

# Chapter 3 Presidents and EC members

## 3.1 Introduction of Past Presidents and EC members

### 3.1.1 Presidents of IUMRS

#### List of IUMRS Presidents from 1991-2022

1. 1991-1992 R.P.H. (Bob) Chang from MRS(USA)
2. 1993-1994 Paul Siffert from E-MRS(France)
3. 1995-1996 Masao Doyama from MRS-J (Japan)
4. 1997-1998 Rodney Ewing from MRS (USA)
5. 1999-2000 Heng De Li from C-MRS(China)
6. 2001-2002 Peter Glasow from E-MRS (Germany)
7. 2003-2004 Robert Nemanich from MRS(USA)
8. 2005-2006 Zhou Lian from C-MRS(China)
9. 2007-2008 Gabriel Crean from E-MRS(Ireland)
10. 2009-2010 Howard Katz from MRS(USA)
11. 2011-2012 B.V.R. Chowdari from MRS-Singapore(Singapore)
12. 2013-2014 Osamu Takai from MRS-J (Japan)
13. 2015-2016 Hanns-Ulrich Habermeier from E-MRS(Germany)
14. 2017-2018 Soo Wahn Lee from MRS-Korea ( South Korea)
15. 2019-2020 Yafang Han from C-MRS(China)
16. 2021-2022 Rodrigo Martins from E-MRS(Portugal)



International Union of  
Materials Research Society (IUMRS)



**Prof. R.P.H. (Bob) Chang**  
President: 1991-1992  
General Secretary: 1993-2017  
Recommended by MRS



**Prof. Paul Siffert**  
President: 1993-1994  
First vice president: 1991-1992  
Recommended by E-MRS



**Prof. Masao Doyama**  
President: 1995-1996  
First vice president: 1993-1994  
Recommended by MRS-Japan



**Prof. Rodney Ewing**  
President: 1997-1998  
First vice president: 1995-1996  
Secretary: 1991-1994  
Recommended by MRS



**Prof. Heng De Li**  
President: 1999-2000  
First vice president: 1997-1998  
Recommended by C-MRS



**Prof. Peter Grasow**  
President: 2001-2002  
First vice president: 1999-2000  
Recommended by E-MRS



**Prof. Robert Nemanich**  
President: 2003-2004  
First vice president: 2001-2002  
Recommended by MRS



**Prof. Zhou Lian**  
President: 2005-2006  
First vice president: 2003-2004  
Recommended by C-MRS

## Chapter 3 Presidents and EC members



### **Prof. Gabriel Crean**

President: 2007-2008  
First vice president: 2005-2006  
Treasurer: 1998-1999  
Recommended by E-MRS



### **Prof. Howard Katz**

President: 2009-2010  
First vice president: 2007-2008  
Recommended by MRS



### **Prof. B.V.R. Chowdari**

President: 2011-2012  
First vice president: 2009-2010  
Recommended by MRS-Singapore



### **Prof. Osamu Takai**

President: 2013-2014  
First vice president: 2011-2012  
Second vice president: 2008-2009  
Recommended by MRS-Japana



### **Prof. Hanns-Ulrich Habermeier**

President: 2015-2016  
First vice president: 2013-2014  
Second vice president: 2012-2013  
Recommended by E-MRS



### **Prof. Soo Wahn Lee**

President: 2017-2018  
First vice president: 2015-2016  
Treasurer: 2012-2013  
Recommended by MRS-Korea



### **Prof. Yafang Han**

Present: 2019-2020  
First vice president: 2017-2018  
Second Vice President: 2014-2015  
Treasurer: 2008-2011  
Recommended by C-MRS



### **Prof. Rodrigo Martins**

Present: 2021-2022  
First vice president: 2019-2020  
Second Vice President: 2018  
Recommended by E-MRS



### 3.1.2 IUMRS Officers List

Year	Presidents	First Vice President	Second Vice President	Secretary	Treasurer
1991	R.P.H.(Bob) Chang	Paul Siffert		Rodney Ewing	Shigeyuki Sômiya
1992	R.P.H.(Bob) Chang	Paul Siffert		Rodney Ewing	Shigeyuki Sômiya
1993	Paul Siffert	Masao Doyama		Rodney Ewing	Shigeyuki Sômiya
1994	Paul Siffert	Masao Doyama		Rodney Ewing	Li-Chung Lee
1995	Masao Doyama	Rodney Ewing		Gou-Chung Chi	Li-Chung Lee
1996	Masao Doyama	Rodney Ewing		Gou-Chung Chi	Ryoichi. Yamamoto
1997	Rodney Ewing	Hengde Li		Chenggong Li	Ryoichi. Yamamoto
1998	Rodney Ewing	Hengde Li		Chenggong Li	Gabriel Crean
1999	Hengde Li	Peter Glasow		Lih. Z. Li	Gabriel Crean
2000	Hengde Li	Peter Glasow	Lih J. Chen	Lih. Z. Li	HannsHabermeier
2001	Peter Glasow	Robert Nemanich	Lih J. Chen	Elton N. Kaufmann	HannsHabermeier
2002	Peter Glasow	Robert Nemanich	Palle Rama Rao	Elton N. Kaufmann	Jong-Wan Park
2003	Robert Nemanich	Lian Zhou	Palle Rama Rao	M J Yacaman (health issue)	Jong-Wan Park
2004	Robert Nemanich	Lian Zhou	John Baglin	Jesus Gonzalez (completed term)	HyeongJoon Kim
2005	Lian Zhou	Gabriel Crean	John Baglin	Guoqing Zhang	HyeongJoon Kim
2006	Lian Zhou	Gabriel Crean	B. V. R. Chowdari	Guoqing Zhang	Hiroshi Yamamoto
2007	Gabriel Crean	Howard Katz	B. V. R. Chowdari	John Baglin	Hiroshi Yamamoto
2008	Gabriel Crean	Howard Katz	Osamu Takai	John Baglin	Yafang Han
2009	Howard Katz	B. V. R. Chowdari	Osamu Takai	Charles Qiang Feng	Yafang Han
2010	Howard Katz	B. V. R. Chowdari	AbdelilahSlaoui	Charles Qiang Feng	Yafang Han
2011	B. V. R. Chowdari	Osamu Takai	AbdelilahSlaoui	Charles Qiang Feng	Yafang Han
2012	B. V. R. Chowdari	Osamu Takai	HannsHabermeier	Charles Qiang Feng	SooWohn Lee
2013	Osamu Takai	HannsHabermeier	HannsHabermeier	Yuan Ping Feng	SooWohn Lee
2014	Osamu Takai	HannsHabermeier	Yafang Han	Yuan Ping Feng	Sergio Mejía Rosales
2015	Hans Habermeier	SooWohn Lee	Yafang Han	Yuan Ping Feng	Sergio Mejía Rosales
2016	Hans Habermeier	SooWohn Lee	Roberto MendonçaFaria	Yuan Ping Feng	Paul Horng
2017	SooWohn Lee	Yafang Han	Roberto MendonçaFaria	Yuan Ping Feng	Paul Horng
2018	SooWohn Lee	Yafang Han	Rodrigo Martins	Yuan Ping Feng	Paul Horng
2019	Yafang Han	Rodrigo Martins	Yuan Ping Feng	Jim Williams	Paul Horng
2020	Yafang Han	Rodrigo Martins	Yuan Ping Feng	Jim Williams	Naoki Kishimoto
2021	Rodrigo Martins	Oswaldo N. Oliveira	Yuan Ping Feng	Jim Williams	Naoki Kishimoto
2022	Rodrigo Martins	Oswaldo N. Oliveira		Jim Williams	

## 3.1.3 IUMRS EC's List

Name	Society from	Name	Society from
Jim Williams	Australia-MRS	Ryoichi Yamamoto	MRS-Japan
Osvaldo N. Oliveira	MRS-Brazil	Naoki Kishimoto	MRS-Japan
Roberto Mendonça Faria	MRS-Brazil	SooWohn Lee	MRS-Korea
Hengde Li	C-MRS	Jong-Wan Park	MRS-Korea
Chenggong Li	C-MRS	HyeongJoon Kim	MRS-Korea
Lian Zhou	C-MRS	Jesus Gonzalez	MRS-Mexico
Guoqing Zhang	C-MRS	Sergio Mejía Rosales	MRS-Mexico
Yafang Han	C-MRS	M J Yacaman	MRS-Mexico
Qiang (Charles) Feng	C-MRS	B. V. R. Chowdari	MRS-Singapor
Paul Siffert	E-MRS	Yuan Ping Feng	MRS-Singapore
Hanns-Ulrich Habermeier	E-MRS	Gou-Chung Chi	MRS-Taiwan
Abdelilah Slaoui	E-MRS	Li-Chung Lee	MRS-Taiwan
Peter Glasow	E-MRS	Lih J. Chen	MRS-Taiwan
Gabriel Crean	E-MRS	Paul Horng	MRS-Taiwan
Rodrigo Martins	E-MRS	R.P.H.(Bob) Chang	MRS (USA)
Palle Rama Rao	MRS-India	Elton N. Kaufmann	MRS (USA)
Masao Doyama	MRS-Japan	Rodney Ewing	MRS (USA)
Shigeyuki Sōmiya	MRS-Japan	John Baglin	MRS (USA)
Osamu Takai	MRS Japan	Howard Katz	MRS (USA)
Hiroshi Yamamoto	MRS-Japan	Robert Nemanich	MRS (USA)

## 3.2 GA Meeting Photos Collection

2013 IUMRS GA meeting  
at Qingdao, China2018 IUMRS GA meeting  
at Daejeon, Korea

2019 IUMRS GA meeting at Nice, French



### 3.3 Words from Past Presidents and EC members

#### The Development of Collaborative Friendships All Over the World

By E-MRS President Prof. P. Siffert



Professor P. SIFFERT

The mid 1960s were truly an euphoric period for Science and Technology with many breakthroughs and developments in fields which have transformed the lives of millions and have changed the world we live in: semiconductors, transistors, ICT, etc. The traditional “Solid State” Physics or Chemistry was no longer able to describe these revolutionary developments and to encompass the multidisciplinary of this new world. The concepts of Materials Science and “ADVANCED MATERIALS” were born.

In many ways it was the development of electron microscopy that introduced the understanding of the behaviour of materials. Previously the subject was regarded in discrete units – metals, plastics and ceramics. Very soon many University Metallurgy Departments broadened their scope to include the other areas and changed their title to Materials Departments.

It was a logical development rather than a surprise that Materials Conferences focusing on a ever widening range of topics started to appear. In 1973 MRS was established in the USA to promote the dissemination of information and scientific collaboration by hosting interdisciplinary materials conferences. A decade later in 1983, MRS-Europe, now the European Materials Research Society (E-MRS) was started and formally legalized at the Strasbourg Court in 1985.

As early as 1984 in a bilateral MRS and MRS -Europe meeting held during the MRS conference in Boston an “International Committee” was proposed (Figs 1 & 2). The objective was to establish an international Community comprised of the various societies concerned with subject of ‘Materials’, rather than a governing body. The aim was to foster interactions between autonomous independent peer Societies devoted to Materials all over the world.

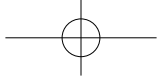
However, in the early 1980s the world was vastly different from today, both scientifically, and economically, but also politically. In many parts of the world any form of scientific exchange and interaction was possible only through intergovernmental, diplomatically arranged contracts. Even during those dark days, these arrangements enabled limited contacts to be established between selected institutions. I was extremely fortunate to participate in one of these diplomatically arranged exchanges, and today I still cherish the many unusual memories and experiences. One example to illustrate the difficulties that some labored under: An internationally well recognized materials female scientist came to visit my laboratory in Strasbourg for two weeks.

During the first weekend I drove her around the area to show her the countryside. Unfortunately, she laddered her nylons and became very nervous. Why? She confessed that when returning home, she would have to hand them back in good shape.

Driving back to Strasbourg on entering the city we encountered a traffic jam. She commented: that it never occurred in her home country because all citizens use buses or bikes. A different civilization existed then and today it is one which many Western countries are trying to replicate half a century later! However, on the Monday morning I provided her with some money and the time to spend a few hours in a supermarket, which made her a definite friend!

Despite all these problems and barriers to collaboration a small team of internationally recognised materials scientists took the initiative to try to launch a world community of material scientists. The leaders of these initiatives include among others: Woody White, Bob Chang, Elton Kaufmann, Masao Doyama, Shigeyaka Sômiya, Hengde Li and myself. With the encouragement and advice of the leaders of MRS, similar societies developed successively in Japan, China, Mexico, Taiwan, India and Australia.

The International Union of Materials Research Societies was formally established in 1990-91 and incorporated in Pennsylvania, where accounting and banking services were generously provided by MRS. The new Union was specifically intended to be modelled on two existing international scientific Unions, the International Union of Pure



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and Applied Physics (IUPAPP) and the International Union of Pure and applied Chemistry (IUPAC). The founding members of IUMRS were the materials research societies in America, Europe, Brazil, China, Australia, India, Korea, Mexico and Taiwan.

Over the intervening years these founding members have been joined by several others to provide the global world coverage that existstoday. One of the main activities of this new Union giving it global visibility was to establish international conferences, the well-known global conferences ICEM, ICAM as well as conferences limited to Asia and Young Researchers today.

However, a major achievement, but a totally globally invisible consequence has been the friendly coming together during bilateral events, organised between the individual societies which have been the seed for closer collaborations and friendly personal relationships. This has been the case especially for E-MRS as demonstrated by the set of pictures collected over years during these friendly visits, exchanges and bilateral events.

To establish this worldwide collaborative scientific and friendly network huge efforts have been needed to bring together so many different cultures and attitudes. In this regard Here R.P.H. (Bob) Chang has spent much of his life in reaching this goal.

However, we are close to a generational change and the new generation of materials scientists has to build on these friendly relationships as well as develop the attractiveness of IUMRS. It is to be hoped that it can be developed much further, so that the materials community provides the leadership to meet the global challenges, especially those associated with the environment and the very intense and sometimes aggressive international competition.

### *P. SIFFERT*

*Founder of E-MRS & Past President IUMRS*

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for representation on the International Council, but the actual representation from the various geographic areas would be determined by the MRS membership or their representatives in those areas. The Chairperson of the International Council would be a designee of the country hosting the next scheduled International Council meeting. The Chairperson would develop the agenda, meeting schedule, preside over the discussions, and prepare a summary of the deliberations and recommendations of the International Council for publication in the Bulletin of the Materials Research Society.

The International Council would initially convene twice each year, in a Spring meeting in Europe, and again during the Fall Meeting of the Materials Research Society in the United States. Current membership roles of the Materials Research Society indicate that candidate countries for representation in the various geographic areas using the above guidelines would include: Canada, France, Germany, Japan, Sweden, the United Kingdom, and the United States. However, it is anticipated that the constituency, meeting schedule and other features of the International Council would be modified by that body to reflect changes in membership, international participation, and operational features to facilitate the primary functions of the Council.

November 28, 1984

A PROPOSAL  
for an  
INTERNATIONAL COUNCIL  
of the  
MATERIALS RESEARCH SOCIETY

The Materials Research Society is among the most rapidly expanding international scientific organizations in the world, with more than 2100 members in North America, 300 members in Europe, nearly 100 members in Japan, and numerous members from several other countries. The wide spectrum of interdisciplinary topics now being presented in symposia of the Society in the United States and Europe is attracting a rapidly growing number of scientists to not only attend, but also to organize timely new symposia in areas that range from fundamental scientific investigations to important applications of materials and process technology. In recognition of the importance of materials science as a discipline, and of the leading role that the Materials Research Society has taken in convening materials scientists from many nations, it is proposed that an International Council be formed to provide guidance to the future evolution of the Society, and to extend these efforts to provide a vital interdisciplinary forum for materials scientists.

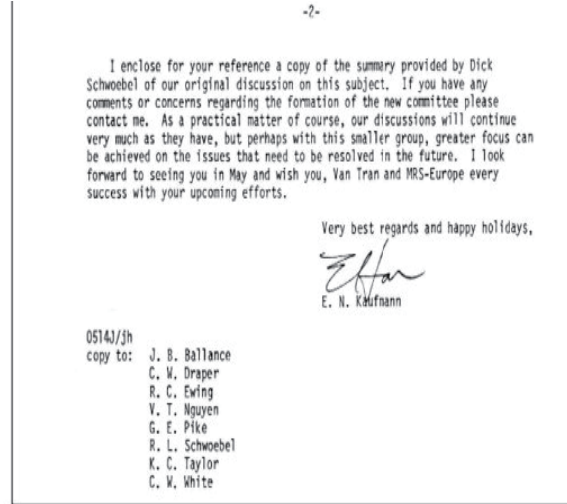
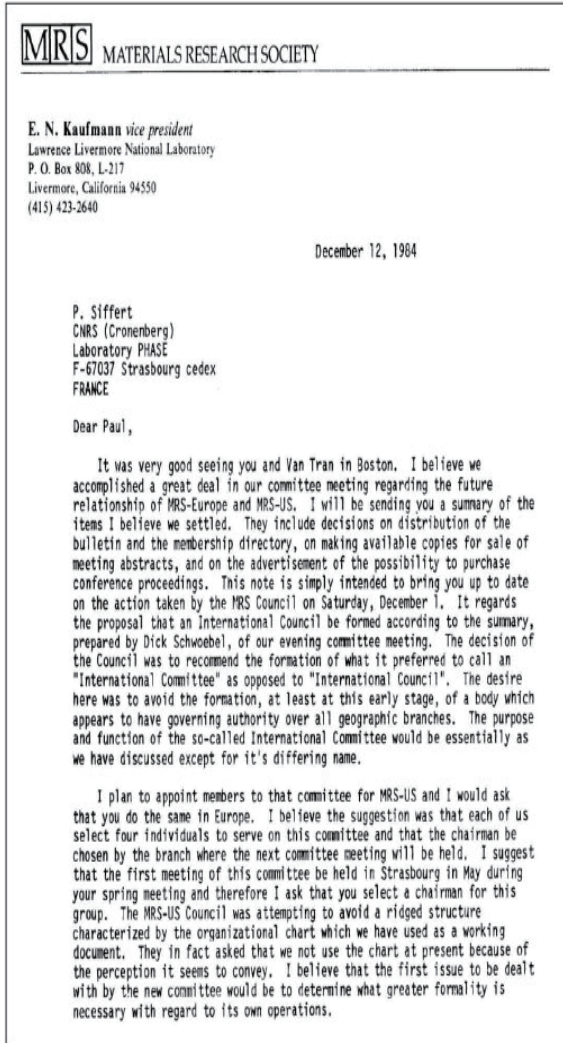
The primary functions of the International Council of the Materials Research Society would be: to establish international subcommittees to arrange for the appropriate siting and scheduling of symposia that are of broad international interest; to recommend an international membership fee system, coordinated publications and other services; to promote more extensive international participation in MRS symposia; and, to consider and recommend other functions that would benefit technical interchange and cooperation of materials scientists.

The constituency of the International Council would initially include four representatives from North America, four from Europe, and up to four additional representatives from countries representing other geographic areas. Countries with twenty or more active members in the Materials Research Society would be candidates



International Union of  
Materials Research Society (IUMRS)

## Original Documents and photos of IUMRS history

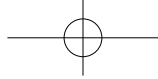


Welcome party of the Russian and Ukrainian delegation at the first Academies of Sciences exhibition in the Western World, organized in 1992 by E-MRS. Notice that a young President Putin was a member of the Russian delegation (third from the right)



IUMRS-ICEM 2000 Conference in Strasbourg  
– General Assembly





## International exchange visit (out of IUMRS)

### China

**December 15-16, 1994** Joint China MRS and E-MRS  
Symposium on "Electronic and  
Optoelectronic Materials", Beijing



**2001** Bilateral Symposium on Energy related problems  
for the Future - Beijing, China



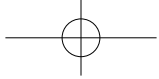
**December 6-8, 2004** Nice, Sino-European Bilateral Meet  
on Materials and Energy



**October 10th 2005** E-MRS - C-MRS Sino-European Bilateral  
Workshop on Photovoltaics, Shanghai



H. LI, L. ZHOU, S. C. XU



International Union of  
Materials Research Society (IUMRS)

**2nd World Materials Summit, Suzhou, October 12-15, 2009**



**India**

**February 13th, 1994**

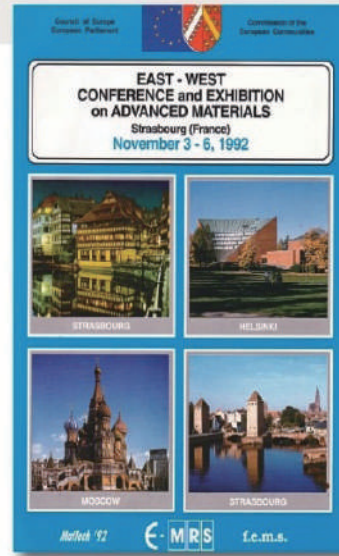


**Russia**

**East West conference and exhibition November 3-6, 1992  
on advanced materials**



# International exchange visit (out of IUMRS)



## 1992 Mat TEC 92 Russia Ukraine Fall, Strasbourg



## 1993 E-MRS MATTECH Fall Conference, St Petersburg





International Union of  
Materials Research Society (IUMRS)

**Joint E-MRS - MRS Russia Conference on Radioactive Waste, Storage, Transportation, Recycling, Environment and Human impact, St Petersburg** **1996**

**E-MRS Fall Conference, Moscow** **2002**



**V. Putin, Strasbourg** **July 2006**

**Ukraine**

**Science for materials conference, Kiev** **2002**

**Japan**

**First International Conference on Electronic Materials** **June 13-15, 1988**

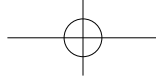
**New materials and new physical phenomena for electronics of the 21st century (ICEM'88), Shigaku-Kaikan, Tokyo, Japan**



**Kenya**

**MRS-Africa Implementation meeting, Nairobi** **August 13th, 2003**





## International exchange visit (out of IUMRS)

### South Africa



Cape Town



Pretoria



Johannesburg

### Brazil

2006



Brasilia



Florianopolis (Sao Paulo)

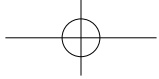


Cathedral Brasilia

### Singapore

July 1-6, 2007 International conference on materials  
for advanced technologies (icmat)





International Union of  
Materials Research Society (IUMRS)



## India

Bengaluru October 8-13, 2007

## Australia

IUMRS-icem, Sydney July 28 - August 1, 2008



## Korea

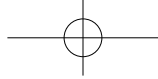
IUMRS-ICEM Kintex, GyeongGi-Do August 22-27, 2010



## USA

Boston

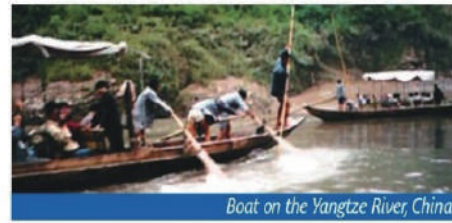
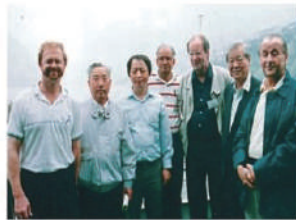
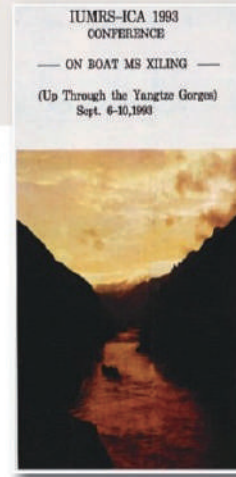




## International exchange visit (within IUMRS)

### List of Meetings with Chinese Representatives

**1993** 1st IUMRS-ICA International Conference in Asia



Boat on the Yangtze River, China

**December 15-16, 1994** Joint China MRS and E-MRS Symposium on "Electronic and Optoelectronic Materials", Beijing

**2000** IUMRS ICEM



**2001** Bilateral Symposium on Energy related problems for the Future, Beijing





International Union of  
Materials Research Society (IUMRS)

**IUMRS-8th International Conference  
on Electronic Materials (ICEM)  
Xian, China**

**June 10-14, 2002**



**E-MRS - IUMRS - C-MRS  
Sino-European Bilateral Meeting on  
Material Aspects for Future Energy  
Supply, Nice**

**December 6-8, 2004**

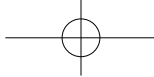
**E-MRS - C-MRS Sino-European  
Bilateral Workshop on Photovoltaics  
Shanghai, China**

**October 10th, 2005**

**Shanghai International Forum on the Development  
Trend of Advanced Materials 2005**







## Some Memories of IUMRS

*By Prof. Lian Zhou, Former President of IUMRS (2005-2006)*



Professor Lian Zhou

To celebrate the 30<sup>th</sup> anniversary of the International Union of Materials Research Societies (IUMRS), I write about some of my experiences with IUMRS.

For 8 years from 1999 to 2007, I had served as President of the Chinese Materials Research Society (C-MRS). During my term, IUMRS-ICEM2002 was successfully held in Xi'an, and in that meeting I was elected as IUMRS First Vice President (2003-2004) and President (2005-2006).

### Promoting the cooperation and exchange between MRSs

C-MRS is one of the IUMRS initiators and an important member of the union, and has maintained a good friendship with friends of the international materials community, such as E-MRS, MRS-Japan and MRS etc. During my term as C-MRS president, C-MRS has jointly organized several Sino-European Meetings on Energy Materials. Besides maintaining good relations of cooperation with E-MRS and MRS, at the same time C-MRS has also paid great attention to cooperation with Asian MRSSocieties, in particular, developing a cooperative relationship with MRS-Taiwan. Since the foundation of IUMRS, MRS-Taiwan's president Prof. Lijun Chen and his successor, Prof. Zhongming Liu, are very friendly to C-MRS.

With the joint efforts, we have organized a number of seminars, involving Beijing, Hongkong and Taiwan. In addition, Professor Paul Chu of Hong Kong University of Science and Technology has also supported the work of C-MRS, frequently giving invited talks in important domestic meetings. Moreover, during my visits to Japan, in Tokyo I met several times the Japanese materials leading authority Prof. Masao Doyama and two MRS-Japan presidents to discuss bilateral cooperation.

In November 2005, I invited John Ballance, Peter Green of MRS and Peter Glasow and Gabriel Crean of E-MRS to China. First, in the International Forum on New Materials held in Ningbo, Changxu Shi, Peter Green, Paul Siffert, Peter Glasow and Gabriel Crean made excellent presentations. Then, presentations were made at Shanghai Jiaotong University and received great response. These contributed to the C-MRS, E-MRS and MRS leaders meeting which was held in the West Lake of Hangzhou.

Later in Shanghai, discussions on IUMRS major issues and multilateral cooperation were continued. As a result, relationships among C-MRS, E-MRS and MRS were further strengthened. Soon after, with invitation from MRS, C-MRS sent a staff to MRS to receive training, and discussed the plan of organizing the 2008 MRS International Materials Research Conference in Shanghai, which was finally changed to be held in Chongqing. In my president's report as IUMRS President, I indicated resolutions on how to solve the problems that IUMRS faced, which was finally passed in the Nice meeting in 2006. During Prof. Hengde Li's term and my term as IUMRS President, both of us have tried our best to make contributions to IUMRS, representing C-MRS.

### Initiating IUMRS World Materials Summit

After I was elected as First Vice President of IUMRS in the IUMRS-ICEM 2002 meeting in Xian, I hoped that China's materials circle might make a difference in the international community. During my attendance at a meeting in Europe, I made a special trip to meet with Professor Siffert and Professor Crean of E-MRS, discussing how to strengthen the contact between C-MRS and E-MRS, and how to play a role in IUMRS and make it strong. In April 2005, we invited Professor Siffert and Professor Glasow to Xi'an, to discuss plans of further cooperation and reform.

On this basis, we initiated the "Materials Research Societies Asian Leadership Meeting" in late April in Beijing. Professor Kim of MRS-Korea, Professor Hiroshi Yamamoto and Professor Masao Doyama of MRS-Japan, Prof. B.V.R.Chowdari of MRS-Singapore, Professor Zhongming Liu of MRS-Taiwan, Prof. Hengde Li and Prof. Yafang Han were present. MRS-India sent no representatives, owing to the time limitation. These meetings were focused on suggestions from each society on organizing the World Materials Congress and the World Materials Summit, found-



ing an international materials award, furthering IUMRS publication “Facets” and website construction, improving IUMRS operation efficiency, and promoting the exchanges among IUMRS member societies. Thus, at the 2005 IUMRS Assembly meeting held in Singapore in July, 2005, our proposal of organizing the world materials summit was passed. Later, the first World Materials Summit was successfully held in Lisbon, Portugal in October 2007, the second one was held in Suzhou, China in October 2009 and the third one will be held in Washington in October 2011. And later on, the world materials summit was held every two years by E-MRS and C-MRS, till 2019 in Hangzhou, China.

### Joining ICSU

On October 20-22, 2005, as President of IUMRS I went to Suzhou to attend the 28th ICSU Congress, and made a presentation at the meeting. Succeeded in the voting, IUMRS officially joined the ICSU. Prior to this, John Baglin, Elton Kaufmann, myself and others had done a lot of work, kept close correspondence with other leaders of IUMRS, requested support from the China Association for Science, Chinese Chemical Society, Chinese Academy of Sciences and the newly elected president of ICSU Prof. Goverdhan Metha, edited and printed in time 300 copies of IUMRS brochures and circulated to representatives of ICSU at Suzhou meeting to advertise IUMRS. All these efforts have helped to make final success.

Dedicated to materials research in my life, I am irrevocably committed to C-MRS and IUMRS. During my presidency term, I have participated in many important events of C-MRS and IUMRS, met with a number of materials scientists and friends at home and abroad. They have given me help and guidance, making my life full of joy and delight. Specially, I would like to mention here that in the materials circle in China, a group of senior materials scientists who have led the development of Chinese materials



Prof. Lian Zhou at 28<sup>th</sup> ICSU General Assembly, Suzhou, China, Oct. 2005



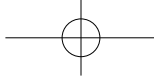
Prof. Lian Zhou, President of IUMRS, was talking with Prof. Goverdhan Mehta, President of ICSU, on Oct. 20 evening, 2005, before the Banquet of the 28<sup>th</sup> ICSU General Assembly

R & D, such as Prof. Changxu Shi and Prof. Hengde Li, at the age of 90s, still stick to their work on materials science. In early 2011, Prof. Changxu Shi won the country's highest science & technology award. This is good luck and makes us proud of the Chinese materials circle!

I realize that IUMRS is also a big international group, with IUMRS presidents, secretary general, officers and presidents of the adhering bodies as the key ties of this large group. During my two years serving as IUMRS president, I took the opportunities of going abroad to attend conferences to meet the friends in E-MRS, MRS, Japan and MRS. Besides discussing matters of the societies, we have also undertaken a number of bilateral activities; correspondingly, many of them, such as Paul Siffert, Masao Doyama, R. P. H. Chang, Peter Glasow, Robert Nemanich, Gabriel Crean, B.V.R. Chowdari, John Baglin, Elton Kaufmann, Hiroshi Yamamoto et al, have become my good friends. This has become a great pleasure of my life. For me personally, it is an important part of my life. I will remember all the friends I knew in the international materials community!

I regret that in 2006 at the end of my term as IUMRS president, because I suffered from cancer and made a liver transplantation operation, I was unable to attend the Nice meeting, some of my suggestions had been forwarded by Gabriel Crean and Yafang Han, here I extend thanks!

Besides, I would also like to extend my thanks to Rob-



## Chapter 3 Presidents and EC members

ert Nemanich, who served as IUMRS President just before me. My special thanks should also be given to Prof. Bob Chang. He is one of the initiators of IUMRS, has worked as IUMRS secretary general for many years, and made great contributions to the development of IUMRS. I have known him for many years, and he has given me and C-MRS lots of help.

*May IUMRS have a greater prospect!*

### Memorable Experience Serving for 4 Years IUMRS Treasurer

*By Jain-Long Horng, MRS-Taiwan*

Since 2004, I have served as Secretary General of MRS-Taiwan for more than 15 years. During this period, we had the opportunity to hold ICA meetings in 2011 and 2017, and hold ICEM meetings in 2014 respectively. Because of the IUMRS International Conference and related activities, it increases the exposure of MRS-Taiwan among the international material community and also enhances the interaction between domestic and international scholars.

During the period of 2015-2019, I served as Treasurer in the IUMRS Executive Council. Due to the increased interaction with the presidents and key members of the adhering bodies, it will help promote the multinational material activities. By participating in the function of the IUMRS platform, the material conferences held by various member groups provided more opportunities for material knowledge exchanges. Many visiting arrangements among MRS-J, MRS-K, MRS-S and C-MRS had been made. Especially with C-MRS many additional bilateral conferences and visiting have been arranged.

To memorize the past, we should appreciate Professor Bob Chang of Northwestern University far-sighted to initiate to build the IUMRS 30 years ago. He combined the seven material group leaders of Chinese, Japanese, Korean, European, Singapore, United States and Taiwan to set up this important material organization.

In these recent three years, Indonesia and Thai Materials Society joined IUMRS as full members, and had also started and organized ICA meetings since then. It is good anticipation to foresee more emerging member groups to join IUMRS, and it also highlights the strong growth and important role of more emerging countries they can play, especially in Asia.

### Unforgettable Memories of My Service for IUMRS

*By Prof. Soo Wahn Lee (President of IUMRS, 2017-2018)*



Prof. Soo Wahn Lee

When the presidentship starts, every president of the IUMRS sets up its own vision and plans for the next two years. I currently see two important issues with the IUMRS. The first issue is to make IUMRS financially strong as compared to the IUPAC and the IUPAP. The IUPAC and the IUPAP had a long history and have many academic members as well as global industry members. However, the budget of the IUMRS is very small depending on the annual dues and some donations after the IUMRS ICAM or ICEM conferences. The second issue is how the MRS can reunite the adhering body member of the IUMRS since the MRS has moved out from the IUMRS in 2013. Bringing MRS under the umbrella of IUMRS is important because most of the activities of materials research has been done by the MRS. Also, the majority of the participants at the annual meeting of the MRS are from Asian countries such as Japan, Korea, China, Singapore, Taiwan, Thailand and India.

My international trips in 2017-2018 included more than 40 multiple visits to the USA, Canada, Mexico, Peru, Argentina, Venezuela, Brazil, South Africa, Botswana, India, Singapore, Thailand, Indonesia, Nepal, Vietnam, Taiwan, Uzbekistan, Japan, China, Russia, Finland, Germany, France, England, Italy, Portugal, and Australia. These visits were partially aimed to solve the above two issues of the IUMRS in my presidential tenure. Early January in 2017, I had visited Professor Bob Chang to share the ideas of the future of the IUMRS. One of the big issues was



to move the IUMRS head office from Evanston, USA to another place possibly in China, Singapore, or France. We discussed this issue for 2 hours at a small restaurant, in Evanston. It was thought that he agreed to move the IUMRS head office due to his age and his research finance situation. One staff has already left his office and now only one staff is working with him. In 2016, I visited Brussel to join the IUMRS GLOBAL LEADERSHIP AND SERVICE awards ceremony. IUMRS GLOBAL LEADERSHIP AND SERVICE AWARD Candidates are stakeholders or policymakers who have made significant contributions to the promotion of science, for example, by attracting sponsorship for science. It recognizes leaders in the materials science community who have dedicated their capabilities and talents to serve the greater good and impacts the world-at-large. We stayed at the same hotel there. In the early morning, I asked Professor Paul Siffert to talk for 30 minutes about the future of the IUMRS. I promised that I will reform the IUMRS within two years. The first thing to be done was to move the IUMRS head office to activate the IUMRS because there have been big arguments about the position of the general secretary of the IUMRS after the Qingdao meeting in 2013. It was suggested to him that the IUMRS head office will be moved to another city from Evanston. The second issue was that the MRS will be requested to rejoin the IUMRS. After the GA meeting in Nice in 2011, the MRS sent a letter to the then President of IUMRS (Professor Osamu Takai in Nagoya University, Japan) that the MRS will not be adhering body of the IUMRS. Since receiving the letter, nobody has tried to discuss with MRS officers to request the reunion. The IUMRS World Materials Summit conference in Strasbourg, France on November 20-21, 2017 was also joined and delivered a congratulatory speech to the conference audience.

### ICMAT 2017 Conference, Singapore

Yuan Ping Feng, the secretary of the IUMRS, sent us the following schedule: There were some details about the coming IUMRS meeting in Singapore, on 18 June, immediately before ICMAT 2017.

14:00 – 18:00 IUMRS planning workshop at Room 307, Suntec Level 3, Temasek Blvd, Singapore 038984 (ICMAT 2017 Conference Venue), MRS President Susan Trolier-McKinstry joined the meeting at approximately 16:00

18:00 – 20:00 Dinner hosted by MRS Singapore, in La Brasserie in Fullerton Bay Hotel. Bus transport was available from Suntec to Fullerton Bay Hotel.

Rodrigo and Jim Williams suggested the following topics which we discussed on June 18 in Singapore:

1. Global Education and connections of IUMRS with European Initiatives
2. Global Leadership and Service Award: definition of next initiative and place to take place (2018/2019)
3. Report on the program for the World Materials Summit in Strasbourg in November in which IUMRS (through the Meetings Commission) has had a big role in organizing.
4. Now that Elton Kaufmann has resigned as Chair of the Development Commission a discussion of how we might appoint a new chair until we can discuss the matter further at the next General Assembly meeting in Kyoto.

We did discuss further additional topics on June 18. Yasuro Ikuma, the chair of the IUMRS-ICAM provided the information about the IUMRS-ICAM2017 conference as well as the IUMRS General Assembly meeting. SooWohn Lee encouraged adhering bodies to invite officers and representatives from MRS and offer a registration fee waiver for two participants, when they organize IUMRS meetings and hope MRS can do the same for only 2-3 IUMRS officers. However, Suzan pointed out that due to different policy, MRS need to discuss. If the board changes the policy for this, it would be included in the budget for the approval. It would be useful if a special collaboration can be



IUMRS EC members with the president of the MRS, Suzan at the ICMAT MRS-Singapore on June 18, 2017

proposed and a proposal be prepared for approval. Hanns-Ulrich Habermeier added the details of secondary importance. It would be an important step if MRS representatives can attend the IUMRS General Assembly which is not necessarily reciprocal. It is the personal relation and confidence that counts.

### C-MRS 2017 Annual Meeting, Yinchuan

In hot and humid summer of July 13, I flew to Xian and delivered a technical presentation on transparent ceramics at the Xi'an Jiaotong University, and then we took a night train to Yinchuan where the C-MRS annual meeting was held. I was a VIP and delivered a congratulatory speech to thousands of material researchers in China. The C-MRS is a leading society and the research activity such as publications and academic meetings are so nice nowadays. Also, MRS-J, MRS-K, MRS-T are very active. These Asian societies of the IUMRS will enhance the scientific and technological as well as manufacturing capacities. But we should consider the environmental pollution and all MRS members are supposed to contribute to solving this environmental problem as well as climate change. Recently, the average temperature was extremely high in Europe, the USA, and Asia (Korea, Japan and India). During dinner time, many of my Chinese friends appreciated my great speech. There is not so huge change in the activity of the IUMRS in Europe, but there is a big wave of movement in Asia among China, Japan, Korea, Taiwan, and Singapore, Thailand.



The opening ceremony of the C-MRS annual meeting on July 13, 2017, in Yinchuan, China.

### MRS-Mexico 2017, Annual Meeting, Mexico



MRS-Mexico President, SooWohn Lee, and other officers at the August 20, 2017, IMRC meeting in Cancun, Mexico.



Past president of the MRS-Mexico, MRS-Mexico President, SooWohn Lee, and other officers at the August 20, 2017, IMRC meeting in Cancun, Mexico.

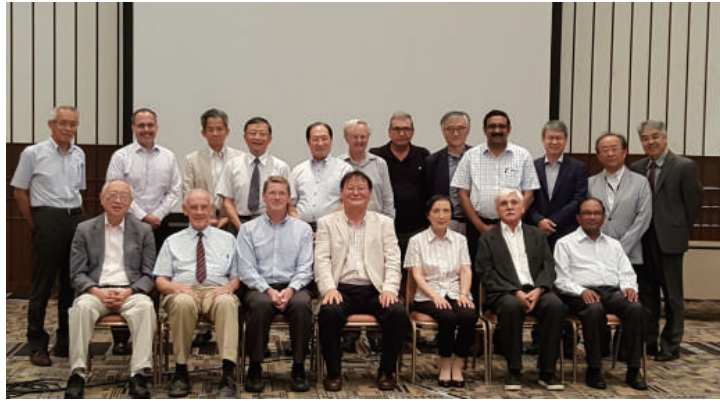
In a humid and shining beach of Cancun, Mexico, the MRS-Mexico annual meeting was held in Marriot hotel by Claudia Elizabeth Gutiérrez-Wing, who is the elected president of the MRS-Mexico. The officers of the MRS-Mexico as shown in Photo 3 are working very hard for the conference. I joined the opening ceremony and talked to Susan Troler-McKinstry who is a professor at Pennsylvania State University and the president of the MRS. Also, I met the executive director, Todd Osman. I asked Suzan to have breakfast together and she agreed. In the early morning in Cancun beach, she came with Todd and we discussed many issues of the IUMRS and activity in Asia. I suggested to both of them to join the IUMRS meeting and conferences in Asia and other countries. They said that it was a great idea. The Cancun meeting and conference were so exciting and took several photos with the president of the MRS-Mexico and officers of the MRS-Mexico as shown in Photo 3 and past presidents of the IUMRS-Mexico, respectively as shown in Photo 4. I asked



them that the MRS-M members should join the conferences in Europe and Asia and invite more Asian scientists as the plenary speakers in Cancun meeting and also to make dual symposium among Asian and Mexico in various areas such as photocatalysts, Li-battery, solar cells, fuel cells and in the energy area. I also asked them to pay annual dues from 1,000 to 5,000US\$ near soon.

### IUMRS-ICAM 2017 Meeting, Kyoto, Japan

The past President of the MRS-Japan, Professor Yasuro Ikuma at the Kanazawa Institute of Technology organized the IUMRS-ICAM2017 at Kyoto University, in Kyoto, Japan. Kyoto was an old capital of the Japanese Empire, and there are many historical temples and shrines in Kyoto area. On the morning of August 26, 2017, we had an EC meeting and in the afternoon we hold GA meeting. The elected president of the MRS, Sean Hearne, and MRS executive director, Todd Osama were invited by SooWohn Lee to the GA meeting and discussed for the collaboration between the IUMRS and the MRS. The EC meeting and GA meeting respectively accepted the application of the IUMRS membership to the MRS-INA and MRS-Thailand. John Baglin, membership commission chair will provide the application form as well as the guideline of the requirement of the IUMRS Membership application. Later John received all required documents from Indonesia and Thailand, which in two months were passed for the membership qualification to two new brand IUMRS members.



2018 IUMRS EC members, August 26, 2017, in Kyoto.



Dinner time with IUMRS members in Kyoto, on August 29, 2017.

### Brazil-MRS 2017, Brazil

On May 13, 2017, Osvaldo Novais De Oliveira Jr sent us (Han, Feng, Chang, Chowdari, Martins) the following e-mail:

Subject: Brazil MRS Meeting  
Dear SooWohn and colleagues,

I am writing to remind you about the deadline for submitting an abstract for the B-MRS-Meeting (deadline 19 May 2017). Also, when you have your flight details, please let me know so that we can organize a transfer from the airport in Porto Alegre (POA) to Gramado where the meeting will take place.

There is an official travel agency which will take care of additional sightseeing or any other tour you may wish to take before or after the



B-MRS Counsel Members on September 12, 2017



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meeting. As for the hotel in Gramado, the recommendation is Hotel Serra Azul.

Earlier, at the IUMRS ICA 2016 meeting in Qingdao, China, I inquired the following person and they agreed to attend the annual meeting of B-MRS on September 10-14, 2017 for the IUMRS to encourage the activity of Latin America MRS through a cooperation with the IUMRS leaders: SooWohn Lee and his wife, Bob Chang, Yafang Han, Yuan Ping Feng and his wife, Chowdari and his wife, Rodrigo Martins and his wife, YasuroIkuma and his wife, Paul Horng and his wife.



Latin America MRS on September 13, 2017 (at 6:00 PM).

Me and my wife Myong Sook Lee, Bob Chang, Rodrigo Martins and his wife Elvira, Claudia Elizabeth Gutiérrez-Wing (president of the MRS-Mexico), and Professor HyungTakJeon (president of MRS-Korea) arrived at a mountain town in Gramado after a very long trip. Even though it was very far from San Paul and Rio, more than 2000 participants attended the B-MRS annual meeting. It was a very successful conference. Osvaldo arranged a meeting for me with all the B-MRS directors as shown in Photo 7. And Osvaldo invited a dinner for IUMRS EC members at an Italian restaurant with many southern Latin American scientists from Peru, Ecuador, Bolivia, Argentina, Chile, and Mexico. On the other night, I invited all of the same Latin American leaders. Particularly two young scientists of metallurgy and physics coming from Peru were very enthusiastic. As shown in Photo 8, I joined the Latin America MRS leaders meeting and delivered a speech of the IUMRS activity. This kind of relationship between the IUMRS and B-MRS has been developed by Professor Bob Chang's long-term strong efforts. I truly appreciate Professor Bob Chang.

### ICSU 2017 Meeting, Taipei, Taiwan



ICSU meeting in Taipei, oct., 2017



Clustering Meeting in Ambassador Hotel, Taipei on October 21, 2017.

The ICSU and the ISSC had been discussed for many years about how to combine these two communities. Natural science and social science are so different fields. If they combine, the fusion synergy effects will be huge in the future for global scientific issues. The Taipei meeting was planned for the announcement of combining these two communities via voting. The first meeting of the ISC, a new name after combining the two organizations, would be decided by voting to be held in Paris rather than in Kyushu, Japan as shown in Photo 9.

Hanns-Ulrich Habermeier, Chowdari, Paul Hong, Professor Han and myself attended this ICSU meeting in Taipei, and we had a UnionClustering meeting of Mathematics (IMU), Physics (IUPAP), Chemistry (IUPAC), and Materials (IUMRS) as shown in Photo 10. We agreed to prepare a proposal to UNESCO for a new paradigm issue.



### The first MRS-Indonesia 2017 conference, Yogyakarta, Indonesia



Opening Ceremony of MRS-INA at the Sahid Jaya Hotel, Yogyakarta, Indonesia on October 9, 2017.



Leaders of the MRS-INA.

It is the first international conference in Yogyakarta, Indonesia, which was joined by the neutron diffraction community and materials science community. This time was my first tour in Indonesia. Through the international airport of Jakarta, it was a big airport and the transition from international to domestic was so nice and kind to the travelers. When the airplane landed in Yogyakarta, it was an old and small airport terminal like a personal private house. Someone picked me at the airport and dropped me with other invited foreign speakers to the Sahid Jaya hotel in Yogyakarta. Evvy Kartini, the president of the MRS-Indonesia was waiting for us in the front of the hotel. She did a great job to organize very successfully the first MRS-Indonesia conference with her own family, daughter, father, and mother helped all foreign speakers. Her father was a Supreme Court judge in Indonesia.

Neutron diffraction community was so tight each other. There are many things to learn using neutron sources from Australia, Germany, China, Korea, the USA and Japan, Mexico, Brazil. Particularly J-PARC in Japan

was an outstanding group to open summer school for foreign students to teach neutron technology as well as making global networks among young generations from around the world. The funding was provided by the J-PARC program. The new membership of the IUMRS was delivered to the president of MRS-Indonesia during the opening ceremony. All participants after the opening ceremony were taken a memorial photo together as shown in Photo 11. The key officers and directors of the new MRS-INA asked me to take photos with Professor Chowdari who had been helping for the foundation of the IMRS-INA with Evvy Kartini for a decade.

Evvy Kartini arranged very good culture tours in Hindu shrine and Buddhist monastery which are scattered in the area of Yogyakarta, I learned the fusion of cultures from historical shrines and temples located in the area of Yogyakarta, as well as the fusion of social science and natural science from the architectures of temples and shrines which were built before 5th century here in Yogyakarta, Indonesia.

### MRS-Thailand 2017 Meeting Chiangmai, Thailand

I left home very earlier and waited in an express train station in my town to get a direct KTX train from my home station to Incheon airport station in Korea, But I was so confused to wait for a different train, and then I had missed the KTX train from my home station to Incheon airport station and therefore I could not get the direct flight from Incheon to Chiangmai. I called my wife to pick up me at the train station, and returned home and booked another flight from Incheon to Bangkok and Bangkok to Chiangmai in the next days. Of course, I did double payment for changing flights. Maybe frequent flyers sometimes face this kind of situation. It was a very long lane to pass through the passport control box in Bangkok airport. However, it was a very good and memorable trip through Bangkok. The



conference place was the same hotel, which I had organized ten years ago for the very successful ISEPD conference. I met many young material scientists in Thailand who are helping each other and making good collaborative networks. Santi, the first president of the MRS-Thailand, was a great leader and his wife was also a good contributor to the MRS-Thai even though she is a professor in the Biology department. The first MRS-Thailand international conference was so successful and invited many other foreign speakers from the USA, Europe, and Asia through their various academic networks. As shown in Photo 14, they were so delighted when I delivered a plaque of the IUMRS membership to Santi, the president of the MRS-Thailand during the opening ceremony like in Yogyakarta, Indonesia.



MRS-Thailand Conference in Chiang Mai, Thailand, on October 31 - November 3, 2017.



Delivering the membership of the IUMRS to Santi, the president of the MRS-Thailand.

### Africa-MRS 2017 Conference, Botswana

Four years ago in 2013, we had joined the Africa-MRS in Victoria Fall city, Zimbabwe with professor Chowdari and Yuan Ping Feng together from the IUMRS. Professor Chowdari was the president of the IUMRS in 2013. After the Victoria Fall meeting, the Africa-MRS organized a conference in Addis Ababa, Ethiopia. I was invited to join the conference, but there was an overlap with my other schedule. I, therefore, missed the great conference in Ethiopia. Dr. Samuel Chigome at the Botswana Institute for Technology Research and Innovation (BITRI), was a secretary



After opening ceremony in December 11, 2017.

of the local organizing committee of the 9th International Conference of the African Materials Research Society which was held at the Gaborone International Conference Center in Gaborone, Botswana, December 11-14, 2017. Samuel continuously asked me to join the Africa MRS meeting through many e-mails for a year. Now Samuel is serving the president of the Africa-MRS. I asked my wife to join, but she refused. Only professor Chowdari had done other schedule in South Africa. He joined the Africa-MRS after his other business in South Africa. It was a little



cold at midnight in Singapore airport when I was there for transit to Johannesburg. When I landed in Johannesburg airport and waited for 6 hours for the connecting flight to Garbone, Botswana. I had a high fever and headache and felt cold. When I was in the airport in Botswana, it was a very hot sunny day. But, I was still feeling so cold. As a president of the IUMRS, I delivered a special speech on the activity of the IUMRS to all Africa MRS community during an opening ceremony. After the opening ceremony we took a photo

with then vice president (now President of Botswana) and important ministers of Botswana as shown in Photo 15. I asked Professor Kenneth I. Ozoemena at the University of Witwatersrand, Johannesburg, to have dinner with the key person of the Africa-MRS. Kenneth arranged a dinner table in a Chinese restaurant inside the conference hotel. I introduced Professor Chowdari to them and discussed how to develop the activity of Africa-MRS near future. But I could not meet Samuel Chigome in Gaborone and flew back home. Professor Maaza, who was very active and joined many conferences in the Asia region, was very bad shape after he was shocked and the left side of his body was paralyzed. It was not a good organization of the conference because of the absence of many speakers.

IUMRS dinner for Africa-MRS members with Chowdari, Kenneth I. Ozoemena at the University of the Witwatersrand, Johannesburg, Dr. Farce Tico M. Therma at the Intercom, Botswana, SooWohn Lee, Professor, Dr. Musa Chacha at the Nelson Mandela Africa Institution of Science and Technology in Tanzania, HuldaShaidiSwai at the Nelson Mandela Africa Institution of Science and Technology in Tanzania, and Prof. M. Maaza at NRF iThemba Labs, South Africa.

### **MRS 2018 Annual Spring Meeting in Phoenix, Arizona**

The MRS sent an email to invite the IUMRS EC members to Phoenix, Arizona, where the MRS Annual spring meeting was held. The president of MRS, Sean Hearne, invited us to discuss the issue of the IUMRS. Professor Han Yafang, Rodrigo Martins, Elvira Martins, Claudia Elizabeth Gutiérrez-Wing, and I joined the meeting. Sean Hearne, Mike Fitzsimmon, and Todd Osman joined with us, and the current president of MRS-Brazil, Professor Monica Cotta was also there. We did chattering and drinking wine to celebrate the activity of the MRS and the activity of the IUMRS. We hopefully suggested that the MRS can reunite with the IUMRS. However, Todd said there were some problems between the IUMRS and the MRS. The MRS can have cooperation in education and workshops with the IUMRS. I prepared the meeting minutes (Appendix I) of the Phoenix trip to Rodrigo and Sean. I hope that the MRS will reunite with the IUMRS if the IUMRS becomes a very strong organization.

UNESCO meeting and ISC meeting, 2018, Paris, France

Professor Sanjay Mathur at the Cologne University, Germany, had asked me to present my recent research works for his students as well as his faculty members at the Department of Inorganic Chemistry, Cologne University. After arriving at the Frankfurt airport, I slept overnight at the Intercontinental Hotel in Frankfurt, and relaxed in the morning and took a train from Frankfurt train station to Cologne train station in the afternoon. Students of Cologne University picked me at the train station and dropped me to a hotel, which was very quiet in a small town far from the downtown in Cologne. After my presentation at Cologne University, I flew from Frankfurt back to Paris.

The Hotel Des Nations Saint Germain, 54 Rue Monge, in Paris had been booked on February 19, 2018, by John Baglin. Unfortunately, John could not join the Paris meeting due to his wife Coral's health conditions. Coral had been suffering from rapidly advancing Alzheimer's disease. John said that Coral's condition has declined in recent weeks, and at this time, he must have to stay home.

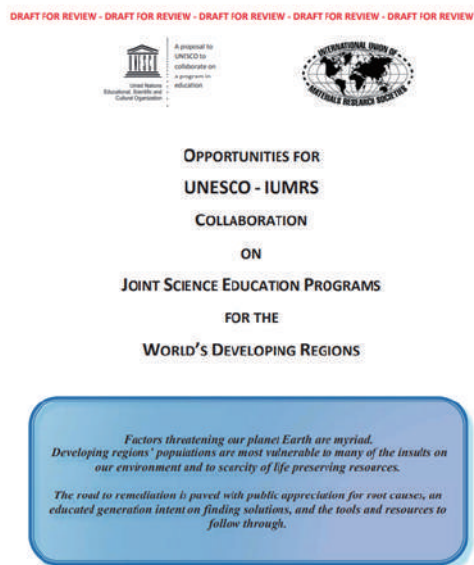
The hotel room was relatively very small like in Japan but the room was air-conditioned. Professor Chowdari

and I had breakfast together in the cafeteria the next morning and discussed how to cooperate with UNESCO on that day's meeting. John planed to create an updated version of the poster that we displayed at the Meeting of the Unions last year. There would be no posters this time, but this would be printed as a 1-page handout that tells all about IUMRS, to be placed on a table provided for such handouts. Alternatively, we could simply update the draft of the IUMRS brochure that Elton Kauffman recently produced for our UNESCO introductions. This would need to be professionally printed and stapled, on thin paper (a ten-page brochure). Thirty copies of the IUMRS brochure and flyer were brought to the UNESCO in Paris.



IUMRS brochure.

Earlier on November 20-21, 2017 in Strasbourg, France, at the 6th the World Materials Submit meeting, I had met Professor M. Martiale G. ZEBAZE-KANA, who was a chief of the section for capacity-building in Science and Engineering within the Natural Science Sector of the UNESCO in Paris and we had also taken a photo together after his speech. After the Strasbourg meeting, I contacted him by e-mail on how to make a productive educational collaboration operation between UNESCO and IUMRS. One day, Paul Siffert asked me to prepare a proposal to the UNESCO and inquired whether the IUMRS has soldiers to prepare the proposal. I did say yes, we have. We hoped that the UNESCO will be interested in exploring such a collaboration. I sent a mail on January 3, 2018 to Ms. Audrey Azoulay, Director-General of UNESCO. On behalf of the Director-General, the Assistant Director-General for Natural Sciences, UNESCO, Flavia Schlegel returned me a mail for my letter of 3rd January by which the IUMRS expressed its interest in working and collaborating with UNESCO on the basic sciences. She said that I should contact Martiale for the collaboration. We have many excellent soldiers to collect the information and to prepare a brochure of the IUMRS and the flying of the IUMRS. I asked Bob Chang, Rodrigo Martins, Yafang Han, John Baglin, and Elton Kauffman to send me the information of the IUMRS, which will be an IUMRS brochure and a proposal to the UNESCO.



A proposal of opportunity for UNESCO-IUMRS Collaboration for Joint Science Education Program.

John collected a lot of information and Elton made a good brochure (Photo 17) and a proposal to UNESCO (Photo 18). Sean Herans sent me an article of the education program in Africa of the Joint USA-Africa Materials Institute (JUAMI; MRS and MRS-Africa are both sponsors and participants in this effort). The first JUAMI school was held in Addis Ababa, Ethiopia, from December 9 - 21, 2012. Professor Yafang Han sent me three files of Chinese researchers on the water pollution including the work of Zhejun Liu, et al., Global Challenges, 2017, on 'Extremely Cost Effective and Efficient Solar Vapor Generation under Nonconcentrated Illumination Using Thermally Isolated Black Paper', which was included in the Advanced Science News program of the IUMRS. Also, I asked Professor and vice president Ben Hsaio of at the State University of New York, to whom I met at the Africa-MRS meeting in Botswana, December 2017, to send me a file of his water program in Kenya, Africa. Elton made an excellent brochure with this information. Finally, Professor Han made 100 hard copies of the IUMRS brochure



Meeting in UNESCO, Paris, on July 2, 2018.

members and three E-MRS members. Martiale suggested the IUMRS can do some works for basic science program of the UNESCO, but do not have any budget to provide to the IUMRS. Paul and E-MRS expected some sort of funding from the UNESCO program.

E-MRS can be a major player with the UNESCO because it is geographically inside France. We agreed with Paul's idea, but it seemed to me that the UNESCO meeting was for the E-MRS, not for the IUMRS. Even after the meeting at UNESCO, we did not say bye and left without any things, even there was no coffee time for discussing the UNESCO strategy in the future.

We left for the Clustering meeting of the International Science Council (ISC) members, everyone taking the same subway. It was a very hot summer afternoon and met all UNION clustering members. Michel Spiro, professor at the École Polytechnique was also the president of the French Physical Society from 2016–2017 and president-elect for the International Union of Pure and Applied Physics (IUPAP) as of 2018. In October 2019 Spiro was asked to replace IUPAP president Kennedy J. Reed who wanted to step down for personal reasons. Michel Spiro

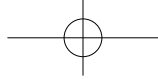


Founding General Assembly of the ISC held at La Maison des Océans (Institutocéanographique).

and flyer, which I brought to UNESCO in Paris. In the afternoon of July 2 (at 2:00 PM) we had an official meeting between the IUMRS and UNESCO as shown in Photo 19. Chowdari and Habermeier joined with me and had some trouble to find out the entrance place of the UNESCO buildings after using a subway in Paris. The E-MRS members Paul Siffert, Jeanpierre Massue (living in Paris) were among to meet the UNESCO people, and Amouroux also joined together. Martiale and his staff discussed with three IUMRS

invited us a dinner at dark historical restaurant without air condition which was a further 80-meter walk to the Cluster venue (both on Rue Saint Jacques). They said that many restaurants in Paris did not have air condition.

As shown in Photo 20, the Founding General Assembly of the International Science Council (ISC), following the merger of ICSU and ISSC, took place on 3-5 July 2018 in Paris, France. The event was hosted by the ISC Member Organization in France, the Academy of Sciences of France. The 3rd of July was devoted to the Members' Fora. The official opening of the General Assembly took place on the morning of the 4th of July. The day was dedicated to the election of the first Governing Board and discussions about the first steps for the new organization. On the 5th of July, the inaugural scientific event of ISC was held, with eminent guests and speakers. The General Assembly was held at La Maison des Océans (Institutocéanographique)



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195, rue Saint-Jacques 75005. On July 3, at the Opening of the General Assembly, HSH Prince Albert, the Sovereign Prince of Monaco Gordon McBean, President of ICSU, Alberto Martinelli, President of ISSC, and Catherine Bréchnignac Secrétaire perpétuel, Academy of Sciences, France, did the outstanding speech. The General Assembly is a closed meeting for Members [Member Organizations (140) and Member Unions and Associations (40)] and about 350 invited participants (Interdisciplinary Bodies, Affiliate Members, key partners and observers). The Assembly, including two Members' fora, lasts for three to four days and is normally preceded by a science day organized by the host country. The Governing Board and a small number of other committees also meet just before the Assembly and immediately after. Provisions should be made for a scientific event to be co-organized by the host and the ISC Secretariat. In the afternoon, we did the election of Officers of the Governing Board and heard presentations by candidates for Officers: President, President-elect, Vice-Presidents, Secretary, and Treasurer. After the election of Officers, at 19.30-22.30 we joined the Cocktail Reception and Concert at the Académie des Sciences, Palais de l'Institut de France, 23 Quai de Conti, 75270 Paris. At 16:30-17:00 of July 4, presentation of bids was held and the date and place of the 2nd GA and call for invitations to host the 3rd GA in 2024 were announced. Professor Reddy Daya at the Department of Mathematics of the Capetown University, South African 1953 (NatSci (maths) CAST/IMU/IUHPST ICSU both) was selected as the first president of the ISC. We also voted for the next ISC meeting in Oman, not in Canada. Most of the delegation expected the voting would favor Montreal, however, the voting result was in favor of Muscat, Oman in 2021. The ISC meeting is held every 3 years. I requested the Korean Government to host the 2024 ISC meeting in Seoul, Korea, and the closing ceremony in Pyongyang in North Korea. But nobody was interested in the ISC meeting in Korea.

### IUMRS ICEM 2018, Daejeon, Korea



During the GA meeting of the IUMRS-ICEM 2018 in Daejeon, Korea.



A group photo in front of SooWohn Lee's house after the industry trip of the IUMRS-ICEM2018.

Before the IUMRS ICEM meeting, there were two days of meetings; EC meeting on Saturday and General Assembling meeting on Sunday. On the evening of Sunday, the official welcome party was arranged. After the GA meeting, most of all GA members enjoyed the welcome party together. Professor Han could not sleep overnight due to the request of President of the C-MRS.

The big hot potato was to decide whether to move the IUMRS head office from Evanston to Singapore. But C-MRS insisted to host the head office in Beijing. Professor Han and Professor Chowdari agreed to move the head office in Beijing for two years and to open finance in Singapore. After 2 years, the head office will move to Singapore for 5 years. This statement was signed by myself, professor Han, professor Chowdari, and Habermeier (immediately past president of the IUMRS).

One of 3 copies was given to C-MRS, MRS-Singapore, and IUMJRS secretary. But we acknowledged Professor Bob Chang for his long term contribution and even founding the IUMRS in 1989. After the GA meeting, we had a group photo as shown in Photo 21.



Also, I arranged industry tours in the Hyundai steel company in the morning and Hyundai Automotive company in the afternoon. We had lunch at a cafeteria of the Hyundai steel company. The food was a normal menu for the engineers of the Hyundai steel company. We looked at all processing from Iron ore storage, blast furnace, hot rolling, to cold rolling steel plate as well as the galvanizing process. Before dinner, every industry tour member visited my house and took a group photo as shown in Photo 22.

### IUMRS ICA 2018 conference, Bali, Indonesia



At the University Hall after the IUMRS-ICA 2018 in Bali.



A tour of the IUMRS-ICA in Bali.

The IUMRS ICA 2018 meeting was held for the first time in Indonesia from October 31 to November 2, 2018, in Bali. All of the IUMRS EC members participated in the IUMRS ICA 2018 conference and did celebrate the MRS-INA. Bali is very famous to global tourists. Bali has many beautiful beaches, various local shopping places as well as great Polynesia style restaurants. Also, it has so good weather as it is near the equator. So many Australian can enjoy here in Bali for vacation. After the IUMRS ICA meeting, we moved to a local university in Bali and presented the IUMRS as well as the technical presentation at a campus auditorium for local students as well as university faculty members who could have good cooperation in the future. It was so exciting conference and activity in Bali as shown in Photo 23. The MRS-Indonesia can be stronger by supporting young Indonesia students. EvvyKartini arranged a great local group tour program for a half-day as shown in Photo 24.

### MRS-Japan 2018 annual conference, Kitakyushu, Japan

Professor Somiya at the Tokyo Institute of Technology passed away this summer. He was a founding member of the IUMRS in 1989. Professor Shikeyuki Somiya organized many conferences of the IUMRS and supported the founding of IUMRS members in Korea and Singapore. Professor Yoshimura asked me to join the Somiya Memorial Symposium at the MRS-Japan Fall meeting in Kitakyushu, Japan. I flew through Fukuoka airport and took a limousine bus from Fukuoka airport to Kitakyushu station; it takes one and a half-hours. After checking a hotel and attending the memorial symposium, there were only a few people in the lecture room. Professor Bob Chang was a key speaker, but he was absent and sent his presentation file to an organizer. I prepared a technical presentation of transparent ceramics because Professor Somiya was a scholar in the area of zirconia ceramics. Most of the presenters talked about professor Somiya's life. I changed the topic as the activity of the IUMRS. Even the president of the MRS-Japan, Takahara did not join this Somiya memorial symposium. In the early morning of the next day, I took a limousine bus from Kitakyushu station to Fukuoka airport and flew back home after rebooking my flight. I felt so sorry for the loss of Professor Somiya.

### Report of the African MRS Conference trip on December 8-16, 2019 in Arusha, Tanzania



Kilimanjaro International Airport



Registration of the 10th African MRS in the NM-AIST.

It was a beautiful sunny afternoon of 9th December 2019 when the airplane landed on the “Kilimanjaro International Airport” stretching across the shining African bushes of Arusha, Tanzania. The Tanzania visa processing was very simple because of the electronic visa that had been applied through a web of Visa HQ. The e-visa was issued within 5 days after applying through the web. The visa costs 107 US \$. As we arrived at the airport, we received warm greetings from a staff holding a display with our name.

We then traveled to a hotel “Four Points by Sheraton” in Arusha city by bus. There were only two lanes on the road from the airport to the hotel. The road was extremely busy due to transport trucks on both lanes. The driver named Ezielkel was a nice person. He provided many interesting and useful information about African life.

It was almost 6:00 PM when I checked in at the hotel. It was a 20 hours long trip through Doha, Qatar from Incheon Airport, from where I departed at midnight (00:35). After check-in, I, therefore, fell a sleep immediately due to the exhausting trip.

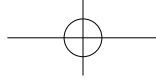
Next day, I woke up very early (5:00 AM) and had a simple breakfast at 6:30 AM on the nice decent cafeteria of the hotel. I checked the front desk to get information on the shuttle bus to the conference place. They put an announcement on the table. They said that we would leave at 7:00 AM. I had only a minute and asked the driver to wait for me for 2-3 minutes to bring my notebook as well as other stuff from the hotel room.

I was surprised that the shuttle bus moved to a different destination, not towards the Arusha Convention Center. The bus stopped in front of the NM-AIST (Nelson Mandela Africa Institution of Science and Technology) in 30 minutes traveling through the unpaved muddy road. Later on, I heard that it was due to the small number of participants, the venue for the conference was changed. Unfortunately, it was unknown until arriving at the NM-AIST.

The registration queue was long enough. The opening ceremony of the 10th African MRS was scheduled at 8:30 AM in the main conference hall of the building. However, the opening ceremony was delayed to 8:50 AM. Dr. Revocatus Manchunda was the rapporteur of the opening ceremony. He introduced Professor Hulda Shaidi Swai was the president of the Africa-MRS. Currently, she is an associate professor in the School of Life Science and Bio-engineering and also a director of Science and Technology in the NM-AIST. Professor Swai officially announced the opening of the 10th African MRS conference, and she introduced the Deputy Minister of Science, Education and Technology, Tanzania.

And there was a welcome address session where Professor Emmanuel Luoga, Vice-Chancellor of NMAIST and leader of Arusha Regional Commissioner (Mrisho Gambo) welcomed the delegates. Finally, Deputy Vice-Chancellor for Research and Innovation, NM-AIST, Professor Anthony Mshandete delivered a “vote of thanks.”

Most of the key VIPs were sitting in the front line of the table on the stage, and all participants were listening



Group photo of the 10th African MRS Conference, Dec. 2019

presented the wireless biosensors for the newborn babies. The CBS TV broadcasted their team's research activities in a hospital in Chicago.

The second plenary speaker, Dr. Askwar Hilonga was a young associate professor of the NM-AIST. He was very successful in establishing his spin-off company called "Nanofilter." He was born in a local town near Ngorongoro Crater in an un-privileged family. His father could not even support his education for the secondary school level. But Hilonga completed a Ph.D. degree in Chemical Engineering at the Hanyang University Korea in 2012 and returned to his country Tanzania as an assistant professor of the NM-AIST. Once he asked 7,000 USD to the chancellor of his University without a contract and was very successful to make a spin off-company. He discovered an idea for a simple and cheap method to clean the water using nanotechnology because he carried out the research on the membrane system at Hanyang University for 3 years. He worked very hard to commercialize the clean water system which he developed and contributed to his poor community. That was his milestone breakthrough for African people to offer clean drinking water free from contagious waterborne disease-carrying bacteria such as cholera and E-Coli. Now, he has many collaborations from various places. He now owns a company called "Nanofilter" in Arusha with 30 employees. His success story has inspired many people in Europe and mid-Asia.

The third plenary speaker, Professor Nelson Torto, director of the Africa Academy of Science (AAS), who was the president of the 9th Africa-MRS Conference in Gaborone, Botswana on December 9-14, 2017, introduced the successful proposals from African Scientists to the AIST. He was the founding CEO of the Botswana Institute for Technology and Innovation (BITI), which values co-creation and empathy.

There was a lunch break from 12:30 to 14:00 at the Parking Lot B of the NM-AIST. They provided a soup with bread and the main menu was rice with vegetables, beef, chicken, and fish, and the dessert of cake and chocolate-cream. It was a wonderful lunch. We had every lunch there with many round tables. During lunch time, we discussed and chatted with various participants from different countries in Africa and the USA, and a few from Europe.

After the lunch break, there were seven parallel sessions from 14:00-15:45 such as A201 (Materials Health), Conference Hall (Sustainable Manufacturing and Construction), A202 (Water and Environmental Mitigation Technologies), B201 (Nanoscience / Nanotechnology), D201 (Materials for Energy A), D202 (Materials for Energy B-JUAMI), and B202 (Computational Materials Science). From 15:30-15:45, there was health break/poster session time. From 15:45 to 17:45 the parallel sessions continued. After 18:00, there was a poster session, but most of the participants left the conference place due to shuttle buses departing at the same time.

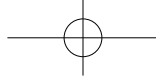
Most of the population in the African continent do not have access to clean drinking water. To understand the issue of clean water in Africa, I attended the session A202 of water and Environmental Mitigation Technology. I came to know that various harmful bacteria and heavy metals such as arsenic, mercury, lead, and cadmium are present in the groundwater in the African continental. Also, there is an extremely high content of Fluorine in the Arusha area ground water through volcanic soil. The local community poor peoples do not have enough money to buy plastic

to their speech. They introduced the Africa Institute of Science and Technology in various countries and encouraged scientists to carry out research on water purification and nanotechnology in Tanzania as well as in the whole of Africa.

After their speech, a group photo was taken in front of the main building of the NM-AIST.

After the group photo, three plenary speakers delivered their talks for 30 minutes each. The first plenary speaker, Professor Joseph Mode of Northwestern University pre-





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bottled waters or clean tap water. Particularly, local African peoples are being suffered from teeth, body bones, and many other diseases due to contaminated drinking water. Most of the speakers presented technology on cheap and clean water supplying systems.

On December 11 (Wednesday) after a very simple breakfast, I took a shuttle bus from my hotel to the NM-AIST conference place because I was the first plenary speaker.

My presentation title was “NiMoO<sub>4</sub> for bacteria/drug degradation in water system,” but my title was printed as “Using micro-structure design of Sialon ceramics for multi-functional properties”. This title was copied from my CV. I prepared on the title of “Activity of the IUMRS,” on the evening of December 10. I asked Eric Garfunkel at the New Jersey State University, USA to present a different title, who served as an organizer of the Africa-MRS since the Victoria Fall conference in 2011, where I had met him there. Eric said that there is no problem with changing the presentation title. I introduced the history of IUMRS and the activities of the IUMRS.

After my talk, Professor Paul Weiss at UCLA, USA delivered the second plenary talk on “Global Opportunity in Nanotechnology,” which was related to a biosensor. Paul is serving as the editor of the *Small*. He joined the ICMAT in Singapore, 2 years ago. The third plenary speaker was Professor Kenneth Ozoema from the University of Witwatersrand in South Africa. He presented on “Manganese based Li-battery.” The cover page of the 10th African MRS program is shown in Photo 6.

In the afternoon of December 11, there were seven parallel sessions. But, there was only one session on Materials for Energy, B-JUAMI, which was replaced as a session of Coach Workshop. The formation of the Joint US/Africa Materials Institute (JUAMI) was initiated at Princeton University in 2003. The JUANI was reactivated at the 7th Africa MRS conference in Addis Ababa, Ethiopia in 2013 (organized by Yohannes Teketel and Professor Eric Garfunkel).

There were two different coaching sessions of Part I: Selling your Science: The art of effective proposal writing from 14:00-15:30, from 15:45 to 16:30. Part 2: Publishing Research Results in High Impact Journals. This coach was delivered by Professor Geri Richmond at the University of Oregon, USA. She explained very well how to write both research proposals to Africa funding agencies and manuscripts to journals. Various questions were raised among the participants.

From 16:30 to 18:30, a session for future works and the worker was held and moderated by Professor Wole-Soyejo at the Worcester Polytechnic Institute (WPI), USA. He invited three speakers. First speaker, Martin Burt from Fundacion Paraguaya and Worcester Polytechnic Institute spoke on the activity of African Scientists. The second speaker, Ange Nzihou at the IMT Mines Albi-Carmaux, France delivered a subject of Recycling waste materials policy in Europe. The final speaker was Daran Apelian, Metal Processing Institute, Worcester Polytechnic Institute. Daran delivered a cyber-speech on the circular economics of Africa covering energy resources as well as mineral resources in Africa. Particularly, the current annual growth of the Africa economy is 5.4%. Even China's economic growth is 7%, but the growth rate in Europe is 0.7%.

From 18:30 to 21:00, there was a gala dinner with drinking beers. I had dinner with Benjamin and David at the University of Ghana.

It was a very exciting time with big African dancing. Most of the participants joined dancing, but not my dinner group. We left the conference place after dinner at 20:00. I asked Benjamin to have lunch with the leaders of the Af-



With Associate Professor Askwar Hilonga at the NM-AIST after his plenary talk.



A lunch with leaders of the African MRS: David Dodoo-Arhin, Benjamin Agyei-Tuffour, SooWohn Lee, President Samuel Chigome (from left to right).

the Ghana University, Accra, Ghana (liaison office to the IUMRS, and an organizer and president of the 8th Africa MRS conference in 2015 in Accra, Ghana), and Benjamin Agyei-Tuffour at the Ghana University were gathered together and discussed with me.

The following items were discussed:

How the Africa-AMRS will prepare an annual report to the IUMRS every year.

How the Africa-AMRS will formulate vice president of A-MRS, secretary, and treasurer

How the Africa-AMRS will pay the membership dues to the IUMRS every year as the first step of level 1 (1,000US\$) up to 2024, and move to level 3 (3,000 US\$) after 2025.

How the delegation (particularly president) of Africa-AMRS will join the IUMRS General Assembly meeting every year in different continents.

How the Africa-MRS will host the IUMRS conference such as the IUMRS-ICAM 2025. The potential location of the IUMRS-ICAM2025 in Africa should be placed in a city where all airplanes from Europe, Asia, America, and Australia can be landed directly without transit.

Samuel Chigome said that he would provide the information of the 2017 Botswana meeting participants list of the 2019 Arusha, Tanzania meeting. I promised to send the presentation file of "Activity of IUMRS," which delivered on Wednesday, December 11, as plenary talk of the 10th Africa-MRS conference in the NM-AIST, Arusha, Tanzania.

rica-MRS on December 12.

December 12 (Thursday) also had 3 plenary speakers; Federico Rosei at INRS-EMT, Montreal, Canada, Shelly Claridge at Purdue University, Indiana, USA, and one more.

I joined the water session in the morning and waited Benjamin Agyei-Tuffour at the Ghana University, Accra, Ghana. We made a reservation of a table in a lunch place. Dr. Samuel Chigome (elected president of Africa-MRS in 2020-2021), Khumo Butale (Editorial Assistant and Administrative Assistant of the Africa MRS), David Dodoo-Arhin at

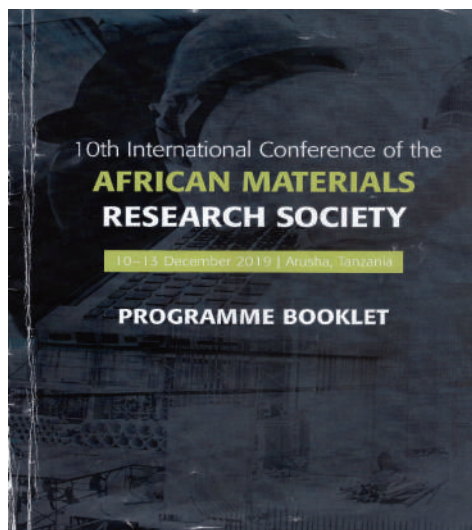


Photo 6. Cover page of the 10th Africa MRS Conference Program Book.