

PROGRAM BOOK

Mational Congress on Membrane Technology **National Congress on**

Theme:

Membranes Technology for Efficient Separation & Energy Generation



Pulai Springs Resort, Johor Bahru, Malaysia

Organized by:











© Advanced Membrane Technology Research Centre (AMTEC), Faculty of Chemical & Energy Engineering (FCEE), Universiti Teknologi Malaysia (UTM) 2016

All right reserved. No part of this publication may be produced, copied, stored in any retrieval system or transmitted in any form or any means – electronic, mechanical, photocopying, recording or otherwise; without prior permission in writing from the Advanced Membrane Technology Research Centre (AMTEC), Faculty of Chemical & Energy Engineering (FCEE), Universiti Teknologi Malaysia (UTM), 81310 Skudai, Johor Darul Takzim, Malaysia.

The National Congress on Membrane Technology (NATCOM2016), Pulai Springs Resort, Johor Bahru, Malaysia, 24th – 25th Aug 2016, Organized by Universiti Teknologi Malaysia (UTM)

Published and printed by:
Advanced Membrane Technology Research Centre (AMTEC),
Faculty of Chemical & Energy Engineering (FCEE),
Universiti Teknologi Malaysia (UTM),
81310 Skudai,
Johor Darul Takzim,
Malaysia.

Tel: +607-5535925/5581463 Fax: +607-5535925/5535807

Website: amtec.utm.my Email: amtec@utm.my

Foreword

Advisor
National Congress on Membrane
Technology 2016 (NATCOM 2016)



Universiti Teknologi Malaysia (UTM) is delighted and honored to be the host of National Congress on Membrane Technology (NATCOM2016). And on behalf of UTM and the organizing committee, I would like to extend our warmest welcome to the membrane researchers around the world who come to this prestigious event from 24th to 25th August in Johor Bahru.

This national congress serves as platform to apply the state-of-the-art membrane technologies to address environmental and energy conservation issues. We are delighted to receive the supports from our international and local prestigious speakers to share their knowledge and latest research outcomes with us. I am sure it will indeed a memorable and valuable experience for all. These experts will share their experiences and knowledge about the current practice, innovations and future prospective in the field of membrane and membrane technology.

With immense sincerity, I hope NATCOM 2016 will benefit the membrane scientists, researchers, technologists and others with a professional interest in separation processes for information exchange and knowledge sharing. Knowing the commitment from NATCOM 2016 organizing committee, I am confident that NATCOM 2016 will be a rewarding experience to all delegates professionally, socially and culturally. Huge praise to the committee and I wish all delegates will be benefited from this congress in securing an incredible opportunity for networking and research advancement.

PROF. DR. AHMAD FAUZI BIN ISMAIL

Advisor

National Congress on Membrane Technology 2016 (NATCOM 2016)

Foreword

Chairman
National Congress on Membrane
Technology 2016 (NATCOM 2016)



On behalf of the organizing committee, I would like to wish our distinguished speakers, participants and all delegates a warm welcome to National Congress on Membrane Technology (NATCOM2016). It is indeed a great honor for AMTEC to be the host of this conference.

We are pleased to receive an overwhelming number of participants from different organizations, universities and industries. These past few years have witnessed an exciting progress in membrane research and development. It is anticipated that the gathering of innovative ideas on the development of membrane technology will create positive interaction and deliberation towards interdisciplinary and collaborative research activities. Five plenary and twelve invited talks by eminent scientists and researchers in their respective fields will be delivered during the conference.

It is with sincere hope that this conference will serve as a scientific platform for both local and international membrane scientists and engineers to generate significant ideas and in-depth interests in the area of membrane science and technology. I strongly believe that this conference would contribute significantly not only to those involved in academia and research but also to industries and the general public; the ultimate end users.

Sponsorship is highly important to ensure the success of this event, so, our sincere thanks to all sponsors. I would also like to express my appreciation to the organizing committee of NATCOM 2016 for their endless effort and commitment. Lastly, my sincere gratitude goes to all speakers and participants for contributing significantly to the success of NATCOM 2016. Thank you.

DR. MOHD HAFIZ DZARFAN BIN OTHMAN

Chairman

National Congress on Membrane Technology 2016 (NATCOM 2016)

Scientific Committees

Prof. Dr. Ahmad Fauzi Ismail

Prof. Dr. Madzlan Aziz

Dr. Mohd Hafiz Dzarfan Othman

Prof. Emeritus Dr. Matsuura Takeshi

Prof. Ir. Dr. Abd Wahab Mohammad

Prof Dr. Mohamed Kheireddine Bin Taieb Aroua

Prof. Dr. Abdul Latif Bin Ahmad

Prof. Dr. Kang Li

Assoc. Prof. Dr. Ooi Boon Seng

Assoc. Prof. Dr. Syed M. Saufi

Assoc. Prof. Dr. Suriani Abu Bakar

Assoc. Prof. Dr. Zawati Binti Harun

Assoc. Prof. Dr Lai Soon Onn

Assoc. Prof. Dr. Nurmin Bolong

Dr. Naznin Sultana

Dr. Mohd Irfan Hatim Mohamed

Dr. Nur Awanis Binti Hashim

Dr. Sunarti Binti Abd Rahman

Dr. Nadia Binti Adrus

Dr. Hatijah Basri

Dr. Baharak Sajjadi

Dr. Koo Chai Hoon

Dr. Ong Chi Siang

Dr. Low Siew Chun

Universiti Teknologi Malaysia

Universiti Teknologi Malaysia

Universiti Teknologi Malaysia

University Of Ottawa, Canada

Universiti Kebangsaan Malaysia

Universiti Malaya

Universiti Sains Malaysia

Imperial College London

Universiti Sains Malaysia

Universiti Malaysia Pahang

Universiti Pendidikan Sultan

Idris

Universiti Tun Hussein Onn

Malaysia

Universiti Tun Hussien On

Malaysia

Universiti Malaysia Sabah

Universiti Teknologi Malaysia

Universiti Malaysia Perlis

Universiti Malaya

Universiti Malaysia Pahang

Universiti Teknologi Malaysia

Universiti Tun Hussein Onn

Malaysia

Universiti Malaya

Universiti Tunku Abdul

Rahman

SEGI University

Universiti Sains Malaysia