thailand.

Dato' Carl Bek-Nielsen, Co-chair of RSPO and Chief Executive Director of United Plantations Berhad gave a scathing welcome address hitting out at RSPO members who are using the "no palm oil" label on their products. He said, "Over the last few years, there has been a growing resentment among African and Asian growers against RSPO members who use the 'no palm oil' label on their products. This goes against the spirit of the RSPO, which is to promote the production and use of RSPO-certified palm oil. This dream will not happen as long as there are 489 products found on the shelves today with the 'no palm oil' label belonging to RSPO members." Bek-Nielsen pointed out that smallholders found the RSPO "bureaucratic, slow, not possible to reach and even arrogant." Outside of the conference he said, "Someone earning \$2 a day is going to have a different sense of sustainability than someone walking around Paris with a pair of Chanel sunglasses."

The keynote address on human sustainability focused the conference onto labour working conditions and smallholders. Migrant worker issues are global eg the Associated Press seafood story and she lamented the absence of palm oil workers in the hall of 800 participants.

The RSPO update session informed that the new IT Platform, PalmTrace will from January 2017 cover all models and B&C will replace GreenPalm. RSPO Next, P&C Standards review in 2017 and the Rules on Market Communication & Claims review were also covered. Players worry about the transition of marketing of credits from GreenPalm as well as the marketing capacity and resources of RSPO and UTZ. There are some doubts about RSPO Next until key top buyers support it.

In the Delivering on Impacts session there are signs that RSPO recognizes the need for it to change and has engaged University Putra Malaysia (UPM) to map the direction. UPM appears to be struggling, hampered by their inconsistent findings and the lack of interest of participants.

A day earlier there were a number of preparatory clusters. A highlight of the conference is the HCS Convergence agreement by NGOs and corporates that merges two different deforestation guidelines viz the High Carbon Stock Approach (HCSA) and High Carbon Stock (HCS+) methodologies. The palm oil industry will now have more clarity on how it can implement no-deforestation claims about their operations.

Also at the clusters the Supply and Demand of Certified Sustainable Palm Kernel Oil was discussed. In an highly interactive session participants came away with a very much clearer picture of the supply chain but no solutions was offered for the lack of availability of CSPKO.

The third and last day started off with Regional Perspectives where it was clear that traction in China and India is low but is key to RPSO's efforts to grow. The smallholders session was expertly moderated and at the conclusion the representative of smallholders pleaded that with farmer awareness at a very low level not to add on to the RSPO P&C and to keep it simple.

The GA 13 resolutions rightly focus on streamlining costs and efficient smallholder certification.



Top: (Right to Left) KS Qua of IChemE with Ed McPhillimy of Oriflame



Left: Dato' Carl Bek-Nielsen delivering the Welcome Address

IChemE Malaysia Awards 2016

The Institution of Chemical Engineers' (IChemE) celebrated ten years of successful operation in Malaysia tonight, at its annual Awards dinner held at the Le Meridien Hotel, Kuala Lumpur. Recognising celebrated outstanding achievements in the Malaysian chemical engineering community, the event concluded the second leg of the Institution's Global Awards programme.



IChemE's Royal Patron HRH Tuanku Zara Salim

IChemE's President Professor Jonathan Seville gave the opening address, and welcomed guests who included IChemE's Royal Patron and Guest of Honour HRH Tuanku Zara Salim.

benefit of society and Malaysia is no exception. Chemical engineering makes a huge contribution to the economy of this nation, and we are delighted to work with a plethora of companies to secure a pipeline of committed, competent and trusted professionals who will make the world a better place. Tonight's ceremony has been a celebration of those trusted professionals, and I am so pleased to see such energy and passion from our Malaysian board, partners and members."

Chair of IChemE Malaysia, Dr Abdul Aziz Bin Abdul Raman said: "Tonight has been incredibly special, not least because we are marking IChemE Malaysia's 10 year anniversary and we are honoured by the attendance of our Royal Patron HRH Tuanku Zara Salim. This celebration is important because it brings unity and positivity to the profession. Tonight's winners should take great pride in their achievements, and I hope they will join me in helping to secure Malaysia as the hub for chemical engineering excellence in South East Asia."

It was a successful night for Sime Darby Plantation Sdn Bhd, the world's largest producer of sustainable palm oil. They went away with both the highly commended mention and the winning trophy in two categories – the *Palm Oil Award*, sponsored by IChemE's Palm Oil Special Interest Group, and the *Sustainable Technology Award*, sponsored by Environmental Resources Management (ERM).

The IChemE Malaysia Awards were held at the Le Meridien Hotel, Kuala Lumpur, on 24 October 2016.



Hong, Chair of POPSIG presents trophy to Palm Oil Award winner

The winning project – 'Re-engineering current palm oil degumming process' – saw the Sime Darby team improve the current palm oil degumming process by using less acid. This resulted in reduced operational cost, increased throughput and reduced impact on the environment.

IChemE's President Jonathan Seville said: "IChemE's purpose is to advance chemical engineering worldwide for the



Group photo of IChemE Malaysia Awards 2016 winners



IChemE's President Jonathan Seville (center), Chair of IChemE Malaysia Dr Abdul Aziz (fifth from left) and board members.

Source: IChemE Malaysia

1

Share with us a bit about yourself?

I received my degree in Bachelor of Chemical Engineering from Melbourne University, Australia in 2009. I'm also a certified Six Sigma Black Belt of America Society for Quality (ASQ) since May 2016. I started my career in Hewlett Packard Malaysia in 2009 and worked in project management world. After that, I joined Sime Darby Research Sdn Bhd since 2012. In my current role, I oversee all aspects of continuous improvement in R&D and support other departments in technical related stuffs.

2

How did the idea of your entry came about?

I'm very passionate about the fundamental of chemical engineering processes especially in palm oil processing industry. I always challenge the method of how palm oil is refined knowing that the processes were deployed from

4

Winning of the Sustainable Technology Award in Malaysia enabled you to participate in IChemE Global Awards at UK. How do you compare and rate your research work with other peers at global level?

I noticed most of their research works were challenged all known process and improved for better quality of life. Moving



*Interview with IChemE Malaysia
Palm Oil and Sustainable Technology Award 2016 Winner*

Mohammad Saiful Nidzam Ismail

Sime Darby Research Sdn Bhd

“Re-engineering Current Palm Oil Degumming Process”

soft oil refining, which has different characteristic compared to palm oil. Also, there were a lot of improvement works done at bleaching and deodorization but not at degumming process. Relatively lower processing cost of degumming compared to bleaching and deodorization in refining process could be one of the main reason for less attention being given thus far. As such, I decided to take up the challenge to improve the efficiency this process.

3

What are the key achievement of your works that enable you to win two trophies (Palm Oil and Sustainable Technology) in IChemE Malaysia Awards 2016?

Our team focused on improving the current degumming process by optimizing the processing parameters in terms of increasing mixing shear force and reducing acid concentration with new formulated acid. Being is one of the most expensive costs in degumming process, reduction of phosphoric acid consumption gave significant positive impact in cost saving. On top of that, benefits attributed by this improvement project at degumming process also sparked a positive chain reaction effect on the subsequent process in bleaching and deodorization. The project also reduced 40% bleaching earth costs and

forward, I believe it is also important to collaborate with other institutions or research centers for broader spectrum so that we can learn from each other. I suppose my research work sharing the same key elements with other works such as creativity, albeit there is room for improvement.

5

Last but not least, any advice that you would like to provide to other young engineers?

Being an engineer is privilege. We are giving responsible and trust to manage and “engineer” things. We should always ask ourselves how to perform better for the better quality of life.



Supply Chain Management for Palm Oil Industry

POPSIG evening talk on Wednesday 9 November 2016 at Monash University Malaysia was delivered by DDr Lam Hon Loong from The University of Nottingham, Malaysia Campus. DDr Lam spoke on “Supply Chain Management for Palm Oil Industry”.

DDr Lam first shared his view on the biomass supply chain activities that transform biomass and organic resources from raw materials into a finished product that is delivered to the end customer. The concept of green materials and waste-to-wealth was also highlighted in the supply chain system.

The evening talk was able to provide a platform for today’s best thinkers, visionaries and thought leaders from across key industry sectors to brainstorm and discuss future supply chain strategies.



DDr Lam delivers his presentation



DDr Lam keeps the audience enthralled

Refreshing Rapport

Saturday 22 October 2016 was the PORAM (The Palm Oil Refiners Association of Malaysia) Annual Dinner at the Imperial Ballroom at One World Hotel in Bandar Utama.

POPSIG committee members were there at this prominent annual event attended by a thousand guests from the palm oil industry. We had the opportunity to renew acquaintances with Mohammad Jaaffar Ahmad (CEO), Teoh Beng Chuan (Deputy CEO), Tan Sri Dr Yusof Basiron (CEO MPOC), Tan Sri Emeritus Prof. Datuk Dr Augustine Ong (President MOSTA), Dato’ Lee Yeow Chor (CEO IOI Group) and many others.



POPSIG committee Qua, Khoo, Hong & Mohan



(Left to Right) Khoo, Dato’ Er, Billy Tan, Mohan & Marc Kellens (Desmet Ballestra)



POPSIG committee with Jaaffar, CEO PORAM (second from Right)

Seminar on Environmental Mainstreaming of Palm Oil Sector

Putrajaya, Malaysia 8th November 2016

By Prof. Dr Chong Mei Fong

Seminar on Environmental Mainstreaming of Palm Oil Mill Sector was held on the 8 November 2016 at The Everly, Putrajaya, Malaysia. It is organized by the Department of Environment (DOE), Malaysia. This seminar received tremendous support from the palm oil millers, other industries players and researchers from universities with attendance of more than 300 participants. The major organizations attended this seminar include Malaysian Palm Oil Board (MPOB), Federal Land Development Authority (FELDA), Sime Darby, Palm Oil Millers Association of Malaysia (POMA), Federal Land Consolidation and Rehabilitation Authority (FELCRA) and Sarawak Oil Palm Plantation Owners Association (SAPPOA).

The major aim of this seminar is to encourage and promote the implementation of guided self-regulation (GSR) to complement the existing command and control approach of DOE in the palm oil industry which is one of their regulated sectors. The GSR employs environmental mainstreaming (EM)

tools where competent person (CP), environmental performance monitoring committee (EPMC) and discharge and emission monitoring are some of the 13 EM tools.

The seminar also shared the direction of regulations in palm oil industry. During the presentations, DOE and MPOB gave extra emphasis on targeting a more stringent discharge limit of palm oil mill effluent (POME) at the parameter of biochemical oxygen demand (BOD).

The seminar was a great success and such initiative will continue to strike for the betterment of environment in Malaysia.



(Left to Right) Prof. Chong Mei Fong (The University of Nottingham, Malaysia Campus), Dato' Dr Hj. Ahmad Kamarulnajib (Director General of DOE), Dr. David Lim (Havys Oil Mill Sdn Bhd)



Dato' Dr Hj. Ahmad Kamarulnajib, Director General of DOE said: "It is timely now that we have to drive or push the regulatory sectors including palm oil to embrace EM elements in order to target for self-regulation. And ultimately the regulated community can strive for environmental pride."



Ms Shazana Mohd Ibrahim, Environmental Control Officer of DOE said: "This seminar is part of the DOE's strategy in introducing the department's new approach i.e. Guided Self-Regulation (GSR) to the palm oil mill sector by implementing the environmental mainstreaming tools within their premises in order to achieve continuous compliance which will ultimately protect the environment."

Get Involved in POPSIG

ChemE members are entitled to join one special interest group free of charge, as part of their membership package, and can join additional special interest groups on payment of a small subscription. Please join POPSIG's technical networking community by becoming a member of POPSIG. [Join a special interest group >>](#)

POPSIG's activities are organized by its members. Getting involved can help you and your organization to raise your profile in the palm oil processing sector. Would you be interested in speaking at a POPSIG event in Malaysia, or giving an online presentation to a wider international audience via webinar? Or could your company support IChemE's POPSIG through provision of venue facilities or sponsorship of an event? To discuss opportunities, please contact Avanna Tan, specialinterestgroups@icheme.org.

Membership of POPSIG is not only for chemical engineers but for anyone interested can join as an Affiliate member. The presentations are directed towards audiences who would like to know more factual information about Palm Oil Processing industry and who would appreciate an opportunity to ask question. The committee is looking to ensure presentations cover palm oil milling, refinery as well as oleochemical. If you'd like to volunteer to give a presentation – either at a physical seminar or via an [online webinar](#) - then please get in touch, providing some details about yourself and your proposed talk. Contact Professor Dr. Chong Mei Fong, meifong.chong@nottingham.edu.my, or Avanna Tan, specialinterestgroups@icheme.org, today.

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