



**AMS10**



The 10<sup>th</sup> Conference of Aseanian Membrane Society  
July 26 - 29, 2016 Nara Kasugano International Forum IRAKA, Nara, Japan

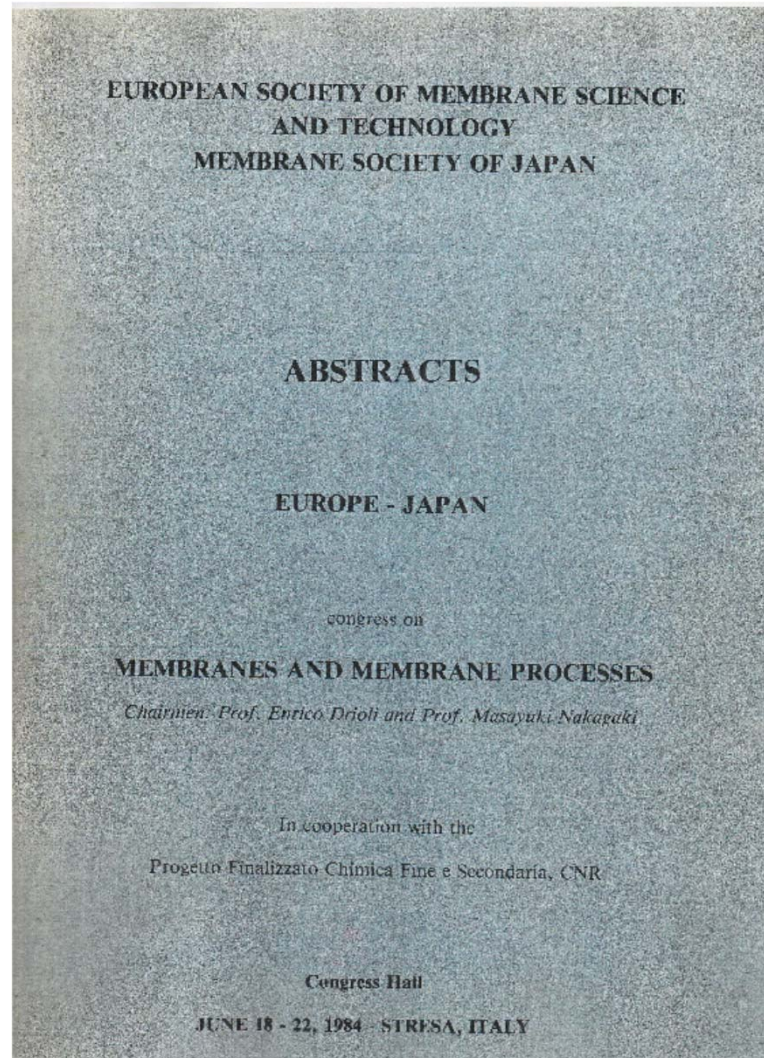
# History of AMS and Future Perspective

**Shin-ichi Nakao**

**Dept. of Environmental Chem. and Chem. Eng.  
School of Advanced Engineering  
Kogakuin University**

**Chemical Research Group  
Inorganic Membranes Research Center  
Research Institute of Innovative Technology for the  
Earth(RITE)**

# The First Congress on Membranes and Membrane Processes



## EUROP-JAPAN Congress on Membranes and Membrane Processes

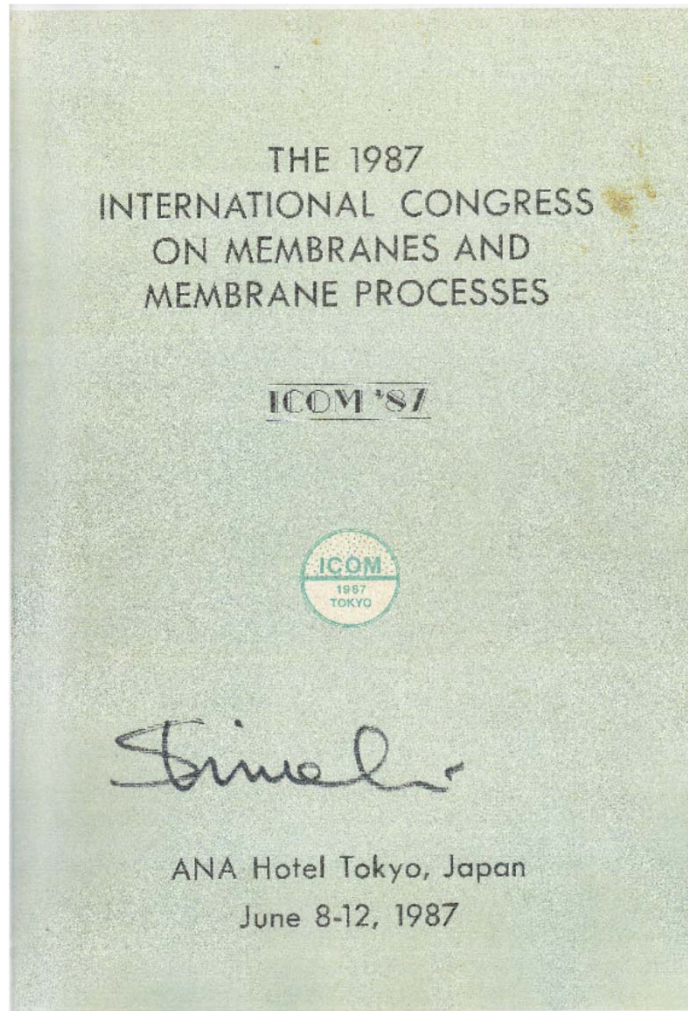
June 18-22, 1984  
Stresa, Italy

Chairmen:  
Prof. Enrico Drioli and  
Prof. Masayuki Nakagaki

The Congress will be held  
in every 3 years.

# The Start of ICOM

## ICOM: International Congress on Membranes and Membrane Processes



Sponsored by  
**The Membrane Society of Japan**  
and  
**The European Society of  
Membrane Science and Technology**

Chairmen:  
**Prof. M. Nakagaki and  
Prof. E. Drioli**

The North American Membrane Society (NAMS) has been established. Therefore the name of congress became "International".

# The order to organize ICOM

The Membrane Society Japan



The North American Membrane Society



The European Society of Membrane Science and Technology  
(The European Membrane Society)



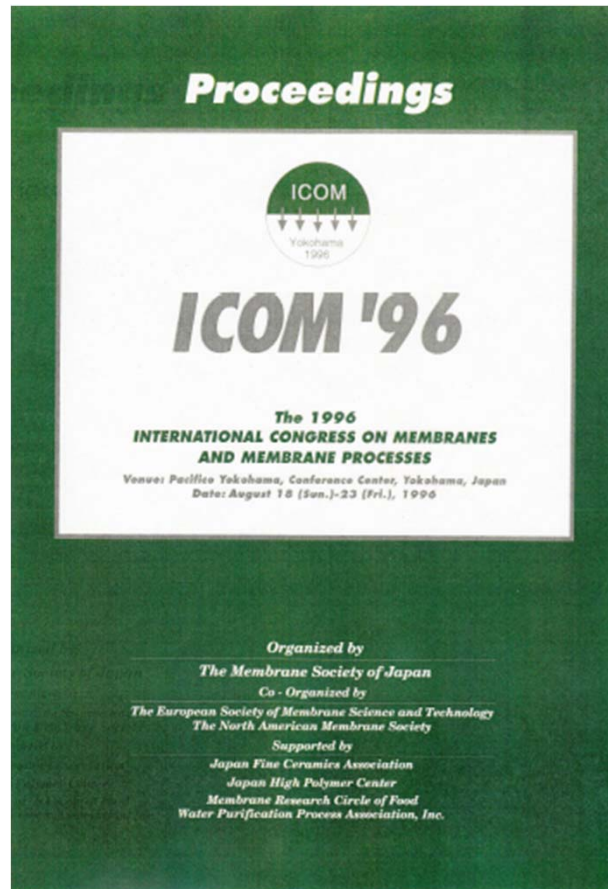
ICOM '87 in Tokyo, Japan

ICOM '90 in Chicago, USA

ICOM '93 in Heidelberg, Germany

ICOM '96 in Yokohama, Japan

# The Membrane Society of Korea has intended to organize ICOM.



## ICOM '96 in Yokohama, Japan

The membrane Society of Japan (MSJ) and The Membrane Society of Korea(MSK) discussed and they decided that the next ICOM in Asia would be held in Korea.

**The Membrane Society of Korea has intended to organize ICOM.**



**icom '99**

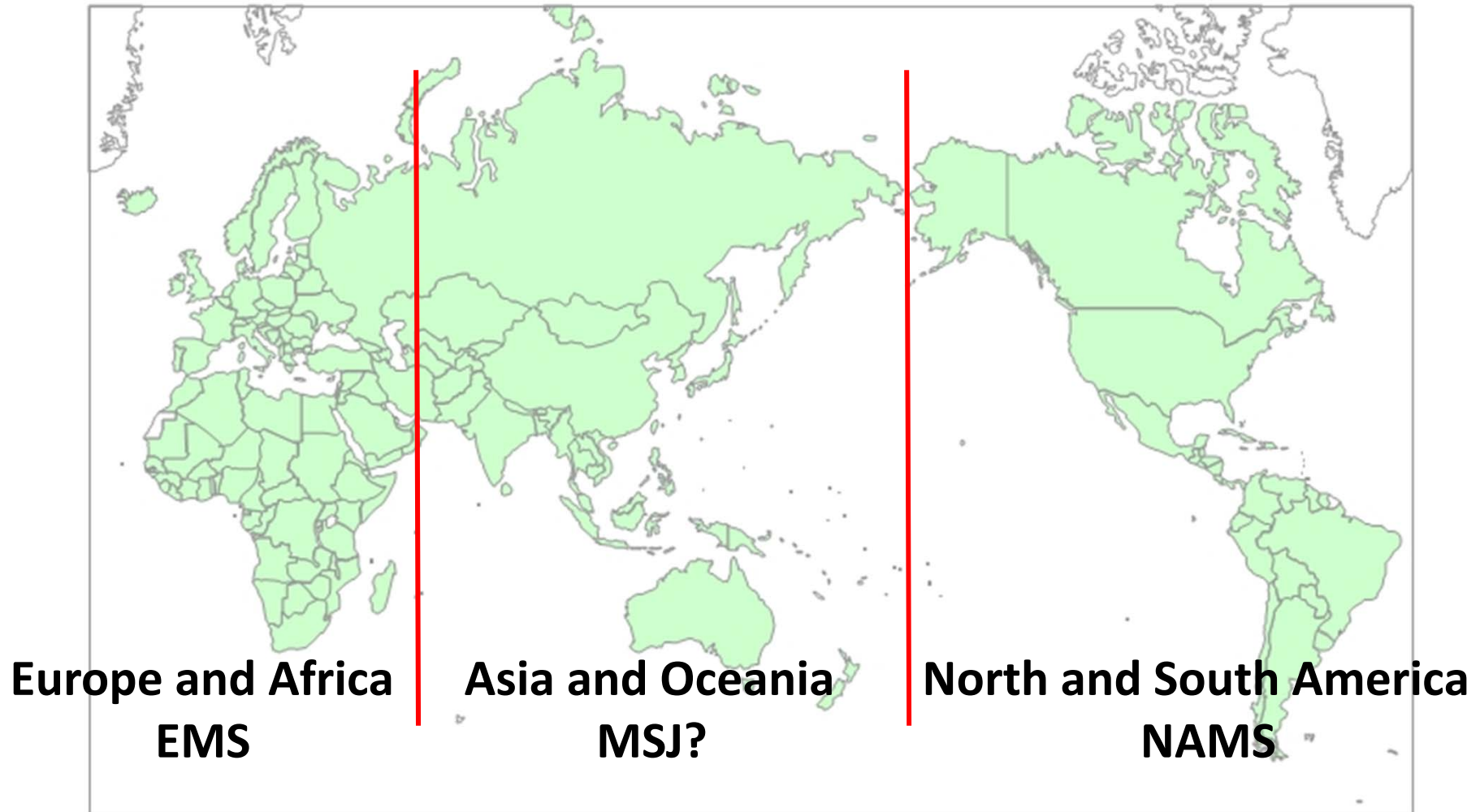
**Program**

**Toronto, Canada  
12 - 18 June 1999**

**ICOM '99 in Toronto,  
Canada**

**MSJ proposed that ICOM would be held in the three areas of the world in the order of the three areas.**

# The New Rule proposed at ICOM '99 in Toronto, Canada



## **The membrane society which represents Asia and Oceania**

**There was no representative society of Asia and Oceania, therefore MSJ and MSK must establish the representative society before next ICOM2002, and the new society will organize ICOM 2005. This proposal was authorized.**

**The both societies had the final meeting for the establishment of the new society in Nov. 10, 2000 during the Annual Fall Meeting of MSK held in Kwangju, Korea with attendees of S. C. Kim, S. H. Noh, Y. S. Kang from MSK and S. I. Nakao from MSJ.**



# Establishment of the Society in Asia and Oceania area

Name: **Asia + Oceania** → **Aseania** → **Aseanian**  
**Aseanian Membrane Society**

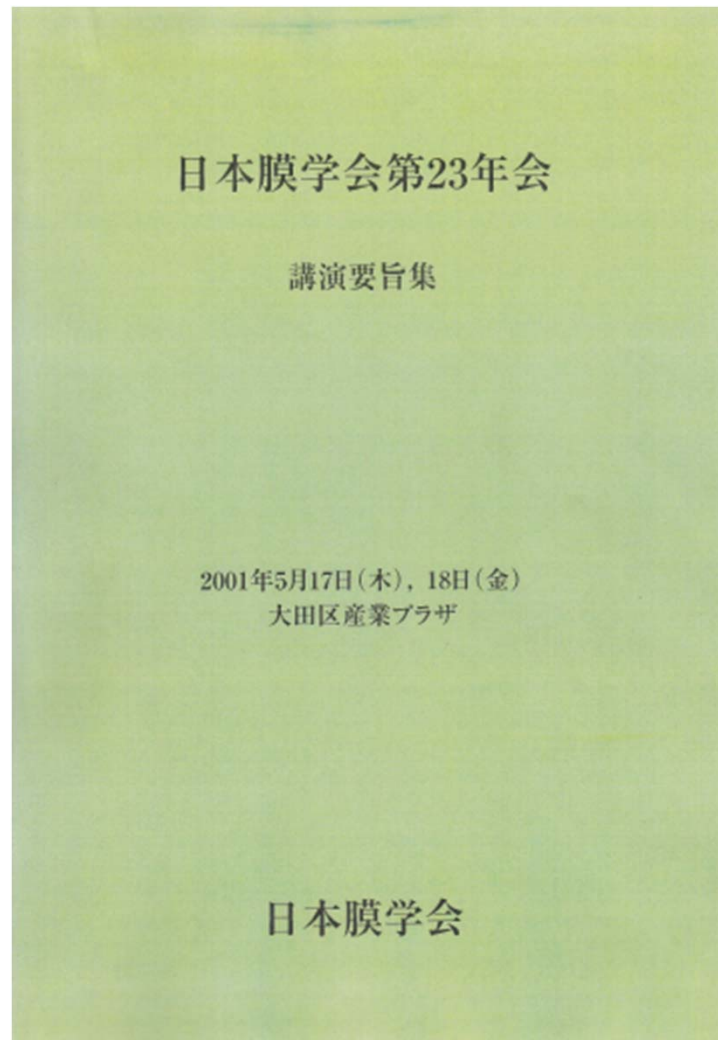
**Founding Members:**

- The Membrane Society of Japan
- The Membrane Society of Korea
- UNESCO Center for Membrane Science and Technology

**Establish Date: 2001.5.18**

**Place of signing: Tokyo, Japan**

# Signing Ceremony for the Establishment of the Aseanian Membrane Society



## 第23年会日程表

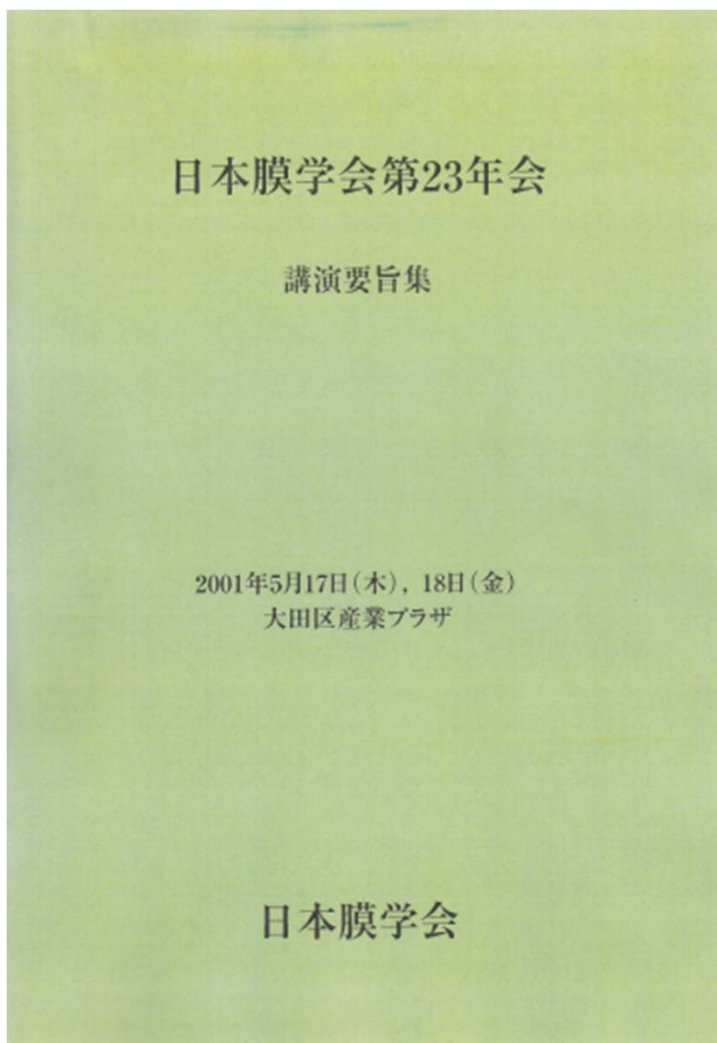
2001年5月17日(木)

	コンベンションホール(4階)		C会場(D会議室) (6階)	ロビー(4階)
	A会場(ホールA)	B会場(ホールB)		
9:00	受付開始			
9:25	開会挨拶 日本膜学会会長 宮崎孝一郎			機器展示
9:30	特別講演(1) 高桑 聡一			ポスター展示 (30件) 機器・書籍展示
10:20	特別講演(2) 増田俊夫			
11:20	展示CM			ポスター討論
12:30	昼食休憩			
13:00	シンポジウム 膜による水処理システム を考える	境界領域 (9件)	生体膜 (16件)	ポスター展示
16:00	人工膜 (8件)	人工膜 (11件)		機器・書籍展示
18:00	懇親会			
19:20				

2001年5月18日(金)

	コンベンションホール(4階)		C会場(D会議室) (6階)	ロビー(4階)
	A会場(ホールA)	B会場(ホールB)		
9:00	シンポジウム 情報素子としての 生体膜および その模倣技術の開発	人工膜 (11件)	人工膜 (12件)	ポスター展示 機器・書籍展示
12:00	昼食休憩			
13:30	日本膜学会総会			ポスター展示
14:00	アジア太平洋膜学会発会式			機器・書籍展示
14:20	日本膜学会膜学研究会 奨励賞受賞者記念講演			
15:00	全体シンポジウム			
17:00	閉会挨拶 日本膜学会第23年会 組織委員長 谷岡明彦			
17:10				

# Signing Ceremony for the Establishment of the Aseanian Membrane Society



**第 23 年 会 日 程 表**  
2001年5月17日(木)

	コンベンションホール(4階)		C会場(D会議室) (6階)	ロビー(4階)
	A会場(ホールA)	B会場(ホールB)		
9:00	受付開始			
9:25	開会挨拶 日本膜学会会長 宮崎孝一郎			機器展示
9:30	特別講演(1) 高桑 聡一			ポスター展示 (30件) 機器・書籍展示
10:20	特別講演(2) 増田俊夫			
11:20	展示CM			ポスター討論
12:20	昼食休憩			
13:00	シンポジウム 膜による水処理システム をテーマに	境界領域		
16:00	<b>Japan-Korea Session</b>			
18:00				
19:20				

	コンベンションホール(4階)		C会場(D会議室) (6階)	ロビー(4階)
	A会場(ホールA)	B会場(ホールB)		
9:00	シンポジウム 情報素子としての 生体膜および その模倣技術の開発	人工膜 (11件)	人工膜 (12件)	ポスター展示 機器・書籍展示
12:00	昼食休憩			
13:30	日本膜学会総会			ポスター展示 機器・書籍展示
14:00	アジア太平洋膜学会発会式			
14:20	日本膜学会膜学研究会 奨励賞受賞者記念講演			
15:00	全体シンポジウム			
17:00	閉会挨拶 日本膜学会第23年会 組織委員長 谷岡明彦			
17:10				

# Signing Ceremony for the Establishment of the Aseanian Membrane Society

日本膜学会第23年会  
講演要旨集

日本膜学会総会  
アジア太平洋膜学会発会式  
日本膜学会膜学研究  
奨励賞受賞者記念講演  
全体シンポジウム

第23年会日程表  
2001年5月17日(木)

時間	コンベンションホール(4階)		C会場(D会議室) (6階)	ロビー(4階)
	A会場(ホールA)	B会場(ホールB)		
9:00	受付開始			
9:25	開会挨拶 日本膜学会会長 宮崎孝一郎			機器展示
9:30	特別講演(1) 高桑聡一			ポスター展示 (30件) 機器・書籍展示
10:30	特別講演(2) 増田俊夫			
11:30	展示CM			ポスター討論
12:30	昼食休憩			
13:00	シンポジウム 膜による水処理システム を考える	境界領域 (9件)	生体膜 (16件)	ポスター展示
14:00	人工膜 (8件)	人工膜 (11件)		機器・書籍展示
15:00	懇親会			
16:00	昼食休憩			
16:30	日本膜学会総会 アジア太平洋膜学会発会式 日本膜学会膜学研究 奨励賞受賞者記念講演 全体シンポジウム			ポスター展示 機器・書籍展示
17:00	閉会挨拶 日本膜学会第23年会 組織委員長 谷岡明彦			

Signing Ceremony

# Japan-Korea Joint Session

口演 (B会場・4階)  
第2日 5月18日(金) 9:00~11:45

## ●B-2-1~4

Chairs Hideto Matsuyama (Kyoto Inst. Tech.)・Toshiyuki Kanamori (AIST)

- B-2-1 (9:00~9:15) Antigen-Responsive Properties of Hydrogel Membranes Having Antigen-antibody Bindings  
(Faculty of Engineering, Kansai University)  
○Takashi Miyata, Noriko Asami, Tadashi Uragami ——— 48
- B-2-2 (9:15~9:30) Preparation of Surface-hydrophilic Polysulfone Membranes and Evaluation of Their Biocompatibility  
(Faculty of Engineering, Seikei University)  
○Akou Higuchi, Masaharu Harashima, Kazunobu Shirano, Mariko Hara (Health Care Center, Seikei University) Mitsuo Hattori, (Asahi Medical) Kazuo Imamura ——— 49
- B-2-3 (9:30~9:45) Preparation and Oxygen Permeability of IPN Membranes based on Silicone and Polystyrene, and Its Use in Diesel Engine  
(Department of Industrial Chemistry Keimyung University)  
Myungsu Seo, ○Hongsik Byun ——— 50
- B-2-4 (9:45~10:00) Functions of Hydrogel Membranes Constructed with Optically Active Polymers  
(Department of Polymer Science & Engineering, Kyoto Institute of Technology)  
○Takashi Aoki, (Department of Chemistry, Sophia University) Mika Muramatsu, Kohei Sanui ——— 51

## ●B-2-5~8

Chairs Masahiko Matsukata (Waseda Univ.)・Makio Tamura (Japan Organo)

- B-2-5 (10:00~10:15) PDMS-Dendrimer Membranes Containing Silver Ions for Olefin/Paraffin Separation  
(Center for Facilitated Transport Membranes Korea Institute of Science and Technology)  
Bong Jun Cha, Yong Soo Kang, ○Jongok Won ——— 52
- B-2-6 (10:15~10:30) Molecular Recognition and Liquid Membrane Transport of Amino Acids  
(Department of Chemical Systems and Engineering Kyushu University)  
○Masahiro Goto, Tatsuya Oshima, Shintaro Furusaki ——— 53
- B-2-7 (10:30~10:45) Production of W/O/W Emulsions Using Precisely Fabricated Porous Media  
(Japan Science and Technology Corporation)○Takahiro Kawakatsu, (Lund University) Gun Trägårdh, Christian Trägårdh ——— 54
- B-2-8 (10:45~11:00) Enhancement of Properties for Reverse Osmosis Membrane  
(Department of Environmental Engineering, Dong-Eui University) ○Nowon Kim ——— 55

## ●B-2-9~11

Chairs Masao Sudo (Shizuoka Univ.)・Takahiro Kawakatsu (JSTC)

- B-2-9 (11:00~11:15) Preparation of Palladium Micromembranes by Electrolysis  
(Department of Applied Chemistry, Kyushu University)  
○Katsuki Kusakabe, Makoto Takahashi, Shigeharu Morooka (Department of Inorganic Materials, Kyushu National Industrial Research Institute)  
Hideaki Maeda ——— 56
- B-2-10 (11:15~11:30) Synthesis and pervaporation properties of a thin mordenite membrane on a porous alumina tubular support  
(Department of Applied Chemistry, Waseda University)  
G. Li, Ei-ichi Kikuchi, ○Masahiko Matsukata ——— 57
- B-2-11 (11:30~11:45) Paper Wastewater Treatment Using Ceramic Ultrafiltration System with Periodic Water Backflushing  
(Division of Life Science, Hallym University) Mi Hee Kim, ○Jin Yong Park ——— 58

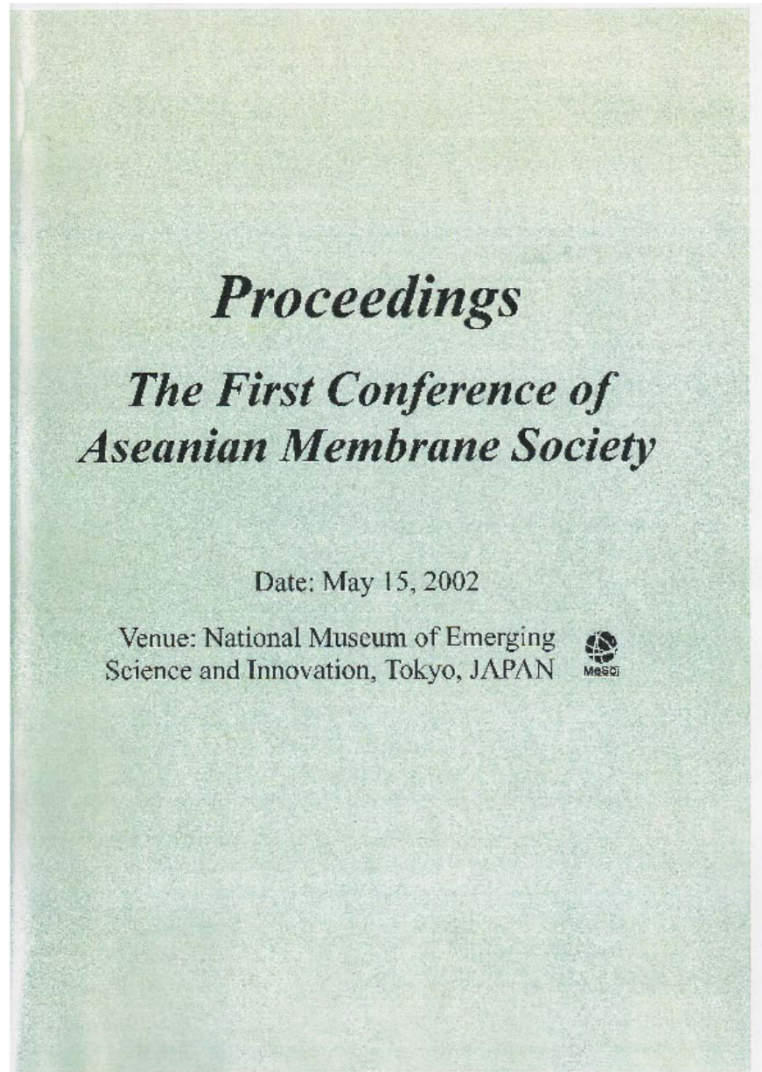
May 18, 2001 9:00-11:45

11 Oral Presentations

7 from Japan

4 from Korea

# The First Conference of Aseanian Membrane Society



**Date: May 15, 2002**

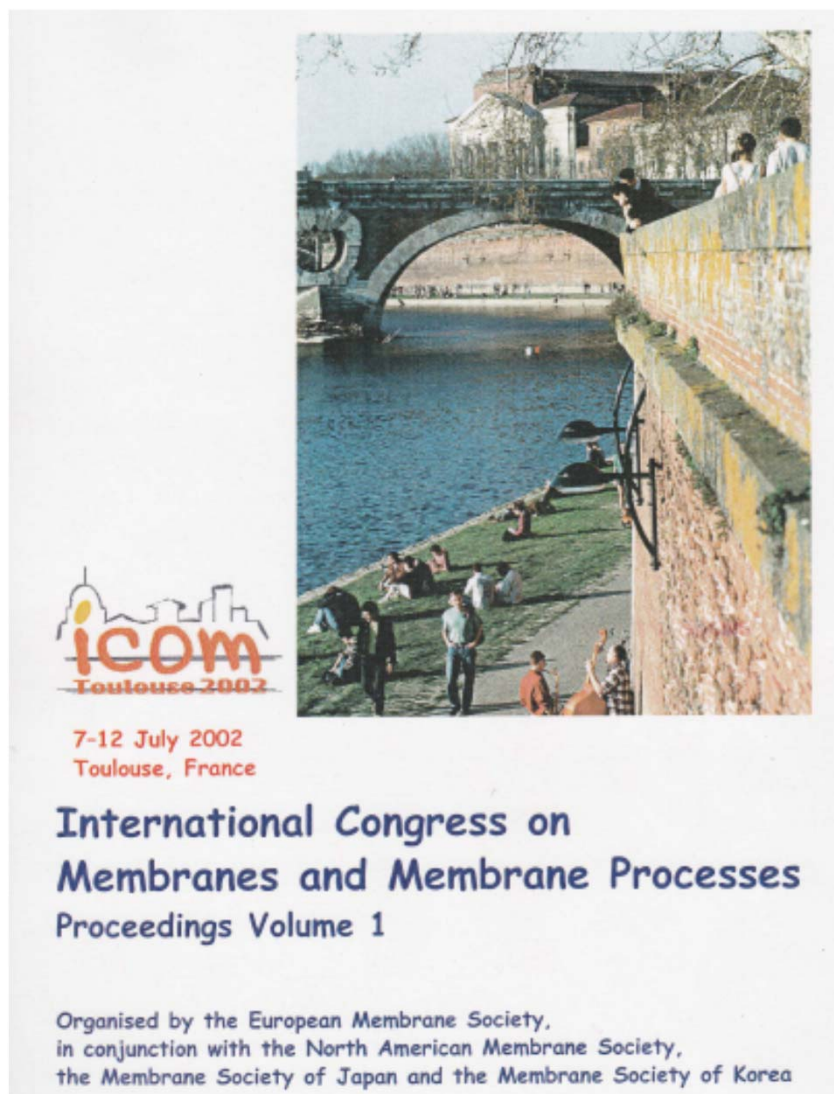
**Venue: Tokyo, Japan**

**Chairperson of Organizing Committee  
Yoshinori Nozawa**

**Chairperson of Executive Committee  
Shin-ichi Nakao**

**2 Invited Lectures (J, K)  
17 Oral (J9, K5, C3)  
13 Poster (J8, K3, C2)**

# ICOM 2002 in Toulouse, France

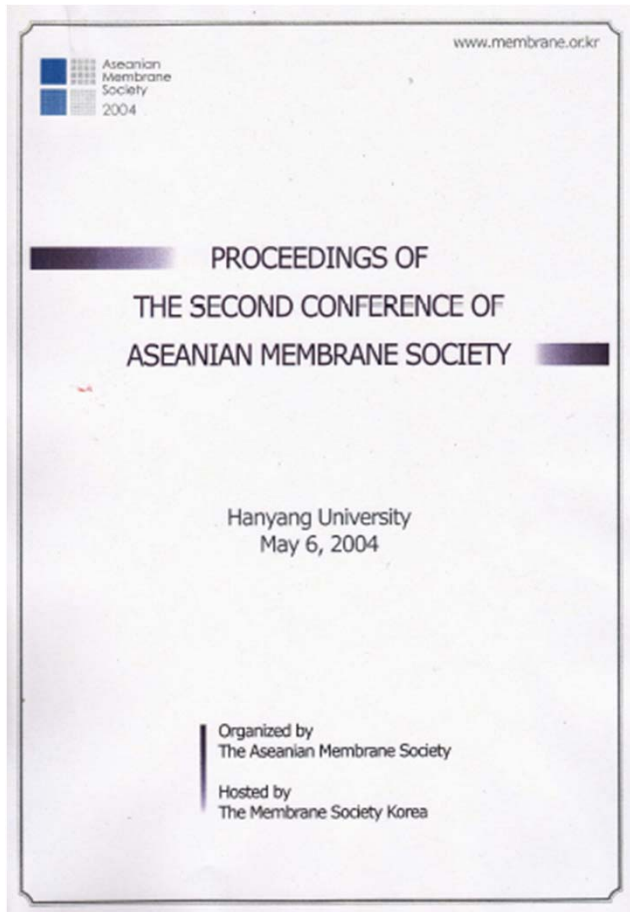


The establishment of The Aseanian Membrane Society was announced by MSJ and MSK, and it was also announced that the first conference has been held in May 15, 2002.

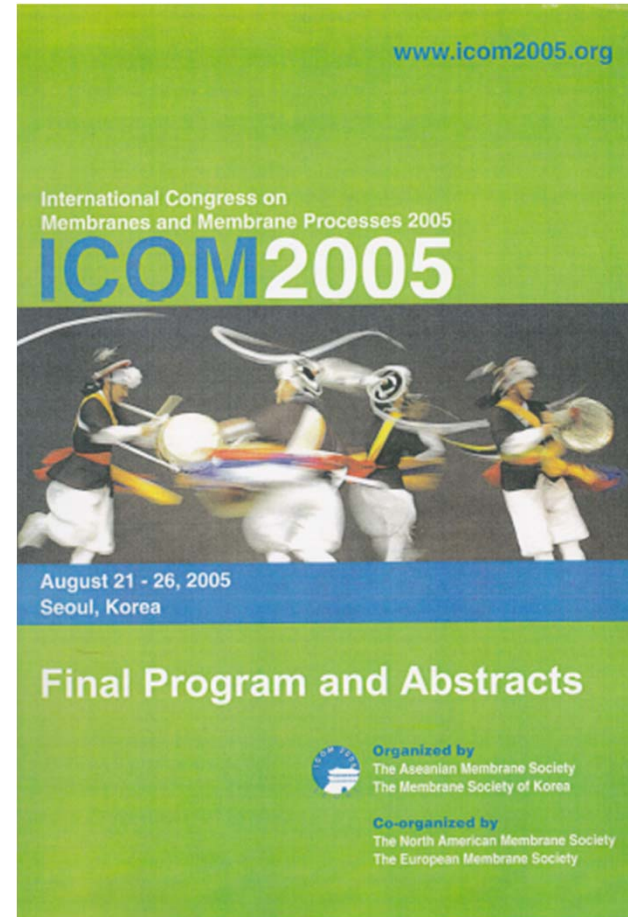
MSK then declared that ICOM 2005 would be held in Soul, Korea and that MSK would organize it with The Aseanian Membrane Society.

This was the first announcement of the establishment of AMS to the world.

# AMS 2 in 2004 and ICOM 2005



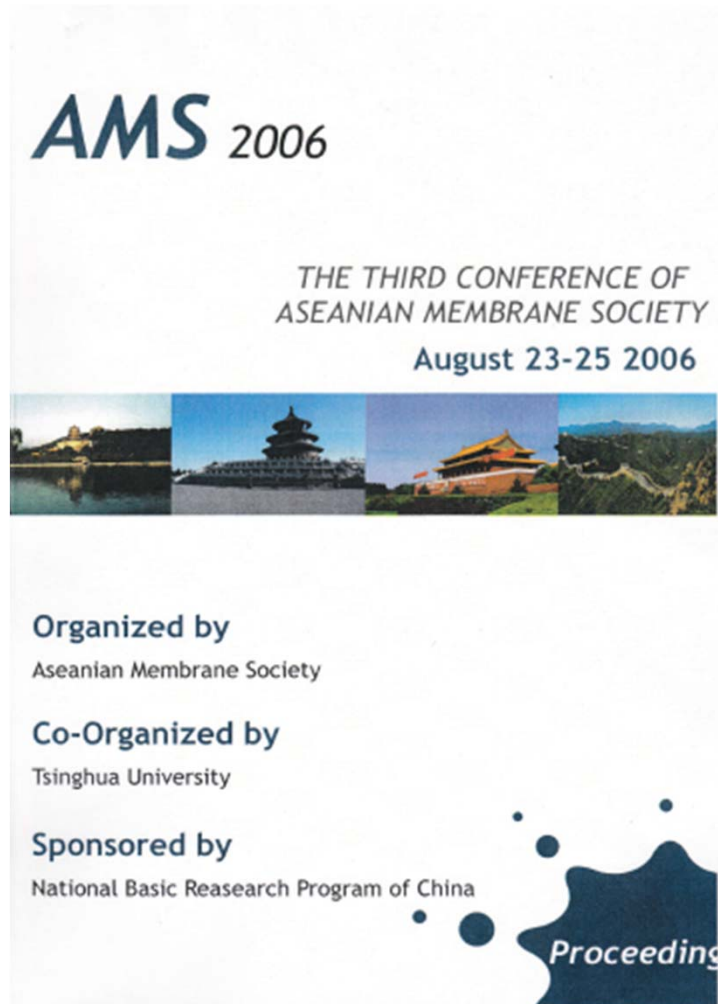
**Chairperson: Tae Moon Tak**



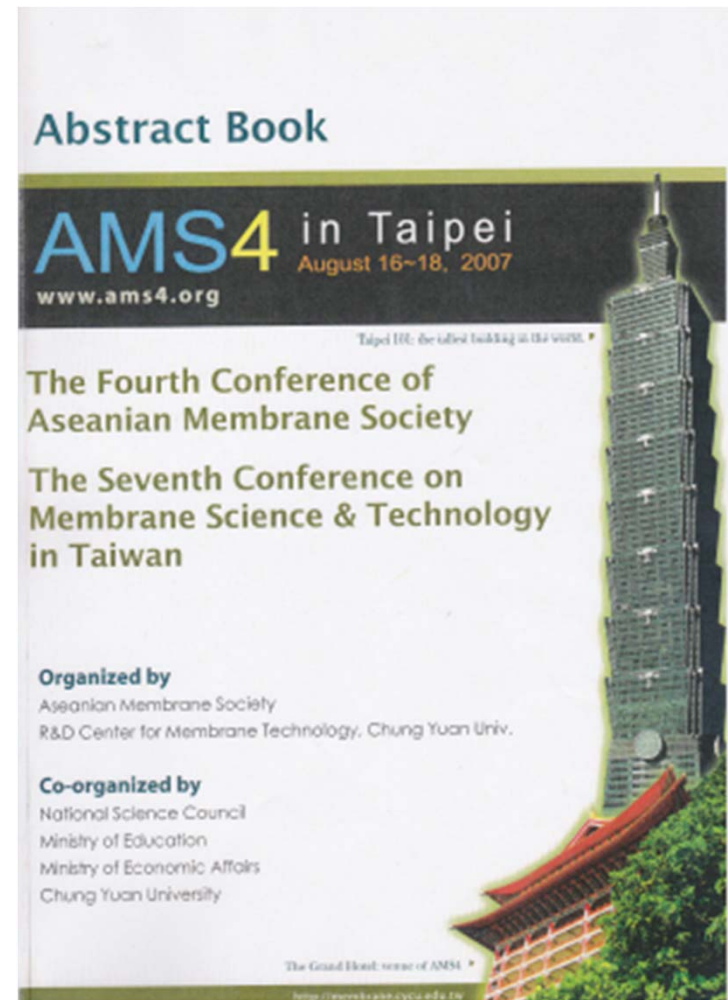
**Congress Chairman: Un Young Kim  
Or. Com. Chairman: Tae Moon Tak**



# AMS 3 in 2006 and AMS 4 in 2007

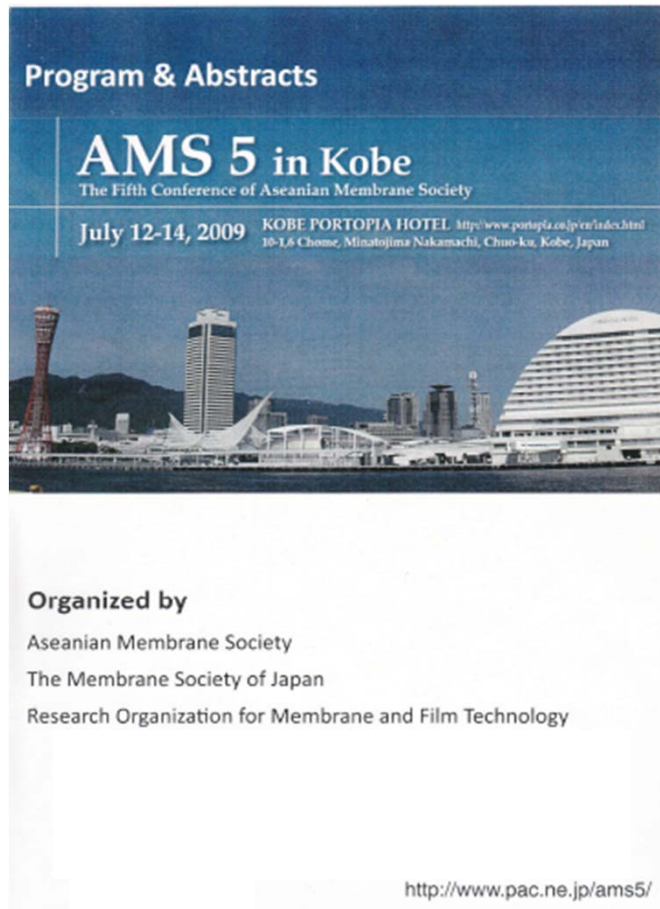


**Chairs: Xia-Lin Wang  
Wan-Qin Jin**

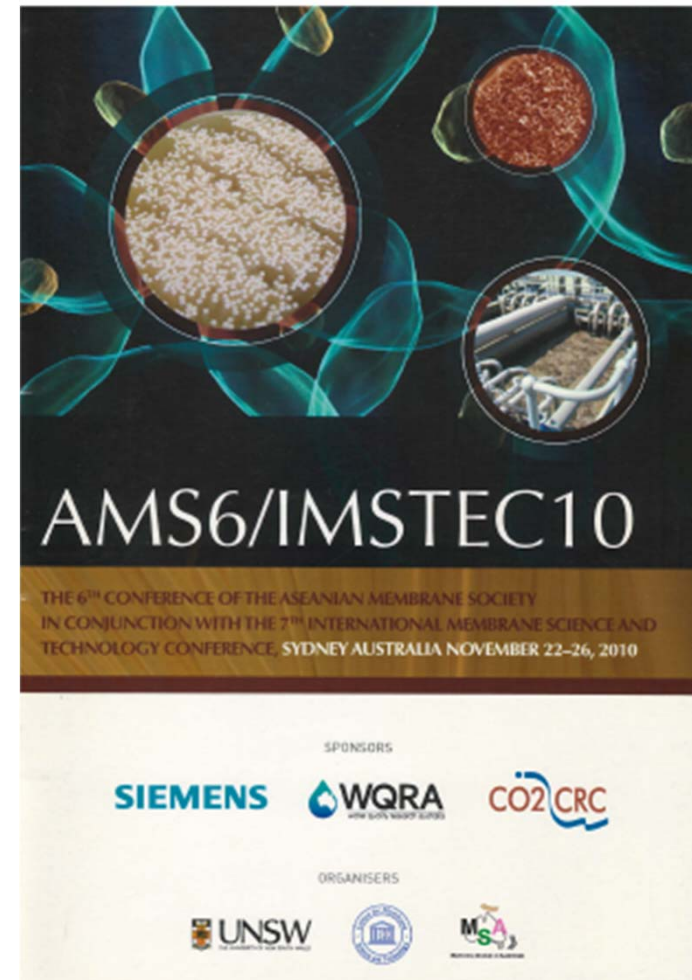


**Chair: Juin-Yih Lai**

# AMS 5 in 2009 and AMS 6 in 2010

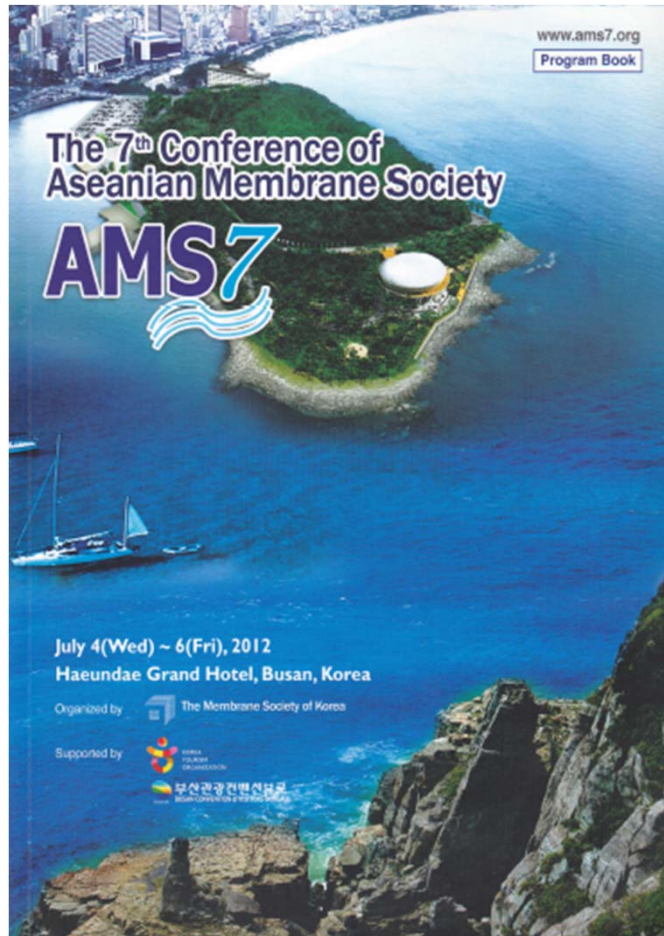


**Chairs: Shin-ichi Nakao  
Hideto Matsuyama**



**Chair: Vicki Chen  
Co-Chair: Greg Leslie**

# AMS 7 in 2012 and AMS 8 in 2013

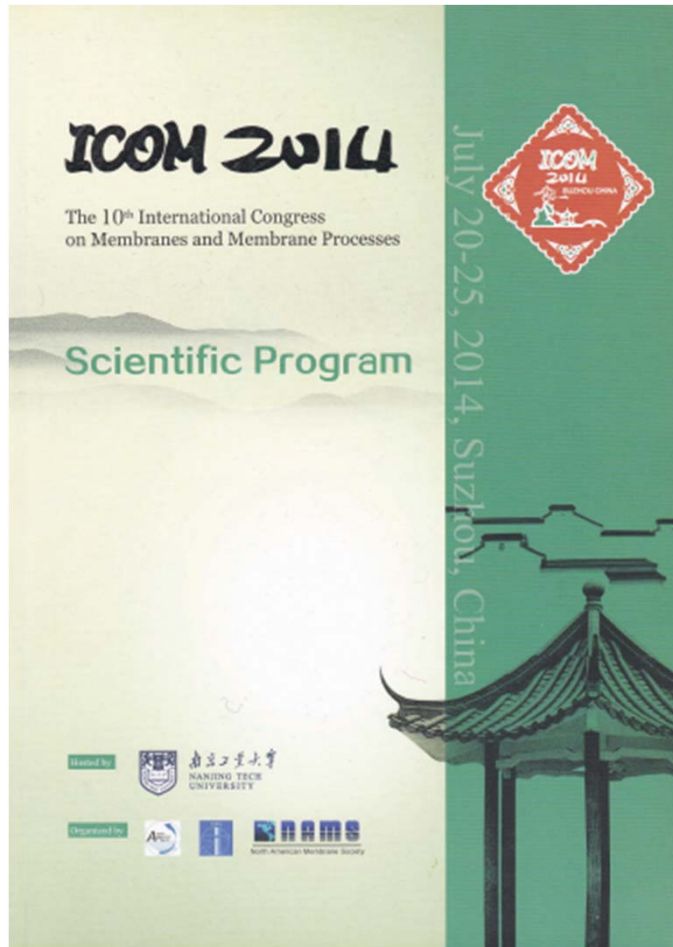


**Chairpersons: Kwang Hyun Lee  
Hong Sik Byun**

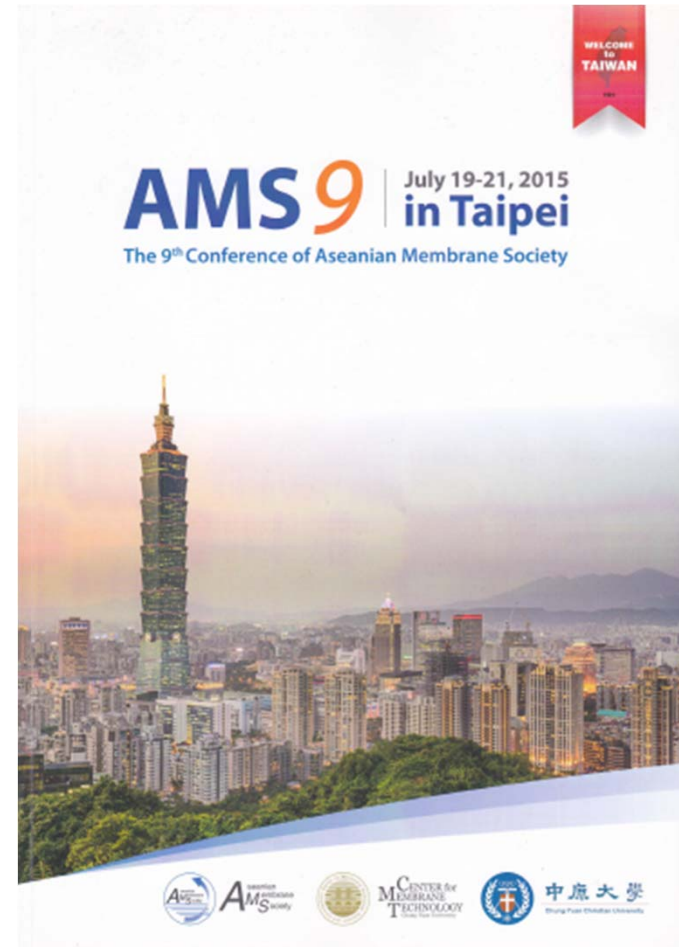


**Chairpersons: Xiao Lin Wang  
Wan Qin Jin**


# ICOM 2014 and AMS 9 in 2015



**Chairs: Congjie Gao, Juin-Yih Lai  
Wanqin Jin, Xiaolin Wang**

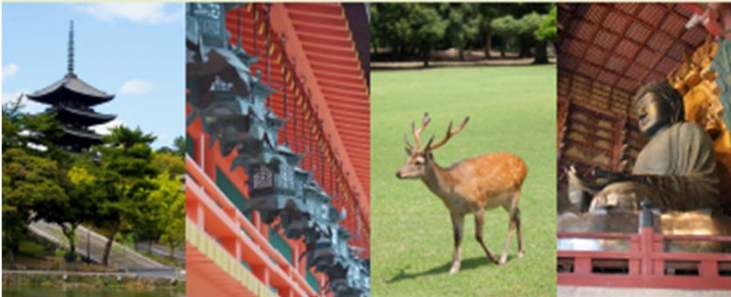


**Honorary Chair: Juin-Yih Lai  
Co-Chairs: Kueir-Rarn Lee  
Da-Ming Wang**

**AMS10** 




The 10<sup>th</sup> Conference of  
Aseanian Membrane Society


July 26-29, 2016



*Venue* Nara Kasugano International Forum IRAKA, Nara, Japan

*Chair* Prof. Hideto Matsuyama, Kobe University  
Prof. Takeo Yamaguchi, Tokyo Institute of Technology

*Organizer*   



**Chairpersons: Hideto Matsuyama  
Takeo Yamaguchi**

# AMS Presidents

The president's term is 2 years.

- |                       |                       |                                |
|-----------------------|-----------------------|--------------------------------|
| <b>1<sup>st</sup></b> | <b>2001.5-2003.4</b>  | <b>Yoshinori Nozawa, Japan</b> |
| <b>2<sup>nd</sup></b> | <b>2003.5-2005.4</b>  | <b>Tae Moon Tak, Korea</b>     |
| <b>3<sup>rd</sup></b> | <b>2005.5-2007.12</b> | <b>Shin-ichi Nakao, Japan</b>  |
| <b>4<sup>th</sup></b> | <b>2008.1-2009.12</b> | <b>Yong Soo Kang, Korea</b>    |
| <b>5<sup>th</sup></b> | <b>2010.1-2011.12</b> | <b>Juin Yih Lai, Taiwan</b>    |
| <b>6<sup>th</sup></b> | <b>2012.1-2013.12</b> | <b>Young Moo Lee, Korea</b>    |
| <b>7<sup>th</sup></b> | <b>2014.1-2015.12</b> | <b>Cong Jie Gao, China</b>     |
| <b>8<sup>th</sup></b> | <b>2016.1-2017.12</b> | <b>Hideto Matsuyama, Japan</b> |

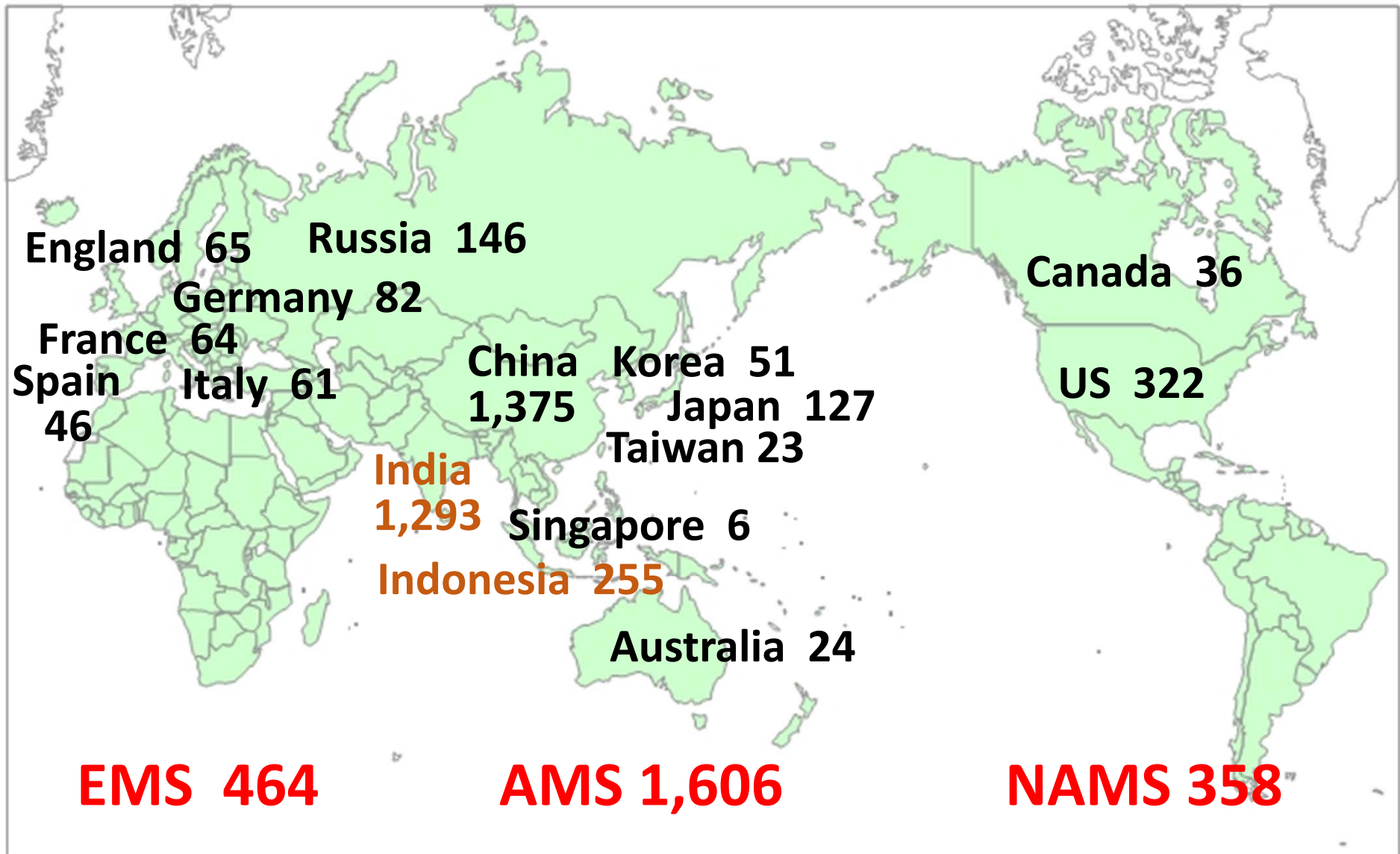
# Future Perspective

## AMS member countries

- Japan, The Membrane Society of Japan
- Korea, The Membrane Society of Korea
- Australia and New Zealand,  
The Membrane Society of Australasia
- China
- Taiwan, Taiwan Membrane Society
- Singapore, Singapore Membrane Society

# World Population in 2015

million





# Meaning of the Huge Population in Aseanian Area

- **Number of researchers in the field of membrane science and technology is the largest.**
  - **Research activity will be becoming more and more active in Aseanian area**
- **The market of industries related to membranes and membrane processes is the largest.**
  - **The industries will be growing more and more in Aseanian area.**

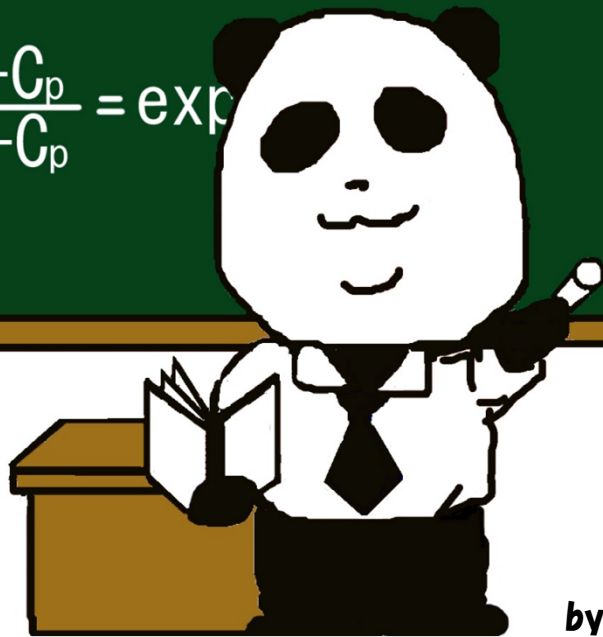
# **Important points in R & D of membrane science and Technology**

- The purpose of R & D is not to publish papers.**
- AMS should be supported by industries.**
- Academia and industries should collaborate in R & D.**
- R & D must target industrial applications.**

**I believe AMS will be the leading society of the membrane science and technology in the world in very near future.**

$$\frac{C_m - C_p}{C_b - C_p} = \exp$$

**Thank you for your  
kind attention**



*by Haru*