



Name : **Prof. Dr. Ahmad Fauzi Ismail,**
FASc., CEng, MICHEM
Date of Birth : 20 March 1966
Nationality : Malaysia
Marital Status : Married



CORRESPONDENCE ADDRESS

Advanced Membrane Technology Research Center (AMTEC),
Universiti Teknologi Malaysia, Skudai, Johor
81310 Johor, Malaysia
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Website: <http://www.utm.my/amtec>

QUALIFICATION

August 1997 : Ph.D. Chemical and Process Engineering
University of Strathclyde, Glasgow, Scotland, U. K.
December 1992 : M.Sc. Chemical Engineering
Universiti Teknologi Malaysia
June 1989 : B. Sc. Petroleum Engineering
Universiti Teknologi Malaysia

AWARDS AND HONORS RECEIVED

July 2012 : **UTM Intellectual Property and Commercialization Award**, Citra Karisma 2012, UTM.
July 2012 : **UTM Innovation and Commercialization Award**, Citra Karisma 2012, UTM
July 2012 : **UTM Best Publication Award** (Paper in Indexed Journal-MMRA)
July 2012 : **UTM Publication Award** (Paper in Indexed Journal-Individual)
18 May 2012 : **Special Award Brussels Eureka Award:**
CNT-M3: Advanced Membrane System for CO₂ Removal (ITEX 2012)
18 May 2012 : Gold Medal Award, CNT-M3: Advanced Membrane System for CO₂ Removal (ITEX 2012)
18 May 2012 : Gold Medal Award, SMReactor: Produced Water Treatment for Oil and Gas
4 Dec. 2011 : Gold Medal Award, M-Contactor: Smart Membrane for CO₂ Removal, Seoul International Invention Fair 2011 (SIIF 2011)
4 Dec. 2011 : Gold Medal Award, Anti *E.Coli* Hybrid Membrane, Seoul International Invention Fair 2011 (SIIF 2011)
4 Dec. 2011 : Silver Medal Award, Charge Surface Modifying Macromolecule (cSMM) Fuel Cell Technology, Seoul International Invention Fair 2011 (SIIF 2011)



17 Nov. 2011	:	Gold Medal Award, (INATEX 2010),
17 Nov. 2011	:	Silver Medal Award, (INATEX 2010),
16 Nov. 2011	:	Winner of the National Innovation Award 2011, Product Category
7 July 2011	:	UTM Best Publication Award (Paper in Indexed Journal-MMRA)
7 July 2011	:	UTM Publication Award (Paper in Indexed Journal-Individual)
7 July 2011	:	UTM Excellent Service Award
30 April 2011	:	Fellow of the Academy of Sciences Malaysia
February 2011	:	Special Award of Polish Invention and Rationalizers , Charge Surface Modifying Macromolecule (cSMM) Fuel Cell Technology, Malaysia Technology Award (MTE 2011)
February 2011	:	The Best Award, M-Contactor: Smart Membrane for CO₂ Removal, Malaysia Technology Award (MTE 2011)
February 2011	:	Gold Medal Award, Smart Membrane for CO ₂ Removal, Malaysia Technology Expo (MTE 2011)
February 2011	:	Gold Medal Award, Charge Surface Modifying Macromolecule (cSMM) Fuel Cell Technology, Malaysia Technology Expo (MTE 2011)
February 2011	:	Gold Medal Award, Smart Membrane for CO ₂ Removal, Malaysia Technology Expo (MTE 2011)
February 2011	:	Gold Medal Award, Charge Surface Modifying Macromolecule (cSMM) Fuel Cell Technology, Malaysia Technology Expo (MTE 2011)
February 2011	:	Silver Medal Award, Anti <i>E.Coli</i> Hybrid Membrane, Malaysia Technology Expo (MTE 2011)
April 2010	:	Gold Medal Award, Novel Nanocharge Hollow Fibre Membrane for the Removal of Bisphenol-A in Wastewater, PEREKA, 2010, UMS.
August 2010	:	Gold Medal Award, (INATEX 2010), M-Contactor: Smart Membrane for CO ₂ Removal
August 2010	:	Gold Medal Award, (INATEX 2010), Charge Surface Modifying Macromolecule (cSMM) Fuel Cell Technology
August 2010	:	Silver Medal Award, (INATEX 2010), Anti <i>E.Coli</i> Hybrid Membrane
August 2010	:	UTM Publication Award (Paper in Indexed Journal-MMRA)
August 2010	:	UTM Publication Award (Paper in Indexed Journal-Individual)
October 2009	:	Winner of the National Innovation Award, Waste to Wealth Category.
October 2009	:	Gold Medal Award-Ekspo Research and Creation International Institute of Higher Learning (PECIPTA 2009) Carbon Nanotube Metal Composite for Advanced Energy Storage (CNT-MC)



- October 2009 : Gold Medal Award-Ekspo Research and Creation International Institute of Higher Learning (PECIPTA 2009), Novel UF Submerged Membrane System for Nom Removal
- October 2009 : Gold Medal Award-Ekspo Research and Creation International Institute of Higher Learning (PECIPTA 2009), Direct Current Plasma Enhanced Chemical Vapour Deposition system (DC-PECVD) for Production of Carbon Nanotubes
- April 2009 : **Grand Winner of the National Intellectual Property, Patent Category.**
- November 2008 : Silver Medal Awards – International Invention Fair of the Middle East (IIFME 2008), Sulfonated Poly Ether Ether Ketone (SPEEK) Membrane for Direct Methanol Fuel Cell (DMFC)
- November 2008 : Silver Medal Awards – International Invention Fair of the Middle East (IIFME 2008), Novel H2MC Membrane for Acid/Green House Removal
- October 2008 : Gold Medal Awards -British Invention Show 2008, Conveyor Dried Continuous Assymetric Membrane Casting System and Spiral Wound Module for Gas Separation.
- October 2008 : Gold Medal Awards -British Invention Show 2008, Novel H2MC Membrane for Acid/Green House Removal
- October 2008 : **Double Gold Medal Awards -British Invention Show 2008**, Novel H2MC Membrane for Acid/Green House Removal
- October 2008 : Gold Medal Awards -British Invention Show 2008, Sulfonated Poly Ether Ether Ketone (SPEEK) Membrane for Direct Methanol Fuel Cell (DMFC)
- October 2008 : **Double Gold and Gold Medal Awards -British Invention Show 2008**, Sulfonated Poly Ether Ether Ketone (SPEEK) Membrane for Direct Methanol Fuel Cell (DMFC)
- October 2008 : Gold Medal Award-British Invention Show 2008, Oxygen Enrichment System (OXES)
- October 2008 : **Platinum Medal Award-British Invention Show 2008, Oxygen Enrichment System (OXES)**
- August 2008 : Bronze medal-INATEX 2008, Carbon Nanotube-Metal Composite For Advanced Energy Storage (CNT-MC).
- August 2008 : Gold Medal Award-INATEX 2008, Novel Ultrafiltration (UF) Submerged Membrane System for Natural Organic Matters (NOM) Removal.
- August 2008 : **Best of the Best Award-INATEX 2008**, Novel Ultrafiltration (UF) Submerged Membrane System for Natural Organic Mtters (NOM) Removal.
- August 2008 : Gold Medal Award-INATEX 2008, Direct Current Plasma Chemical Vapour Deposition System, (DE-PECVD) for Production of Carbon Nanostructures.
- August 2008 : **Best of the Best Award-INATEX 2008**, Direct Current Plasma Chemical Vapour Deposition Syste, (DE-PECVD) for Production of Carbon Nanostructures.
- May 2008 : **Excellent Service Award 2007, UTM**



- May 2008 : Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.
- May 2008 : Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.
- May 2008 : **UTM Best Research Group Award 2007**
- May 2008 : **UTM Distinguished Researcher Award**
- February 2008 : **Best of the Best Award –Malaysia Technology Expo (MTE 2008), A Novel SPEEK Membrane for Direct Methanol Fuel Cell**
- February 2008 : Gold Medal Award – Malaysia Technology Expo (MTE 2008), Novel H2MC Membrane for Acid /Greenhouse Gases Removal
- February 2008 : Gold Medal Award – Malaysia Technology Expo (MTE 2008), A Novel SPEEK Membrane for Direct Methanol Fuel Cell
- August 2007 : Gold Medal Award -INATEX 2007, Novel SPEEK Membrane for Direct Methanol Fuel Cell
- July 2007 : Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.
- July 2007 : Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.
- July 2007 : Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.
- July 2007 : Hadiah Penghargaan: Award for Best Paper in International Journal, Penerbit UTM.
- November 2006 : Marquis Who'sWho in the World
- August 2006 : **British Chevening Royal Society Fellowship 2006/2007**
- April 2006 : Marquis Who's and Who in Science and Engineering 2006/07
- October 2, 2005 : **Best of The Best Invention Award for the invention** entitled "New Oxygen Enrichment System (OXES) using Polysulfone Hollow Fiber Membrane in the 3rd IPTA R&D Expo 2005
- October 2, 2005 : **Special Award, Advanced Materials for the invention entitled** "New Oxygen Enrichment System (OXES) using Polysulfone Hollow Fiber Membrane" in the 3rd IPTA R&D Expo 2005
- October 2, 2005 : **Special Award, Potential to Commercialize for the invention** entitled "New Oxygen Enrichment System (OXES) using Polysulfone Hollow Fiber Membrane" in the 3rd IPTA R&D Expo 2005
- October 2, 2005 : Gold Medal Award in the 3rd IPTA R&D Expo 2005 for the invention Entitled "Novel Multiwalled Carbon Nanotubes (MWNTs) as



	:	Hydrogen as Hydrogen Storage Materials”
October 2, 2005	:	Gold Medal Award in the 3 rd IPTA R&D Expo 2005 for the invention Entitled “Novel Enzymatic Membrane Reactor (EMR) for Cyclodextrins Production from Tapioca Starch”
October 2, 2005	:	Gold Medal Award in the 3 rd IPTA R&D Expo 2005 for the invention Entitled “Novel Conveyer-Drive Continuous Asymmetric Membrane Casting System and Spiral Wound Module for Gas Separation and Liquid-Liquid Separation”
October 2, 2005	:	Gold Medal Award in the 3 rd IPTA R&D Expo 2005 for the invention Entitled “New Oxygen Enrichment System (OXES) using Polysulfone Hollow Fiber Membrane”
August 2005	:	UTM Best Researcher of The Year, 2004.
January 2004	:	2000 Outstanding Scientist of the 21st Century, International Biographical Centre, Cambridge, England.
August 2004	:	Marquis Who’s and Who in The World 2005
August 2004	:	Marquis Who’s and Who in Science and Engineering 2004/05
September 2004	:	Hadiah Penghargaan: Award for Best paper in International Journal, UTM Press.
April 2003	:	Marquis Who’s and Who in Science and Engineering 2003/04
17 September 2003	:	UTM Inventor of the Year, 2002
23 October 2003	:	UTM Best Research Group of the Year, 2002
May 2002	:	Bronze Medal Award in the 30 th Geneva Exhibition: New Techniques and Products, Switzerland, 2002
August 2002	:	Excellent Service Award 2001, UTM
September 2002	:	JSPS Visiting Scientist at Kyoto University, Japan.
11 January 2001	:	Malaysia Young Scientist Award 2000
June 2001	:	Bronze Medal Award in Industrial Art & Technology Exhibition (INATEX ’2001)
July 2001	:	Silver Medal Award in Expo Science & Technology 2001
September 2001	:	UTM Researcher of the Year, 2000
20 September 2001	:	ASEAN Young Scientist and Technologist Award 2001
April 2000	:	Bronze Medal Award in the 28 th Geneva Exhibition: New Techniques and Products, Switzerland, 2000.
August 2000	:	Hadiah Penghargaan: Award for Best paper in International Journal, Penerbit UTM.



- August 2000 : Sijil Pengiktirafan Ministry of Science, Technology and Environment, Malaysia
- Jun 2000 : *Sijil Pengiktirafan* Ministry of Science, Technology and Environment, Malaysia
- July 1999 : Bronze Medal Award in Industrial Art & Technology Exhibition (INATEX '98)
- Mei 1999 : Gold Medal Award in the 27th Geneva Exhibition: New Techniques and Products, Switzerland
- August 1999 : **Gold Medal Discovery Award Conferred by UTM and Presented by Prime Minister of Malaysia, Dato Seri Dr. Mahathir Mohammad**
- October 1999 : **JSPS Scientist Exchange Program with University of Tokyo, Japan**
- September 1999 : Silver Medal Award in International Invention Exhibition (ITEX'99)
- April 1998 : **University Honor's Award**
- October 1998 : **Gold Medal Award in International Invention Exhibition (ITEX'98)**
- July 1998 : Special Jury Award in Industrial Art & Technology Exhibition (INATEX '98), UTM.
- June 1998 : First Price: Award for Best paper in International Journal, UTM Press.
- April 1994 : **CICHE Program awarded by The British Council**
- Oct. 1994 – Sept. 1997 : **Commonwealth Academic Staff Scholarship Tenable at University of Starthclyde, U.K.**
- 24 June 1993 : Best Working Paper in Faculty Research Seminar

PROFESIONAL EXPERIENCE

- April 2009 – present : Dean of Research, Materials and Manufacturing Research Alliance, UTM
- 8 Dec. 2009 – 11 Dec. 2009 : Visiting Professor, Nagoya Institute of Technology, Japan
- 8 July -18 July 2009 : Guest Professor, Meji University, Tokyo, Japan
- November – December 2008 : Visiting Academic, Imperial College London
- 15 June – 2 July 2008 : Visiting Academic, Imperial College London
- Nov. 2006-Feb. 2007 : Visiting Academic, Imperial College London



May 2002 – present	:	International Advisory Board, Membrane Science and Technology Research Center, Prince of Songkla, Hat Yai, Thailand.
October 2002 – present	:	Professor at Department of Gas Eng., UTM
Jan. 1999 - September 2002	:	Associate Professor at Department of Gas Eng., UTM
15 Aug. 1998 – Aug. 2000	:	Head of Gas Engineering Department, UTM
15 August 1998 – Dec., 1998	:	Lecturer of Gas Eng. Department, UTM
April 1994 – August 1998	:	Lecturer of Department of Polymer and Gas Eng., UTM
July 1990 – March 1993	:	Research Officer, (Petronas-UTM Collaborative Research Project)
Jan. 1990 – June 1990	:	Research Assistant at Faculty of Chemical & Natural Resources Engineering, UTM.
June 1989 – Dec. 1989	:	Application Engineer, Tech Lab Sdn. Bhd.

JOURNAL EDITOR/EDITORIAL BOARD/ADVISORY PANEL

1. Editor, Desalination, 1 December 2010 – present
2. Editorial Board Member, Desalination, June 2009 – 30 November, 2010
3. Editorial Board Member, Journal of Rubber Research, Malaysian Rubber Borad, 2008-present
4. Editorial Board Member, Membrane Water Treatment, Jan 2009-present
5. Guest Editor, Special Issue Honoring Takeshi Matsuura, Desalination, October 2009
6. Advisory Panel for The IEM Journal, May 2010- present
7. Scientific Editor, International Journal of Science and Engineering
8. Editor-in-Chief, Journal of Advanced Membrane Science and Technology, Penerbit UTM, 2005- present
9. Guest Editor, Jurnal Teknologi
10. Editorial Board Member, Jurnal Teknologi, August 2010- present

ADMINISTRATIVE EXPERIENCE

FACULTY LEVEL

20 March 2012	:	Speaker, Research Methodology Course.
4 Oct 2010 – 3 Oct 2012	:	Member of Facilities Management, Faculty of Petroleum and Renewable Energy Engineering
4 Oct 2010 – 3 Oct 2012	:	Member of Human Resource Development, Faculty of Petroleum and Renewable Energy Engineering
7 Mei 2010	:	Faculty Panel of Evaluation, for promotion exercise to Associate Proffessorship (Gred DS54)
15 August 1998 – June 2010	:	Board of Faculty Member, Faculty of Chemical and Natural Resources Engineering.



- August 2010 – present : Board of Faculty Member, Faculty of Petroleum and Renewable Energy Engineering.
- 15 August 1998 – August 2000 : Head of Gas Engineering Department, Faculty of Chemical & Natural Resources Engineering, UTM
- November 2004-present : Member, Screening Panel for Professorship Promotion
- November 2004-present : Member, Screening Panel for Associate Professorship Promotion
- November 2004-present : Member, Screening Panel for Senior Lecturer Promotion (DS52)
- October 2004-September 2006 : Faculty Committee Member, Quality Teaching and Learning
- April 2002 – present : Head of Membrane Research Unit (Advanced Membrane Technology Research Center (AMTEC))
- April 2002 – present : Head of Gas Engineering Research Laboratory
- Oct. 1997 – August 1998 : Coordinator of Research Project, Department of Polymer and Gas Engineering
- Oct. 1997 – present : Committee member of Post Graduate Studies, Faculty of Chemical & Natural Resources Engineering
- Oct. 1993 – Sept. 1994 : Coordinator of Undergraduate and Postgraduate Students Seminar, Department of Polymer and Gas Engineering
- Nov. 1993 – Sept. 1994 : Committee member of Faculty Publication and Documentation
- June 1993 – Sept. 1994 : Coordinator of Faculty Basic Eng. Laboratory,
- April 1993 – Sept. 1994 : Coordinator of Publication and Documentation, Department of Polymer and Gas Engineering
- Jan. 1990 – March 1993 : Involved in setting up of Membrane Research Unit (MRU) Research facilities and administration
- December 14 – 15, 1992 : Coordinator of Workshop in Numerical Methods in Engineering, Organized by Membrane Research Unit,

UNIVERSITY LEVEL

1. 26 March 2012 : Speaker, “Writing Review Paper” Workshop for Faculty of Bioscience and Bioengineering
2. 15 February 2012 : Panel of Evaluator for Vice Chancellor Innovation Award 2012 (AINC2012)
3. February 2012– 2020 : Head of UTM Task Force on Center of Excellent (COE) Research Structure
4. February 2012– 2020 : Head of UTM Task Force on Publication in High Impact Factor Journal
5. 20 October 2010 – present : Committee Member, UTM Value Creation Committee
6. August 2011– present : Chairman of UTM Senior Professor Promotion Evaluation



Committee

7. August 2010 – present : Head of UTM Task Force for High Impact Center of Excellent (HICoE)
8. 27 September 2010– Present : Senate Member of UTM
9. October 2010 – Nov. 2012 : Committee Member (Senate Representative), Evaluation Panel for UTM Chair Professors
10. April 2010 : Committee Member, Criteria for UTM Academic Staff Promotion Exercise
11. 1 November 2009 – : Committee Member of Task Force for 31 Oktober 2011 Preparation of Master of Science (Gas Engineering & Management)
12. October 2009- present : Committee Member for ‘Professor Inaugural Lecture Professor’
13. 2 September 2009- present : Distinguished Academic Fellow, UTM Student Affair
14. Jun 2009 – Present : Faculty Representative to University Council of Professors
15. June 2003-Jan. 2008 : Senat Member of UTM
16. December 2010-present : Senate Member of UTM
17. March 2011- present : Champion Council under Key Focus Area (KFA) Research and Innovation
18. March 2008 – March 2009 : Head of Panel for Professional Development Module for Educationan Srevicees Scheme (Skim Perkhidmatan Pendidikan) Gred DS45/TK3 and Gred DS45/TK5
19. June 2005 - June 2007 : Committee Member for Energy Focus group
20. June 2005-June 2007 : Technical Committee Member for Intellectual Property
21. March 2005 : Internal Evaluation Committee for Energy Focus Group for Coordination Workshop, IRPA Research Project.
22. March 2005 : Internal Evaluation Committee for Chemical and Biotechnology Focus Group for Coordination Workshop, IRPA Research Project
23. March 2005 : Evaluation Committee for Working Paper in National and International Journal Award, Quality Day, UTM Press.
24. March 2005 : Panel of Judges for Industrial Art and Technology Exhibition (INATEX) 2005
25. February 2005-present : Faculty representative to ALUMNI University
26. December 2004 : Speaker/Facilitator Kursus Penilaian Tahap Kecekapan bagi S45/TK3 (Performance Appraisal Course)



27. Mei 2004 : Speaker/Facilitator Kursus Penilaian Tahap Kecekapan bagi DS45/TK3 (Performance Appraisal Course)
28. April 2004 : Speaker/Facilitator Professional Development Course, UTM
29. July 2004 : Member, of Evaluation Committee for Coordination Worksoop for Research Project IRPA RM 8 IRPA Energy Focus Group, UTM
30. April 2004 : Member, of Evaluation Committee for Coordination Worksoop for Research Project IRPA RM 8 IRPA Chemical & Bio Focus Group, UTM
31. November 2004 : Member, Screening Committee for Senior Lecturer Promotion (DS52)
32. Dec. 2004 : Member, University Research Council
33. June 2004 : Facilitator for Professional Development Course, UTM and KUITTHO
34. July 2004 : Panel of Judges for Industrial Art and Technology Exhibition(INATEX) 2004
35. September 2003 : Panel of Judges for Industrial Art and Technology Exhibition(INATEX) 2003
36. 1 Nov. 1998 – 30 Oct. 2004 : Fellow Kolej Tuanku Canselor
37. Technical Committee : 32nd International Exhibition of Invention, New techniques and Member Products, Geneva 2004 for UTM
38. Technical Committee : 31st International Exhibition of Invention, New techniques and MemberProducts, Geneva 2003 for UTM
39. May 2003-Present : Member, Task Force for University Research Centre
40. March 2003-Present : Group Leader for Research Grant, Task Force Member for RMC Strategic Planning
41. March 2003-Present : Task Force Member for University Marketing Plan
42. April 2003- Present : Member, Research Methodology Course, UTM

NATIONAL COMMITTEE

1. Appointed as Evaluation Committee Member for Potential Center of Excellent (COE), Malaysian Technical University Network (MTUN). May 2012- present.
2. Appointed as Technical & Research Committee Member, Organization of Islamic Countries (OIC)
3. Appointed as External Reviewer at Tun Ahmadshah Abdullah Oil & Gas (TAS) Academy, a fully Managed & Wholly Owned by UMSLink-SilverKris Sdn Bhd. (1 April 2012- 30 March 2014)
4. Appointed as Panel of Judges for Creation, Innovation, Technology and Research Exposition (CITREx 2012), Universiti Malaysia Pahang, (20 Marc 2012).
5. Appointed as Expert Panel for Evaluation of R,D&C Grant, Ministry of Science, Technology and Innovation (MOSTI) (11 November 2011-present)
6. Appointed as Head of ASM Water Research and Development Agenda (November 2011)
7. Appointed as Member of The ASM Water Committee, Academi Sains Malaysia, (2011-April 2013)



8. Appointed as External Examiner for Faculty of Chemical Engineering, Universiti Teknologi Mara (UiTM) for 2 years (1 Mac 2010 – 28 Februari 2012)
9. Appointed as External Examiner for Promotion Exercise of Academic Staff at Universiti Malaysia Terengganu. (UMT), 30 November 2009 – 29 November 2012
10. Speaker/Fasilitator for Training of Trainers workshop (TOT) Research Proposal Evaluation, Universiti Malaysia Terengganu., June 2010.
11. Committee Member for Malaysia Nanotechnology Society, April 2010 – present
12. National Advisory Committee for 4th World Engineering Congress (WEC) 2010 from 2-5 August 2010, Kuching, Sarawak.
13. Panel of Judges for Bioinno Awards 2009, 17 November 2009, Kuala Lumpur Convention Centre.
14. Panel of Judges for Exhibition and competition Industrial Art & Technology Exhibition (INATEX) 2009, October 2009, UTM.
15. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2009
16. Assistant Secretary, (Founding Member), Malaysian Nanotechnology Association. (2007- April 2010)
17. Expert Committee for IRPA Priorities Research Concept Paper: Development of Wound Management Product from Chitosan Derivatives, 2007
18. External Evaluation Committee for IRPA Project (EAR) for Manufacturing & Construction Sector KUSTEM, 2005
19. Deputy Chairman, IPTA Working Committee for Exhibition and Award, August 2005- 2 October 2005.
20. Program Adviser, IRPA Top-Down Priorities Research (PR) RM8 for the project entitled: The Development of Polymer-Based Carbon Fibre, 2005-2009
21. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2007
22. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2006
23. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2005
24. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2004
25. Deputy Chairman, Fuel Cell Subcommittee, National Energy Center March 2003-present
26. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2003
27. Panel of Judges for Invention and Innovation competition in Expo Science and Technology 2002

**INTERNATIONAL COMMITTEE**

1. Scientific Committee of the 1st International Conference on Desalination using Membrane Technology (MEMDES) in Sitges, Spain, 7-10 April 2013.
2. Chairperson of International Symposium on Materials Characterization and Processing, 7-12 July 2012, Sunway Resort Hotel & Spa, Kuala Lumpur, Malaysia.
3. Organizing Committee for 8th International Materials Technology Conference and Exhibition (IMTCE 2012), 12 July 2012, Sunway Resort Hotel & Spa, Kuala Lumpur, Malaysia
4. National Advisory Committee Member, 2nd International Conference on Biotechnology Engineering (ICBioE'11), May 17-19, 2011, Kuala Lumpur.
5. Technical Advisory Panel for International Conference of Chemical Engineering and Industrial Biotechnology, 28 November – 1 December 2011, Universiti Malaysia Pahang, Malaysia.
6. Chairman of the Organizing Committee for International Membrane Science and Technology Conference, (MST 2009), Malaysia.
7. Advisory Committee Member, International Graduate Conference in Science and Engineering, 2008, Malaysia
8. Scientific Committee Member for Membrane Science and Technology 2008, Thailand
9. Technical Committee Member for Membrane Science and Technology 2006, Singapore
10. Scientific Committee Member for Membrane Science and Technology 2005, Indonesia
11. Chairman of the Organizing Committee for Membrane Science and Technology 2004, Malaysia
12. Technical Committee Member for Membrane Science and Technology 2003, Thailand

TEACHING EXPERIENCES**Undergraduate Courses Taught**

Membrane Gas Separation Technology
Mechanics of Materials
Fuel Technology and Combustion
Numerical Methods for Chemical Engineering
Engineering Mechanics
Gas Processing
Materials Science
Fluid Mechanics Laboratory
Fuel Testing Laboratory
Gas Testing Laboratory
Basic Engineering Laboratory.

Postgraduate Courses taught

MKK 1523: Membrane Separation Processes (offered every semester)

EXTERNAL ASSESSOR FOR PROFESSORSHIP EXERCISE

1. Assoc. Prof. Dr. Abu Bakar Mohammad, National Universiti of Malaysia (UKM)
2. Assoc. Prof. Dr. Ku Halim Ku Hamid, Universiti Teknologi Mara (UiTM)
3. Assoc. Prof. Ir. Dr. Abdul Wahab Mohammd, Universiti Kebangsaan Malaysia (UKM)
4. Assoc. Prof. Dr. Abdul Amir Hassan Kadhum, Universiti Kebangsaan Malaysia (UKM)
5. Assoc. Prof. Dr. Osman Hassan, Universiti Kebangsaan Malaysia (UKM)
6. Assoc. Prof. Dr. Sobri Takrif, Universiti Kebangsaan Malaysia (UKM)



7. Assoc. Prof. Dr. Sharifah Aishah Syed Abdul Kadir, Universiti Teknologi Mara (UiTM)

EXTERNAL ASSESSOR FOR ASSOCIATE PROFESSORSHIP EXERCISE

1. Dr. Azmi Mohd Shariff, Univeriti Teknologi Petronas (UTP)
2. Dr. Kamarul Ariffin Amminudin, Univeriti Teknologi Petronas (UTP)
3. Dr. Zakaria Man, Universiti Teknologi Petronas (UTP)
4. Dr. Suraya Abdul Rashid, Universiti Putra Malaysia (UPM)
5. Dr. Mohd Omar Abdullah, Universiti Malaysia Sarawak (UMS)

INTERNAL ACESSOR FOR PROFESSORS/ASSOC. PROFESSORS/DS 52/DS54

1. Panel of assessors for promotional exercise, Faculty of Chemical and Natural Resources Eng., 2002
2. Panel of assessors for promotional exercise, Faculty of Chemical and Natural Resources Eng., 2003
3. Panel of assessors for promotional exercise, Faculty of Chemical and Natural Resources Eng., 2004
4. Panel of assessors for promotional exercise, Faculty of Mechanical Eng., 2004
5. Panel of assessors for promotional exercise (Professor), Faculty of Chemical and Natural Resources Eng., 2005
6. Panel of assessors for promotional exercise (Professor), Faculty of Mechanical Eng., 2005
7. Panel of assessors for promotional exercise (Assoc. Professor), Faculty of Mechanical Eng., 2005

SUPERVISION OF VISITING PROFESSORS

1. Prof. Takeshi Matsuura, University of Ottawa, Canada, January - July 2007; February 2009 - August 2009, April 2010- October 2010, June 2011- November 2011,
2. Prof. Dr. Kang Li, Imperial College, London, July 2007- September 2007, August 2008 – September 2008; December 2008-Jan. 2009; 17 November 2009- 9 December 2009, March 2010- May 2010.
3. Asocc. Prof. Dr. Arun Isloor, National Institute of Technology-Karnataka, Surathkal, Mangalore, India. Dec 2011, March 2012
4. Dr. Kailash C. Khulbe, University of Ottawa, Canada, February 2012 - April 2012.

PROFESSIONAL MEMBERSHIP AND RECOGNITION

1. Member, American Chemical Society, Membership No.: 30265866
2. Charetered Chemical Engineer, CEng (UK), April 2011.
3. Member, Institution of Chemical Engineers, UK (IChemE), Membership No: 99928853, April 2011.
4. Member, Malaysian Invention and Design Society (MINDS) (1999 – present)



5. Member, American Chemical Society (October 2010-present)
6. Member, Malaysian Association of Research Scientist (MARS) (2007-present)
7. Assistant Secretary, (Founding Member) Malaysian Nanotechnology Association, (March 2007 – April 2101).
8. Committee Member for Malaysia Nanotechnology Society, April 2010 – present

RESEARCH ACHIEVEMENTS

Patent Granted

1. **A. F. Ismail** and S. J. Shilton, International Patent entitled “Super selective hollow fiber membranes” (US Patent 6,521,025 B1)
2. **A. F. Ismail** and S. J. Shilton, International Patent entitled “Super selective hollow fiber membranes” European Patent (WO00/27512)

Patent Filed/Disclosure

1. **Ahmad Fauzi Ismail**, Ng Be Cheer, Mohd Sohaimi Abdullah, Chan Fook Kiong, Polysulfone Hollow fiber Membranes Oxygen enrichment System, (PI 20041881)
2. **Ahmad Fauzi Ismail**, Lai Ping Yean, Defect-free and high Performance uncoated Asymmetric polysulfone membranes for Gas Separation Process (PI 2006 0628)
3. **Ahmad Fauzi Ismail**, Ng Be Cheer, Mohd Sohaimi Abdullah, Apparatus for Casting Flat Sheet Membrane (PI 2004 5431)
4. **Ahmad Fauzi Ismail**, Rosli Ilias, Osman Hassan, Mimi Sakinah, Enzymatic Membrane Reactor (EMR) System for Cyclodextrin Production (PI 2007 1347).
5. **Ahmad Fauzi Ismail**, Juhana Jaafar, Azeman Mustafa, Mohd Hafiz Dzarfan Othman, A Novel Sulfonated Poly (Ether Ether Ketone) (SPEEK) Membrane for Direct Methanol Fuel Cell (DMFC), Malaysia Patent (PI 2007 2252).
6. **Ahmad Fauzi Ismail**, Mohd Hafiz Dzarfan Othman, Azeman Mustafa, Juhana Jaafar, SPEEK/BPO₄ Composite Membrane for Direct Methanol Fuel Cell (DMFC), Malaysia Patent.
7. **Ahmad Fauzi Ismail**, Madzlan Aziz, Mohammad Abdul Raziz Saidi, Suhaila Sanip, Ng Be Cheer and Mohd Sohaimi Abdullah, Direct Current Plasma Enhanced Chemical Vapour deposition for Carbon Nanostructured Growth. (PI2009 0588)
8. **Ahmad Fauzi Ismail**, Madzlan Aziz, Suhaila sanip, Carbon Nanotube Metal Composite for Hydrogen Adsorption.(PI2009 0535)
9. **Ahmad Fauzi Ismail**, Tutuk Djoko Kusworo, Azeman Mustafa, A hybrid mixed matrix composite membrane (PI2008 1016)
10. **Ahmad Fauzi Ismail**. Rosli Ilias, Mohd. Idham Mustafa, Mohd Sohaimi Abdullah. - Effect of dope extrusion rate on morphology and performance of hollow fibres membranes for ultrafiltration PI2008 2020
11. **Ahmad Fauzi Ismail**, Ng Be Cheer, Mohd Sohaimi Andullah - A conveyor - drive membrane casting system for formation of asymmetric membrane, PI2009 1383



12. **Ahmad Fauzi Ismail**, Mukhlis Abd. Rahman, Mohd Sohaimi Abdullah, Dayang Salyani Abang Mahmud, Ng Be Cheer.- Solvent Free Coagulation Bath for Dry-Jet Wet Spinning Polyacrylonitrile/Acrylamide Fiber (PI 2010 002109)
13. **Ahmad Fauzi Ismail**, Muhammad Noorul Anam Mohd Norddin, Charged-sulfonated polyether ether ketone (speek) membrane for fuel cell technology (PI2011 000686)
14. **Ahmad Fauzi Ismail**, Amir Mansourizadeh, Mohd Sohaimi Abdullah, Ng Be Cheer- M-Contactor: Smart membrane for CO₂ removal (PI2011 000661)
15. **Ahmad Fauzi Ismail**, Hatijah Basri, Madzlan Aziz, Suhaila Mohd Sanip, Mohd Sohaimi Abdullah, Ng Be Cheer- Anti *E.coli* hybrid membrane (PI2011 000663)

POSTGRADUATE SUPERVISION

PhD Student

Ian Sharpe(Graduated, 2002)

The Isolation and Study of rheological and Mass Transfer Parameters in The Spinning of Advanced Hollow Fiber Membranes for Gas Separation.

(joint supervision with Dr. S. J. Shilton from University of Strathclyde, Scotland,

Ani Idris (graduated, 2002)

Developmet of novel asymmetric hollow fiber reverse osmosis membrane for biometerial application

3. Ramlah Tajuddin (Graduated, 2006)
Development of Novel Immersed Membrane System for Wastewater Treatment
4. Mohd Fadil Abdul Wahab (Graduated 2012)
Development of Mixed Matrix Membrane for Gas Separation
5. Tutuk Joko Kusworo (Graduated, 2008)
Formation and Characterization of Zeolite-filled Polyimide Membrane for Gas Separation
6. Zularisham Abdul Wahab (Graduated, 2008)
Development and Optimization of Ultrafiltration Submerged Membrane Reactor for Surface Water Treatment
7. Mimi Sakinah Abdul Munaim (Graduated, 2008)
Development of Enzymatic Membrane Reactor for the Production, Separation and Purification of Cyclodextrin from Tapioca Starch
8. Iwan Ratman (Graduated, 2009)
Methodological Development for Reducing Foaming in Amine Base Carbon Dioxide Removal System
9. Tee Jia Chee
Production and Characterization of Pure Multi-Walled Carbon Nanotubes Using Catalytic Chemical Vapour Deposition for Hydrogen Storage
10. Nurmin Bolong (Graduated, 2010)
Development of Nanofiltration membrane for the removal of Endocrine disrupting Chemicals in domestic wastewater



11. Lau Woei Jye (Graduated, 2009)
Preparation, characterization and performance evaluation of PES/SPEEK blend membrane for salt and colour removal
12. Muhd. Noorul Anam Mohd. Norddin (Graduated, 2010)
Preparation, Characterization and performance evaluation of polymer electrolyte membrane blended with charged surface modifying
13. Amer Mansourizadeh (Graduated, 2010)
Development of hollow fiber membrane contactors for CO₂ removal
14. Hatijah Basri (Graduated 2012)
Development of hybrid antibacterial nanofiltration membrane for environmental application
15. Juhana Jaafar (Graduated 2011)
Development and characterization of SPEEK-Montmorillonite (MMT) clay Nanocomposite membrane for Direct Methanol Fuel Cells
16. Devaraj Verasamy (Graduated, 2010)
Fouling Studies on Natural Rubber Skim Latex Recovery Using Integrated Ultrafiltration Membrane System
17. Suhaila Sanip (Graduated 2011)
Preparation and Characterization of mixed matrix membrane based on CNT for gas energy storage
18. Goh Pei Sean (Graduated 2012)
Functionalization and metal deposition of CNT for gas separation
19. Norhaniza Yusof
Development of new solvent-free coagulation process for the production of polyacrylonitrile-based carbon fiber
20. Wan Norharyati Wan Salleh (Graduated 2012)
Carbon Hollow Fiber Membrane for Gas Purification
23. Seyed Abdollatif Hashemifard (Graduated 2011)
Development of Hybrid Membranes System for Acid Gas Removal
24. Budiyo (Graduated 2010)
Development of Mixed Matrix Membrane for Biogas Separation
25. Erna Yuliawati (Graduated 2012)
Treatment of produced water using ultrafiltration membrane
26. Agung Mataram
Development of PAN-based carbon fiber using electrospinning technique
28. Mohammad Aroon (Graduated, 2010)
Preparation and Characterization of CNT-Based Mixed Matrix for Gas Separation
29. Gulam Reza Bekary (Graduated, 2010)
Development of PVDF Hollow Fiber Membrane Contactor for Acid Gas Removal
30. Masoud Rahbari Sisakht
Development of Novel cSMM Based Membrane for Gas Separation
31. Ng Be Cheer
Development and Optimization of Membrane and Membrane System for Acid Gas Removal



32. Rosmawati Naim
Development and Optimiztion of Hollow fiber membrane and Membrane Contactors for CO₂ removal
33. Norasyikin Misdan
Development of Novel Surface modified TFC Reverse Osmosis Membrane for Water Desalination
34. Farahdila Khan Kadir Khan
Plasticization Studies of Membranes for High Pressure Mixed Gas for CO₂ removal from Natural Gas
35. Muhammad Zaini Yunos
Development of Novel Membrane Material for Aqous Phase Separation.
36. Wan Nurul Izyan Wan Azelee
Enhancement of Bacterial Growth in Hollow Fiber Membrane
37. Rohaida Che Man
Application of Membrane Technology for Enzym purification
38. Nadzirah Mohd Mokhtar
Develoment of Novel Membrane for Membrane Distillation Process
39. Noor Aina Mohd Nazri
Hollow Fiber Ultrafiltration Membrane for Wastewater Treatment
40. Masood Rezaei Dasht Arhandi
Development of Novel Mixed Matrix Membrane Material for Membrane Contactor for Gas Separation
41. Shaya Mahmoudian
Regenerated Cellulose/Montmorillonite Nanocomposite Fibers
42. Nik Abdul Hadi Sapiaa@ Md. Nordin
High Pressure CO₂/CH₄ Mixed Gas Separation Performance Using Polysulfone Hollow Fiber Membranes
43. Zulhairun Abdul Karim
Effect of Heavy Hydrocarbon Content on the Performance of High Pressure CO₂/CH₄ Mixed Gas Separation Performance Using Polysulfone Hollow Fiber
44. Rasoul Jamshidi Gohari
Effect of Purified Multiwalled CNT on the Performance of Mixed Matrix Membranes for Liquid-Liquid Phase Separation
45. Maizura Ismail
Development of Novel Mixed Matrix Membrane for Mixed Natul Gas Separation
46. Dariush Gholamreza
Development of Novel Nanofiltration Membrane for Heavy Metal Removal
47. Nur Aimee Abdullah Sani
Polyphenylsulfone Hollow Fiber Membrane for Organic Solvent Nanofiltration
48. Farhana Aziz
Surface Modification of Organic Solar Cell for Stand alone PV Solar System

***MSc. Student***

1. Ammar Saad (Graduated)
Study of the rate of Combustion flame (Graduated in 1995)
2. Cheng See Yuan (Graduated, 2005)
Establishing the relationship between properties of packaging materials and the processing window of the Form-Fill-Seal machine with heat bar sealing method.
3. Nalini A/P Sangaran Kutty (Graduated, 2006)
Study of the factors influencing the strength and the durability of the potting up resin used in the production of hollow fiber gas separation membrane.
4. Ng Be Cheer (Graduated, 2006)
Development of polysulfone asymmetric membrane using pneumatically-controlled membrane casting system and the study of the effects of shear rate and forced convection residence time on gas separation membrane performance.
5. Chan Fook Kiong (Graduated, 2005)
Oxygen enrichment into wastewater treatment aeration tanks using selective permeation membranes.
6. Lim Pooh Choon (Graduated, 2005)
Development of Membrane Gas Separation Network
7. Lai Ping Yean (Graduated, 2005)
Development of ultrathin-skinned and high performance asymmetric membrane for gas separation
8. Lorna Wong (Graduated)
Effect of penetrant induced plasticization on the performance of asymmetric membrane for gas separation.
9. David Lee Ik Bing (Graduated, 2005)
Development of carbon hollow fiber membrane for gas separation
10. Khoo Chong Teak (Graduated, 2007)
Development of tropicalized lead acid battery using membrane technology
11. Rosmawati Naim (Graduated, 2007)
Preparation and Characterization of Sulphonated Polysulfone Membranes for Proton Exchange Membrane Fuel Cell (PEMFC)
12. Nor Aida Zubir (Graduated, 2006)
Preparation and Characterization of Radiation Grafted Polysulfone Membrane for Proton Exchange Membrane Fuel Cell (PEMFC)
13. Syed Mohd Saufi Tuan Kecik (Graduated, 2006)
Effects of Fabrication Conditions on the Performance of Carbon Hollow Fiber Membrane for Gas Separation
14. Suhana Jalil (Graduated, 2006)
Development of Nanofiltration Polyethersulfone Hollow Fiber Membrane for Enzyme Purification”
15. Suhaina Mohd. Ibrahim (Graduated, 2006)
Effects of Module Configuration and Flow Patterns on The performance of O₂/N₂ Hollow Fiber Membrane Separation System
16. Norida Ridzuan (Graduated, 2006)



- Effect of Additive in Coagulation Medium on the Structure and Separation Performance of Asymmetric Membrane for Gas Separation
17. Sunarti Abd. Rahman (Graduated, 2006)
Development of High Performance Cellulose Acetate Membrane for Gas Separation
 18. Mohd Idham Mustaffar (Graduated, 2006)
Development of Ultrafiltration Membrane for Enzyme Separation
 19. Wan Ahmad Hafiz Wan Hassan (Graduated, 2006)
Preparation and Characterization of Asymmetric Gas Separation Membrane for Tropical Lead Acid Battery Application
 21. Norshahnawal Yaacob (Graduated, 2005)
Development of Hollow Fiber Membrane System for Carbon Dioxide/Methane Gas Separation Process
 20. Tee Jia Chee (Graduated)
Synthesis and Characterization of Carbon Nanotube for Hydrogen Storage
 22. Mohd Hafiz Dzarfan (Graduated, 2007)
Synthesis and Characterization of polymer/inorganic composite membrane for direct methanol fuel cell (DMFC) application.
 23. Rehan Adnee Abdul Rahim (Graduated, August 2008)
Development of mixed matrix composite membrane for CO₂/CH₄ gas separation
 24. Mohd Syukri Abd. Rahaman (Graduated, 2007)
Development high performance carbon/graphite fiber from polyacrylonitrile (PAN) precursor.
 25. Mukhlis A. Rahman (Graduated, 2007)
Optimization of polyacrylonitrile (PAN) fiber fabrication process using dry-wet spinning for the production of PAN based carbon fiber.
 26. Juhana Jaafar (Graduated, 2007)
Formation and characterization of sulfonated poly (ether ether ketone) for direct methanol fuel cell (DMFC) application.
 27. Wan Rafizah (Graduated, 2007)
Effect of water vapor presence in CO₂/CH₄ gas feeds on performance of carbon molecular sieve-mixed matrix membranes.
 30. Nur Hidayati Othman (Graduated, August 2008)
Development and Characterization of mixed matrix membrane for direct methanol fuel cell
 31. Nurul Saadah Abu Bakar (Graduated, 2010)
Development of third generation high performance hybrid membrane for effective removal of greenhouse gases from hydrocarbon gas mixtures
 32. Farhana Aziz (Graduated, 2010)
Development of mixed-matrix membrane for hydrocarbon gas purification
 33. Mohd Raziz Saidin (Graduated, 2010)
Effect of synthesis gas ratio and process parameters on the production of carbon nanotubes via plasma enhanced chemical vapour deposition system
 34. Dayang Salyani (Graduated, 2011)
Preparation and characterization of polyacrylonitrile fibers as a precursor for carbon fiber production
 35. Mohd Azwar Azhari



Development of Mixed Matrix Membrane to Remove Carbon Dioxide from Natural Gas Stream

36. Nur Atiqah Binti Abdul Hamid (Graduated 2011)
Removal of Natural Organic Matter Using Membrane Surface Water Treatment Process
37. Nurul Hanan Abd Rahim (Graduated, 2011)
Preparation and Characterization of Novel Carbon Nanotube filled Mixed Matrix Membrane for Hydrocarbon Gas Purification
38. Safia Syazana Binti Moktar (Graduated 2011)
Preparation and Characterization of Sulfonated Poly(Ether Ether Ketone) For Direct Methanol Fuel Cell Application
39. Mohd Hanif Mohammad Halim
Preparation and Characterization of Multi layer Coating Hollow Fiber Membrane for CO₂/CH₄ Separation
40. Wan Nurul Ffazida Wan Mustapa
Preparation and Characterization of Mixed Matrix Membrane for Mixed Gas Separation
41. Rafiqah Ismail
Polyacrylonitrile Membrane for Palm Oil Effluent Treatment
42. Ali Moslehyani
Effect of Filler Types on the Performance of Mixed Matrix Membranes for Gas Separation
43. Amirhossein Naddafian
Preparation and Characterization of Charged Nanofiltration Membrane for Wastewater Treatment
44. Elnaz Halakoo
Preparation and Characterization of Ultrafiltration Membrane for Wastewater Treatment
45. Hamid Ilbeygi
Preparation and Characterization of Sulphonated Polyether ether ketone Membrane for DMFC
46. Arief Denesfar
Natural Organic Removal using Ultrafiltration Membrane
47. Ong Chi Siang
Submerged Membrane Photocatalytic Reactor for Oil Refinery Wastewater
48. Alireza Miyahi
Formation and Characterization of Sulphonated Polyether ether ketone Membrane for Direct Methanol Fuel Cell.
49. Nur Iedrilla Rahman
Removal of Free Fatty acid from Crude Palm using Membrane Technology

POSTGRADUATE EXAMINATION /VIVA

UTM STUDENTS/VIVA

1. Examiner (to convert MSc to PhD) for the thesis entitled "A study on synthesis of sodium citrate from citric acid and sodium salts using electro dialysis membranes" by Ling Lay Pee
2. Chairman of the MSc. Viva Panels for Ngunyen Man Hung



3. First Stage Examination (MSc) for the thesis entitled “Conversion and concentration of sodium citrate to citric acid using Electrodialysis” by Chew Boon Chong
 4. Chairman of the Examination Panels for the MSc thesis entitled “Treatment of printing wastewater using combination of chemical treatment and aerobic SBR” by Ng Ink Hock
5. First Stage Examination for the MSc. thesis entitled “Selective process for silver extraction from photographic waste” by Yuliasman
6. First Stage Examination for the MSc. thesis entitled “The development of gas metering calibration system for domestic meter” by Liaw Kim Kiat
7. First Stage Examination for the PhD thesis entitled “citrate from citric acid separation using electrodialysis with BERL ion exchange membranes” by Ling Lay Pee
8. First Stage Examination for the PhD thesis entitled “Pervaporation dehydration of isopropanol-water system using a locally-produced chitosan based membranes” by Hashim Hassan.
9. Chairman for MSc. Viva Panels for Muhammad Noorul Anam Mohd. Ghazali
10. First Stage Examination for the MSc thesis to Ashaari Mohammad
11. First Stage Examination for the MSc thesis to Ruzinah Isha
12. First Stage Examination for the MSc thesis to Tutuk Djoko Kusworo
13. First Stage Examination for the MSc thesis to Shameed Ashraf
14. First Stage Examination for the MSc thesis to Nur Amzira
15. First Stage Examination for the MSc thesis to Rosiah Rohani
16. First Stage Examination for the MSc thesis to Tengku Ida Sofina
17. Chairman (for conversion MSc to PhD) for the thesis entitled “Reactive Extraction of antibiotics from” by Lau Shiew Wei

PhD EXTERNAL EXAMINER

1. Mohd Roslee Othman
Kajian Pemisahan Membran-Membran Tak Organik, USM, 2002
2. Nora'aini Ali
Kajian Pengaruh Ciri-Ciri Membran Penurasan Nano Ke atas Prestasi dan kos Sistem pemisahan, USM, 2003
3. Ooi Boon Seng
Development of Polymeric Composit Nanofiltration Membrane: Synthesis, Characterization and its Evaluation on Copper Sulfate Rejection, 2005.
4. Rahmah Mohamed
Sintesis, Pencirian dan Fabrikasi Pandu Gelombang Polimer Untuk Kegunaan Peranti Fotonik, UKM 2005
5. Muataz Ali Atieh Hussien
Synthesis and Characterization of Carbon Nanotubes and Carbon Nanofibers for Nanocomposites Application. UPM 2005.



6. Leo Choe Peng
Bimodal Porous Ceramic Membranes Via Nanosized Polystyrene Templating: Synthesis, Characterization and Performance Evaluation, USM 2008
7. Amilia Linggawati
Pembuatan Membran Hibrid Nilon 66 dengan kaedah Alur Elektron dan Penciriannya, UKM 2009.
8. Yeong Yin Fong
Silicalite-1 Membrane: Synthesis, Modification, Characterization and its Performance for the Reactive Separation of Para-Xylene from Xylene Isomers, USM, 2010
9. Indok Nurul Hasyimah Mohd Amin
Membrane Fouling during the Clarification of Glycerine-rich Solution, UKM, 2012
10. Nurhayati Melon
Hydrodynamics and Separation Performance Analysis of Horizontal, Inline, Swirl Tube Separator for Natural Gas Water Separation for Potential Offshore Application, UTP, 2012
11. Chiang Siu Hua
Simultaneous Extraction and Stripping of CU(II) through Vegetable Oil-Based Bulk Liquid Membrane USM, 2012
12. Nurandani Hardyanti
Development of Decentralized domestic Sewage Treatment System using Membrane Bioreactor, UMP (2012)

MSc EXTERNAL EXAMINER

1. Anthony Mariada, Reduction of Membrane Fouling Using Helical Baffles for Crossflow Microfiltration, USM, 2003
2. Fathiah Mohd Zuki, Removal of Chromium ions from Aqueous Solutions by Polymer-Enhanced Ultrafiltration, UM 2005
3. Norzeeha Mat Rasid, Development and Characterization of (Mg-Al) hydroxide-Alumina Using Sol Gel Technique for Carbon Dioxide Adsorption
4. Christina Varqis @ John Varqis, Synthesis and Characterization of Carbon Nanotubes-Coated Carbon Fibers by Chemical Vapour Deposition Whiskerization Treatment, UPM July 2007
5. Sofiah Hamzah, Synthesis and Characterization of Polymeric Based Asymmetric Ultrafiltration Membrane for Lysozyme Separation Towards Biotechnology Development, UMT, 9 November 2009
6. Siti Norazian Ismail (GS16994), Investigation of floating Catalyst CVD for Development of CNT-Coated Carbon Fibre Reinforced Composite, UPM, 2010
7. Amin Firouzi (GS20451), Investigation on Effect of Gas Adsorption On Electrical Resistance Of Carbon Nanotubes, UPM 2010
8. Ong Yit Thai, Effects of Dispersion and Alignment of Carbon Nanotubes for Pervaporation Polymeric Membrane, USM 2010.
9. Munawar Shahrudin (EH780 UiTM)
The Development of Composite Reverse Osmosis Membrane in Treating Oily wastewater from Oil Refinery



MSc INTERNAL EXAMINER

1. Law Jeng Yih, The Concentration of Sodium Salicylate and Conversion of Sodium Salicylic Acid using Electrodialysis Membranes, July 2004.
2. Noorhayati Othman, Industrial Research of Pressure and Flow Effects on Ultrasonic Cleaning System (DUCS) to Increase the Efficiency of 0.5 Sintered Stainless Membrane in Oleo Chemical Plant, UTM
3. Amgad Ahmed Aly Ibrahim
Proton Conducting Membrane by Radiation-Induced Grafting of 1-Vinylimidazole onto Poly(ethylene-CO-Tetrafluoro ethylene) Film and Phosphoric Acid Doping.

PhD INTERNAL EXAMINER

1. Ling Lay Pee, A Study of Citric Acid and Sodium Citrate recovery in the Electrodialysis Process with Ion exchange Membranes.
2. Hashim Hassan, Pervaporation Separation of Isopropanol-Water Mixture Using Locally-Produced Chitosan Based Membranes.
3. Khairol Suzana Nor Kamaruddin, synthesis and Chracterization of Zeolite for Gas adsorption Processes.

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
1.	Measurement of Gas Permeation through Polymeric Membranes	1989/90
2.	Effect of Pressure and Temperature on Permeation Rates of Pure Gas through Polymeric Membranes	1990/91
3.	Measurement of Gas Permeation Rates through Membrane using Constant Volume Method	1990/91
4.	Prediction of Dual Mode Sorption for Pure Gas through Glassy Polymer using Rigorous Iteration Methods	1990/91

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
5.	Effect of Post-Treatment Method on Structure and Gas Permeation Rates	1991/92
6.	Effect of Pore Size and Pore Size Distribution on Gas Permeation Rates	1991/92
7.	Effect of Cellulose Acetate Concentration in Casting Solution on Membrane Performance for the Separation of CO ₂ /CH ₄	1991/92
8.	Performance Evaluation of Natural Gas Permeation through The Cellulose Acetate, Cellulose Triacetate and Polyimide Membranes	1991/92



9.	Investigation of The Structure and Mechanical Strength of Hollow Fiber Membrane for Gas Separation	1993/94
10.	Residual Composition Analysis of Liquefied Petroleum Gas for Domestic Utilization	1993/94
11.	Development of spreadsheet Program for Prediction The performance of CO ₂ /CH ₄ using Hollow Fiber Membrane permeator	1993/94
12.	Optimization of Membrane Gas Separation Program using Hollow Fiber Membrane Simulator	1993/94
13.	Pore size determination in asymmetric membranes for gas separation	1998/99
14.	Effect of shear rate and polymer concentration on the performance of asymmetric membranes for gas separation	1998/99
15.	Time dependency test and its effect on the separation performance of pure O ₂ /N ₂ and H ₂ /N ₂ systems	1998/99
16.	Study of the ageing phenomena in membranes for gas separation	1998/99
17.	Effects of evaporation time on the skin formation and the separation performance of asymmetric membranes for gas separation	1998/99
18.	Mathematical modelling of gas separation system for the single stage hollow fiber membrane permeator	1998/99
19.	Development of a computer program for determination of a membrane area for hollow fiber and spiral wound membrane configuration	1998/99
20.	Study on the potentiality of implementing landfill methane recovery technology in Malaysia	1998/99

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
21.	Hollow fiber membrane system for CO ₂ removal from natural Gas stream: Guideline in the preparation of technical specifications, process design and document preparation for commercial vendors	1998/99
22.	Development of asymmetric flat sheet reverse osmosis membrane for water desalination	1998/99
23.	Determination of pore size for asymmetric membrane for gas separation	1998/99
24.	Casting of reverse osmosis membrane from a polymer Solution: Studies on the effect of shear rate on membrane	1998/99



	performance	
25.	Studies on the effect of thermal history and treatment time on the performance on asymmetric polysulfone membrane for gas separation	1998/99
26.	Effect of drying techniques on membrane permeability and selectivity for gas separation	1998/99
27.	Studies on the effect of coagulation temperature on the performance of asymmetric polysulfone membrane for gas separation	1998/99
28.	Evaluation of polysulfone hollow fiber membrane performance for gas separation	1999/00
29.	Comparative studies on the performance of asymmetric polysulfone flat sheet membrane for coated and uncoated for gas separation	1999/00
30.	Studies on the performance of reverse osmosis membrane: A comparison between experimental and theoretical studies	1999/00
31.	Effect of coating solution concentration on the performance of asymmetric membrane for gas separation	1999/00
32.	Effect of shear rate on the performance of asymmetric membrane for gas separation	1999/00
33.	Determination of defect characteristics in hollow fiber membrane skin layer using gas permeation method	1999/00
34.	The performance of asymmetric polysulfone membrane: Experimental and simulation studies	1999/00
35.	Determination of the Effect of feed pressure and operating Temperature on the performance of hollow fiber membrane in Gas separation	1999/00
36.	Effect of shear rate on the performance of reverse osmosis for Water desalination	1999/00

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
37.	Effect of tetrahydrofuran on the performance of reverse osmosis in water desalination	1999/00
38.	Studies of the stray current interference in corrosion prevention on the cathodic protection using sacrificial anode	1999/00
39.	Safety aspects in the manufacturing of unfired pressure vessel	1999/00
40.	Laws and regulation in the manufacturing of liquefied petroleum gas storage	1999/00



41.	Studies on the use of polyester in natural gas filtration processes	1999/00
42.	Studies on hazardous and operability in sulfur recovery unit in oil refinery plant	1999/00
43.	Inspection of corrosion in offshore gas pipeline using pigging technique	1999/00
44.	Effect of pressure and flow rate on the performance of membrane oxygen enrichment system	2000/01
45.	Determination of gas separation performance using uncoated and coated asymmetric polysulfone membrane through differential forced convection time	2001/02
46.	Development of polysulfone-polyethersulfone blend asymmetric membrane for gas separation	2001/02
47.	Influence of purge gas flow rate and heating duration during pyrolysis process on polyacrylonitrile carbon membranes for gas separation	2001/02
48.	The effect of heat treatment on the performance of asymmetric polysulfone membranes for gas separation	2001/02
49.	Kesan kepekatan CO ₂ dan tekanan suapan ke atas resin potting up dan kadar alir telapan dalam modul membran gentian geronggang	2001/02
50.	Effect of forced convection residence time on the performance of asymmetric polysulfone membrane for gas separation	2001/02
51.	Development of asymmetric polysulfone membrane for ultrafiltration Process	2002/03
52.	Development of asymmetric cellulose acetate membrane for nanofiltration process for water desalination	2002/03
53.	Effect of blending composition of polysulfone and polyethersulfone on the performance asymmetric membrane for gas separation	2002/02

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
54.	Simulation of capital cost and membrane area of hollow fiber membrane system for gas separation processes	2002/03
55.	Computer modeling of hollow fiber membrane for CO ₂ /CH ₄ : Permeate recycle system	2002/03
56.	Effect of Aeration Methods on the Physical Characteristics of Palm Oil Effluent	2002/03
57.	Effect of Casting Conditions on the Performance of Nanofiltration Membrane	2002/03



58.	Effect of Nonsolvent Additives on the Structure and Separation Performance of Asymmetric Polyethersulfone for Gas Separation	2002/03
59.	Effects of Pyrolysis Temperature on the Properties of Polyacrylonitrile (PAN) Based Carbon Membrane	2002/03
60.	Effect of Shear Rate on the Performance of ultrafiltration Membrane for Separation of Sodium Chloride (NaCl) Solution	2002/03
61	Development of Polysulfone and Polyethersulfone Blend Asymmetric Membrane for Gas Separation	2004/05
62	Effect of Nonsolvent Additive Content on The Performance and Structure of Nanofiltration Membrane	2004/05
63	Effect of Feed and Permeate Channel Height on The Performance of Polysulfone Spiral Wound Membrane for O ₂ /N ₂ and CH ₄ /H ₂ separation	2004/05
64	Effects of Polymer Concentration and Solvent Ratio on The Performance of Polysulfone-Acrylonitrile-Butadiene-styrene (MINDEL S-1000) Asymmetric Membrane for Gas Separation	2004/05
65	Study on The effect of Zirconium Phosphate Dispersion in Sulphonated Poly(ether ether ketone) Membrane for Direct Methanol Fuel Cell Application	2004/05
66	Effect of Shear Rate and Evaporation time on The Performance of Asymmetric flat Sheet Ultrafiltration Membrane for Polyethelenglycol (PEG) Separation	2004/05
67	Determination of Optimum Condition for The Preparation of high Performance Asymmetric Nanofiltration Membrane	2004/05
68	The Influence of Solvent and Nonsolvent Composition on The Membrane Structure and Performance	2004/05
69	Removal of Inorganic Impurities in Waswater Using Ultrafiltration Membrane	2003/04

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
70	Removal of Organic Impurities in Waswater Using Ultrafiltration Membrane	2003/04
71	Formation and Characterization of Reverse Osmosis Hollow Fiber Membrane For Drinking Water Production	2005/06
72	Design of Spiral Wound Membrane Module for Gas separation	2005/06
73	Feasibility study of surface Water Treatment using Membrane Filtration for Drinking Water and its Application to Malaysia	2005/06



74	Effect of polymer Concentration on the Formation of Mixed Matrix Membrane Materials	2005/06
75	Optimization of PAN-Based Carbon Fiber Formation Process	2005/06
76	Formation and Characterization of Mixed Matrix Membrane -Effect of Zeolite Loading	2005/06
77	Performance Enhacement of Polyethersulfone-Zeolite Hollow Fiber Mixed Matrix Membrane Using Novel silane coupling Agent for Gas Separation	2006/07
78	Studies the Effect of Polymer Concentration and Silicone Coated on the Performance of Polysulfone-Acrylonitrile-Butadiene-Styrene (Mindel S-1000) Asymetrix Membrane for CO ₂ /CH ₄ Gas Separation	2006/07
79	Effect of Air Gap and Dope Extrusion Rate on The Polyethersulfone Membrane for Gs Saparation	2006/07
80	Development of polyethersulfone Mixed Matrix Membrane Using Nanostructured Zeolite and Silica as Molecular Sieve	2006/07
81	Effects of Temperature on swelling Behavior for Sulfonated Polyether-ether ketone (SPEEK) Membrane for Direct Methanol Fuel Cell (DMFC) Application	2006/07
82	Development of Polyethersulfone-Activated Carbon Mixed Matrix Membrane for Oxygen Enrichment	2006/07
83	Effect of Degree of Sulfonated and Tungstosilic Acid Composition on the Preparation of Mixed Matrix Membrane for Direct Methanol Fuel Cell	2007/08
84	Effect of Different Molecular Weights of Polymeric Additive and Air Gap Length on the Morphology and Separation Performance of Nanofiltration Hollow Fiber Membranes	2007/08
85	Effect of Poly (Vinyl) pyrrolidone K15 Concentration and Air Gap Length on the Morphology and separation Performance of Nanofiltration Hollow Fiber Membrane	2007/08

FINAL YEAR THESIS PROJECTS SUPERVISED

	Title	Session
86.	Effects of Heat Treatment On The Plasticization of Asymmetric Polysulfone Membrane For Gas Separation	2009/10
87.	Carbon Nanotube-Based Polyimide Mixed Matrix Membrane for Gas Separation	2010/10
88.	The Effect of Titanium Dioxide on Modified Hollow Fiber Membrane for The Treatment of Refinery Produced Wastewater	2010/10
89.	Nanotube Clays As New Innovative fillers For Mixed Matrix Membrane for Gas Separation	2010/10
91.	Effect of Cross Linking Reagents On The Performance of Polyimide	2010/11



Membrane for Gas Separation		
92.	Effects of Thermal Annealing On Cross-Linked Reaction and Performance of Polyimide Membrane for Gas Separation	2010/11
93.	Effect of Cloisite 15A Loading on Barrier Properties of Sulfonated Poly Ether Ether Ketone Membrane with Compatibilizer (Tap) for Direct Methanol Fuel Cell Application	2010/11
94.	The Effect of Titanium Dioxide on Modified Hollow Fiber Membrane for The Treatment of Refinery Produced Wastewater	2011/12
95.	Preparation Plasticization Suppression Technique of Polysulfone Membrane via Post Treatment Step	2011/12

RESEARCH PROJECT UNDERTAKEN

April 1993 – Sept. 1994	:	Conducted a research project entitled “Rate of Combustion of Natural Gas Flame”
Oct. 1994 – Aug. 1997	:	Conducted a research project entitled “Novel Studies of Molecular Orientation in Synthetic Polymeric Membranes for Gas Separation”
1 Sept. 1992 – 31 Aug. 1994	:	Project Leader for the research project entitled “Development of gas separation membranes”, budget approved RM 200,000
May 98 – May 2000	:	Project leader for the research project entitled “Effect of fabrication conditions on the performance of asymmetric membranes for gas separation”. Budget approved by RMC RM 15,000
June 1999 – present	:	Project Leader for the research entitled “Development of reverse osmosis for processing of drinking water” Budget approved by IRPA RM 300,000
June 1999 – present	:	Project Leader for the research entitled “Development of novel asymmetric membrane from a polymer blends for gas separation applications”. Budget approved by IRPA RM120,300.
Oct. 2000-April 2001	:	Project Leader for the research entitled “Development of novel hollow fiber membranes for liquid-liquid phase separation”. Budget approved by IRPA RM412,000.
Jan 2002-Dis. 2004	:	Project Leader for the research entitled “Development of membrane oxygen enrichment system for wastewater aeration using hollow fiber membranes”. Budget approved by IRPA RM305,000 (Vot 74003)
Aug. 2002- April 2005	:	Project Leader for the <i>Top-Down</i> Research Program entitled “Development of Carbon Nanotube for hydrogen and Natural Gas Storage”. Budget approved by IRPA RM 1,863,842.00 (Vot.74525)
April 2003-April 2006	:	Project Member for the research entitled “Development of Asymmetric Carbon Hollow Fiber Membrane for Gas Separation”. Budget approved by IRPA RM207,000 (Vot 74173)



Aug. 2002- April 2005	:	Member for the Top-Down Research Program entitled “Development, Testing and improvement of long term Performance for Proton Conducting Membranes. Budget approved by IRPA
July 2004-Jun 2005	:	Member for the research entitled “Formation and Characterization of mixed Matrix composite Materials for efficient Energy Gas Separation”. Budget approved by RMC RM49,900.
Jan 1990 – Sept. 1994	:	Member of the collaborative research project between Petroleum Research and Scientific Services (PRSS) and UTM entitled “Separation of CO ₂ from Natural Gas using Permeation Membranes”. Budget approved RM813,000
Nov. 1997 – Oct 2000	:	Member of the research project entitled “Development of Commercially Competitive Proton Exchange Membrane Fuel Cell Technique”. Budget approved RM4.4 million
Jan., 199 – Dis., 1999	:	Member for the research project entitled “Development of novel asymmetric membrane from a polymer blends for gas separation applications”. Budget approved by RMC RM19,000.
Oct., 1999 – Oct., 2000		Project Member for the research project entitled “Bacterial removal in water treatment using membrane” filtration system, Budget approved by RMC 20,000
Oct., 1999 – Oct., 2000	:	Project Member of the research project entitled “Immersed membrane filtration (IMF) for high quality drinking water production”. Budget approved by RMC RM 20,000.
Oct., 2004- Oct. 2007	:	Project Member of the research project entitled: “Development of Nanofiltration Membrane and Membrane system for Waste Treatment of Batik Industries in the East Coast of Malaysia. Budget approved by IRPA RM 258,000
Jan 2004 – Dis 2006		Project Leader for Development of a Dry-wet Spinning Machine and Processes for the Production of Polyacrylonitrile Fiber (Vot 74539). Budget approved RM 3.22 Juta
Dis 2006 – Nov 2008	:	Project Leader for Development of Novel Activated-MDEA Hollow Fiber Membrane Contactor for CO ₂ from Natural Gas Removal (Vot 79035). Budget approved RM 235,693
Dis 2006 – Nov 2008	:	Project Leader for Production of Pure Multi-Walled Carbon Nanotubes (MWNTs) by Using Catalytic Chemical Vapour Deposition (CCVD) System for Hydrogen Storage (Vot 79036). Budget approved RM 219, 193
June 2007-June 2009	:	Project Member for Development of High Performance Sulfonated Poly (Ether Ether Ketone) (SPEEK) Proton Exchange Membrane for Direct Methanol Fuel Cell (DMFC) Application. Budget approved RM 157, 500 (Vot 79138)
June 2007-June 2009	:	Project Leader of Development of New Solvent-Free Coagulation Process for the Production of Polyacrylonitrile-Based Carbon Fiber. Budget approved RM 231,500. (Vot 79136)
Dec 2006-Dec. 2008	:	Project Member for Development of Mixed Matrix Polymer



		Electrolyte Membranes for Proton Exchange Membrane Fuel Cell (PEMFC). Budget approved RM 261, 396 (Vot 79040)
Dec 2006-Dec. 2008	:	Project Member for Development of Third Generation High Performance Hybrid Membranes for Hydrocarbon Gases Purification. Budget approved RM 256,393 (Vot 79039)
July 2007-June 2009	:	Project Leader , Development of Novel Carbon nanotubes-Mixed matrix Membranes for Hydrocarbon Gases Purification. Budget approved RM 200, 000 (Vot 79116)
Dec. 2007- Dec. 2009	:	Project Leader , Development of Advanced Antibacterial Hybrid Nanofiltration Membrane for Environmental and Biological Applications. Budget approved RM 211,500 (Vot 79135)
February 2012-Feb 2014	:	Project Member , Single-Step Development of Nanosize Mixed Metals Oxide Electrolyte using a Novel Sol-Gel Technique for Solid Oxide Fuel Cell. Budget approved RM242, 200
FRGS FUND		
1 September 2007- 31 August 2009	:	Project Leader of Mechanistic Studies for Carbon Nanotubes Growth and Adsorption. Budget approved RM 13,700
December 2009 – November 2011	:	Project Leader of Studies of the effects of inorganic nano-filler on SPEEK nanocomposite membrane properties. Budget approved RM 38,000
August 2000-July 2012	:	Project Member , Fundamental Studies of Formation of Ultrafiltration Membranes via Controlling Coagulation Value during Phase Inversion Process, Budget approved RM50,740
August 2000-July 2012	:	Project Member , Synthesis and Characterization Studies on Surface Modification of Multilayer and Hybrid porous Membrane via Different Fabrication Methods. Budget approved RM61,000
August 2000-July 2012	:	Project Member , Consolidation of Ceramic Porous Membrane via Different Fabrication Methods. Budget approved RM65,000
August 2000-July 2012	:	Project Member , Synthesis and Anti-Fouling Performance Studies of Polysulfone-Grafted-Methyl Methacrylate Membrane. Budget approved RM50,740

TOP-DOWN LONG TERM RESEARCH GRANT SCHEME (LRGS) RESEARCH PROJECT AWARDED BY MINISTRY OF HIGHER EDUCATION

1. **A.F. Ismail** et al., Program Leader, *Sustainable Membrane-Based Manufacturing*. The budget approved is RM 6,000,000. August 2011 – August 2014.

**CONTRACT RESEARCH PROJECT UNDERTAKEN (Industrial Grant Scheme, (IGS))**

1. **A. F. Ismail** et al., Project Leader for Research and Development to produce commercially viable and truly 'green' (non-ozone depleting and non-global warming) hydrocarbon refrigerants as substitutes to CFCs and other synthetic refrigerants for the air conditioning and refrigeration industries. (Collaborative works between Ecocool Technologies Sdn. Bhd. and Membrane Research Unit, UTM). The budget approved by IGS, MOSTE is RM3.9 million
2. **A. F. Ismail** et al., Project Leader for Research and Development of a high purity Chemical Dispense System (Collaborative works between Rancang Inovatif Sdn. Bhd. and Membrane Research Unit, UTM). The budget approved is RM 1.965 million

CONTRACT RESEARCH PROJECT UNDER COMMERCIALIZATION OF R&D FUND (CRDF), Malaysian Technology Development Corporation.

1. **A. F. Ismail** et al., Development of a Pilot Plant Scale Membrane Separation System For Water Desalination. The budget approved is RM1.461 million.

CONTRACT RESEARCH PROJECT AWARDED BY MINISTRY OF HIGHER EDUCATION

1. S. H. Tapsir, N. Moktar, **A. F. Ismail**, A. K. Mirasa, S. Sanip and F. A. Manan. Deputy Project Leader for A Study on University-Industry Partnership: Fostering Strategic linkages at Institutes of Higher Learning Malaysia. The budget approved RM 103,000

CONTRACT RESEARCH PROJECT AWARDED BY PETRONAS RESEARCH SDN BHD

1. **A. F. Ismail et al.** Development of Membrane Material for High CO₂ Gas Field Separation System. The budget agreed RM2,550,000 (September 2009-June 2012)

INTERNATIONAL CONTRACT RESEARCH PROJECT AWARDED BY THE BRITISH COUNCIL

1. Prof. Dr. Ahmad Fauzi Ismail- PMI2 Strategic Alliances and Partnerships project, Research Co-operation, The British Council bagi penyelidikan bertajuk "Multi-functional membranes for energy applications and CO₂ capture" Budget approved RM 249,750
This project was conducted in collaboration with Prof. Kang Li from Imperial College, London.

INTERNATIONAL CONTRACT RESEARCH PROJECT AWARDED BY INDUSTRIAL MEMBRANE RESEARCH LABORATORY, UNIVERSITY OF OTTAWA, CANADA

1. Prof. Dr. Ahmad Fauzi Ismail, Surface Modifying Macromolecules (SMMs) for the Development of Novel Membranes. Budget allocated RM 10,000.
This project was awarded by Industrial Membrane Research Laboratory, University of Ottawa, Canada.

PUBLICATIONS AND PAPER PRESENTED**THESIS**

1. **Ahmad Fauzi Ismail**, Novel Studies of Molecular Orientation in Synthetic Polymeric Membranes for Gas Separation, Ph.D. Thesis, University of Strathclyde, Scotland, UK (1997).



2. **Ahmad Fauzi Ismail**, Mathematical Modelling of Gas Separation System For Hollow Fiber Membranes, Master Thesis, Universiti Teknologi Malaysia (1992)
3. **Ahmad Fauzi Ismail**, Paraffin Deposition Model, B.Sc. Thesis, Universiti Teknologi Malaysia (1989)

PUBLICATIONS

Journals

1. A. Hassan, **A. F. Ismail** and H. Saidi, Gas separation using polymeric membrane: The recent development and its future, **Bulletin FKKKSA**, 1991.
2. **A. F. Ismail**, S. J. Shilton, I. R. Dunkin and S. L. Gallivan, Direct measurement of rheologically induced molecular orientation in gas separation hollow fiber membranes and effects on selectivity, **J. Membrane Sci.**, 126 (1997) 133- 137.
3. S. J. Shilton, **A. F. Ismail**, P. J. Gough, I. R. Dunkin and S. L. Gallivan, Molecular orientation and the performance of synthetic polymeric membranes for gas separation, **Polymer**, 38 (9) (1997) 2215-2220.
4. **A. F. Ismail**, S. J. Shilton, I. R. Dunkin and S. L. Gallivan, Polysulfone hollow fiber membranes for gas separation with enhanced selectivity, **J. Membrane Sci.**, 139 (1998) 285-286.
5. **A. F. Ismail**, I. R. Dunkin, S. L. Gallivan and S. J. Shilton, Production of super selective polysulfone hollow fiber membranes for gas separation, **Polymer**, 40 (1999) 6499-6506.
6. Sharpe I.D.; **Ismail A.F.**; Shilton S.J.; Danovaro R.; Marrale D.; Della Croce N.; Parodi, P, Fabiono, M., Biochemical composition of sedimentary organic matter and bacterial distribution in the Aegean Sea trophic state and pelagic-benthic coupling, **Journal of Sea Research**, 42 (2) (1999) 117-129.
7. D. Sharpe, **A. F. Ismail** and S. J. Shilton, A study of extrusion shear and forced convection residence time in the spinning of polysulfone hollow fiber membranes for gas separation, **Separation and Purification Technology**, 17 (1999) 101-109.
8. **A. F. Ismail** and S. J. Shilton, The practical use of resistance modeling to interpret the gas separation properties of hollow fiber membranes, **Jurnal Teknologi**, No. 32(F), (Jun 2000) 93-101
9. **A. F. Ismail** and S. Haron, Development of a simulation model for hollow-fiber membrane system for N₂-H₂ separation, **Jurnal Teknologi**, No. 32(F), (Jun 2000) 45-56
10. **A. F. Ismail** and D. L. Ik Bing, Carbon membrane for gas separation: latest development and future directions, **J. Membrane Sci.**, 193 (1) (2001) 1-18.
11. **A. Idris**, **S. Iswandi**, **S. J. Shilton**, **A. F. Ismail**, **Effect of Methanol Concentration on the Performance of asymmetric cellulose acetate reverse osmosis membranes using dry/wet phase inversion technique**, **Jurnal Teknologi**, No. 34(F), **Jun 2001: 39-50.**
12. **A. F. Ismail**, **F. K. Chan** and **C. Y. Tan**, **Effects of feed pressure and retentate flow rate on the performance of membrane oxygen enrichment system**, **Jurnal Teknologi**, No. 34(F), **Jun 2001: 11-20.**
13. Ani Idris, M. Y. Noordin, **A. F. Ismail** and S. J. Shilton, Study of Shear Rate Influence on the performance of cellulose acetate hollow fiber membranes, **J. Membrane Sci.**, 202 (2002) 205-215.
14. **A. F. Ismail** and L. Wong, Latest development of penetrant induced plasticization phenomenon in glassy polymers and its application for gas separation membrane, **Separation and Purification Technology**, 27(3) (2002) 173-194.



15. A. Idris, **A. F. Ismail** and S. J. Shilton Optimization of cellulose acetate hollow fiber membrane production using Taguchi Method, **Journal of Membrane Science**, 205 (2002) 223-237.
16. **A. F. Ismail** and L. P. Yean, Effect of shear rate on morphology and gas separation performance of asymmetric polysulfone membranes, **ASEAN Journal of Chemical Engineering**, 2(1), (2002) 67-74.
17. Ani Idris, S. Gordeyev, **A. F. Ismail** and S. J. Shilton, Effect of Rheological Behaviour of Cellulose Acetate Spinning Solution on Reverse Osmosis Hollow Fiber Membranes, **Jurnal Teknologi**, 37(F) Dec. 2002, 1-14.
18. S. M. S. T. Chik and **A. F. Ismail**, Development and Characterization of Polyacrylonitrile (PAN) Carbon Hollow Fiber Membrane, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 843-854
19. **A. F. Ismail**, Abd. Rahman Hassan and B. C. Ng, Effect of shear rate on the performance of nanofiltration membrane for water desalination, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 833-842.
20. **A. F. Ismail**, S. M. Ibrahim and N. S. Nasri, Effects of Dope Extrusion Rate on the Morphology and Gas Separation Performance of hollow fiber membranes for O₂/N₂ Separation, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 879-889.
21. N. A. Zubir and **A. F. Ismail**, Effect of Sintering Temperature on the Morphology and Mechanical Properties of PTFE Membranes as a Base Substrate for proton exchange membrane, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 823-831.
22. **A. F. Ismail** and W. A. Hafiz, Effect of polysulfone concentration on the performance of membrane-assisted lead acid battery, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 815-821.
23. **A. F. Ismail**, N. Ridzuan and S. A. Rahman, Latest Development on Membrane Formation for Gas Separation, **Songklanakarin Journal of Science and Technology**, 24 (Suppl.) (2002), 1025-1043.
24. Ani Idris, **A.F. Ismail**, S.J. Shilton, R. Roslina, M. Musa, The Deduction of Fine Structural Details of Reverse Osmosis Hollow Fiber Membranes Using Surface Force-Pore Flow Model, **Separation and Purification Technology**, 29 (2002) 217-227.
25. **A. F. Ismail** and L. Wong, Suppression of Plasticization in Polysulfone membranes for Gas Separation using Heat Treatment Technique, **Separation and Purification Technology**, 30 (2003) 37-46.
26. **A. F. Ismail**, P. Y. Lai, Effects of Phase Inversion and Rheological Factors on Formation of Defect-Free and Ultrathin-Skinned Asymmetric Polysulfone Membranes for Gas Separation, **Separation and Purification Technology**, 33 (2) (2003) 127-143.
27. **A. F. Ismail**, P. Y. Lai, Review on the development of defect-free and ultrathin-skinned asymmetric membranes for gas separation through manipulation of phase inversion and rheological factors, **Journal of Applied Polymer Science**, 88(2) (2003) 442-451.
28. **A. F. Ismail** and L. I. B. David, Future Direction of R&D in Carbon Membranes for Gas Separation, **Membrane Technology**, (2003) 4-8.
29. L. I. B. David and **A. F. Ismail**, The Influence of the Thermastabilization Process and Pyrolysis Conditions on the Polyacrylonitrile Carbon Membranes for O₂/N₂ Separation, **Journal of Membrane Science**, 213 (2003) 285-291
30. A. Idris, **A. F. Ismail**, M. Noorhayati, S.J. Shilton, Rheologically assessment of cellulose acetate spinning solution and its influence on reverse osmosis hollow fiber membrane performance, **Polymer Testing**, 22 (3) (2003) 319-325



31. **A. F. Ismail**, B. C. Ng, W. A. W. Abdul Rahman, Effects of shear rate and forced convection residence time on asymmetric polysulfone membranes structure and gas separation performance, **Separation and Purification Technology**, 33 (2003) 255-272.
32. S. M. Saufi and **A. F. Ismail**, Fabrication of Carbon Membrane for Gas Separation: A Review, **Carbon**, 42(2) (2004) 241-259.
33. **A. F. Ismail**, P. Y. Lai, Development of Defect-Free Asymmetric Polysulfone Membranes for Gas Separation using Response Surface Methodology, **Separation and Purification Technology**, 40 (2004) 191-207.
34. R. Abd Rahman, R. M. Illias, M. G. M. Nawawi, **A. F. Ismail**, O. Hassan and K. Kamaruddin, Optimization of Growth Medium for The Production of Cyclodextrin Glucanotransferase from *Basillus Stearothermophilus* HR1 using Response Surface Methodology, **Process Biochemistry**, 39 (2004) 2053-2060.
35. **A. F. Ismail** and A. R. Hassan, The Deduction of Fine Structural Details of Asymmetric Nanofiltration Membrane Using Theoretical Model, **J. Membrane Sci.**, 231 (1-2) (2004) 25-36
36. **A. F. Ismail** and S. N. Kumari, Potential Effect of Potting Resin on The Performance of Hollow Fiber Membrane Modules in a CO₂/CH₄ Gas Separation System, **Journal of Membrane Sci.**, 236 (2004) 183-191.
37. Suhaila M. Sanip, Nor Aziah Buang, Madzlan Aziz, Zaiton A. Majid, Yusran Sulaiman, Tee Jia Chee and **Ahmad Fauzi Ismail**, Surface Modification Due to Pretreatment of Carbon Materials for Hydrogen Storage, **Buletin Kimia**, No. 20 (1 & 2) (2004) 31-38,
38. S. Sanip, Y. Sulaiman, J. Dewi, N. A. Buang and **A. F. Ismail**, Surface modification of carbon materials via heat and acid treatment, **Journal of Solid State Science and Technology**, 11(2) (supplementary) 2004.
39. J. C. Lee, N. A. Buang, S. Sanip and **A. F. Ismail**, Characterization on series of support metal oxides catalysts for the synthesis of carbon nanotubes (CNT's), **Journal of Solid State Science and Technology**, 11(2) (supplementary) (2004)
40. Y. Sulaiman, J. C. Lee, N. A. Buang, M. Aziz, S. Sanip and **A. F. Ismail**, SEM of as-synthesized nano-carbon using different catalyst, **Journal of Solid State Science and Technology**, 11(No) 2 (supplementary) (2004).
41. N. A. Razak, K. A. Arshad, A. A. Rahman, S. Sanip and **A. F. Ismail**, Artificial Neural Network modeling for the prediction of carbon surface area, **Journal of Solid State Science and Technology**, 11(2) (supplementary) (2004)
42. K. A. M. Yaakob, R. Husin, P. Marwoto, S. Sanip and **A. F. Ismail**, Design of the DC plasma enhanced chemical vapor deposition (DC-PECVD) for the synthesis of carbon nanotubes, **Journal of Solid State Science and Technology**, 11(2) (supplementary) (2004).
43. B. C. Ng, **A. F. Ismail**, M.S Abdullah, H. Hasbullah, S. Sanip, *Formation of Asymmetric polysulfone Flat sheet Membrane for Gas Separation: Rheological Assessment.*, **Jurnal Teknologi**, No. 41(F) (2004) 73-88.
44. S. M. Sanip, Z. R. Z. Abidin, N. Buang, M. Aziz and **A. F. Ismail**, Effects of Heat Treatment on Synthetic Graphites For Carbon Nanotubes, **The International Journal of Nanoscience**, 3 (4 & 5) (2004) 1-5
45. T. E. Wong, R. M. Illias, M. M. Salleh, O. Hassan, K. Kamaruddin, R. A. Rahman and **A. F. Ismail**, Initial Screening of Fermentation Variables for the Production of Cyclomalto-dextrin Glucanotransferase (CGTase) from Local Isolated *Basillus stearothermophilus* HR1, Dev. **Chem. Eng. Mineral Process.** (2005) 13 (5/6) 541-547.



46. N. Buang, M. Aziz, S. Sanip, J.C. Tee, Z. Abidin and **A. F. Ismail**, Effect of Pretreatment of Synthetic and Natural Carbons as Starting Materials for Carbon Nanotubes, **J. Metastable and Nanocrystalline Materials**, 23 (2005) 285-288.
47. N. A. Zubir, **A. F. Ismail**, M. M. Nasef, K. Z.M. Dahlan, Physico-chemical study of sulfonated polystyrene pore-filled electrolyte membranes by electrons induced grafting, **J. Membrane Science**, 254 (2005) (1-2), 189-196.
48. **A. F. Ismail** and W. A. Hafiz, Development of gas separation membrane membrane assisted-lead acid battery, **Journal of Power Sources**, 141(2005) 177-187.
49. H. K. Sian, M. Said, O. Hassan, K. Kamaruddin, **A. F. Ismail**, R. A. Rahman, N. A. N. Mahmood and R. M. Illias, Purification and characterization of cyclodextrin glucanotransferase from alkalophilic Bacillus sp. G1, **Process Biochemistry**, 40 (2005) 1101-1111.
50. **A. F. Ismail** and M. I. Mustaffar, R. M. Illias, Effect of dope extrusion rate on morphology and performance of hollow fiber ultrafiltration membrane, **Separation Science and Technology**, 49 (2006), Issue 1, 10-19.
51. **A. F. Ismail** and A. R. Hassan, Formation and Characterization of Asymmetric Nanofiltration Membrane: Effect of Shear Rate and Polymer Concentration, **Journal of Membrane Science**, 270, 1-2, (2006), 57-72.
52. **A. F. Ismail** and M. I. Mustaffar, R. M. Illias, Effect of bore fluid and dope extrusion rate on morphology and performance of hollow fibers membrane for ultrafiltration, **Separation and Purification Technology**, 49(1) (2006) 10-19.
53. M.M. Nasef, N.A. Zubir, **A.F. Ismail**, M. Khayet, K.Z.M. Dahlan, H. Saidi, R. Rohani, T. I. S. Ngah and N.A. Sulaiman, PSSA pore-filled PVDF membranes by simultaneous electron beam irradiation: Preparation and transport characteristics of protons and methanol, **Journal of Membrane Science**, 268(1) (2006) 96-108.
54. M.M. Nasef, N.A. Zubir, **A.F. Ismail**, K.Z.M. Dahlan, H. Saidi and M. Khayet, Preparation of radiochemically pore-filled polymer electrolyte membranes for direct methanol fuel cells, **Journal of Power Sources**, 270(1-2) (2006) 57-72.
55. A. W. Zularisam, **A. F. Ismail** and R. Salim, Behaviours of Natural Organic Matter (NOM) in Membrane Filtration for Surface Water Treatment – A Review, **Desalination**, 194(1-3) (2006) 211-231
56. **A. F. Ismail** and N. Yaacob, Performance of treated and untreated asymmetric polysulfone hollow fiber membrane in series and cascade module configurations for CO₂/CH₄ gas separation system, **Journal of Membrane Science**, 275 (2006) (1-2) 151-165.
57. Mohamed Nasef, Nor Aida Zubir, **A. F. Ismail** and Mohamed Khayet Sulfonated radiation grafted polystyrene pore-filled poly(vinylidene fluoride) membranes for direct methanol fuel cells: structure–property correlations, **Desalination**, 200(1-3)(2006) 642-644
58. N. A. Buang, Z. A. Majid, Y. Sulaiman, S. M. Sanip and **A. F. Ismail**, Effect of addition of Ni metal catalyst onto the Co and Fe supported catalyst for the formation of carbon nanotubes, **Journals of Porous Materials**, 13 (3) (2006) 331-334
59. Suhaila M. Sanip, **A. F. Ismail**, Madzlan Aziz, Nor Aziah buang, Zaiton A. Majid and Mohd. Abdul Raziz Saidin, Hydrogen Sorption Capacity of As-grown Multiwalled Nanotubes (MWNTs), **J. Solid St. Sci and Technol. Letters**, 13(1) (2006) 151-156.
60. Suhaila M. Sanip and **A. F. Ismail**, Determination of Hydrogen Storage Capacity of Carbon Nanotubes via Volumetric Differential Pressure Technique, **J. Solid St. Sci. and Technol. Letters**, 13(2) (Suppl.) (2006) 153-154.



61. Yusran Sulaiman, Nor Aziah Buang, Zaiton Abd. Majid and **A. F. Ismail**, Raman and TEM Studies of Carbon Nanotubes Produced by Bimetallic Catalysts System, **Journal of Solid State Science and Technology Letters**, 13(1) (2006) 157-161.
62. J. C. Tee, N. A. Buang, S. M. Sanip & **A. F. Ismail**, Synthesis of Multi-Walled Carbon Nanotubes (MWNTs) over Anodic Aluminium Oxide (AAO) Template (O103), **Journal Solid State Science and Technology**, 13(2) (2006) 151-152.
63. **A. F. Ismail**, T.D. Kusworo, A. Mustafa and H. Hasbullah, Advanced Materials for Membrane-Based Gas Separation, **Applied Membrane Science and Technology**, 3 (2006) 29-64
64. Firas N. Ridha, Rosli M. Yunus, Mohd Rashid, **Ahmad F. Ismail**, Dynamic delivery analysis of adsorptive natural gas storages at room temperature, **Fuel Processing Technology**, 88(4) (2007) 349-357.
65. M. Z. A. Wahab, **A. F. Ismail** and M. R. Salim, Dissolved natural organic matter (nom) fouling haracteristics and flux recovery of submerged ultrafiltration (UF) membrane reactor for drinking water production, communicated, in **Separation Science and Technology**.
66. Firas N. Ridha, Rosli M. Yunus, Mohd Rashid, **Ahmad F. Ismail**, Thermal transient behavior of an ANG storage during dynamic discharge phase at room temperature, **Applied Thermal Engineering**, 27 (2007) 55-62.
67. Firas N. Ridha, Rosli M. Yunus, Mohd. Rashid and **Ahmad F. Ismail**, Thermal analysis of adsorptive natural gas storages during dynamic charge phase at room temperature, **Experimental Thermal and Fluid Science**, 32 (1)(2007) 14-22
68. A.W. Zularisam, **A.F. Ismail**, M.R. Salim, Mimi Sakinah, Roles of natural organic matter (NOM) fractions on fouling characteristics and flux recovery of ultrafiltration membrane. **Desalination**, 212 (1-3) (2007) 191-208.
69. M. Z. A. Wahab, **A. F. Ismail** and M. R. Salim, Ultrafiltration of Natural Organic Matter (NOM): Effect of NOM Characteristics on Membrane Rejection Mechanisms in Drinking Water Process, **The Malaysian Journal of Science**, 26 (1) 97-107 (2007).
73. J. Jaafar, **A.F. Ismail** and A. Mustafa, Physicochemical study of poly(ether ether ketone) electrolyte membranes sulfonated with mixtures of fuming sulfuric acid and sulfuric acid for direct methanol fuel cell application, **Materials Science and Engineering: A**, 460-461 (2007) 475-484.
70. **A.F. Ismail** and A.R. Hassan, Effect of additive contents on the performances and structural properties of asymmetric polyethersulfone (PES) nanofiltration membranes, **Separation and Purification Technology**, 55(1) (2007)98-109.
71. A.W. Zularisam, **A.F. Ismail**, M.R. Salim, Mimi Sakinah and O. Hiroaki, Fabrication, fouling and foulant analyses of asymmetric polysulfone (PSF) ultrafiltration membrane fouled with natural organic matter (NOM) source waters, **Journal of Membrane Science**, 299 (1-2) (2007) 97-113
72. M.H.D. Othman, **A.F. Ismail** and A. Mustafa, Proton Conducting Composite Membrane from Sulfonated Poly (Ether Ether Ketone) and Boron Orthophosphate for Direct Methanol Fuel Cell Application, **Journal of Membrane Science**, 299 (1-2)(2007)156-165.
73. M.S.A. Rahaman, **A.F. Ismail** and A. Mustafa, A review of heat treatment on polyacrylonitrile fiber, **Polymer Degradation and Stability**, 92 (2007) 1421-1432.
74. M.A. Rahman, **A.F. Ismail** and A. Mustafa, The effect of residence time on the physical characteristics of PAN-based fibers produced using a solvent-free coagulation process, **Materials Science and Engineering: A**, 448(1-2) (2007) 275-280.
75. A.M. Mimi Sakinah, **A.F. Ismail**, Rosli Md Illias and Osman Hassan, Fouling Characteristics and autopsy of a PES ultrafiltration membrane in cyclodextrins separation, **Desalination**, 207(1-3) (2007)227-242.



76. A.R. Hassan, Nora'aini Ali, Norhidayah Abdull and **A.F. Ismail**, A theoretical approach on membrane characterization: the deduction of fine structural details of asymmetric nanofiltration membranes, **Desalination**, 206 (1-3) (2007)107-126.
77. M.H.D. Othman, **A.F. Ismail** and A. Mustafa, Physico-Chemical study of Sulfonated Poly (Ether Ether Ketone) membranes for Direct Methanol Fuel Cell Application, **Malaysian Polymer Journal**, 2 (1) 2007, 10-28
78. **A.F. Ismail** and Tutuk D.K., Fabrication and characterization of polyimide/polyethersulfone-fumed silica mixed matrix membrane for gas separation, **Reactor**, vol 11, (2007) 30-37.
79. T. D. Kusworo, **A. F. Ismail**, A. Mustafa and T. Matsuura, Dependence of Membrane Morphology and Performance on Preparation Conditions: The Shear Rate Effect in Membrane Casting, **Separation and Purification Technology**, 61(3), (2008) 249-257.
80. **A.F. Ismail**, T.D. Kusworo, and A. Mustafa, Enhanced gas separation performance of polyethersulfone mixed matrix hollow fiber membranes using novel Dynasylan Ameo silane agent, **Journal of Membrane Science**, 319 (2008) 306-312
81. Sakinah A.M.M., **A. F. Ismail** , Rosli M.I., Osman H., Zularisam A.W., T. Matsuura (2007). Cyclodextrin Production in Hollow Fiber Membrane Reactor System: Effect of Substrate Preparation, **Separation and Purification Technology**, 63 (2008) 163–171
82. Sakinah A.M.M., **A. F Ismail**, Rosli M.I., Osman H., Zularisam A.W. (2007). Role of starch pretreatment temperature on types of produced cyclodextrins from raw tapioca starch. **Malaysian Journal of Science**, 27(1) (2008) 101-110
83. A.M. Mimi Sakinah, **A.F. Ismail**, R.M. Illias, A.W. Zularisam, O. Hassan, T. Matsuura., Cyclodextrin production in hollow fiber membrane reactor system: Effect of substrate preparation, **Separation and Purification Technology**. 63 (1) (2008)163-171
84. **A.F. Ismail**, M.A. Rahman, A. Mustafa and T. Matsuura, The effect of processing conditions on a polyacrylonitrile fiber produced using a solvent-free free coagulation process, **Materials Science and Engineering: A**, 485(1-2) (2008) 251-257
85. W.A.W. Rafizah and **A.F. Ismail**, Effect of carbon molecular sieve sizing with poly(vinylpyrrolidone) K-15 on carbon molecular sieve-polysulfone mixed matrix membrane, **Journal of Membrane Science**, 307 (1) (2008) 53-61.
86. **A. F. Ismail**, R.A.Rahim, and W. A. W. Abdul Rahman, Characterization of Polyethersulfone/Matrimid® 5218 Miscible Blend Mixed Matrix Membranes for O₂/N₂ Gas Separation, **Separation and Purification Technology**. 63 (1) (2008) 200-206
87. **A.F. Ismail** , P. S. Goh, J. C. Tee, S. M. Sanip and M. Aziz, A review of purification techniques for carbon nanotubes, **NANO: Brief Reports and Reviews**, 3, 3 (2008) 127–143
88. **A.F. Ismail**, M.A. Rahman, A. Mustafa and T. Matsuura, The effect of processing conditions on a polyacrylonitrile fiber produced using a solvent-free free coagulation process, **Materials Science and Engineering: A**, 485, 1-2, (2008), 251-257
89. M.N.A. Mohd Norddin, **A.F. Ismail**, D. Rana, T. Matsuura, A. Mustafa and A. Tabe-Mohammadi, Characterization and performance of proton exchange membranes for direct methanol fuel cell: Blending of sulfonated poly(ether ether ketone) with charged surface modifying macromolecule, **Journal of Membrane Science**, 323 (2) (2008) 404-413
90. Tutuk D.K., **A.F. Ismail**, K. Li and A. Mustafa, The effect of type zeolite on the gas transport properties of polyimide-based mixed matrix membranes, **Reactor**, 13 (2008) 68-77



91. I. Ratman, **A. F. Ismail**, The Influence of Natural Gas Impurities to the Surface Tension of Blended Piperazine-N-Methyldiethanolamine (MDEA) solution, **Reactor**, **13 (2008) 59-67**
92. **A.F. Ismail**, A. Mustafa, M.A. Rahman, Effect of Blending Temperature on the Characteristics of Modified Polyacrylonitrile Homopolymer, **Modern Applied Science**, 2 (2) (2008) 131-141.
93. **Ismail, A.F.** and Lau, W. J., Influence of feed conditions on the rejection of salt and dye in aqueous solution by different characteristics of hollow fiber nanofiltration membrane. **Desalination and Water Treatment**. 6 (2009) 281-288
94. N. Bolong, **A.F. Ismail**, M.R. Salim, D. Rana, and T. Matsuura, Charged Surface Modifying Macromolecule (cSMM) Blends for Water Application, **AIP Index Conference Proceedings 1136**, (2008) 84.
95. H. Basri, **A.F. Ismail**, and M. Aziz., Effect of Different Incorporation Route on the Properties of Polyethersulfone-Silver Membrane, **AIP Index Conference Proceedings 1136**, 93.
96. S.M. Sanip, **A.F. Ismail**, M. Aziz, and T. Soga., Cyclodextrin-functionalized Carbon Nanotubes for Mixed Matrix Membrane, **AIP Index Conference Proceedings 1136**,196.
97. **A.F.Ismail**, W.R.Rahman, and F. Aziz., Development of Polysulfone (PSF)-Carbon Molecular Sieve (CMS) Mixed Matrix Membrane (MMM) for O₂/N₂ Gas Separation, **AIP Index Conference Proceedings 1136**, 201.
98. J.C.Tee, M. Aziz and **A.F. Ismail.**, Effect of Reaction Temperature and Flow Rate of Precursor on Formation of Multi-Walled Carbon Nanotubes, **AIP Index Conference Proceedings 1136**, (2008) 214.
99. M. A. R. Saidin, M. Aziz and **A.F.Ismail**, Parametric Studies of Thin Film Nickel Catalyst for the Growth of Carbon Nanotube, **AIP Index Conference Proceedings 1136**, (2008) 219.
100. P.S Goh, **A.F. Ismail** and M. Aziz, Effect of Acid Oxidation on the Dispersion Property of Multiwalled Carbon Nanotubes, **AIP Index Conference Proceedings 1136**, (2008) 224.
101. V. Devaraj, **I. Ahmad Fauzi** and M. N. Zairossani, Characterisation of Foulants in a PVDF Tubular Cross Flow Ultrafiltration Membrane by ATR/FTIR Spectrometry, **Journal Rubber Research Volume 12(2) (2008)**, 71.
102. A.M Mimi Sakinah and **A.F. Ismail**, Effects of Fabrication Parameters on the Morphology of Porous Polysulfone Hollow Fiber Membranes, **Jurnal Teknologi No. 49 (F)**, (2008) 81-89.
103. M.N.A Mohd-Norddin, **A.F. Ismail**, T. Matsuura and D. Rana, Charges Surface Modifying Macromolecules in Polymer Electrolyte Membrane, **Jurnal Teknologi No. 49 (F)**, (2008) 91-102.
104. **A.F. Ismail** and L.W. Jye, The Effect of Structural and Electrical Properties of Hollow Fiber Nanofiltration Membranes on Salt and Dye Removal Under Different Solution Properties, **Jurnal Teknologi No. 49 (F)**, (2008) 103-113.
105. M.A.R. Saidin, M. Aziz and **A.F. Ismail**, Parametric Studies of Thin Film Nickel Catalyst for the Growth of Carbon Nanotubes, **Jurnal Teknologi No. 49 (F)**, (2008) 115-121.
106. N. Bolong, **A.F. Ismail**, M.R. Salim and T. Matsuura, Miscibility Characteristics of Poly (Ethersulfone (Pes) Hollow Fiber Membranes with Charged-Surface Modifying Macromolecules (cSMM) for Water Separations Applications, **Jurnal Teknologi No. 49 (F)**, (2008) 123-132.
107. H. Basri, **A.F. Ismail** and M. Aziz, Effect of Different Solvent in the Preparation of Polyethersulfone (Pes)-Ag Polymer Composite, **Jurnal Teknologi No. 49 (F)**, (2008) 133-140.



108. T.J Chee, M. Aziz and **A.F. Ismail**, Effect of Reaction Temperature and Flow Rate of Precursor on Formation of Multi-walled Carbon Nanotubes, **Jurnal Teknologi No. 49 (F)**, (2008) 141-147.
109. Lau, W. J. and **Ismail, A.F.**, Theoretical studies on the morphology and electrical properties of blended PES/SPEEK nanofiltration membranes using different sulfonation degree of SPEEK, **J. Membr. Sci.** 334 (2009) 30-42
110. Woei-Jye Lau, **A. F. Ismail**, Polymeric nanofiltration membrane for textile dyeing wastewater treatment: Preparation, performance evaluation, transport modelling, and fouling control-A Review, **Desalination**, 245 (2009) 321-348
111. M.N.A. Mohd Norddin, **A.F. Ismail**, D. Rana, T. Matsuura and S. Tabe, The effect of blending sulfonated poly(ether ether ketone) with various charged surface modifying macromolecules on proton exchange membrane performance, **Journal of Membrane Science**, 328 (2009) 148-155
112. W.J Lau and **A.F. Ismail**, Theoretical studies on structural and electrical properties of PES/SPEEK blend nanofiltration membrane, **AIChE Journal** Vol. 55, (2009) 2081-2093.
113. Bolong, N., **Ismail, A.F.**, Salim, M.R., Rana, D., Matsuura, T. Development and characterization of novel charged surface modification macromolecule to polyethersulfone hollow fiber membrane with polyvinylpyrrolidone and water, **Journal of Membrane Science** 331 (1-2) (2009) pp. 40-49
114. Mimi Sakinah, A.M., **Ismail, A.F.**, Hassan, O., Zularisam, A.W., Illias, R.Md. Influence of starch pretreatment on yield of cyclodextrins and performance of ultrafiltration membranes, **Desalination** 238 (1-3) (2009) pp. 317-333
115. Bolong, N., **Ismail, A.F.**, Salim, M.R., Matsuura, T. A review of the effects of emerging contaminants in wastewater and options for their removal, **Desalination** 238 (1-3) (2009) pp. 229-246
116. **A. F. Ismail**, N. H. Othman, A. Mustafa, Sulfonated polyether ether ketone composite membrane using tungstosilicic acid supported on silica-aluminium oxide for direct methanol fuel cell (DMFC), **Journal of Membrane Science** 328 (1-2) (2009) pp. 18-29
117. Zularisam, A.W., **Ismail, A.F.**, Salim, M.R., Sakinah, M., Matsuura, T. Application of coagulation-ultrafiltration hybrid process for drinking water treatment: Optimization of operating conditions using experimental design, **Separation and Purification Technology** 65 (2) (2009) pp. 193-210
118. Mansourizadeh, **Ismail, A.F.** Hollow fiber gas-liquid membrane contactors for acid gas capture: A review, **Journal of Hazardous Materials**. Vol 171, Issues 1-3, 15 November 2009, 38-53
119. **A. F. Ismail**, P. S. Goh, S. M. Sanip, M. Aziz. Transport and Separation Properties of Carbon Nanotubes-Mixed Matrix Membranes, **Separation and Purification Technology**. Volume 70, Issues 1, 19 November 2009, 12-26
120. J. Jaafar, **A. F. Ismail**, T. Matsuura. Preparation and barrier properties of SPEEK/Cloisite 15A®/TAP nanocomposite membrane for DMFC application, **Journal of Membrane Science.**, Volume 345, Issues 1-2, 1 December 2009, Pages 119-127
121. S. A. Hashemifard, **A. F. Ismail** and T. Matsuura. Prediction of Gas Permeability Mixed Matrix Membrane Using Theoretical Model. **Journal of Membrane Science**, Volume 347, Issues 1-2, 1 February 2010, Pages 53-61.
122. W.J. Lau and **A. F. Ismail**. Effect of SPEEK Content on the Morphology and Electrical Properties of PES/SPEEK Blend Nanofiltration Membrane. **Desalination**, Volume 249, Issue 3, 25 December 2009, Pages 996-1005.
123. W. J. Lau and **A. F. Ismail**. Application of Response Surface Methodology in PES/SPEEK Blend NF Membrane for Dyeing Solution Treatment. **Membrane Water Treatment**. In Press.



124. S. M. Sanip, **A. F. Ismail**, M. Aziz and T.Soga, Functionalized Carbon Nanotubes For Mixed Matrix Membrane, **IEICE TRANS. ELECTRON.** Vol. E92-C, No. 12 Dec 2009, 1427-1431
125. J.C. Tee, **A. F. Ismail**, M. Aziz and T.Soga, *Influence of Catalyst Preparation on Synthesis of Multi-walled Carbon Nanotubes*, **IEICE TRANS. ELECTRON.** Vol. E92-C, No. 12 Dec 2009, 1421-1425
126. M.A. Aroon, **A.F. Ismail**, M.M. Montazer-Rahmati, T. Matsuura, A mathematical analysis of hollow fiber spinning: Bore and dope velocity profiles in the air gap, *Journal of Membrane Science*, Volume 348, Issues 1-2, 15 February 2010, Pages 13-20.
127. A. Mansourizadeh, **A.F. Ismail**, Effect of additives on the structure and performance of polysulfone hollow fiber membranes for CO₂ absorption, *Journal of Membrane Science*, Volume 348, Issues 1-2, 15 February 2010, Pages 260-267.
128. A. Mansourizadeh, **A.F. Ismail**, T. Matsuura, Effect of Operating Conditions on the Physical and Chemical CO₂ Absorption Through the PVDF Hollow Fiber Membrane Contactor, *Journal of Membrane Science*, Volume 353, Issue 1-2, (1 May 2010) 192-200.
129. S.A.Hashemifard, **A.F.Ismail**, T. Matsuura. A New Theoretical Gas Permeability Model Using Resistance Modeling For Mixed Matrix Membrane Systems, *Journal of Membrane Science*, Volume 350, Issues 1-2, 15 March 2010, pages 259-268.
130. M. A. Aroon, **A.F. Ismail**, M.M. Montazer-Rahmati, T. Matsuura, Effect of raw multi wall carbon nanotubes on morphology and separation properties of polyimide membranes, **Separation Science and Technology**, Vol. 45 No.16 (2010), 2287-2297.
131. Hatijah Basri, **Ahmad Fauzi Ismail**, Madzlan Aziz, Kazukiyo Nagai, Takeshi Matsuura, Mohd. Sohaimi Abdullah, Ng Be Cheer, Silver-filled Polyethersulfone Membranes for Antibacterial Applications -Effect of PVP and TAPaddition on silver dispersion, **Desalination** , Vol. 261 (2010), Issue 3, Pages 264-271.
132. F. Aziz and **A.F Ismail**, Preparation and characterization of cross-linked Matrimid® membranes using para-phenylenediamine for O₂/N₂ separation, **Separation and Purification Technology**, Volume 73, Issue 3, (2010) pp. 421-428.
133. A.Mataram, **A.F Ismail**, D. S. A. Mahmod and T. Matsuura, Characterization and mechanical properties of polyacrylonitrile/silica composite fibers prepared via dry-jet wet spinning process Letter, **Materials Letters**, Volume 64, Issue 17 (2010), Pages 1875-1878
134. M.A. Aroon, **A.F. Ismail**, M.M. Montazer-Rahmati, T. Matsuura, Morphology and permeation properties of polysulfone membranes for gas separation: Effects of non-solvent additives and co-solvent, **Separation and Purification Technology**, Volume 72, Issue 2, 20 April 2010, Pages 194-202.
135. S. Sanip, **A. F. Ismail**, P.S. Goh, B. C. Ng, M.S. Abdullah, T. Soga, T. Hayashi, M. Tanemura, Preparation and Characterization of Functionalized Carbon Nanotubes in Polyimide Mixed Matrix Membranes, **NANO** , Volume 5, Issue 4 (2010), 195-202,
136. H. Basri, **A.F. Ismail**, M. Aziz, Polyethersulfone (PES) ultrafiltration (UF) membranes with silver nitrate loading for antibacterial application, **Membrane Water Treatment**, Volume 2, Number 1, (January 2011), 25-37.
137. Gh. Bakery, **A. F. Ismail**, M. Shariaty, T. Matsuura, Effect of polymer concentration on the structure and performance of polyetherimide hollow fiber membranes, *Journal of Membrane Science*. Volume 363, Issues 1-2, 1 November 2010, Pages 103-111.



138. M.A. Aroon, **A.F. Ismail**, M.M. Montazer-Rahmati, T. Matsuura, Performance studies of mixed matrix membranes for gas separation: A review, **Separation and Purification Technology**, Volume 75, Issue 3, (20 November 2010) 229-242.
139. T.D. Kusworo, **A.F. Ismail**, Budiyono, I.N. Widiassa, S. Johari, Sunarso, CO₂ Removal from Biogas using Carbon Nanotubes Mixed Matrix Membranes, *International Journal of Science and Engineering*, Vol. 1(1) (2010) 1-6.
140. M.A. Aroon, **A.F. Ismail**, M.M. Montazer-Rahmati, T. Matsuura, Effect of chitosan as a functionalization agent on the performance and separation properties of polyimide-multi walled carbon nanotubes mixed matrix flat sheet membranes. **Journal of Membrane Science**, Volume 364, Issue 1-2 (15 November 2010) 309-317.
141. A. Mansourizadeh, **A.F. Ismail**, Effect of LiCl concentration in the polymer dope on the structure and performance of hydrophobic PVDF hollow fiber membranes for CO₂ absorption, **Chemical Engineering Journal**, Volume 165, Issue 3, (15 December 2010), 980-988.
142. P. S. Goh, B. C. Ng, **A. F. Ismail**, M. Aziz, Surfactant Dispersed Multi-Walled Carbon Nanotubes/Polyetherimide Mixed Matrix Membrane, **Solid State Sciences**, Volume 12, Issue 12, (December 2010) 319-328.
143. Budiyono, T.D. Kusworo, **A. F. Ismail**, I.N. Widiassa, Seno Johari, Sunarso, Synthesis and Characterization of Polyimide-Zeolite Mixed Matrix membrane for Biogas Separation, **International Journal of Basic and Applied Sciences**, Vol. 10(1) (2010) 1-7.
144. A. Mansourizadeh, **A.F. Ismail**, CO₂ Absorption with NaOH Solution through the Porous PVDF Hollow Fibre Membrane Contactor, **Journal of Applied Membrane Science & Technology**, Vol. 12, (Dec 2010), pages 1-6.
145. W.A.W. Rafidah, **A.F. Ismail**, T. Matsuura, S.A. Hashemifard, M. S. Abdullah, Structure and Gas Transport Behavior of Polysulfone/Polyacrylonitrile-Carbon Molecular Sieve Mixed Matrix Membrane, **Journal of Applied Membrane Science & Technology**, Vol. 12, (Dec 2010), pages 1-6.
146. **A.F. Ismail**, A. Mansourizadeh, A comparative study on the structure and performance of porous polyvinylidene fluoride and polysulfone hollow fiber membranes for CO₂ absorption, **Journal of Membrane Science**, Volume 365, Issue 1-2, (1 December 2010) 319-328.
147. H. Basri, **A. F. Ismail**, M. Aziz, Polyethersulfone-silver composite ultrafiltration membrane: Effect of PVP molecular weight on morphology and antibacterial activity, **Desalination**, Volume 273, Issue 1 (2011), 72-80.
148. A.W. Zularisam, **A.F. Ismail** and M. Sakinah, Application and changes of membrane in surface water treatment, *Journal of Applied Sciences*, 10(5) (2010) pages 380-390
149. E. Yuliawati, **A. F. Ismail**, Effect of additives concentration on the surface properties and performance of PVDF hollow fiber ultrafiltration membranes for refinery produced wastewater treatment, **Desalination**, Volume 273, Issue 1 (June 2011), 226-234.
150. A. Mansourizadeh, **A.F. Ismail**, A developed asymmetric PVDF hollow fiber membrane structure for CO₂ absorption, **International Greenhouse Gas Control**, Volume 5, Issue 2, (March 2011), 374-380.
151. H. Hasbullah, Kumbakhar, **A.F. Ismail**, K. Li, Preparation of polyaniline asymmetric hollow fiber membranes and investigation towards gas separation performance, **Journal of Membrane Science**, Volume 366, Issues 1-2, (1 January 2011) 116-124.



152. **A.F. Ismail**, R. Norida, W.A.W. Ab. Rahman, T. Matsuura, S. A. Hashemifard, Preparation and characterization of hyperthin-skinned and high performance polyethersulfone membrane for gas separation, **Desalination**, Volume 273, Issue 1 (1 June 2011), 93-104.
153. N.A.A. Hamid, **A.F. Ismail**, T. Matsuura, A.W. Zularisam, W.J. Lau, E. Yuliwati, M.S. Abdullah, Morphological and separation performance study of Polysulfone/Titanium Dioxide (PSF/TiO₂) ultrafiltration membranes for humic acid removal, **Desalination**, Volume 273, Issue 1 (1 June, 2011), 85-92.
154. S.M. Sanip, **A.F. Ismail**, P.S. Goh, T. Soga, T. Tanemura, H. Yasuhiko, Gas Separation Properties of Functionalized Carbon Nanotubes Mixed Matrix Membranes, **Separation and Purification Technology**, Volume 78, Issue 2 (11 April, 2011), 208-213.
155. S.S. Mohtar, **A.F. Ismail**, T. Matsuura, Preparation and characterization of SPEEK/MMT-STA composite membrane for DMFC application, *J. Membrane Science*, Volume 371, Issue 1-2, (1 April, 2011), 10-19.
156. W.N.W. Salleh, **A.F. Ismail**, Gas permeation properties and characterization of polyetherimide/polyvinylpyrrolidone-based carbon hollow fiber membrane for CO₂/CH₄ separation, **International Journal of Chemical and Environmental Engineering**, 2(1) (2011), 15-19.
157. A. Mansourizadeh, **A.F. Ismail**, CO₂ Stripping from water through PVDF hollow fiber membrane contactor, **Desalination**, Volume 273, Issues 2-3, 15 June 2011, Pages 386-390.
158. E. Yuliwati, A.F. Ismail, T. Matsuura, M.A. Kassim, M.S. Abdullah, Characterization of surface-modified porous PVDF hollow fibers for refinery wastewater treatment using microscopic observation, **Desalination**, Volume 283, 1 December 2011, pages 206-213.
159. S.A. Hashemifard, **A.F. Ismail**, T. Matsuura, Effect of montmorillonite nono-clay fillers on PEI mixed matrix membrane for CO₂ removal, **Chemical Engineering Journal**, Volume 170, 15 May 2011, Pages 316-325.
160. W.N.W. Salleh, **A.F. Ismail**, T. Matsuura and M.S. Abdullah, Precursor selection and process conditions in the preparation of carbon membrane for gas separation: A review, **Separation & Purification Review**, 40: 4, (2011) 261 — 311.
161. N. Yusof, **A.F. Ismail**, Polyacrylonitrile/acrylamide-based carbon fibers prepared using solvent-free coagulation process: Effect of acrylamide loading on the resulting fiber properties and its structure evolution during stabilization and carbonization, **Polymer Engineering Science**, 52(2), pages 360-366.
162. D. S. A. Mahmood, **A.F. Ismail**, A. Mustapa, T. Matsuura, Effect of Solvent Type on the Formation and Physical Properties of Polyacrylonitrile Fiber via Solvent-free Coagulation Bath, **Journal of Applied Polymer Science**, Article first published online: 21 MAR 2011, DOI: 10.1002/app.33796
163. S. A. Hashemifard, **A.F. Ismail**, T. Matsuura, Mixed matrix membrane incorporated with large pore size halloysite nanotubes (HNT) as fillers for gas separation: Experimental, **J. Colloid and Interphase Science**, Volume 359, Issue 2, 15 July 2011, Pages 359-370.
164. S. A. Hashemifard, **A.F. Ismail**, T. Matsuura, Co-casting technique for fabrication dual-layer flat sheet membrane for gas separation, **Journal of Membrane Science**, Volume 375, Issues 1-2, 15 June 2011, Pages 258-267.
165. A.W. Zularisam, Anwar Ahmad, Mimi Sakinah, **A.F. Ismail**, T. Matsuura, Role of natural organic matter (NOM), colloidal particles, and solution chemistry on ultrafiltration performance, **Separation and Purification Technology**, Volume 78, Issue 2, 11 April 2011, 189-200



166. W.J. Lau, **A.F. Ismail**, N. Misdan, M.A. Kassim, A recent progress in thin film composite membrane: A Review, **Desalination**, Volume 287, 15 February 2012, Pages 190-199.
167. P.S. Goh, B.C. Ng, **A.F. Ismail**, S. Sanip, M. Aziz, M.A. Kasim, Effect of Dispersed Multi-Walled Carbon Nanotubes on Mixed Matrix Membranes for O₂/N₂ Separation, **Separation Science and Technology**, 46:8, (2011), 1250-1261.
168. S. A.Hashemifard, **A.F.Ismail**, T. Matsuura, Mixed matrix membrane incorporated with large pore size halloysite nanotubes (HNT) as fillers for gas separation: Morphological Diagram, **Chemical Engineering Journal**, Volume 172, Issue 1, 1 august 2011, Pages 581-590.
169. The performance of SPEEK/Cloisite15A@ nanocomposite membrane for DMFC application, **Journal of Applied Polymer Science**, 11 OCT 2011, DOI: 10.1002/app.35139
170. **A.F. Ismail**, S. Hashemifard, T. Matsuura, Facilitated Transport Effect of Ag⁺ Ion Exchanged Halloysite Nanotubes on the Performance of Polyetherimide Mixed Matrix Membrane for Gas Separation, **Journal of Membrane Science**, Volume 379 (2011), Pages 378-385.
171. W.N.W. Salleh, **A.F. Ismail**, Carbon hollow fiber membranes derived from PEI/PVP for gas separation, **Separation and Purification Technology**, Volume 80, Issue 3, 18 August 2011, Pages 541-548.
172. Gh. Bakeri, **A.F. Ismail**, D. Rana, T. Matsuura, S. Shariaty, Investigation on the effects of fabrication parameters on the structure and properties of surface-modified membranes using response surface methodology, **Journal of Applied Polymer Science**, Vol. 123, 2812–2827 (2012)
173. P.S. Goh, **A.F. Ismail**, S. Sanip, B.C. Ng, M. Aziz, Recent Advances of Inorganic Fillers in Mixed Matrix Membrane for Gas Separation, **Separation and Purification Technology** Volume 81, Issue 3, 10 October 2011, Pages 243-264.
174. P.S. Goh, **A.F. Ismail**, S. Sanip, B.C. Ng, M. Aziz, Pre-Treatment of Carbon Nanotube for Polyetherimide Mixed Matrix Hollow Fibers, under correction, **Applied Surface Science**.
175. R. Saidin, **A.F. Ismail**, M. Aziz, Controlled Growth of Carbon Nanofibers using Plasma Enhanced Chemical Vapour Deposition: Effect of Catalyst Thickness and Gas Ratio, **Thin Solid Film**, Volume 520, Issue 7, 31 January 2012, Pages 2575-2581.
176. Gh. Bakeri, **A.F. Ismail**, D. Rana, T. Matsuura, S. Shariaty, The effect of phase inversion promoters on the structure and performance of polyetherimide hollow fiber membrane using in gas-liquid contacting process, **Journal of Membrane Science**, Volume 383, Issue 1-2, November 2011, Pages 159-169.
177. Juhana Jaafar, **A.F. Ismail**, T. Matsuura, Performance of SPEEEK based polymer-nanoclay inorganic membrane for DMFC, **Journal of Membrane Science**, Volume 382, Issue 1-2, October 2011, Pages 202-211.
178. H. Hasbullah, Kumbakhar, **A.F. Ismail**, K. Li, Preparation of polyaniline asymmetric hollow fiber membranes and investigation towards gas separation performance, **Journal of Membrane Science**, Volume 366, Issue 1-2, (1 January 2011), Pages 116-124.



179. M.F.A. Wahab, **A.F. Ismail**, S.J. Shilton, Studies on Gas Permeation Performance of Asymmetric Polysulfone Hollow Fiber Mixed Matrix Membranes using Nanosize Fumed silica as Fillers, **Separation and Purification Technology**, Volume 86, 15 February 2012, Pages 41-48
180. W.N.W. Salleh, **A.F. Ismail**, Fabrication and Characterization of PEI/PVP-based Carbon Hollow Fiber Membranes for CO₂/CH₄ and CO₂/N₂ Separation, **AIChE Journal**, 9 DEC 2011, DOI: 10.1002/aic.13711.
181. M. Rahbari, **A.F. Ismail**, T. Matsuura, Fabrication and characterization of asymmetric Polysulfone hollow fiber membrane contactor for CO₂ Absorption, **Under Review in Journal of Hazardous Materials**
182. D. Veerasamy, **A.F. Ismail**, Rehabilitation of fouled membrane from natural rubber skim latex concentration through membrane autopsy and ultrasonication enhanced membrane cleaning procedure, **Desalination**, Volume 286, 1 February 2012, Pages 235-241.
183. H. Basri, **A.F. Ismail**, M. Aziz, Microstructure and Anti-Adhesion Properties of PES/TAP/Ag Hybrid Ultrafiltration Membrane, **Desalination**, Volume 287, 15 February 2012, Pages 71-77.
184. N. Masdan, W. J. Lau, **A.F. Ismail**, Seawater Reverse Osmosis (SWRO) Desalination by Thin film Composite Membrane- Current Development, Challenges and Future Prospect, **Desalination**, Volume 287, 15 February 2012, Pages 228-237
185. N. Yusof, **A.F. Ismail**, Post Spinning and Pyrolysis Processes of Polyacrylonitrile (PAN)-based Carbon Fiber and Activated Carbon Fiber: A Review, **Journal of Analytical and Applied Pyrolysis**, Volume 93, January 2012, Pages 1-13.
186. A. Mansourizadeh, **A.F. Ismail**, Influence of Membrane Morphology and Characteristics of PVDF Hollow Fiber Membrane for CO₂ Stripping from Water, **Desalination**, Volume 287, 15 February 2012, Pages 220-227.
187. **A.F. Ismail**, N. Yusof, Polyacrylonitrile/acrylamide based carbon fibers prepared using solvent free coagulation, **Society of Plastic Engineers, Plastic Research Online**, 10.1002/spepro.003831
188. S. Mahmoudian, Mat Uzir Wahit and **A.F. Ismail**, Preparation of Regenerated Cellulose/Montmorillonite Nanocomposite Films via Ionic Liquids, **Carbohydrate Polymers**, Volume 88, Issue 4, Pages 1251-1257 (2012).
189. H. Hasbullah, Kumbakhar, **A.F. Ismail**, K. Li, Asymmetric hollow fiber membranes based on ring-substituted polyaniline and investigation towards its gas transport properties, **Journal of Membrane Science**, Volumes 397-398, 15 April 2012, Pages 38-50.
190. M. Rahbari, **A.F. Ismail**, T. Matsuura, Effect of bore fluid composition on structure and performance of asymmetric Polysulfone hollow fiber membrane contactor for CO₂ absorption, **Separation and Purification Technology**, Volume 88, 22 March 2012, pages 99-106.



191. R. Naim, **A.F. Ismail**, A. Mansourizadeh, Preparation of microporous PVDF hollow fiber membrane contactor for CO₂ stripping from diethanolamine solution, **Journal of Membrane Science**, Volume 392-393, 1 March 2012, Pages29-37.
192. W.N.W. Salleh, **A.F. Ismail**, Effect of carbonization heating rate on CO₂ separation derived from carbon membranes, **Separation and Purification Technology**, Volume 88, 22 March 2012, pages 174-183.
193. Gh. Bakeri, **A.F. Ismail**, D. Rana, T. Matsuura, S. Shariaty, A novel surfaced modified polyetherimide hollow fiber membrane for gas-liquid contacting processes, **Separation and Purification Technology**, Vol. 89, 22 March 2012, pages 160-170.
194. Muhammad Faisal Siddiqui, Mimi Sakinah, **A.F. Ismail**, A.W. Zularisam, The anti-biofouling effect of piper beetle extract again Pseudomonas Aeruginosa and bacterial consortium, **Desalination**, Volume 288, 1 March 2012, Pages 24-30.
195. E. Yuliwati, **A.F. Ismail**, W.J. Lau, B.C. Ng, A. Mataram, M.A. Kassim, Effects of process conditions in submerged ultrafiltration for refinery wastewater treatment: Optimization of operating process by response surface methodology, **Desalination**, Volume 287, 15 February 2012, Pages 350-361.
196. M.K. Souhaimi, **A.F. Ismail**, Special Issue Honoring Takeshi Matsuura, **Desalination**, Volume 287, 15 February 2012, Page 1.
197. E. Yuliwati, **A.F. Ismail**, M. S. Abdullah, M.A. Kassim, Determination of optimal process parameters in suspended solid and ammonia nitrogen removal for refinery wastewater treatment, communicated with **Separation and Purification Technology**.
198. R. Naim, **A.F. Ismail**, A. Mansourizadeh, Effect of fiber packing density on physical CO₂ absorption performance in gas-liquid membrane contactor, In Press, **Journal of Membrane Science**
199. W.N.W. Salleh and **A.F. Ismail**, Effect of stabilization temperature on gas permeation properties of carbon hollow fiber membrane, **Journal of Applied Polymer Science**, (2012) DOI:10.1002/APP.37621
200. W.N.W. Salleh and **A.F. Ismail**, Effect of stabilization condition on carbon hollow fiber membranes properties, communicated with **Separation Science and Technology**.
201. K.C. Khulbe, **A.F. Ismail**, T. Matsuura, Use of electro-spun nanofiber membranes in membrane distillation, communicated with **Desalination** Special Issue.
202. K.C. Khulbe, **A.F. Ismail**, T. Matsuura, Progresses in membrane and advanced oxidation processes for water treatment, communicated with **Membrane Water Treatment**
203. Chitrakar Hegde, Arun Isloor, Mahesh Padaki, **Ahmad Fauzi Ismail** and Lau Woe Jye, New CPS-PPEES blend membranes for CaCl₂ and NaCl rejection, **Membrane Water Treatment**, Volume 3, Number 1, January 2012.
204. Ganesh B. M., Arun M Isloor , Shrikrishna Isloor, Sundareshan S., **Ahmad Fauzi Ismail**, Manjunath Pattabi, Studies on silver coated Polysulfone and modified Poly isobutylene alt-maleic anhydride blend anti-fouling membrane, communicated with **Desalination**.



205. Chitrakara Hegde, Arun M Isloor, Mahesh Padaki, Ganesh B.M, **Ahmad Fauzi Ismail**, M.S. Abdullah, B.C. Ng, Performance of PS/PIMA/ PPEES nanofiltration membranes before and after alkali treatment for filtration of CaCl₂ and NaCl, **In Press in Desalination**.
206. Mahesh Padaki, Arun M Isloor, **Ahmad Fauzi Ismail**, M.S. Abdullah, Synthesis, characterization and desalination study of novel PSAB and mPSAB blend membranes with polysulfone (PSf), **Desalination** 295 (2012) 35-42.
207. Mahesh Padaki, Arun M Isloor, Pikul Wanichapichart, **Ahmad Fauzi Ismail**, Preparation and characterization of sulfonated polysulfone and N-phthaloyl chitosan blend composite cation-exchange membrane for desalination, **In Press Desalination**.
208. G.P. Sean, **A.F. Ismail**, Carbon nanotubes for water desalination: Performance evaluation and current hurdles, In Press in **Desalination** Special Issue.
209. G.P. Sean, **A.F. Ismail**, Pre-treatment of carbon nanotube for polyetherimide mixed matrix hollow fibers, In Press **J. Colloid and Interphase Science**.
210. Gh. Bakeri, **A.F. Ismail**, D. Rana, T. Matsuura, S. Shariaty, Development of high performance surface modified polyetherimide hollow fiber membrane for gas-liquid contacting processes, **Chemical Engineering Journal**, Volume 198-199, 1 August 2012, Pages 327-337.
211. N. Yusof, **A.F. Ismail**, Effects of the activation temperature on the polyacrylonitrile/acrylamide-based activated carbon fibers prepared via a solvent-free coagulation process, **Materials Letters**, Volume 82, 1 September 2012, pages 16-18.
212. M. Rahbari, **A.F. Ismail**, T. Matsuura, A novel surface modified polyvinylidene fluoride hollow fiber membrane contactor for CO₂ absorption, **Journal of Membrane Science**, Vol. 415-416, 1 October 2012, pages 221-228.
213. M. N. A. Mohd Norddin, D. Rana, **A.F. Ismail**, R. Sudirman, J. Jaafar, Study on synthesis and physical properties of charged surface modifying macromolecules with different end-capping materials for membrane application, **In Press Journal of Industrial and Engineering Chemistry**.
214. M. Rahbari, **A.F. Ismail**, D. Rana, T. Matsuura, Effect of additives on the physical and chemical CO₂ absorption in polyetherimide hollow fiber membrane contactor system, In Press in **Separation and Purification Technology**.
215. Gh. Bakeri, **A.F. Ismail**, D. Rana, T. Matsuura, A. Ghaee, An investigation on the performance of surface modified polyetherimide hollow fiber membranes in membrane gas-liquid contacting process using response surface methodology, **Accepted for publication in J. Appl. Polym. Sci**.
216. Hoong-Kun Fun, Tze Shyang Chia, Mahesh Padaki, Arun Isloor and **A.F. Ismail**, (2E)-3-(6-Methoxynaphthalen-2yl)-1-[4-(methylsulfanyl)phenyl]prop-2-en-1-one, **Acta Crystallographica Section E**, (2012) E68, o2277-o2278.



217. Sahadevan Rajesh, **Ahmad Fauzi Ismail**, Doraiswamy, Structure-property interplay of poly(amide-imide) and TiO₂ nanoparticles impregnated poly(ether-sulfone) asymmetric nanofiltration membranes, **RSC Adv.**, 2012, 2,6854-6870.
218. Shaya Mahmoudian, Mat Uzir Wahit, **A.F. Ismail**, Muhammad Imran, and Harintharavimal Balakrishnan, A Facile Approach to Prepare Regenerated Cellulose/Graphene Nanoplatelets Nanocomposite using Room-Temperature Ionic Liquid, **Journal of Nanoscience and Nanotechnology**, Volume 12, Issue 7, Pages 5233-5239 (2012).
219. M. Homayoonfal, M. R. Mernia, **A.F. Ismail**, Effect of nanoparticle impregnation route on structure and liquid filtration performance of polymeric membranes: A comprehensive review, **In Press in Desalination and Water Treatment**.
220. Mostafa Ghasemi, Wan Ramli Wan Daud, Manal Ismail, Mostafa Rahimnejad, **Ahmad Fauzi Ismail**, Jun Xing Leong, Madhiah Miskan, Kien Ben Liew, Effect of pre-treatment and biofouling of proton exchange membrane on microbial fuel cell performance, **In Press in International Journal of Hydrogen Energy**
221. M. Rahbari, **A.F. Ismail**, D. Rana, T. Matsuura, Carbon dioxide stripping from diethanolamine solution through porous modified PVDF hollow fiber membrane contactor, **In Press in Journal of Membrane Science**
222. D. Rana, T. Matsuura, **A.F. Ismail**, Radioactive decontamination of water by membrane processes: A Review, Accepted for publication in Desalination.

ORIGINAL BOOK

1. **A. F. Ismail**, D. Rana, T. Matsuura, H. Foley, **Carbon-Based Membrane for Separation Processes**, Springer, New York, (June 2011).
2. S. H. Tapsir, N. Moktar, **A. F. Ismail**, A. K. Mirasa, S. Sanip and F. A. Manan. A Study on University-Industry Partnership: Fostering Strategic linkages at Institutes of Higher Learning Malaysia, (2010) UTM Press.

EDITED BOOK

1. **Sustainable Membrane Technology for Energy, Water and Environment**, Edited by **A. F. Ismail** and T. Matsuura, March 2012, John Wiley
2. **Development in Polymer-based Carbon Fibre in Malaysia**, Edited by **A. F. Ismail**, R. Daik. K. Noorsal and M. A. Baharom, (2009) UTM Press.

BOOK CHAPTER

1. **A. F. Ismail** and K. Li, **From Polymeric Precursor to Hollow Fibers Carbon and Ceramic Membranes**, Membranes Science and Technology, Volume 13, Edited by M. Menendez, Elsevier B. V. 2008, Pages 81-119.
2. **A. F. Ismail**, R. Naim, N. A. Zubir, **Fuel Cell Technology Review, Polymer Membranes for Fuel Cells**, Edited by J. A. Zaidi and T. Matsuura, Springer, 2009, pages, 27-49.



3. **A. F. Ismail**, *Preparation of The Carbon Membrane for Gas Separation*, Comprehensive Membrane Science and Engineering, Chapter 1.13, pages 275-290, Edited by E. Drioli, Elsevier Science, 2010.
4. **A.F. Ismail**, M.N.A. Norddin, J. Jaafar, T. Matsuura, *Modification of Sulfonated poly (ether ether ketone) for DMFC application*, in Membrane Modification: Technology and Application, Edited by N. Hilal and M. Khayet, CRC Press, June 2012.
5. **A.F. Ismail**, W.J. Lau, *Nanofiltration membrane in textile effluent treatment*, in Membrane Modification: Technology and Application, Edited by N. Hilal and M. Khayet, CRC Press, June 2012
6. **A.F. Ismail**, F. Aziz, *Chemical cross-linking modifications of polymeric membranes for gas separation applications*, in Membrane Modification: Technology and Application, Edited by N. Hilal and M. Khayet, CRC Press, June 2012
7. **A.F. Ismail**, E. Yuliwati, *Membrane Science and Technology for Wastewater Reclamation*, in Water Sciences and Engineering, Encyclopedia of Life Support System (EOLSS) (2010), Elsevier Limited, Oxford, UK
8. A. Mataram, **A.F. Ismail** and T. Matsuura, *Polya cry lonitrile Na nofiber Assembled by Electrospinning: Effect of Dope Concentrat ions on the Stru ctural and Pore Characterizat ions*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley**
9. A. Masourizadeh, A. F. Ismail and M.A. Aroon, *Effect of Different Additives on the Propert ies and Performance of Porous Polysulfone Hollow Fiber Membranes for CO2 Absorption*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley**
10. J. Jaafar and A. F. Ismail, *Contribution of Na noclays to the Barr ier Properties of SPEEK/Cloisite15A® Na nocomposite Membrane for DMFC Application*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley**
11. N. Bolong, A. F. Ismail and M.R. Salim, *Spinning Effect of Polyethersulfone Hollow Fiber Membrane Prepared by Water or Polyvinylpyrrolidone in Ternary Formulation*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley**
12. T.D. Kusworo, A. Busairi, A.F. Ismail, A. Mustafa and Budiyono, *Purificat ion of Biogas Using Carbo n Na notube s Mixed Matr ix Membrane: Effect of Functionalizat ion of Carbon Nanotubes Using Silane Agent*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley**
13. Othman, N. H., **A. F. Ismail**, T. Matsuura, *A response surface methodology approach for analyzing the influence of tungstosilicic acid (SiWA) and silica oxide (SiO₂) content and optimizing the parameters during the preparation of SPEEK composite membrane*, in Sustainable Membrane Technology for Energy, Water and Environment, **Edited by A. F. Ismail and T. Matsuura, March 2012, John Wiley.**
14. N. A. Razak, K. A. Anuar, **A. F. Ismail**, M. Aziz, S. Sanip, *Simulation of Carbon Nanotubes for Hydrogen Storage using Neural Network: A preliminary study*, (2003)179-186, Advances in Malaysian Fuel Cell research and Development, Edited by W. R. Wan Daud and K. Sopian, National University of Malaysia.



15. T. J. Chee, N. A. Buang, M. Aziz, S. Sanip, **A. F. Ismail**, *Heat Treatment Studies on Activated Carbon and Charcoal for Carbon Nanotubes synthesis*, (2003) 187-196, Advances in Malaysian Fuel Cell research and Development, Edited by W. R. Wan Daud and K. Sopian, National University of Malaysia.
16. Z. R. Z. Abidin, **A. F. Ismail**, M. Aziz, S. Sanip, N. A. Buang, *Pretreatment of Natural Graphite as Starting Material for Carbon Nanotube Synthesis*, (2003) 197-202, Advances in Malaysian Fuel Cell research and Development, Edited by W. R. Wan Daud and K. Sopian, National University of Malaysia.
17. M. A. Rahman, **A. F. Ismail**, A. Mustafa, B. C. Ng., H. Hasbullah, M. S. A. Rahaman and M. S. Abdullah, *Effect of Coagulation Bath Temperature and Polymer Composition on the Fabrication and Characteristics of Carbon Fiber Precursor in the Solvent-free Coagulation Process*, 2006, Development in Polymer-based Carbon Fibre, Edited by A. F. Ismail, R. Daik, K. Noorsal and M. A. Baharom..
18. M. A. Rahman, **A. F. Ismail**, A. Mustafa, B. C. Ng, H. Hasbullah, M. S. A. Rahaman and M. S. Abdullah, *Effect of Residence Time on the Fabrication and Characteristics of Carbon Fiber Precursor in the Solvent-free Coagulation Process*, 2006, *Development in Polymer-based Carbon Fibre in Malaysia*, Edited by A. F. Ismail, R. Daik, K. Noorsal and M. A. Baharom
19. M. S. A. Rahaman, **A. F. Ismail**, A. Mustafa, *Stabilization Process and Its Relationship on Mechanical Properties of Modified PAN Fiber*, 2006, *Development in Polymer-based Carbon Fibre*, Edited by A. F. Ismail, R. Daik, K. Noorsal and M. A. Baharom
20. Siti Hamisah Tapsir, Noraieni Hj. Mokhtar, Abd Karim Mirasa, Ahmad Fauzi Ismail, Suhaila Mohd Sanip, Fazilah Abd Manan, *The University –Industry Partnerships: Fostering Strategic Linkages at Institutes of Higher Learning in Malaysia*, (2008) Enhancing Quality of Higher Education through Research: Shaping Future Policy, Kementerian Pengajian Tinggi: Chapter 4, 92 – 115. Chief Editor; Prof Dr Zuraidah Mohd Don
21. **A.F. Ismail**, N. Yusof and A. Mustafa, Carbon fiber as composite materials precursor- A review, Carbon Fibre: Material for the Future, pp 54-64, Edited by Kartini Noorsal and Mohamad Ariff, Baharom Advanced Materials Research Center (AMREC), 2008.
22. **A.F. Ismail**, D.S.A. Mahmud, M.A. Rahman and A. Mustafa, Fabrication of polyacrylonitrile/acrylamide (PAN/AM) fibers using a solvent-free coagulation bath, Carbon Fibre: Material for the Future, pp 54-74, Edited by Kartini Noorsal and Mohamad Ariff, Baharom Advanced Materials Research Center (AMREC), 2008.

ENCYCLOPEDIA OF MEMBRANE

1. **A.F. Ismail**, M.A. Rahman, Air separation, Springer, Heidelberg, Germany (**In Press**, 2012).
2. **A.F. Ismail**, J. Jaafar Matrimid® membranes, Springer, Heidelberg, Germany (**In Press**, 2012).
3. **A.F. Ismail**, M.A. Rahman O₂/N₂ separation, Springer, Heidelberg, Germany (**In Press**, 2012).
4. **A.F. Ismail**, M. H.Z. Othman, Silica DDR membrane, Springer, Heidelberg, Germany (**In Press**, 2012).
5. **A.F. Ismail**, M.H. Z. Othman, Silica membrane, Springer, Heidelberg, Germany (2012).

EXPERT REPORT

1. H. Saidi, M. M. El-Sayed Naseff, **A. F. Ismail**, **Removal of CO₂ from Natural Gas Using Permeation Membranes**, Final Report submitted to Petronas Research And Scientific Services (PRSS), August 1997.
2. **A. F. Ismail**, R. Naim, N. A. Zubir and H. Saidi, **Fuel Cell Technology Development and Strategic Applications Project (Phase 1)**, Final Report submitted to Petronas Research And Scientific Services (PRSS), 25 March 2002.



3. **A. F. Ismail**, H. Saidi, N. Yaacob and R. Naim, Technology Development and Current Status of Membrane Technology For CO₂ Removal, Final Report submitted to Petronas Research And Scientific Services (PRSS), April 2002.
4. **A. F. Ismail**, Total Water Management and Conservation of Water for Sibu Island Resort, Final Report submitted to Johor Corporation, December 2000.
5. **A. F. Ismail** and B. P. Chow, Technical Report on Semberong Barat Water Treatment Plant and Dam, Air Hitam, Johor, submitted to Badan Kawal Selia Air Johor (BAKAJ), July 2004.
6. S. H. Tapsir, N. Moktar, **A. F. Ismail**, A. K. Mirasa, S. Sanip and F. A. Manan. Deputy Project Leader for A Study on University-Industry Partnership: Fostering Strategic linkages at Institutes of Higher Learning Malaysia.

PLENARY LECTURE/KEYNOTE ADDRESS

1. **A. F. Ismail** et al., Membrane Technology for Malaysia Industrial Applications: Prospects and Challenges” Lecture given at National Seminar on Chemical and Process 2002, 24-26 July, 2002, University Diponegoro, Semarang, Indonesia.
2. **A. F. Ismail** et al., Membrane Separation for Biotechnology in Malaysia: Current Status and Future Prospects, Malaysian Society of Molecular Biology and Biochemistry (MSMBB) Conference, 22-24 May 2002, Saujana Hyatt Hotel, Subang, Malaysia.
3. **A. F. Ismail**, Membrane Separation Processes: Current Status and Futures Prospects in the Chemical Process Industry, Congress of Science and Technology Malaysia (COSTAM), 19-21 September, 2002, Putri Pan Pacific, Johor Bahru, Johor.
4. **A. F. Ismail**, S.O.S. in Research and Development, Syarahan Perdana sempena Kolokium Penyelidikan Fundamental, Kolej Universiti Teknologi Tun Hussein Onn, 17 April, 2003, Batu Pahat, Johor
5. **A. F. Ismail** and H. Hasbullah, Membrane Technology: From Laboratory Push to The Industrial Venture, Keynote Speech at Research and Development IPTA Exhibition 2003, Putra World Trade Center, October 9 2003, Kuala Lumpur
6. **A. F. Ismail** and Tutuk, K, Advanced Materials for Membrane-Based Gas Separation, Regional Symposium on Membrane Science and Technology, (MST 2005), 24-27 April, 2005, Bandung, Indonesia.
7. **A. F. Ismail**, Membrane Technology Development: A Malaysian Perspective, Seminar on Membrane Filtration for Portable Water Treatment, organized by PBA Pulau Pinang, 26 April 2006.
8. **A. F. Ismail**, Membrane separation processes: Current status and future prospect in the chemical process industries, International Conference on Added Value of Energy, University Srivijaya, Palembang, Indonesia, 21-23 May 2008.
9. **Ahmad Fauzi Ismail**, Farhana Aziz, **Mixed Matrix Membrane Materials for Gas Separation: Current Status and Future Potential**, 4th International Conference on Recent Advances in Materials, Minerals and Environment and 2nd Asian Symposium on Materials and Processing (RAMM & ASMP 2009), Penang, Malaysia. 1st – 3rd June 2009.
10. **Ahmad Fauzi Ismail**, **Malaysia Polymer International Conference**, 21-22 October 2009, Palm Garden Hotel IOI Resort Putrajaya (MPIC 2009)



11. **A.F. Ismail, P.S. Goh, S.M. Sanip and S.A. Hashimefard, Nanotechnology Meets Membrane Technology: The New Emerging Advanced Material for Gas Separation Processes**, 3rd International Congress on Nanoscience and Nanotechnology (ICNN 2010), 9-11 November 2010, Shiraz, Iran.
12. **A.F. Ismail, G. P Sean, Advanced Mixed Matric Membrane Materials for Gas Separation: The interplay between Chemistry and Engineering**, 24th Regional Symposium of Malaysia Analytical Sciences (SKAM -24), 21-23 November, 2011, Langkawai, Kedah, Malaysia
13. **A.F. Ismail, E. Yuliwati, M. A. Kassim, Submerged Ultrafiltration Membrane for Refinery Wastewater Treatment**, 3rd International Conference on Environmental Research and Technology (ICERT 2012), Park Royal Hotel, Penang, 30 May – 1 June 2012.
14. **A. F. Ismail, P.S. Goh, Carbon Naonotubes/Mixed Matrix Membranes: Emerging Materials for Gas Separation Processes**, the 4th International Congress on Nanoscience and Nanotechnology (ICNN 2010), 8-10 September 2012, Kashan, Iran.
15. **A. F. Ismail, P.S. Goh, Mixed Matrix Membrane for Gas Separation: The Symbiosis between Fundamental and Applied Research for Commercial Applications**, the 12th International Conference on Membrane Science and Technology, 22–23 August, 2012, Bangkok, Thailand.

INVITED/GUEST SPEAKER

1. **A. F. Ismail et al, Membrane Technology for Industrial Applications: Prospects and Challenges** presented at The 27th Congress on Science and Technology of Thailand: Technology for Thai Economics, Prince of Songkla University, Hat Yai, Thailand, 16-18 October 2001
2. **A. F. Ismail et al., Membrane Technology for Industrial Applications: Prospects and Challenges** presented at Ekspo Science and Technology, PWTC, Kuala Lumpur, 26 October 2001
3. **A. F. Ismail, Clean Fuels for Fuel Cell, paper presented at Meeting “Fuel Cell/Hydrogen Development in Malaysia** Organized by Malaysia Energy Centre, at Ministry of Energy, Communications and Multimedia, Malaysia, 25 February 2002.
4. **A. F. Ismail, Application of Membrane Technology for Water Purification, “Seminar Air Anugerah Tuhan**, Organized by Institute of Islamic Understanding Malaysia (IKIM), Kuala Lumpur, Malaysia, 16-17 July 2002.
5. **A. F. Ismail et al., Latest Development on The Formation of Gas Separation Membrane**, Regional Symposium on Membrane Science and Technology, 13 –17 Jan., 2003 Songkla, Thailand
6. **A. F. Ismail, Consistency and Perseverance for Postgraduate Research**, Third Annual Seminar for National Science Fellowship (NSF), 17-18 December 2002, Vistana Hotel, Kuala Lumpur
7. **A. F. Ismail and H. Hasbullah, Ahli Akademik vs Saintis, Kongres Hal Ehwal Mahasiswa**, Organized by Universiti Sains Malaysia, Jabatan Pendidikan Tinggi Malaysia and Biro Tatanegara Jabatan Perdana Menteri, 10-12 April 2003, Pulau Pinang.
8. **A. F. Ismail, Literature Review, Research Methodology Course**, UTM.
9. **A. F. Ismail and H. Hasbullah, Learning a Lesson from Science and Technology Evolution: Tips and Tricks for Unifying the Nation for Global Competitiveness, Convention on Unifying the Nation Through Science**, Organized by Malaysian Industrial Government Group for High Technology (MIGHT) and Biro Tatanegara, Jabatan Perdana Menteri, 8-10 December 2003, Ulu Sepri, Rembau, Negeri Sembilan.



10. **A. F. Ismail**, *Development of Defect-free and High Performance Asymmetric Membrane for Gas Separation Processes*, *International R&D Forum on Oil, Gas & Petrochemicals*, 16-18 February, 2004, Hotel Mandarin Oriental, Kuala Lumpur. Organized by University Technology Petronas, Tronoh, Perak, Malaysia.
11. **A. F. Ismail**, *Professional Effective Technical Writing Seminar*, 30 March 2005, Organized by Society of Post Graduate Studies, Faculty of Chemical and Natural Resources Engineering, UTM.
12. **A. F. Ismail**, K. T. Cheok and T. D. Kusworo, *Performance of Sealed Lead Acid Battery Enhanced by Gas Separation Membrane*, *International Membrane Conference*, Taiwan (ICMT2005), Aug 19-19, 2005, Chung-Li, Taiwan.
13. **A. F. Ismail**, N. Yaacob and T. D. Kusworo, *Effect of membrane configuration on the separation performance of polysulfone hollow fiber membrane system for CO₂/CH₄ separation*, *Regional Symposium on Membrane Science and Technology*, 27 –28 April, 2006, NTU, Singapore.
14. **A. F. Ismail**, *Development of high performance synthetic polymeric membrane for enhancement of gas separation processes*, *International Conference on Added Value of Energy*, University Sriwijaya, Palembang, Indonesia, 21-23 May 2008.
15. **A. F. Ismail**, T. D. Kusworo and A. Mustafa. *Performance Evaluation of Polyethersulfone-Fumed Mixed Matrix Membrane for Gas Separation*. Patong, Phuket, Thailand 13th-15th August 2008
16. **A. F. Ismail**, *Novel-free Coagulation Process for the Production of Polyacrylonitrile Fiber*. 4th National Conference on Carbon Fiber of Composites. Sirim Berhad, Pulau Pinang, August 2008.
17. **Ahmad Fauzi Ismail**, *Advanced Polymer Nanocomposite Materials for Membrane Separation Processes*, *NanoSciTech 2008*, UiTM, Selangor, 18-21st Nov 2008
18. **Ahmad Fauzi Ismail**, *CNT-Based Mixed Matrix Membrane Separation: Current Trend and Future Challenges*, *2nd International Conference On Advanced materials And Practical Nanotechnology (2nd ICAMPN)*, Bidakara Hotel, Jakarta, Indonesia November 11-12,2009
19. **Ahmad Fauzi Ismail**, *Mixed Matrix Membrane for removal of the green house gases*, *Invited Co Chairman, Nanomaterial seminar for reducing environmental risk in Asia*, Nagoya Institute of Technology December 9, 2009
20. **Ahmad Fauzi Ismail**, *Development of Advanced Membrane Materials for Separation Processes*, *National Conference On Advanced Manufacturing And Material Engineering 2010 (NAMME2010)*,Universiti Tun Hussein Onn Malaysia, May 25, 2010
21. **A.F. Ismail**, P.S. Goh and S.M. Sanip, S. A Hashemifard, *Mixed Matrix Membrane for Gas Separation Processes: The Need, Challenges and Future Prospects*, 8th International Conference on Membrane Science and Technology, 30th November-1st December 2010, Bandung, Indonesia.
22. **A.F. Ismail**, P.S. Goh and S.M. Sanip, *Nanostructured Materials in Advanced Membrane Technology for Separation Processes*, 2nd Nanotech Malaysia 2010, International Conferene on Enabling Sciencee and Nanotechnology, 1-3 December 2010, Kuala Lumpur Convention Centre, Malaysia.
23. **A.F. Ismail**, D. Rana, T. Matsuura, *Application of Surface Modifying Macromolecules for various Membrane Separation Processes*, *Murphy Award Symposium in Honor of Norman Li*, 241st ACS Spring National Meeting, Anaheim, CA, March 27-31, 2011.



24. **A.F. Ismail**, **Nanotechnology Meets Membrane Technology: Emerging Materials for Gas Separation Processes**, International Conference on Materials for Advanced Technologies (ICMAT), 26-1 July 2011, Singapore.
25. **A.F. Ismail**, E. Yuliwati, **Refinery Produced Wastewater Treatment Using Ultrafiltration Membranes**, Regional Symposium on Membrane Science and Technology, (MST 2011), 24-25 August, 2011, NTU, Singapore
26. **A.F. Ismail**, **Path to On-Time Graduation**, National Graduate Symposium 2011, 17-18 September 2011, Universiti Teknologi Petronas, Perak, Malaysia.
27. **A.F. Ismail**, E. Yuliwati, **Refinery produced wastewater treatment using submerged ultrafiltration membranes**, Water Forum, Ministry of Environment, Government of Canada, 4 May, 2012.

REFEREED CONFERENCES

1. **A. F. Ismail**, S. J. Shilton, I. R. Dunkin and S. L. Gallivan, **Molecular orientation and the performance of hollow fiber membranes for gas separation**, Proc. International Membrane Science and Technology Conference, Sydney Australia, 12 – 14 November 1996, Vol. 1, pp. 104 – 106 (ISBN 0 7334 1457 5).
3. H. Saidi, **A. F. Ismail** and R. A. Aziz, **Design of pilot plant for separation of CO₂ from natural gas using permeation membranes**, International Membrane Science and Technology Conference, Sydney Australia, 11 – 12 November 1992.
3. H. Saidi, **A. F. Ismail**, R. A. Aziz, A. Sahar, I. K. Salleh, S. Seeni Abdul, **Processing the natural resources of Islamic countries using membrane technology**, Proc. 2nd FEIIC General Assembly and Conference on Technological Development for The Islamic Countries – Issues and Option, Kuala Lumpur, 24 – 27 April 1991, pp. D21 – D35.
4. H. Saidi, **A. F. Ismail**, R. A. Aziz, and S. Seeni Abdul, **Membrane for advanced separation technology – The Malaysian scenario**, The third JSPS – VCC Seminar on Integrated Engineering, Institute of Advanced Studies, Universiti Malaya, 17 – 18 December, 1990.
5. **A. F. Ismail**, I. D. Sharpe and S. J. Shilton, **Polysulfone hollow fiber membranes with enhanced selectivity: gas mixture permeation tests**, Euromembrane '99, Belgium, September 1999.
6. I. D. Sharpe, **A. F. Ismail** and S. J. Shilton, **Extrusion shear and the development of advanced industrial hollow fiber membranes for gas separation**, Euromembrane '99, Belgium, September 1999.
7. A. Idris, Y. B. Hi, S. J. Shilton, **A. F. Ismail**, **Effect Of Shear rate On Flat Sheet Reverse Osmosis Membrane Performance**, World Engineering Congress, 20-22 July 1999, Kuala Lumpur
8. **A. F. Ismail**, **Studies of molecular orientation in synthetic polymeric membranes for gas separation**, Exxon Research Seminar, Department of Chemical and Process Engineering, University of Strathclyde, U. K., Oct. 11, 1995.
9. **A. F. Ismail**, **Structural analysis of oriented synthetic polymeric membrane for gas separation**, Exxon Research Seminar, Department of Chemical and Process Engineering, University of Strathclyde, U. K., Oct., 13, 1996.
10. **A. F. Ismail**, H. Saidi, and A. Abd. Rahman, **Numerical modelling of CO₂ separation in a membrane gas separation system**, The First Regional Conference on The Application of Numerical Methods in Engineering, Universiti Sains Malaysia, Perak Branch, 19 – 20 July, 1994.



- 11 S. Haron and A. F. Ismail, *Numerical Simulation of a hollow fiber membrane for gas separation system*, Regional Symposium on Chemical Engineering 99 (RSCE), 22 – 24 November 1999, Songkla Thailand.
- 12 A. Idris, L. Wong, S. J. Shilton and A. F. Ismail, *Effect of Polyvinylpyrrolidone on flat sheet reverse osmosis membrane performance*, Regional Symposium on Chemical Engineering 99 (RSCE), 22 – 24 November 1999, Songkla Thailand.
- 13 A. F. Ismail, H. Saidi, and A. Abd. Rahman, *Mathematical modelling of CO₂ separation from natural gas using hollow fiber membrane*, Proc. Seminar Kaedah Berangka, Fakulti Sains, UTM, 1991.
- 14 A. F. Ismail, H. Saidi, and A. Abd. Rahma, *Permodelan berangka bagi proses pemisahan campuran gas CO₂/CH₄ dengan membran penelap*, Simposium Kebangsaan Sains Matematik ke V, 20 – 22 Dec., 1992, UTM.
- 15 A. F. Ismail, H. Saidi, A. Abd. Rahman, *Simulation of hollow fiber membrane gas separation system- Effect of pressure drops*, The 9th Symposium of Institution of Chemical Engineers Malaysia, UKM Bangi, 6 – 7 July, 1993.
- 16 A. F. Ismail, C. B. H. Che Omar, Z. Zakaria, M. N. Abd. Rahman, *Residual composition analysis of liquefied petroleum gas for domestic utilization*, The 10th Symposium of Institution of Chemical Engineers Malaysia, USM Penang, 6 – 7 August, 1994.
- 17 A. F. Ismail, *Production of commercially competitive hollow fiber membranes for gas separation – UTM experiences*, Proc. COSTAM '98, Johor Bahru, Johor, 20-31 November 1998.
- 18 A. F. Ismail and L. P. Yean, *Production of ultrathin skin asymmetric membranes for gas separation*, Proc. COSTAM '98, Johor Bahru, Johor, 20-31 November 1998.
- 19 N. S. Kutty, A. Idris, H. Saidi and A. F. Ismail, *Potting-up materials and techniques used in hollow fiber membrane module manufacturing – A Review*, COSTAM'99, Johor Bahru, Johor, 6-8 Disember 1999.
- 20 S. Haron and A. F. Ismail, *An interactive simulation model development of a hollow fiber for gas separation system*, COSTAM'99, Johor Bahru, Johor, 6-8 Disember 1999.
- 21 N. B. Cheer, A. F. Ismail and W.A. W. Abdul Rahman, *A preliminary studies of flat sheet asymmetric membrane formation for gas separation applications*, National Symposium on Polymeric Materials, Universiti Sains Malaysia, Penang, 1-2 Jun 2000.
- 22 S. Haron and A. F. Ismail, *An interactive simulation model development of a hollow fiber membrane for CO₂/CH₄ separation system*, 13TH Symposium of Malaysian Chemical Engineers, 30-31st October 2000.
- 23 C. F. Kiong, A. F. Ismail and M. R. Yusof, *Development of membrane oxygen enrichment system into the wastewater aeration system*, COSTAM 7-9 November 2000, Genting Highland.
- 24 L. Wong and A. F. Ismail, *Penetrant Induced Plasticization in glassy polymer membrane for gas separation*, COSTAM 7-9 November 2000, Genting Highland.
- 25 D. L. Ik Bing and A. F. Ismail, *Latest development of carbon hollow fiber membranes for gas separation*, Proc. COSTAM 7-9 November 2000, Genting Highland.



- 26 N. Sangaran Kutty, **A. F. Ismail** and H. Saidi, *Studies on the factors affecting the potting up resin used in hollow fiber membrane manufacturing*, Bengkel Tahunan Biasiswa Penyelidikan NSF, MOSTE, Kuala Lumpur.
- 27 **A. F. Ismail**, H. Saidi, and A. Abd. Rahman, *Numerical Simulation of a mathematical model for hollow fiber membrane gas separation system*, Research Seminar, FKKKSA, 23-24 June 1994.
- 28 **A. F. Ismail**, *Membrane technology for gas separation*, Final year Research Seminar, Faculty of Chemical and Natural Resources Engineering, UTM, January, 1998.
- 29 **A. F. Ismail** and L. Wong, *Time Dependent Permeation of carbon dioxide through asymmetric membrane for gas separation process*, Proc. International Polymer Symposium, 16 – 18 Oct., 2001, Songkla, Thailand.
- 30 A. Idris, **A. F. Ismail** and S. J. Shilton, *Application of Taguchi analysis to hollow fiber reverse osmosis manufacturing process*, paper accepted for oral presentation at World Engineering Congress 2002, Kuching Sarawak 22-25 July 2002.
- 31 **A. F. Ismail** and L. P. Choon, *Development of membrane gas separation network*, Proc. Regional Symposium on Chemical Engineering, 29 –31 Oct., 2001 (RSCE), Bandung, Indonesia
- 32 H. L. Lee, H. V. Yee, M. H. Yunan and **A. F. Ismail**, *Separation of water-oil emulsion using membrane*, Proc. 15th Symposium of Malaysia Chemical Engineers, September 11-12, 2001, Johor Bahru, Johor. Bahru.
- 33 D. L. I. Bing, **A. F. Ismail** and M. Aziz, *Effect of heating duration on the carbon hollow fiber membrane for gas separation*, paper presented at Regional Symposium on Chemical Engineering, 29 –31 Oct., 2001 (RSCE), Bandung, Indonesia
- 34 D. L. I. Bing, **A. F. Ismail** and M. Aziz, *Effect of pyrolysis temperature on the carbon membrane for gas separation*, Proc. COSTAM, 11 –13 Oct., 2001 Melaka.
- 35 L. P. Yean and **A. F. Ismail**, *Optimization of Formation Process in Development of High Performance Asymmetric Membranes*, Proc. 15th Symposium of Malaysia Chemical Engineers, September 11-12, 2001, Johor Bahru.
- 37 D. L. I. Bing and **A. F. Ismail**, *Influence of Gas Flow rate During Pyrolysis Process on the Polyacrylonitrile Carbon Membranes*, Proc. International Polymer Symposium, 16 – 18 Oct., 2001, Songkla, Thailand.
- 38 **A. F. Ismail** and L. P. Yean, *Development of high Performance Asymmetric Polysulfone Membranes for Gas Separation*, Proc. International Polymer Symposium, 16 – 18 Oct., 2001, Songkla, Thailand.
- 39 F. K. Chan, **A. F. Ismail** and M. R. M. Yusof, *Membrane Oxygen Enrichment into Wastewater Aeration-Efficiencies of Oxygen Transfer Rate and BOD Removal*, Proc. The International Water Association Conference on Water & Wastewater Management for Developing Countries, Vol. 2, pp 470-475, 29-31 October 2001, Kuala Lumpur Malaysia.
- 40 **A. F. Ismail** and L. P. Yean and M. R. Illias, *Application of Membrane Separation in Biotechnology*, Proc. 13th National Biotechnology Seminar, pp 102-108, 10-13 November 2001, The Bayview Beach Resort, Penang, Malaysia,
- 41 Kamarulzaman, K. Osman, H., Leow, Z. Y., Lau, S. H., Rosli, M. I. and **A. F. Ismail**, *Factors Affecting the Production of Cyclodextrins-Optimisation Studies Using Experimental Design Software*, Proc. 13th National Biotechnology Seminar, pp 132-141, 10-13 November 2001, The Bayview Beach Resort, Penang, Malaysia,
- 42 Rosli, M. I, Ho, K. S., **A. F. Ismail**, M. N. F. M. Ghazali and M. Said, *Purification of cyclodextrin Glucanotransferase from Alkalophilic Bacteria Bacillus sp. G1*, Proc. 13th National Biotechnology Seminar, pp 235-237, 10-13 November 2001, The Bayview Beach Resort, Penang, Malaysia,



43. Ani Idris, **A. F. Ismail** and S. J. Shilton, *A Study of Extrusion Shear in The Spinning of Cellulose Acetate Hollow Fiber Membranes for Reverse Osmosis*, Proc. 15th Symposium of Malaysia Chemical Engineers, September 11-12, 2001, Johor Bahru, Johor.
44. L. P. Yean and **A. F. Ismail**, *Effect of Solution Composition on Gas Separation Performance of Asymmetric Membranes*, Proc. COSTAM, 11-13 Oct., 2001, Melaka.
45. R. I. Ilias, H. K. Sian, M. Said, O. Hassan, K. Kamaruddin and **A. F. Ismail**, *Effects of Different Types of Starch, Concentration and triton X-100 on the B-CD Production, Malaysian Society of Molecular Biology and Biochemistry(MSMBB)* Conference, 22-24 May2002, Saujana Hyatt Hotel, Subang, Malaysia.
46. **A. F. Ismail** and T. A. Seng, *Studies on the effect of solution formulation on the separation performance of asymmetric polysulfone membranes for gas separation*. Regional Symposium on Chemical Engineering, 28 –30 Oct., 2002 (RSCE), Kuala Lumpur
47. S. M. S. T. Chik and **A. F. Ismail**, *Effect of Pyrolysis Parameters on the Performance of Polyacrylonitrile (PAN) Based Carbon Hollow Fiber Membrane for oxygen/Nitrogen Separation*, Regional Symposium on Membrane Science and Technology, 13 –17 Jan., 2003 Songkla, Thailand
48. **A. F. Ismail**, Abd. Rahman Hassan and B. C. Ng, *Effect of shear rate on the performance of nanofiltration membrane for water desalination*, Regional Symposium on Membrane Science and Technology, 13 –17 Jan., 2003 Songkla, Thailand
49. R. Naim and **A. F. Ismail**, *Formation and characterization of sulfonated polysulfone membrane for proton exchange membrane fuel cell*, Regional Symposium on Membrane Science and Technology, Songkla, Thailand, 13-17 Jan., 2003 Songkla, Thailand
50. S. M. Ibrahim and **A. F. Ismail** and, *Effects of dope extrusion rate on the performance of hollow fiber membranes in oxygen enrichment system*, Regional Symposium on Membrane Science and Technology, Songkla, Thailand, 13-17 Jan., 2003 Songkla, Thailand.
51. R. Tajuddin and **A. F. Ismail**, *Oxygen enriched air using membrane for palm oil wastewater treatment*, Regional Symposium on Membrane Science and Technology, Songkla, Thailand, 13-17 Jan., 2003 Songkla, Thailand.
52. **A. F. Ismail** and N. A. Zubir, *Formation and characterization of radiation grafted asymmetric membrane for proton exchange membrane fuel cell*, Regional Symposium on Membrane Science and Technology, Songkla, Thailand, 13-17 Jan., 2003 Songkla, Thailand.
53. **A. F. Ismail** and W. A. Hafiz, *Effect of polysulfone concentration on the performance of membrane-assisted lead acid battery*, Regional Symposium on Membrane Science and Technology, Songkla, Thailand, 13-17 Jan., 2003 Songkla, Thailand
54. T. J. Chee, N. Buang, S. M. Sanip and **A. F. Ismail**, *Heat Treatment Study on Activated and Charcoal for Carbon Nanotube Synthesis*, Annual Fundamental Science Symposium, Organized by Insitute Ibnu Sina, UTM, 20-21 May, 2003, Puteri Pan Pacific, Johor Bahru.
55. N. Buang, M. Aziz, T. J. Chee, Z. R. Z. Abidin, S. M. Sanip and **A. F. Ismail**, *Effect of pretreatment of Synthetic and Natural Carbon as Starting Material for Nanotubes*, International Conference on Materials for Advanced Technology, Singapore, 7-12 December, 2003.
56. N. Buang, M. Aziz, S. M. Sanip, J. Chee, Z. R. Abidin and **A. F. Ismail**, *Effect of pretreatment of synthetic and natural carbons as starting materials for carbon nanotubes*, 2nd international Conference on Materials for Advanced Technologies & IUMRS-International Conference in Asia 2003, 29 June-4 July 2003, Singapore.



57. S. M. Sanip, N. Buang, M. Aziz, , Z. R. Abidin and **A. F. Ismail**, *Effect of heat treatment on synthetic graphites for carbon nanotubes*, 2nd international Conference on Materials for Advanced Technologies & IUMRS-International Conference in Asia 2003, 29 June-4 July 2003, Singapore.
58. M. M. Nasef, N. A. Zubir, **A. F. Ismail**, K. Z. Dahlan and H. Saidi, *New Pore-Filled polymer eletrolyte membranes by electron induced grafting*, Proceedings of International Symposium on Renewable Energy: Environment Protection 7 Energy Solution for Sustainable Development, 14-16 December 2003.
59. N. A. Razak, K. A. Anuar, **A. F. Ismail**, M. Aziz, S. Sanip, *Simulation of Carbon Nanotubes for Hydrogen Storage using Neural Network: A preliminary study*, (2003)179-186, Synthesis, Seminar Penghasilan Sel Bahanapi Malaysia, 27-30 June, 2003, Admiral Marine & Leisure Club, Port Dickson.
60. T. J. Chee, N. A. Buang, M. Aziz, S. Sanip, **A. F. Ismail**, *Heat Treatment Studies on Activated Carbon and Charcoal for Carbon Nanotubes synthesis*, Synthesis, Seminar Penghasilan Sel Bahanapi Malaysia, 27-30 June, 2003, Admiral Marine & Leisure Club, Port Dickson.
61. Z. R. Z. Abidin, **A. F. Ismail**, M. Aziz, S. Sanip, N. A. Buang, *Pretreatment of Natural Graphite as Starting Material for Carbon Nanotube Synthesis*, Seminar Penghasilan Sel Bahanapi Malaysia, 27-30 June, 2003, Admiral Marine & Leisure Club, Port Dickson.
62. M. F. A. Wahab, R. A. Rahim, **A. F. Ismail**, *Latest development of mixed matrix membrane using glassy polymer as continuous phase for gas separation*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
63. **A. F. Ismail**, W. A. Hafiz and T. C. Khoo, *Effect of Shear Rate on the Performance of Membrane-Assisted Lead Acid Battery*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
64. W. A. Hafiz, **A. F. Ismail**, and T. C. Khoo, *Effect of Shear Rate on the Performance of Membrane-Assisted Lead Acid Battery*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
65. T. C. Khoo, **A. F. Ismail** and W. A. Hafiz, *Development of a Maintenance Free Tropicalized Lead Acid Battery Enhanced by Gas Separation Membrane*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
66. R. M. Tajuddin, **A. F. Ismail** and M. R. Salim, *Effect of Oxygen Concentration on Microbial Growth in Aerated Palm Oil Mill Effluent Using Oxygen Enriched Air Membrane System*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
67. R. M. Tajuddin, **A. F. Ismail**, M. R. Salim and S. M. Sanip, *A Study on The Performance and Morphology of Multicomponent Hollow Fiber Ultrafiltration Membrane*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
68. B. C. Ng, **A. F. Ismail** and W. A. W. Rahman, *Formation of Asymmetric Polysulfone Flat Sheet Membrane for Gas Separation: Rheological Assessment*. Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
69. S. M. Saufi, **A. F. Ismail** and M. S. Abdullah, *Polyacrylonitrile (pan)-based carbon hollow fiber membrane for O₂/N₂ gas separation*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
70. N. Ridzuan, W. A. W. Abdul Rahman and **A. F. Ismail**, *Effect of Polymer Concentration on the Development of Asymmetric Polyethersulfone Membrane for Gas Separation*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.



71. S. M. Suhaina, **A. F. Ismail**, and N. S. Nasri, *Performance evaluation of polysulfone hollow fiber membrane for Oxygen enrichment system*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
72. A. R. Sunarti, **A. F. Ismail** and W. A. W. Abd Rahman, *Effects of shear rate on binary system on cellulose acetate membrane for gas separation*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
73. A. R. Rahman and **A. F. Ismail**, *Characterization of nanofiltration membrane by the solute transport method: Some practical aspects in determining of mean pore size and pore size distributions*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
74. N. Yaacob and **A. F. Ismail**, *Polysulfone hollow fiber membrane system for CO₂/CH₄ separation: Influence of membrane configuration on the separation performance*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
75. M. I. Mustaffar, **A. F. Ismail** and R. Illias, *Study on the effect of polymer concentration on hollow fiber ultrafiltration membrane morphology and performance*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
76. S. Jalil, **A. F. Ismail** and H. Shahrir, *Preparation and characterization of polyethersulfone hollow fiber nanofiltration membranes made from PES/PEG 400/Water*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
77. R. Naim, **A. F. Ismail** and H. Saidi, *Effects of sulfonation on thermal behavior and microstructure of sulfonated polysulfone membranes as a material for PEM*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
78. N. A. Zubir, **A. F. Ismail**, M. M. Nasef, K. Z. M. Dahlan, H. Saidi and E. Saion, *Physico-chemical study of sulfonated polystyrene pore-filled PTFE membranes by electrons induced grafting*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
79. N. A. Zubir, **A. F. Ismail**, M. M. Nasef, K. Z. M. Dahlan, H. Saidi and E. Saion, *Sulfonated polystyrene pore-filled electrolytes membranes by electrons induced grafting of styrene into PTFE films: Thermal stability and structural investigation*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
80. R. Naim, **A. F. Ismail**, H. Saidi and E. Saion, *Sulfonated polysulfone membranes as a material for PEM*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
81. R. M. Tajuddin, **A. F. Ismail** and M. R. Salim, *Effect of oxygen concentration on microbial growth aerated palm oil mill effluent using oxygen enriched air membrane system*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 21-25 April, 2004.
82. S. Sanip, Y. Sulaiman, J. Dewi, N. A. Buang and **A. F. Ismail**, *Surface modification of carbon materials via heat and acid treatment*, The XXI Regional Conference on Solid State Science and Technology, 10-13 October 2004, Hyatt Regency, Kota Kinabalu, Sabah, Malaysia.
83. J. C. Tee, N. A. Buang, S. Sanip and **A. F. Ismail**, *Characterization on series of support metal oxides catalysts for the synthesis of carbon nanotubes (CNT's)*, The XXI Regional Conference on Solid State Science and Technology, 10-13 October 2004, Hyatt Regency, Kota Kinabalu, Sabah, Malaysia.
84. Y. Sulaiman, J. C. Lee, N. A. Buang, M. Aziz, S. Sanip and **A. F. Ismail**, *SEM of as-synthesized nano-carbon using different catalyst*, The XXI Regional Conference on Solid State Science and Technology, 10-13 October 2004, Hyatt Regency, Kota Kinabalu, Sabah, Malaysia.



85. N. A. Razak, K. A. Arshad, A. A. Rahman, S. Sanip and **A. F. Ismail**, *Artificial Neural Network modeling for the prediction of carbon surface area*, The XXI Regional Conference on Solid State Science and Technology, 10-13 October 2004, Hyatt Regency, Kota Kinabalu, Sabah, Malaysia.
86. K. A. M. Yaakob, R. Husin, P. Marwoto, S. Sanip and **A. F. Ismail**, *Design of the DC plasma enhanced chemical vapor deposition (DC-PECVD) for the synthesis of carbon nanotubes*, The XXI Regional Conference on Solid State Science and Technology, 10-13 October 2004, Hyatt Regency, Kota Kinabalu, Sabah, Malaysia.
87. **A. F. Ismail**, S. A. Rahman, and W. A. W. Rahman, Formation of cellulose acetate membrane for gas separation from binary dope system: Effect of shear rate. In: Proceedings of Regional Symposium on Membrane Science and Technology 2004, 21-25 April 2004, Puteri Pan Pacific Hotel, Johor Bharu, Malaysia.
88. J. C. Lee, N. A. Buang, S. Sanip and **A. F. Ismail**, *Scanning electron microscope (SEM) analysis of as-grown carbon nanotubes over supported catalysts*, Asia Pacific Nanotechnology Forum 2004, Dec 8-12 2004, Shanghai, China.
89. S. Sanip, J. C. Lee, N. A. Buang and **A. F. Ismail**, *Effect of catalyst supports on the growth of carbon nanotubes*, Asia Pacific Nanotechnology Forum 2004, Dec 2004, Shanghai, China.
90. N. S. Yaacob and **A. F. Ismail**, *Effect of Membrane System Configuration on the Performance of Polysulfone Hollow Fiber Membrane system for CO₂/CH₄ Separation*, 18 Symposium of Malaysia Chemical Engineering (SOMChe 2004) Dec 13-14, 2004, UTP, Tronoh.
91. N. A. Buang, Y. Sulaiman, S. Sanip and **A. F. Ismail**, *The synthesis of Carbon Nanotubes (CNTs) Grown over Supported Catalyst and their Adsorption Properties*, 3rd International Conference on Materials for Advanced Technologies (ICMAT 2005), 3-8 July 2005, Singapore.
92. A. A. Rahman, N. A. Razak, K. A. Arshad and **A. F. Ismail**, *hydrogen Desorption Studies on As-synthesized Carbon Nanotubes using Artificial Neural Network*, 3rd International Conference on Materials for Advanced Technologies (ICMAT 2005), 3-8 July 2005, Singapore.
93. A. M. Zaiton, S. Sanip and A. F. Ismail, *Influence of Pretreatment Methods on the Sorption Capacity of Carbon Nanotubes*, 3rd International Conference on Materials for Advanced Technologies (ICMAT 2005), 3-8 July 2005, Singapore.
94. A. M. Zaiton, S. Sanip and A. F. Ismail, *effect of Temperature on the Sorption Characteristics of Carbon Nanotubes*, 3rd International Conference on Materials for Advanced Technologies (ICMAT 2005), 3-8 July 2005, Singapore.
95. R. M. Tajuddin, **A. F. Ismail**, R. Salim, *Development of Hollow Fiber Polysulfone Membrane for Removal of Inorganic Impurities in Palm Oil Mill Effluent*, Brunei International Conference on Engineering and Technology (BICET 2005), 4-7 July 2005.
96. R. M. Tajuddin, **A. F. Ismail**, R. Salim, *Development of Hollow Fiber Polysulfone Membrane for Removal of Organic Impurities in Palm Oil Mill Effluent*, Regional Symposium on Membrane Science and Technology, Johor Bahru, Malaysia, 25-27 April, 2005
97. M. Mimi Sakinah , **A.F. Ismail**, Rosli Md Illias, Osman Hassan, *Development of enzymatic membrane reactor (EMR) for cyclodextrins production*, International Conference on Chemical and Bioprocess Engineering (ICCBPE 2005), Kota Kinabalu, Sabah.
98. Z. A. Wahab, **A. F. Ismail** and M. R. Salim, *Influence of natural organic matter (NOM) characteristics on membrane ultrafiltration membrane reactor*, International Conference on Chemical and Bioprocess Engineering (ICCBPE 2005), Kota Kinabalu, Sabah



99. S. Sanip, **A. F. Ismail**, N. A. Buang, Z. Majid and M. A. R. Saidin, *Hydrogen sorption capacity of as grown multiwalled nanotubes (MWNTs)*, The XXII Regional Conference on Solid State Science and Technology, 18-21 December, Kuantan, Malaysia
100. M. N. M. Nasir, N. A. Buang, S. M. Sanip and **A. F. Ismail**, *CCVD synthesis of carbon nanotubes (CNTs) using MgO and CaCO₃ supports*. The XXII Regional Conference on Solid State Science and Technology, 18-21 December 2005, Kuantan, Malaysia
101. Y. Sulaiman, N. A. Buang, Z. A. Majid, S. M. Sanip and **A. F. Ismail**, *Raman and TEM studies of carbon nanotubes produced by Bimetallic catalyst system*, The XXII Regional Conference on Solid State Science and Technology, 18-21 December 2005, Kuantan, Malaysia
102. R. Tajuddin, **A. F. Ismail**, M. R. Salim and A. Baki, *Effect of oxygen concentration during aeration on waste water (Palm Oil Mill Effluent)*, In international Seminar on Civil and Infrastructure Engineering (ISCIE'06), 13-16 June, 2006, Kuala Lumpur, Malaysia.
103. M.M. Nasef, H. Saidi, N.A. Zubir, **A.F. Ismail**, K.Z.M. Dahlan and M. Khayet, *Preparation and characterization of polystyrene sulfonic acid pore-filled poly(vinylidene fluoride) membranes by radiation-induced grafting*, The International Congress on Membranes and Membranes Processes, 2005 (ICOM 2005) Seoul, 21–26 August 2006, Korea.
104. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan, *Fouling Characteristics in enzymatic membrane reactor (EMR) for cyclodextrins production using ATR/FTIR.*, Regional Symposium of Membrane Science Technology., Nanyang Executive Center, 26 – 28 April 2006, Singapore.
105. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan, *The behaviors of ultrafiltration membrane in cyclodextrins separation.* Regional Symposium of Membrane Science Technology., Nanyang Executive Center, April, 26-28, 2006, Singapore.
106. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan, *ATR/FTIR analysis of cleaned membrane with typical cleaning agent during cyclodextrins separation.* Young Researchers Conference on Applied Science. Young Researchers Conference on Applied Science. Hyatt Regency Saujana, June, 13-14, 2006, Subang, Selangor, Malaysia.
107. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan , *The effect of starch pretreatment on cyclodextrins production.* Regional Postgraduate Conference on Engineering and Science. 26 – 27 July 2006, Johor Bharu.
108. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan , *The effect of crossflow velocity on the permeate flux during cyclodextrins bioseparation.* Regional Postgraduate Conference on Engineering and Science. Universiti Teknologi Malaysia, 26 – 27 July 2006, Johor.
109. A.W. Zularisam, **A.F. Ismail**, Razman Salim, *Membrane Autopsy of NOM Fouled Ultrafiltration Membrane for Fouled Membrane Characterization and Foulant Analysis* International Conference on Environment 2006. 13-15 November 2006, Universiti Sains Malaysia, Pulau Pinang.
110. J.C. Tee, N.A. Buang, S.M. Sanip and **A.F. Ismail**, *Synthesis of Multi-Walled Carbon Nanotubes (MWNTs) over Anodic Aluminium Oxide (AAO) Template*, The Second International Conference on Solid State Science and Technology, 4 - 6 Sept 2006, Kuala Terengganu.
111. Suhaila Mohd Sanip and **A. F. Ismail**, *Determination of Hydrogen Storage Capacity of Carbon Nanotubes via Volumetric Differential Pressure Technique*, The Second International Conference on Solid State Science and Technology, 4 - 6 Sept 2006, Kuala Terengganu.
112. **A. F. Ismail**, N. Yaacob and T. D. Kusworo, *Effect of membrane configuration on the separation performance of polysulfone hollow fiber membrane system for CO₂/CH₄ separation*, Regional Symposium on Membrane Science and Technology, 27 –28 April, 2006, Singapore.



113. **A. F. Ismail** and Z. A. Wahid, *Membrane Technology for Surface Water Treatment: Application and Challenges*, International Conference and Exhibition on Green Chemistry, 19-21 September 2006, Sunway Pyramid Convention Centre, Petaling Jaya, Selangor, Malaysia.
114. M. S. A. Rahaman, **A. F. Ismail**, A. Mustafa, M. A. Rahman and H. Hasbullah, *Modification of PAN Homopolymer for The Precursor of Carbon Fiber*, Seminar Penyelidikan dan Pembangunan Gentian Karbon Malaysia, 6th - 9th June 2006, City Bayview Hotel, Langkawi.
115. M. S. A. Rahaman, **A. F. Ismail**, A. Mustafa, *Stabilization Process and Its Relationship on Mechanical Properties of Modified PAN Fiber*, Seminar Penyelidikan dan Pembangunan Gentian Karbon Malaysia, 6th - 9th June 2006, City Bayview Hotel, Langkawi.
116. M. A. Rahman, **A. F. Ismail**, A. Mustafa, B. C. Ng, H. Hasbullah, M. S. A. Rahaman and M. S. Abdullah, *Effect of Coagulation Bath Temperature and Polymer Composition on the Fabrication and Characteristics of Carbon Fiber Precursor in the Solvent-free Coagulation Process*, Seminar Penyelidikan dan Pembangunan Gentian Karbon Malaysia, 6th - 9th June 2006, City Bayview Hotel, Langkawi.
117. **A. F. Ismail**, M. A. Rahman, A. Mustafa, M. S. Abdullah, B. C. Ng and H. Hasbullah, *Effects of Residence Time on the Characteristics of PAN-based Fibers and its Fabrication through Solvent-Free Coagulation Process*, Seminar Penyelidikan dan Pembangunan Gentian Karbon Malaysia, 6th - 9th June 2006, City Bayview Hotel, Langkawi.
118. **A. F. Ismail**, *Membrane Technology Development: A Malaysian Perspective*, Seminar on Membrane Filtration for Portable Water Treatment, 26 April 2006 Pulau Pinang.
119. T. D. Kusworo, **A. F. Ismail**, *Oxygen Enrichment Properties of Polyimide/Polyethersulfone Blends-Zeolite 4A Mixed Matrix Membranes*. 20th Symposium of Malaysian Chemical Engineers (SOMCHE 2006) 19 Dis. 2006, Shah Alam.
120. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan, *Production of Cyclodextrin Using Raw Tapioca Starch in Batch Process*, 20th Symposium of Malaysian Chemical Engineers (SOMCHE 2006) 19 Dis. 2006, Shah Alam.
121. A.W. Zularisam, **A.F. Ismail**, Razman Salim. *Autopsis of Fouled Hollow Fiber Membranes In Surface Water Treatment with Immersed Ultrafiltration Membrane*, 20th Symposium of Malaysian Chemical Engineers (SOMCHE 2006), 19 Dis. 2006, Shah Alam.
122. A. M. Sakinah, **A. F. Ismail**, Rosli Md. Illias and Osman Hassan, *Effect of Reaction Temperature to the Cyclodextrins Production in Batch Process*. 20th Symposium of Malaysian Chemical Engineers (SOMCHE 2006) 19 Dis. 2006, Shah Alam.
123. Tee Jia Chee, Nor Aziah Buang and **Ahmad Fauzi Ismail**, *Electron Microscopes Analysis of Home Grown Multi-Walled Carbon Nanotubes (MWNTs)*, 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.
124. A. W. Zularisam, **A. F. Ismail** and M. R. Salim, *Natural Organic Matter (NOM) Fouling in Surface Water Treatment* (Poster), 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.
125. A. W. Zualrisam, **A. F. Ismail**, Razman Salim and M. Sakinah, *Influence of Natural Organic Matter Characteristics on Fouling and Rejection Mechanisms of Immersed Ultrafiltration Membrane Filtration. A Case Study of Potable Water Production*, 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.
126. Tutuk D. Kusworo, **A. F. Ismail** and A. Mustafa. *Oxygen Enrichment Properties of Polyethersulfone/Polyimide Blends-Zeolite 5A Mixed Matrix Membranes*, 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.



127. A. M. Mimi Sakinah, Rosli Md. Illias, **A. F. Ismail**, Osman Hassan and A. W. Zularisam, *The Effect of Strach Pretreatment on Cyclodextrins Production*, 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.
128. A. M. Mimi Sakinah, Rosli Md. Illias, **A. F. Ismail**, Osman Hassan and A. W. Zularisam, *The Effect of Cross Flow Velocity on the Permeate Flux during Cyclodextrins Bioseparation*, 1st Regional Postgraduate Conference on Engineering & Science (RPCES 2006) 26-27 July 2006, UTM Skudai.
128. N. Bolong, **A. F. Ismail** and M. R. Salim, *Effect of Polyvinylpyrrolidone in Binary Solution on the Performance of Poly ether sulfone Hollow Fiber Membrane for Sodium Chloride Separation*, International Conference on Advancement of Materials and Nanotechnology, 29 May – 1 Jun 2007, Langkawi. SIRIM & UITM.
129. J. C. Tee, S. M. Sanip, M. Aziz and **A. F. Ismail**, *Template Synthesis of Carbon Nanotubes*, *International Conference on Advancement of Materials and Nanotechnology*, 29 May – 1 Jun 2007, Langkawi. SIRIM & UITM.
130. S. M. Sanip, M. A. R. Saidin, M. Aziz and **A. F. Ismail**, *Hydrogen Adsorption on Activated Carbon Nanotubes using Volumetric Differential Pressure Technique*, International Conference on Advancement of Materials and Nanotechnology, 29 May – 1 Jun 2007, Langkawi. SIRIM & UITM.
131. T. J. Chee, M. Aziz and **A. F. Ismail**, *Effects of Catalyst Preparation on Multi-Walled Carbon Nanotubes Growth*, 23rd Regional Conference on Solid State Science and Technology, 2007, Hyatt Regency Hotel, 27-29 November 2007, Johor Bahru.
132. P. S. Goh, M. Aziz and **A. F. Ismail**, *Acid Purification of Carbon Nanotubes Grown by CCVD*, 23rd Regional Conference on Solid State Science and Technology, 2007, Hyatt Regency Hotel, 27-29 November 2007, Johor Bahru.
133. M. A. R. Saidin, S. M. Sanip, M. Aziz and **A. F. Ismail**, *Optimization of Home-Built Plasma Enhanced Chemical Vapour Deposition (PECVD) System*. 23rd Regional Conference on Solid State Science and Technology, 2007, Hyatt Regency Hotel, 27-29 November 2007, Johor Bahru.
134. S. M. Sanip, M. A. R. Saidin, M. Aziz and **A. F. Ismail**, *Hydrogen Adsorption Capacity of Multi-Walled Carbon Nanotubes Grown over Different Catalyst Supports*, 23rd Regional Conference on Solid State Science and Technology, 2007, Hyatt Regency Hotel, 27-29 November 2007, Johor Bahru
135. A. W. Zualrisam, **A. F. Ismail**, M. R. Salim and M. Sakinah, *Natural Organic Matter (NOM) Fouling and Associated Foulant in Surface Water Treatment*. 21st Symposium of Malaysian Chemical Engineers (SOMCHE 2007) 12-14 December 2007, UPM, Kuala Lumpur.
136. S. M. Sanip, T. J. Chee, M. A. R. Saidin, M. Aziz and **A. F. Ismail**, *Effect of Different Catalyst Supports on Hydrogen Adsorption Capacity of Multi-walled Carbon Nanotubes*, Nanotech Malaysia 2007.
137. M. Aziz and **A. F. Ismail**, *The Effect of Cobolt Catalyst Loading and Acetylene Flow Rate for the Growth of CNTs*, Nanotech Malaysia 2007
138. P. S. Goh, M. Aziz and **A. F. Ismail**, *Oxidation of Carbon Nanotubes Grown by CCVD*, Nanotech Malaysia 2007.
139. J. C. Tee, M. Aziz and **A. F. Ismail**, *Influence of Catalyst Preparation on Synthesis of Multi-Walled Carbon Nanotubes*, Nanotech Malaysia 2007.
140. D. Verasamy, **A. F. Ismail**, Z. M. Nor, *Fouling characteristics and autopsy of a PVDF tubular ultrafiltration membrane in natural rubber skim latex(waste latex) recovery*, International Membrane Science and Technology Conference 2007, 5-9 Nov., 2007, Sydney Australia.



141. T. D. Kusworo, **A. F. Ismail**, A. Mustafa, D. Verasamy, *Gas Separation Performance of PI/PES Polymer Blending Hollow Fiber Mixed Matrix Membrane with Modified Zeolite 4A using Dynasylan Ameo*, International Membrane Science and Technology Conference 2007, 5-9Nov., 2007, Sydney Australia.
142. S.H. Tapsir, N. Mokhtar, **A.F. Ismail**, S.M.Sanip, and F. A. Manan, *University-Industry Partnership for Nation Building*, 3rd Asia Pacific Professional Leader in Education, 11-13 July, 2007, Hong Kong.
143. S.M.Sanip, S.H. Tapsir, N. Mokhtar, **A.F. Ismail**, and F. A. Manan, *Interaction factors Contributing Towards the Success of University-Industry Partnership*, RnD Management Conference 2008, 17-21 June, 2008, Ottawa, Canada.
144. Bolong N., **Ismail A. F.**, M. R. Rana and Matsuura T., *Modification of Polyethersulfone Hollow Fiber Membranes by Novel Charged Surface Modifying Macromolecule (CSMM) Blends for Water Application*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
145. Hatijah Basri, **Ahmad Fauzi Ismail** and Madzlan Aziz, *Characteristic and Performance Studies of Polyethersulfone (PES)-Ag Polymer Composite*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
146. Suhaila Mohd. Sanip, **Ahmad Fauzi Ismail** and Madzlan Aziz, *Cyclodextrin-Functionalized Carbon Nanotubes for Mixed Matrix Membrane*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
147. M. A. R. Saidin, M. Aziz and **A. F. Ismail**, *Parametric Studies of Thin Film Nickel Catalyst for the Growth of Carbon Nanotubes*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
148. P. S. Goh, **A. F. Ismail** and M. Aziz, *Effect of Acid Oxidation Dispersion Property of Multiwalled Carbon Nanotubes*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
149. J. C. Tee, **A. F. Ismail** and M. Aziz, *Effect of Reacation Temperature and Flow Rate of Precursor on Formation of Multiwalled Carbon Nanotubes*, NanoSciTech 2008, UiTM, Selangor, 18-21st Nov 2008
150. Bolong N, **Ismail A.F.**, Salim M.R., Rana D. and Matsuura T, *Influence of Surface Modifying Macromolecules (SMMs) on Polyethersulfone Hollow Fiber Membranes for Water Separations*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
151. Suhaila Mohd Sanip, Nur Izzah A. Azes, Madzlan Aziz and **Ahmad Fauzi Ismail** : *Preparation and Characterization of Functionalized Multiwalled Carbon Nanotube(f-MWNTs)-Polyimide (PI) Mixed Matrix Membrane*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
152. Jaafar J. and **Ismail A.F.** : *Preparation and Characterization of High Methanol Resistance Sulfonated Poly(ether ether ketone) Membrane for DMFC Application*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
153. Mohd-Norddin M.N.A., **Ismail A.F.**, Matsuura T. and Rana D. : *Preparation and Characterization of Blending Sulfonated Poly(ether ether ketone) with Charged Surface Modifying Macromolecules*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
154. Basri H., **Ismail A.F.** and Aziz M. : *Preparation and Characterization of polyethersulfone (PES) membranes incorporated with silver nitrate (AgNO₃)*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
155. **Ismail A.F.** and Lau W.- J. : *Deduction of Structural and Electrical Properties of Blended PES and S-PEEK Nanofiltration Membranes Using Theoretical Models*, 6th Regional Symposium on Membrane Science & Technology 2008, Phuket, Thailand, 13-15 August 2008
156. Hatijah Basri, **Ahmad Fauzi Ismail**, Madzlan Aziz, *The Preparation and Characterization of silver-loading polyethersulfone (PES) Asymmetric Membrane for Wastewater Treatment*, Seminar Kebangsaan Aplikasi Sains dan Matematik 2008 (SKASM 2008), UTHM, Batu Pahat, 24-25 November 2008



157. Zaharah Ibrahim, Azrimi Umor, **Ahmad Fauzi Ismail**, Madzlan Aziz, Hatijah Basri, *Development of Bioremediation Processes for Textile Industry Wastewater Treatment*, Seminar Kebangsaan Aplikasi Sains dan Matematik 2008 (SKASM 2008), UTHM, Batu Pahat, 24-25 November 2008
158. **A.F. Ismail** and W.J. Lau, *Effect of feed conditions on the salt and colour removal using different characteristics of self-made hollow fiber NF membranes*, 15th Regional Symposium on Chemical Engineering in conjunction with the 22nd Symposium of Malaysian Chemical Engineers, Impiana KLCC Hotel & SPA, Kuala Lumpur, Malaysia, 2-3 December 2008
159. **A.F. Ismail**, A. Mansourizadeh, *Effects of Fabrication parameters on the morphology of microporous polysulfone hollow fiber membranes*, 15th Regional Symposium on Chemical Engineering in conjunction with the 22nd Symposium of Malaysian Chemical Engineers, Impiana KLCC Hotel & SPA, Kuala Lumpur, Malaysia, 2-3 December 2008
160. T. D. Kusworo, **A.F. Ismail**, Budiyono, I.N. Widiassa, S. Johari, and Sunarso, *CO₂ removal from biogas using carbon nanotubes mixed matrix membranes*. International Graduate Conference in Science and Engineering, 2008, UTM, Malaysia.
161. N. H. Othman, S. A. S. A. Kadir and **A. F. Ismail**, *Application of Central Composite Design (CCD) Combined with Response Surface Methodology (RSM) in Describing the Performance of SPEEK/SiWA/SiO₂-Al₂O₃ Composite Membrane*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
162. M.N. A. Mohd Norddin, **A. F. Ismail**, T. Matsuura and D. Rana, *Blending Sulfonated Poly(Ether Ether Ketone) with Various Charged Surface Modifying Macromolecules*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
163. J. Jaafar and **A. F. Ismail**, *Contribution of Nanoclays to the Barrier Properties of SPEEK/Cloisite15a[®] Membrane for DMFC Application*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
164. N. H. Othman, S. A. S. A. Kadir and **A. F. Ismail**, *Preparation and Characterization of Proton Conductive SPEEK Composite Membrane Containing SiWA Loaded onto SiO₂-Al₂O₃ for Direct Methanol Fuel Cell (DMFC) Application*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
165. D. Veerasamy, **A. F. Ismail** and Z. M. Nor, *Fouling Characteristics and Cleaning Strategies of a PVDF Tubular Ultrafiltration Membrane in a Skim Natural Rubber Latex Concentration Process*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
166. E. Yuliwati and **A. F. Ismail**, *Theoretical Studies of Using PVDF/LiClO₄/TiO₂ Hollow Fiber Membranes for the Treatment of Refinery Wastewater*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
167. F. Aziz, **A. F. Ismail** and A. Mustafa, *Chemical Cross Linking Modification of Matrimid Membranes using P-Phenylenediamine for Gas Separation*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
168. S. A. Hashemifard, **A. F. Ismail** and A. Mustafa, *Comparison of Gas Permeability Models for Mixed Matrix Membranes*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
169. M. A. Aroon, **A. F. Ismail**, M.M. Montazer Rahmat, T. Matsuura and A. Mustafa, *Dimensionless Analysis of Steady Hollow Fiber Spinning: Rheological Aspect*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur



170. M. A. Aroon, **A. F. Ismail**, M.M Montazer Rahmat, A. Mansorizadeh and A. Mustafa, *Effect of Additives on Flat Sheet Membranes for Gas Separation*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
171. T. D. Kusworo, **A.F. Ismail**, A. Mustafa, Budiyono and I. Widiassa, *Enhanced of Oxygen Separation using Polyethersulfone-Activated Carbon Mixed Matrix Membrane*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
172. S. M. Sanip, **A. F. Ismail**, M. Aziz, J. C. Tee and T. Soga, *Matrimid[®] and Functionalized Multi-Walled Carbon Nanotubes Mixed Matrix Membrane for Gas Separation*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
173. Budiyono, T. D. Kusworo, A. F. Ismail, I. N. Widiassa, S. Johari and Sunarso, *Polyimide-Zeolite Mixed Matrix Membrane (MMM) for Biogas Purification*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
174. A. Mansourizadeh, **A. F. Ismail**, M. A. Aroon and A. Mustafa, *Preparation of Porous Polysulfone Hollow Fiber Membranes for CO₂ Absorption Effect of Different Additives*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
175. T. D. Kusworo, Abdullah Busairi, **A. F. Ismail**, A. Mustafa, Budiyono and I. N. Widiassa, *Purification of Biogas using Carbon Nanotubes Mixed Matrix Membrane: Effect of Functionalization of Carbon Nanotubes using Silane Agent*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
176. M. F. A. Wahab, **A. F. Ismail** and S. J. Shilton, *Resorcinol-Formaldehyde Carbon Xerogel as Molecular Sieve Fillers for Hollow Fiber Mixed Matrix Membrane for Gas Separation*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
177. **A. F. Ismail** and W. J. Lau, *Properties of PES/SPEEK Blend Nanofiltration Membranes: A Comparative Study between Theoretical and Experimental Results*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
178. Bolong N., **Ismail A.F.**, Salim M.R., Rana D and Matsuura T., *Surface Characterization by X-Ray Photoelectron Spectroscopy of Polyethersulfone Hollow Fiber Membranes Modified with Surface Modifying Macromolecules*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
179. M.T. Ramlah, A.Baki, **A.F. Ismail** and Y. Nor Azlina, *Performance of RMBR and SMBR using UFHF Membrane for Biological Treatment of Pome*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
180. A. W. Zularisam, **A. F. Ismail**, M. R. Salim and M. Sakinah, *Role of NOM Fraction and Colloidal Particulate to UF Membrane Fouling*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
181. N. Bolong, **A. F. Ismail** and M. R. Salim, *Spinning Effect of Polyethersulfone Hollow Fibre Membrane Prepared by Water or Polyvinylpyrrolidone in Ternary Formulation*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
182. H. Basri, **A. F. Ismail** and M. Aziz, *The Effect of PVP Addition in The Preparation of Polyethersulfone(PES)-Ag Antibacterial Membrane*, 7th International Conference on Membrane, Science & Technology, 13th-15th May, 2009, Corus Hotel, Kuala Lumpur
183. M. N. A. Mohd Norddin, **A. F. Ismail**, D. Rana and T. Matsuura, *Study on Synthesis and Physical Properties of Charge Surface Modifying Macromolecules With Different End-Capping Materials For Membrane Application*, Regional Conference on Environmental and Earth Resource, 7-8 December 2009, M. S. Garden Hotel, Kuantan, Pahang.



184. H. Basri, **A. F. Ismail**, and M. Aziz, **Polyethersulfone (PES)-Ag UF Membrane For Antibacterial Application**, Environmental Science and Technology Conference, 7-8 December 2009, Kuala Terengganu, Terengganu.
185. S. M. Sanip, **A. F. Ismail**, M. Aziz, T. Soga, M. Tanemura, and Y. Hayashi, **Prerparation and Characterization of Functionalized Carbon Nanotube-Polyimide (PI) Mixed Membrane (MMM)**, Nanomaterials Seminar For Reducing Enviroment Risk in Asia, 2009 Nagoya Institute of Technology Nagoya, Japan.
186. N. Zubir, **A. F. Ismail**, M.M. Nasef, H. I. Maarof, **Thermal Stability and Structural Investigations of Sulfonated Polystyrene Pore-Filled Poly(Vinylidene Fluoride)**, International Conference on Science and Social Research (CSSR 2010), 5-7 December 2010.
187. N. Bolong, **A.F. Ismail**, M.R. Salim, T. Matsuura, **Modelling the rejection performance of hollow fiber nanofiltration membrane modified by negatively charged-modifying macromolecules**, 2010 Fourth Asia International Conference on Mathematical/Analytical Modelling and Simulation, pp. 384-389
188. P.S. Goh, B.C. Ng, **A.F. Ismail**, M. Aziz and S. M. Sanip, **Effect of Surfactant Dispersed Carbon Nanotubes on Polyetherimide Mixed Matrix Membrane for Gas Separation**, The 8th International Conference on Membrane Science and Technology, ITB Bandung, Indonesia, 29th Nov - 1st Dec., 2010.
189. S. M. Sanip, **A. F. Ismail**, P.S.Goh and T.Soga, **Effect of CNTs on the Gas Separation Performance of Polyimide Membrane**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
190. N. Yusof and **A. F. Ismail**, **Effect of Microstructural Variation on Mechanical and Chemical Properties of Polyacrylonitrile-Based Activated Carbon Fiber Developed Via Solvent-Free Coagulation Process**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
191. M.H.M. Halim, **A.F. Ismail**, B. C. Ng, S. Abdullah, F. Kadir Khan, W.N.F.W. Mustapa, A. Safawi, A.S. Ahmad, S.M. Shariff, **Effect of Different Bore Fluid Concentration on Morphology and Separation Properties of Polysulphone Hollow Fiber Membranes for CO₂ Separation**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
192. A. Matarama, **A. F. Ismail**, T. Matsuura, **Polyacrylonitrile Nanofiber Assembled by Electrospinning: Structural and Pore Characterization for Air Filtration**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
193. E. Yuliwati, **A.F. Ismail**, **Effect of Surface Properties on Filtration Performance of PVDF/LiCl/TiO₂ composite Membrane**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
194. E. Yuliwati, **A.F. Ismail**, **Surface Properties Effect on Filtration Performance of PVDF composite Hollow Fiber Membrane**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.



195. A. Mansourizadeh, **A.F. Ismail**, **CO₂ Absorption with NaOH through the Porous Hollow Fiber Membrane Contactor**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
196. S.A. Hashemifard, **A.F. Ismail**, T. Matsuura, **Modified Halloysite Nanotubes/Polyetherimide Mixed Matrix Membranes for Gas Separation**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
197. N. Misdan, W.J. Lau, **A.F. Ismail**, **Thin-Film Composite (TFC) Membrane for Seawater Desalination: Current Developments and Future Prospects**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
198. F. Kadir Khan, M.H.M. Halim, W.N.F.W. Mustapa, A. Safawi, A.S. Ahmad, S.M. Shariff, **A.F. Ismail**, **Comparative Study of Batch and Continuous Permeation Process for CO₂/CH₄ Mixed Gas using Hollow Fiber Membrane**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
199. **A.F. Ismail**, W.N.F.W. Mustapa, F. Kadir Khan, M.H.M. Halim, B. C. Ng, M.S. Abdullah, A. Safawi, A.S. Ahmad, S.M. Shariff, **Effects of Additive on the Morphology and performance of Asymmetric Polysulfone Membrane for CO₂/CH₄ Gas Separation**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
200. S.A. Hashemifard, **A.F. Ismail**, T. Matsuura, **A Novel Permeability-Selectivity Morphological Diagram for Mixed Matrix Membranes Incorporating large Pore Size Fillers**, The 8th International Conference on Membrane Science and Technology, ITB, Bandung, Indonesia, 29th Nov - 1st Dec. 2010.
201. A. Mansourizadeh, **A.F. Ismail**, **Preparation of Porous PVDF/Surface Modifying Macromolecule (SMM) Blend Hollow Fiber Membranes for CO₂ Absorption**, International Conference on Materials for Advanced Technologies (ICMAT), 26-1 July 2011, Singapore.
202. S. Sanip, **A.F. Ismail**, P.S. Goh, **Effect of Carbon Nanotubes on the Gas Separation Properties of Mixed Matrix Membranes**, International Conference on Materials for Advanced Technologies (ICMAT), 26-1 July 2011, Singapore.
203. P.S. Goh, A.F. Ismail, S. Sanip, B. C. Ng, M. Aziz, **Multi-walled Carbon Nanotubes/Polyetherimide composite Hollow Fibers for Gas Separation**, International Conference on Materials for Advanced Technologies (ICMAT), 26-1 July 2011, Singapore.
204. M.A. Aroon, M.M. Montazer-Rahmati, **A.F. Ismail**, **Fabrication and Characterization of Polyimide Mixed Matrix Membrane Containing Functionalized MWCNTs by β -Cyclodextrin**, 7th International Chemical Engineering Congress and Exhibition, Kish, Iran, 21-24 November 2011.
205. A. Mataram, **A.F. Ismail**, T. Matsuura, **Performance of electrospun nanofibers for water filter application**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
206. W.N.W. Salleh, **A.F. Ismail**, **Effect of carbonization conditions on gas permeation properties of carbon membrane**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
207. M.A.M. Amin, A.H.M. Yusof, **A.F. Ismail**, M.N. Anam, N.A.N. Mahmud, **Effect of different sulfonation degree of SPEEK membrane on the power generation of microbial fuel cell**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.



208. A.H.M. Yusof, K.A.M. Said, **A.F. Ismail**, **Effect of polyvinylpyrrolidone (PVP) and geometry on antibacterial properties of polyethersulfone (PES) containing silver (Ag) membrane**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
209. A.H.M. Yusof, K.A.M. Said, **A.F. Ismail**, **The effect of polyvinylpyrrolidone (PVP) and 2,4,6-triaminopyrimidine (TAP) on antibacterial activity of hollow fiber impregnated with silver**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
210. E. Yuliwati, **A.F. Ismail**, M.A. Kassim, B.C. Ng, M.S. Abdullah, **Effect of aeration and membrane characteristics on COD and TOC removal in a submerged membrane ultrafiltration**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
211. R. Naim, **A.F. Ismail**, A. Monsourizadeh, **CO₂ stripping from aqueous DES solution by microporous PVDF membrane**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
212. M. Rahbari-Sisakht, **A.F. Ismail**, T. Matsuura, **Fabrication and characterization of asymmetric polysulfone hollow fiber membrane contactor for CO₂ absorption**, Regional Symposium and Workshop on Membrane Science and technology 2011, 23-26 August 2011, Nanyang Technological University, Singapore.
213. Shaya Mahmoudian, Mat Uzir Wahit, **A.F. Ismail**, Harinthaavimal Balakrishnan, Muhammad Imran and Do Hyun Kim, **Regenerated Cellulose/Montmorillonite Nanocomposite Fibers Prepared with the ionic liquid 1-Ethyl-3-methylimidazolium Acetate**, The 9th International Nanotech Symposium & Exhibition in Korea (Nano Korea 2011), 24-26 August 2011, Kintex, Korea.
214. Shaya Mahmoudian, Mat Uzir Wahit, **A.F. Ismail**, **Gas Barrier Properties of Regenerated Cellulose/Montmorillonite Nanocomposite Films Prepared with Ionic Liquids**, Malaysia Polymer International Conference 2011, 18-20 October 2011, Kuala Lumpur, Malaysia.