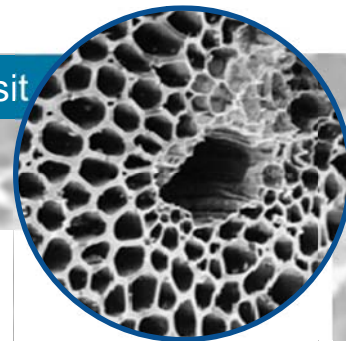


SHORT COURSE ON

Characterization of Porous Catalysts and Adsorbents

A course with theory, practical example and laboratory visit



Date : 15 November 2017 (Wednesday)
Time : 9.00 am - 5.00 pm
Venue : School of Chemical Engineering,
Engineering Campus, USM, Nibong Tebal, Penang.

15 min from Penang 2nd Bridge (Sultan Abdul Halim Muadzam Shah Bridge)

Who should attend?

- Technical personnel, Quality control & assurance, Engineers
- Researchers, and Postgraduate students.

COURSE FEE:

Fee inclusive of GST.

(GST registration no. : 0012 9141 9648).

Fee covers tea breaks and lunch, hard copy course materials and certificate of attendance.

RM 800 per participant

Group: RM 750 per participant

(minimum 3 participants from the same company / organization)

Student: RM 650 per participant

(with proof of student status)

Limited
seats



(wholly owned by Universiti Sains Malaysia)
(Co. Reg. no. : 473883-H)
HRDF Reg. no. : 0159

HRDF CLAIMABLE
(Subject to HRDF approval)

INTRODUCTION

Catalyst and adsorbent are porous materials commonly used in various industries. Catalysts are widely used in the oil and chemical industries. Meanwhile, adsorbent such as activated carbon is widely used in gas and water purifications and many other applications. High yield of a process that involves either one of these porous materials is strongly related to the physical and chemical properties of the material itself. Characterization is the tangible methods carried out to examine the properties of these materials. In a catalytic process, catalysts with specific properties are very important in order to produce promising product yield as well as reproducible product result. Characterizations are also carried out in troubleshooting if a chemical process has problems. This course covers a series of specific characterization methods used in porous materials, especially for catalysts and adsorbent. It explains the essential knowledge of those characterizations methods, including theory as well as applications for those methods in the area of catalysis and adsorption.

COURSE OUTCOMES

Upon completion of this course, participants will be able to:

- i. Understand the essential fundamental knowledge in characterization methods and interpret the results systematically.
- ii. Identify and justify useful characterization methods for porous materials.
- iii. Be attentive to the limitation of the specific characterization methods in problem solving.

TENTATIVE COURSE PROGRAM

Time	Agenda
08.30 – 09.00	Registration
09.00 – 11.00	Introduction of porous materials, types of characterization and applications By <i>Professor Dr. Bassim H. Hameed</i>
11.00 – 11.15	Tea break
11.15 – 12.45	Chemisorption and thermal analysis: Thermogravimetric analysis (TGA), temperature programmed desorption (TPD), temperature programmed oxidation (TPO) and temperature programmed reduction (TPR) techniques. By <i>Professor Dr. Ahmad Zuhairi Abdullah</i>
12.45 – 14.00	Lunch break
14.00 – 16.00	Surface and composition analysis: Brunauer-Emmett-Teller (BET) surface analysis, scanning electron microscope (SEM), transmission electron microscopy (TEM), x-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR). By <i>Associate Professor Dr. Mohd Azmier Ahmad & Associate Professor Dr. Tye Ching Thian</i>
16.00 – 17.00	Laboratory visit
17.00 – 17.15	Closing & photo session (with refreshment)

ENQUIRY

Course coordinator:

Dr. Tye Ching Thian,
School of Chemical Engineering, Universiti Sains Malaysia,
Tel: +604 599 6471 Email : chcttye@usm.my

SPEAKERS PROFILE



Professor Dr. Bassim H. Hameed

Professor Dr. Bassim H. Hameed received his Ph.D. in Chemical Engineering from the University of Salford, UK, in 1992. He is a professor at the School of Chemical Engineering, Universiti Sains Malaysia. He leads the Reaction Engineering & Adsorption (READ) research group. His research interest is in Reaction Engineering and Adsorption Technology, especially issues related to Energy and Environment.

Professor Bassim has been included by Thomson Reuters in their prestigious list of Highly Cited Researchers 2016, 2015 & 2014. He has been also listed in Thomson Reuters's "The World's Most Influential Scientific Minds 2015 & 2014". Recently, Prof. Bassim has been listed as one of the Most Cited Researchers for Chemical Engineering and Environmental Science & Engineering Subjects of 2016 by Shanghai Global Rankings of Academic Subjects. To date, he has published more than 250 articles in ISI-indexed journals and 100 articles in other international and national journals and proceedings. His publications have been cited over 16,150 times (Scopus), and 43 of these papers were cited more than 100 times each. He has an author h-index of 69, and an i10-index of 182.



Professor Dr. Ahmad Zuhairi Abdullah

Professor Dr Ahmad Zuhairi Abdullah is currently the Deputy Dean (Research, Postgraduate & Network) at School of Chemical Engineering, Universiti Sains Malaysia. He received his B. Tech (Hons) in 1995 from Universiti Sains Malaysia and subsequently MSc (2000) and PhD (2004) in the field of chemical process technology and chemical engineering, respectively. He has been a registered chemist with Malaysian Institute of Chemistry since 2005. His research works encompass chemical reactions involved in oleochemical conversions, waste treatment, green technology and production of renewable energy sources. He has involved in collaboration with industries such as Felda, WD-Media, Pacific West Foods and SilTerra to solve their problems. He often takes part in the Environmental Impact Assessment (EIA) reports on proposed commercial projects. He received travel grants to share his research experience in Japan, Indonesia and Laos. He has been a reviewer to more than 80 different international journals and also an evaluator to research proposals from local and international organization such as American Chemical Society and the Qatar National Research Foundation. He is one of the recipients of the Top Research Scientist Malaysia 2014 award. His h-index (Scopus) currently stands at 36.



Associate Professor Dr. Mohd Azmier Ahmad

Associate Professor Mohd Azmier Ahmad obtained his B.Eng. and M.Sc. degrees from Universiti Sains Malaysia and University of Malaya for PhD degree in Chemical Engineering. His research interest is Wastewater Treatment, Adsorption Technology and Agrowaste Utilization. His current research activities are on carbon adsorbents for wastewater treatment and development of polymeric carbon membranes for gas separation. He is active member of Water Expert for Working Committee of Research and Innovation, Ministry of Science, Technology and Innovation (MOSTI), Malaysia. He has been appointed as Editor Board of International Journal of Scientific Research in Chemical Engineering, American Journal of Modern Chemical Engineering, Scientific World Journal, International Journal of Water and Wastewater Treatment, International Journal of Petrochemistry and Research and Scientific Federation.



Associate Professor Dr. Tye Ching Thian

Dr. Tye received her doctoral degree at The University of British Columbia, Canada in 2006, specializing in catalysis and chemical reaction engineering. Previously, she obtained her MSc. and B.Eng (Hons.) in Chemical Engineering degrees from Universiti Sains Malaysia. Her research interest is in chemical reaction and petroleum processing. Dr. Tye has been involved in investigating the fundamental issues of catalyst such as the effects of its morphology and structure in cracking and treating of different unconventional energy resources like heavy oil, residue, used motor oil and palm oil. She is a member of the Editorial Board of International Journals of Petrochemistry and Research, and a Guest Editor for Special Issue of Journal of Nanotechnology.

REGISTRATION FORM

**Closing date:
5 Nov 2017**

Short course on
CHARACTERIZATION OF POROUS CATALYSTS AND ADSORBENTS
15 November 2017

Send registration form to : Dr. Tye Ching Thian, School of Chemical Engineering, Engineering Campus,
Universiti Sains Malaysia, 14300 Nibong Tebal, S.P.S. Penang.
Fax : +604 – 599 6908 / Email : chcttye@usm.my

NO.	PARTICIPANTS	TEL NO.	EMAIL
1			
2			
3			
4			
5			
Organization:			Company stamp
Address			
Date	Signature		

MODE OF PAYMENT		NUMBER	BANK	NO. OF PARTICIPANTS		MYR
I enclosed	Cheque			Normal		
	Bank Draft			Group		
	Money Order/Wang Pos			Student		
	LO/PO					
I enclosed transaction slip of	Online transfer/TT/Bank-in/ATM Machine			Total		

Cheque / Bank Draft / Money Order / LO / PO must be made payable to '**USAINS HOLDING SDN. BHD.**'

1. Bank Transfer or Cash Bank-In [Please provide a copy of your transaction Slip (with your name & details on the slip)]

Payee Name : **USAINS HOLDING SDN BHD**
Details : **Characterization & Applications of Porous Catalysts and Adsorbents –15 November 2017**
Name of Bank : **AmBank (M) Berhad, Level 21, Menara Dion, Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia.**
Account Number : **888 – 100 – 985 – 0380**
Swift Code : **ARBKMYKL**

2. A Local Order (LO) or Purchase Order (PO) must be presented before the event.

The Organizer reserves the right to refrain a registered participant from taking part in the event if no proof of payment can be presented. This only applies to registered participants who have NOT paid the registration fee PRIOR to the event date.

Disclaimer

The Organizer reserves the right to reschedule or cancel any part of its published programme or venue due to unforeseen circumstances and will not accept liability for costs incurred by participants or their organizations for the cancellation of travel arrangements and/or accommodation reservations as a result of the course being cancelled or postponed. Advance notice will be given if there is such a change or cancellation.