

# The Last and Next Decades of the Asian Core Program on Cutting-Edge Organic Chemistry in Asia

Minoru Isobe,<sup>\*,[a]</sup> Atsushi Nishida,<sup>\*,[b]</sup> Yeun-Mun Choo,<sup>[c]</sup> Noorsaadah Abd. Rahman,<sup>\*,[c]</sup> Poonsakdi Ploypradith,<sup>[d]</sup> Somsak Ruchirawat,<sup>\*,[d]</sup> Guo-Qiang Lin,<sup>[e]</sup> Ang Li,<sup>\*,[e]</sup> Zhu-Jun Yao,<sup>\*,[f]</sup> Biing-Jiun Uang,<sup>\*,[g]</sup> Chun-Chen Liao,<sup>[g]</sup> Pauline Chiu,<sup>\*,[h]</sup> Byeong Moon Kim,<sup>\*,[i]</sup> and Teck Peng Loh<sup>\*,[j]</sup>

## 10 Years of the Asian Core Program on Cutting-Edge Organic Chemistry in Asia

Minoru Isobe<sup>\*,[a]</sup> and Atsushi Nishida<sup>\*,[b]</sup>

### Preface

Ten years have passed since the Asian Core Program on Cutting-Edge Organic Chemistry in Asia (ACP-CEOCA) was established in 2005. It has been greatly recognized among the member countries/regions, such that the activities of the ACP-CEOCA have continued growing and the annual conference is held alternatively in a member country/region as well as the lectureship tour, which is awarded to the presenters during the conference. In the beginning of the Phase I of the ACP-CEOCA (October, 2005–March, 2010), the program was focused on the showcasing and networking among the participants to form relationships, and it gradually extended to the organic chemists in Asia to allow an exchange from the senior generation to the younger generation. Since Phase II of the ACP-CEOCA (April, 2010–March, 2015), the activity has further extended to the junior generation including graduate students by establishing the Junior CEOCA program. In the past 10 years, over 600 lectureships were awarded from the 0<sup>th</sup>–9<sup>th</sup> International Conference on Cutting-Edge Organic Chemistry

in Asia (ICCEOCAs) and the member countries/regions across the borders were visited for a one-week lecture tour. The opportunities for research collaborations and exchange students have become more frequent and active, as shown in the following individual country/region reports. We believe that these successful outcomes have been established through a good mutual understanding of collaborative minds and generosity by the local coordinators and the participating individuals.

On behalf of the international advisory members and country/region coordinators, we would like to express our special appreciation for all of the support and collaborations and to share with you the successful results of the ACP-CEOCA. We also appreciate the significant contributions from those who have submitted articles for the 10-year anniversary of the ACP-CEOCA special issue in *Chemistry-An Asian Journal*, which is also celebrating ten years.

### Brief History of the ACP-CEOCA

This program was launched in early 2005 through the leadership of the Japan Society for Promotion of Sciences (JSPS), as one of the multinational collaborating programs on the basis

[a] Prof. Dr. M. Isobe

Chemistry Department, National Sun Yat-Sen University  
70 Lien-Hai Rd, Kaohsiung, 80424 (Taiwan)  
E-mail: minoru@mail.nsysu.edu.tw

[b] Prof. Dr. A. Nishida

School of Pharmacy, Chiba University  
1-8-1, Inohana, Chuo-ku, Chiba, 260-8675 (Japan)  
E-mail: anishida@faculty.chiba-u.jp

[c] Dr. Y.-M. Choo, Prof. Dr. N. A. Rahman

Chemistry Department, University of Malaya  
Kuala Lumpur, 50603 (Malaysia)  
E-mail: ymchoo@um.edu.my  
noorsaadah@um.edu.my

[d] Prof. Dr. P. Ploypradith, Prof. Dr. S. Ruchirawat

Chulabhorn Research Institute and Chulabhorn Graduate Institute  
Laksi, Bangkok 10210 (Thailand)  
E-mail: poonsakdi@cri.or.th  
somsak@cri.or.th

[e] Prof. Dr. G.-Q. Lin, Prof. Dr. A. Li

Shanghai Institute of Organic Chemistry  
345 Lingling Road, Shanghai, 200032 (China)  
E-mail: lingq@sioc.ac.cn  
ali@sioc.ac.cn

[f] Prof. Dr. Z.-J. Yao

Chemistry Department, Nanjin University  
22 Hankou Road, Nanjing, Jiangsu, 210093 (P.R. China)  
E-mail: yaoz@nju.edu.cn

[g] Prof. Dr. B.-J. Uang, Prof. Dr. C.-C. Liao

Chemistry Department, National Tsing Hua University  
101 Sec 2nd, Kuanfu Road, Hsinchu, 30013 (Taiwan)  
E-mail: bjuang@mx.nthu.edu.tw  
ccliao@mx.nthu.edu.tw

[h] Prof. Dr. P. Chiu

Chemistry Department, The University of Hong Kong  
Pokfulam Road, Hong Kong (China)  
E-mail: pchiu@hku.hk

[i] Prof. Dr. B. M. Kim

Seoul National University  
1 Gwanak-ro, Gwanak-gu, Seoul, 151-747 (Republic of Korea)  
E-mail: kimbm@snu.ac.kr

[j] Prof. Dr. T. P. Loh

Nanyang Technological University  
50 Nanyang Avenue, 639798 (Singapore)  
E-mail: teckpeng@ntu.edu.sg

of matching funds. Minoru Isobe (Nagoya University and President of IUPAC Organic and Biomolecular Chemistry Division, July, 2004) applied to an Asian Core Program (ACP), and communicated by emails with the coordinators of the member countries/regions and/or directly visited them to make agreements for this program. The CEOCA was officially inaugurated on October 11, 2005. This program has been approved and operated by collaboration with the IUPAC East Asian Networking Project, (chair, M. Isobe and the country/region coordinators were the task force members), National Science Council of Taiwan (C. C. Liao), KAIST Korea (Sunggak Kim and Kwan Soo Kim), NNSFC China (Guo-Qiang Lin and Zhu-Jun Yao), the Chinese University of Hong Kong (Henry N. C. Wong), and NRCT Thailand (Somsak Ruchirawat). International coordinator M. Isobe (2005–2008) and Toshio Nishikawa (Nagoya University 2008–2010) with General Secretary (GA) Pauline Chiu (2005–2010) and the above country/region coordinators coordinated the first phase ACP-CEOCA. The start-up conference was called



**Figure 1.** Preliminary meeting for East and Southeast Asia, Nagoya (5–8 September, 2004).

the 0<sup>th</sup> meeting ICCEOCA-0 and was held at Nagoya University (March, 2006). Since the end of the last century, many bilateral programs have been organized in East Asia in the organic chemistry fields. IUPAC has focused on the development of chemistry in Asia since the beginning of this century. One of the programs in chemistry of biodiversity is the example. The very first preparative meeting for the East and Southeast Asian organic chemistry was held in September 2004 in Ise-Nagoya, Japan (Figure 1). This meeting led us to start preparation for the Cutting-Edge Organic Chemistry in Asia, which has been supported by JSPS as Asian Core Program (ACP). The official first conference was held as the 0<sup>th</sup> ICCEOCA in Nagoya University in March 2006, Japan to inaugurate and establish the details of this program. The details of the history and aims of the ACP-CEOCA for establishing the Asian network for organic chemistry, selected awards list, and agreements have been published in a Community Report of this journal.<sup>[1]</sup>

The 1<sup>st</sup> International Conference on Cutting-Edge Organic Chemistry of Asia (ICCEOCA-1) was held in Okinawa, Japan (October 16–20, 2006) (Figure 2), a beautiful green island on emerald seas. The IUPAC-sponsored workshop was held in the morning of the first day of the conference. C. C. Liao and B. J. Uang in Hsinchu, Taiwan, organized the post conference.<sup>[2]</sup> The ICCEOCA-2 was organized by S. Kim, K. S. Kim, and S. Chang (September, 2007) at the Grand Hotel Haeundae, a beautiful beachside venue in Busan, Korea. Teck-Peng Loh from the Nanyang Technological University, Singapore, joined the ACP. A satellite symposium was organized by S. Ruchirawat (November, 2007) in the 6<sup>th</sup> Princess Congress in Bangkok, Thailand. The ICCEOCA-3 was in Hangzhou, China, and organized by Yann-Guan Wang, Z. J. Yao, and G. Q. Lin (October, 2008) at the Liuying Hotel by the picturesque West Lake. M. Isobe moved from Nagoya University and Toshio Nishikawa took over the international coordinator role (Nagoya University, April, 2009). The last conference of Phase I, ICCEOCA-4 was held in Bangkok



**Figure 2.** Participants at the ICCEOCA-1, Naha, Okinawa, Japan (16–20 October, 2006).

at the Convention Center of the Chulabhorn Research Institute (November–December, 2009). S. Ruchirawat, P. Ploypradith, and M. Chittchang helped in the organization. IUPAC Workshops were continued as in the attached program in Busan (2007), Hangzhou (2008), and Bangkok (2009, in this case attached to the Asian Chemical Congress, ACC) by selecting general topics that were useful for younger scientists from various organic chemistry backgrounds. Participants from the non-member countries/regions were from the Philippines, Malaysia, Indonesia, and Vietnam. Malaysia (Norsaada Rahman) joined as an ACP member since 2009.

The start-up conference was held in Chiba, Japan (August, 2009) to prepare the Phase II of the ACP-CEOCA and Atsushi Nishida was approved as the international coordinator (Figure 3.<sup>[3]</sup> The ICCEOCA-5 was held at the Ambassador Hotel in Hsinchu, Taiwan (7–11 November, 2010) by B. J. Uang. A pre-symposium of ICCEOCA-5 was organized by Ming-Jiung Wu at the NSYSU, Kaohsiung, Taiwan (5–7 November, 2010). In addition, the 0<sup>th</sup> Junior Workshop was held in NTHU, Hsinchu, aiming at ACP sample program of the additional future activity.<sup>[4]</sup>

The secondary phase of the ACP-CEOCA (2010–2015) was coordinated by Atsushi Nishida (Chiba University) together with his secretary team at Chiba University, Montakarn Chittchang (2010–12), Nopporn Thasana (2013), and Rozana Othman (2014–2015). ICCEOCA-6 was organized at the Hilton Hotel of the Chinese University of Hong Kong by Henry N. C. Wong and his team (11–15 December, 2011). The 1<sup>st</sup> Junior ICCEOCA was held in Xiamen, China (9–11 December, 2011) and was organized by Pei-Qiang Huang. The 2<sup>nd</sup> Junior ICCEOCA was held in the University of Malaya, Kuala Lumpur, Malaysia, by N. A. Rahman and Y. M. Choo (8–11 December, 2012) preceding the ICCEOCA-7, which was held in Singapore and organized by Teck-Peng Loh and his team at the Holiday Inn (11–14 December, 2012). The Junior ICCEOCA-3 was organized by A. Nishida in Seimei-no-Mori, Chiba (22–25 November, 2013), which proceeded to ICCEOCA-8 that was held in International Convention Center, Rihga Royal, a five-star hotel in Osaka, Japan, by M. Murata (25–28 November, 2013).<sup>[5]</sup> The Junior ICCEOCA-4 was organized by S. Ruchirawat in the Convention Center of CRI, Bangkok (28–30 November, 2014). The ICCEOCA-9 was then held by N. A. Rahman at the Eastin Hotel Petaling Jaya, Malaysia (1–5 December, 2014). The details of these activities are described in the following community reports by Norsaada, Somsak, and the lectureship awardees are listed in Table 1.



**Figure 3.** Start-up conference for the Phase II of ACP-CEOCA, Chiba, Japan (August, 2009).

Year	No. of Awards Given	No. of Awards Received	No. of Malaysian Participants
2009	0	0	1
2010	5	2	2
2011	5	3	5
2012	3	2	5
2013	3	2	5
2014	5	1	8
Total	21	10	26

Prof. Dr. H. R. H. Princess Chulabhorn Mahidol of Thailand graciously presented the opening lectures at the ICCEOCA-1, 3, 4, and 8 about Thai medicinal plants, marine natural products and lamellarin synthesis, which have strongly supported this program as the illuminating issues of the 10 year history (Figure 4, Figure 5a and Figure 9).



**Figure 4.** Abstracts from the ICCEOCA 0–9 and Junior ICCEOCA 0–3 over the past 10 years.

The start-up conference toward the Phase III was held in NTHU, Hsinchu, Taiwan (19–21 April, 2014) organized by B. J. Uang in collaboration with A. Nishida, as reported in his community report (see below). The future ICCEOCA will be held in Taiwan (2015), Korea (2016), China (2017), Thailand (2018), and Japan (2019). The third phase ACP-CEOCA (2015–2020) will be headed by Y. Iwabuchi (Tohoku University) as the international coordinator, whom has recently been informed that financial support from JSPS will be awarded. This program ACP-CEOCA is expected to continue with more collaborative research work as well as exchange students, as will be explained in the following community reports written by past/current coordinators about the 10 years of ACP (Table 1).



**Figure 5.** a) Prof. Dr. H. R. H. Princess Chulabhorn Mahidol and the participants of the ICCEOCA-8 in Osaka, Japan. b) Country/local coordinators and international advisory board members of the ACP-CEOCA. c) Speakers from the 3rd Junior ICCEOCA. d) Participants of the 3rd Junior ICCEOCA in Chiba, Japan (22–25 November, 2013). e) The best oral and poster presentation awardees. f) Participants from the Philippines and Vietnam. g) Lectureship award ceremony at the ICCEOCA-8.

## Asian Core Program: Cutting-Edge Organic Chemistry in Asia (ACP-CEOCA)-Malaysia Report

Yeun-Mun Choo<sup>[c]</sup> and Noorsaadah Abd. Rahman<sup>\*[c]</sup>

2014 is the 10<sup>th</sup> anniversary of the Asian Core Program: Cutting-Edge Organic Chemistry in Asia (ACP-CEOCA). The ACP-CEOCA was first established in 2006 on the initiatives of Professor Minoru Isobe with several other renowned organic chemists in Asia from Korea, China, Taiwan, Hong Kong, and Thailand. Subsequently, Professor Isobe had made a few visits to Malaysia to establish contact and invite Malaysia to join the program. As one of the criteria of this program is equal partnership in the joint research, scientific meetings, and researcher exchanges, Malaysia was unable to join this initiative at the time due to financial constraints. However, Malaysia officially joined the initiative during its second phase in 2009 with the University of Malaya, Kuala Lumpur, as its core institutions of the program and Professor Noorsaadah Abd. Rahman as the country coordinator.

As a member of the program, Malaysian organic community have attended the International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA/NICCEOCA) organized annually to promote exchange and collaboration with other organic chemists from the Asian regions. A total of 21 ACP Lectureship awards to Malaysia have been awarded to organic chemists from the members countries since 2009, while 10 ACP Lectureship awards were received by Malaysia organic chemists (Tables 1 and 2). The ACP Lectureship awards allow the award recipient to spend up to a week in the inviting country to give seminars and promote scientific exchange (Figure 6).

In 2012, the Chemistry Department at the University of Malaya achieved the 1<sup>st</sup> milestone for this program by successfully hosting the 2<sup>nd</sup> Junior ICCEOCA meeting, which is the graduate students' version of the "senior" ICCEOCA meeting (Figure 7). This meeting was attended by 59 graduate students from eight member countries (Malaysia (11), Japan (10), Taiwan (10), Korea (8), China (5), Singapore (5), Hong Kong (4), and Thailand (4)) and two non-member countries (Indonesia (1) and the Philippines (1)).

The Chemistry Department at the University of Malaya achieved the 2<sup>nd</sup> milestone in 2014 by successfully organizing the 9<sup>th</sup> ICCEOCA meeting at the Eastin Hotel Petaling Jaya, Malaysia (Figure 8). This meeting was attended by 176 participants from Japan (48), China (40), Taiwan (34), Korea (17), Hong Kong (11), Singapore (10), Malaysia (8), and Thailand (8). In this meeting, 87 ACP lectureship awards were given to participants for lectureship visits to the various countries (Singapore (19), China (17), Taiwan (15), Japan (10), Korea (8), Thailand (7), Hong Kong (6), and Malaysia (5)).

Malaysian chemists have come a long way since 2009 when they first participated in the ACP-CEOCA activities. There have been many opportunities for exchanges and interactions with fellow Asian organic communities on a regular basis. Malaysia has also become an active contributing member in the ACP-

**Table 2.** List of lectureship awards selected from the ICCEOCA-9 presentations.

ID	First Name	Last Name	Organization	Country	Inviting Country
OP23	Rongbiao	Tong	The Hong Kong University of Science and Technology	HK	CN
OP8	Dan	Yang	The University of Hong Kong	HK	CN
PC14	Man-Kin	Wong	The Hong Kong Polytechnic University	HK	CN
OP11	Katsunori	Tanaka	RIKEN	JP	CN
PC24	Yoshiaki	Nakao	Kyoto University	JP	CN
PC27	Masayuki	Inoue	The University of Tokyo	JP	CN
PD29	Junichiro	Yamaguchi	Nagoya University	JP	CN
OP7	Chulbom	Lee	Seoul National University	KR	CN
PB13	Won-Koo	Lee	Sogang University	KR	CN
PA7	Naohiko	Yoshikai	Nanyang Technological University	SG	CN
PA4	Chunyan	Chi	National University of Singapore	SG	CN
PA12	Choon-Hong	Tan	Nanyang Technological University	SG	CN
PA8	Yixin	Lu	National University of Singapore	SG	CN
PB22	Ratchanok	Pingaew	Srinakharinwirot University	TH	CN
PD13	Rong-Jie	Chein	Academia Sinica	TW	CN
PC25	Chinpiao	Chen	National Dong Hwa University	TW	CN
PD1	Ming-Jung	Wu	National Sun Yat-Sen University	TW	CN
OP21	Kazuaki	Ishihara	Nagoya University	JP	HK
PC27	Masayuki	Inoue	The University of Tokyo	JP	HK
PA9	Katsuhiko	Tomooka	Kyushu University	JP	HK
OP1	Teck-Peng	Loh	Nanyang Technological University	SG	HK
OP4	Sheng-Hsien	Chiu	National Taiwan University	TW	HK
PD19	Kwunmin	Chen	National Taiwan Normal University	TW	HK
OP5	Wenhao	Hu	East China Normal University	CN	JP
PB21	Wen-Hua	Zheng	Nanjing University	CN	JP
PB28	Congyang	Wang	Institute of Chemistry, Chinese Academy of Sciences	CN	JP
OP17	Zhenlei	Song	Sichuan University	CN	JP
PB24	Ming-Hua	Xu	Shanghai Institute of Materia Medica, Chinese Academy of Sciences	CN	JP
OP8	Dan	Yang	The University of Hong Kong	HK	JP
PA10	Pauline	Chiu	The University of Hong Kong	HK	JP
OP7	Chulbom	Lee	Seoul National University	KR	JP
OP9	Sumrit	Wacharasindhu	Chulalongkorn University	TH	JP
OP4	Sheng-Hsien	Chiu	National Taiwan University	TW	JP
PB21	Wen-Hua	Zheng	Nanjing University	CN	KR
PB8	Yong	Huang	Peking University	CN	KR

Table 2. (Continued)					
ID	First Name	Last Name	Organization	Country	Inviting Country
OP23	Rongbiao	Tong	The Hong Kong University of Science and Technology	HK	KR
PC18	Yujiro	Hayashi	Tohoku University	JP	KR
PD30	Masahiro	Murakami	Kyoto University	JP	KR
PA7	Naohiko	Yoshikai	Nanyang Technological University	SG	KR
PD13	Rong-Jie	Chein	Academia Sinica	TW	KR
PD28	Po-Chiao	Lin	National Sun Yat-sen University	TW	KR
OP11	Katsunori	Tanaka	RIKEN	JP	MY
OP3	Takeshi	Ohkuma	Hokkaido University	JP	MY
OP29	Min	Kim	Chungbuk National University	KR	MY
OP12	Shunsuke	Chiba	Nanyang Technological University	SG	MY
PC15	Biing-Jiun	Uang	National Tsing Hua University	TW	MY
OP30	Wen-Jing	Xiao	Central China Normal University	CN	SG
OP5	Wenhao	Hu	East China Normal University	CN	SG
PB28	Congyang	Wang	Institute of Chemistry, Chinese Academy of Sciences	CN	SG
OP26	Chun-An	Fan	Lanzhou University	CN	SG
OP25	Huanfeng	Jiang	South China University of Technology	CN	SG
PA27	Jian	Xiao	Qingdao Agricultural University	CN	SG
PB11	Yuhong	Zhang	Zhejiang University	CN	SG
PB16	Bin	Xu	Shanghai University	CN	SG
PB3	Jinheng	Li	Hunan University	CN	SG
PD3	Hegui	Gong	Shanghai University	CN	SG
PA16	Junliang	Zhang	East China Normal University	CN	SG
PA17	Wei	Wang	Lanzhou University	CN	SG
PB12	Xiao-Qi	Yu	Sichuan University	CN	SG
PC16	Cheuk-Lam	Ho	Hong Kong Baptist University	HK	SG
OP20	Sensuke	Ogoshi	Osaka University	JP	SG
PC24	Yoshiaki	Nakao	Kyoto University	JP	SG
PA31	Chang-hee	Lee	Seoul National University	KR	SG
PD28	Po-Chiao	Lin	National Sun Yat-sen University	TW	SG
PB32	Tun-Cheng	Chien	National Taiwan Normal University	TW	SG
OP26	Chun-An	Fan	Lanzhou University	CN	TH
OP28	Chanjuan	Xi	Tsinghua University	CN	TH

Table 2. (Continued)					
ID	First Name	Last Name	Organization	Country	Inviting Country
PC14	Man-Kin	Wong	The Hong Kong Polytechnic University	HK	TH
PD29	Junichiro	Yamaguchi	Nagoya University	JP	TH
PA28	B. Moon	Kim	Seoul National University	KR	TH
OP16	Yu	Zhao	National University of Singapore	SG	TH
PB26	Hsyueh-Liang	Wu	National Taiwan Normal University	TW	TH
OP30	Wen-Jing	Xiao	Central China Normal University	CN	TW
PB29	Bo	Liu	Sichuan University	CN	TW
OP20	Sensuke	Ogoshi	Osaka University	JP	TW
OP21	Kazuaki	Ishihara	Nagoya University	JP	TW
OP24	Shiki	Yagai	Chiba University	JP	TW
PC22	Shuji	Akai	Osaka University	JP	TW
PD23	Michito	Yoshizawa	Tokyo Institute of Technology	JP	TW
PD24	Yoichi M. A.	Yamada	RIKEN Center for Sustainable Resource Science	JP	TW
OP14	Cheol-Hong	Cheon	Korea University	KR	TW
OP22	Eun-Jin	Cho	Hanyang University	KR	TW
PB6	Rozana	Othman	University of Malaya	MY	TW
OP16	Yu	Zhao	National University of Singapore	SG	TW
PA4	Chunyan	Chi	National University of Singapore	SG	TW
OP9	Sumrit	Wacharasindhu	Chulalongkorn University	TH	TW
PB30	Wannaporn	Disadee	Chulabhorn Research Institute	TH	TW



Figure 7. 2nd Junior ICCEOCA organized by the University of Malaya, Kuala Lumpur (8–11 December 2012).



Figure 6. Lectureship awardees from Malaysia.



**Figure 8.** The 9th ICCEOCA organized by the University of Malaya, Kuala Lumpur (1–5 December, 2014).

CEOCA program. We hope that the ACP-CEOCA program will be continued and generously supported by the Asian organic community and funding agencies.

### Impact of the Asian CORE Program (ACP): Cutting-Edge Organic Chemistry in Asia to the Chemistry-Related Community in Thailand over 10 years

Poonsakdi Ploypradith<sup>[d]</sup> and Somsak Ruchirawat<sup>\*,[d]</sup>

Since the establishment of the Asian CORE Program (ACP): Cutting-Edge Organic Chemistry in Asia in 2005 initiated by Professor Minoru Ise and other country/region coordinators, the program has gained and enjoyed increasing publicity in Thailand. More importantly, the impact that the program has had on the Thai chemistry-related community has been enormous and long-lasting. On the occasion of the 10<sup>th</sup> year anniversary of the program, this community report is to commemorate its success and elaborate on some milestones achieved in Thailand as a consequence of this international networking program.



**Figure 9.** Prof. Dr. H. R. H. Princess Chulabhorn Mahidol delivered the Nagoya Medal lecture at the ICCEOCA-1, Okinawa, 2006.

Following its official launch in 2006, the program has stimulated active participation from faculty members of various leading Thai academic and research institutions among which the Chulabhorn Research Institute (CRI) has served as a coordinating body to facilitate the program activities with the supports from National Research Council of Thailand (NRCT) and recently also from the Thailand International Development Cooperation Agency (TIDCA). The program has fostered domestic as well as international networking through its hallmark activities—annual conferences and lectureship tours. Both activities have significantly contributed and led to a number of productive and successful bilateral collaborations.

On January 22, 2007, following the first conference in Okinawa (16–20 October, 2006), the symposium “Chinese Medicinal and Natural Product Chemistry” was jointly organized at the CRI Convention Center by Professor Somsak Ruchirawat, the ACP coordinator of Thailand, and Professor Guo-Qiang Lin, the ACP coordinator of China and the Director of the Chemistry Division of the National Natural Science Foundation of China (NSFC). In addition to the lecture by Professor Lin, the symposium also featured four lectures from the Chinese delegates (Professors Zhu-Jun Yao, Mei-Xiang Wang, Yi Zhun Zhu, and Guolin Zhang) and forty posters from the Thai participants including approximately 200 symposium attendants. In addition to organizing this symposium, Professor Ruchirawat also coordinated with Professor Vichai Boonsaeng, the former Head of the Academic Research Division of the Thailand Research Fund (TRF) to arrange an official visit for the Chinese delegates. Since 2008, the bilateral collaboration between China and Thailand has been established with the support from both NSFC and TRF, respectively. Five joint workshops were alternately organized in China and Thailand during the past seven years in Chengdu (2008), Phuket (2009), Xián (2010), Songkla (2012), and Shanghai (2014). Currently, Professor Xu Shen, the Shanghai Institute of Materia Medica (SIMM), and Professor Supa Hannongbua, Kasetsart University, have served as the coordinators of this bilateral collaborative program. In addition to the joint workshops, some research collaborations between Chinese and Thai scientists have been successfully established, resulting in some joint publications as well as future patents.

Following the initial acquaintances from the ACP, bilateral joint meetings between Mahidol University, Thailand, and the National Tsing Hua University, Taiwan, have also been organized over the past few years. Most recently, the memorandum of understanding between Chulabhorn Research Institute (CRI)/Chulabhorn Graduate Institute (CGI) and Nagoya University as well as that between CRI/CGI and Chiba University has been officially signed to facilitate research collaborations as well as foster student/scholar exchanges. Concurrent with the second phase of the ACP during 2010–2014, these bilateral collaborations have emphasized on the activities, which also benefit younger generations, especially students.



Figure 10. Presentation awards at the 4th Junior ICCEOCA.

Clearly, the ACP: Cutting-Edge Organic Chemistry in Asia has paved the path to create effective and productive joint collaborations between Thailand and other ACP member countries. The 10<sup>th</sup> anniversary of this research networking program has witnessed a number of successful establishments of amicable environments among participating delegates who will undoubtedly further strengthen the existing network while bridging a new one (Figure 10 and Figure 11 a,b).

### JSPS Asian Core Program: The 10-Year Fruitful Journey for the Organic Chemistry Community in Mainland China

Guo-Qiang Lin,<sup>[e]</sup> Zhu-Jun Yao,<sup>\*,[f]</sup> and Ang Li<sup>\*,[e]</sup>

On the occasion of the 10th year for the project of Cutting-Edge Organic Chemistry in Asia under the ACP-CEOCA, we, as the previous and current coordinators of Mainland China, are more than excited to see the great success of this program. ACP-CEOCA is certainly attributable to the joint efforts of organic chemists from different countries and regions in Asia. The program has been so successful in terms of promoting the career development of both young and mature generations of the organic chemistry community, which, to some extent, goes far beyond our original anticipation as an international conference series. We would like to take this opportunity to briefly



Figure 11. a) ICCEOCA-4 Bangkok, Thailand (29 November–3 December, 2009). b) Junior ICCEOCA-4 organized by the Chulabhorn Research Institute-C. Graduate Institute (28–30 November, 2014).

go through the journey from the Chinese chemists' point of view, and express our gratitude to our colleagues who have been involved in and made important contributions to this program.

The journey can be traced back to April, 2001, even before ACP-CEOCA officially started. On the IUPAC Workshop on Biodiversity at Kunming, China, Prof. Minoru Isobe of Nagoya University and Professors Guo-Qiang Lin and Zhu-Jun Yao of the Shanghai Institute of Organic Chemistry (SIOC), Chinese Academy of Sciences, and some other attendees, discussed the idea of organizing a series of small-to-medium sized symposiums, to promote the scientific communications and collaborations among Asian countries such as Japan, China (including Mainland China, Taiwan, and Hong Kong regions), Singapore, Korea, Thailand, Malaysia, and Vietnam (Figure 12).

The journey started in 2006, from the launching conference of this program, namely, the 0<sup>th</sup> International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-0) was held in Nagoya, Japan. Prof. Minoru Isobe set the format of this program together with the coordinators from other Asian countries and regions. Professors Guo-Qiang Lin and Kuiling Ding, both from SIOC, attended this meeting and delivered talks. It turned out to be perhaps the most important idea for this pro-



Figure 12. Participants at the IUPAC workshop on Biodiversity, Kunming, China (2001).

gram that the "ACP lectureship award" was set towards the goal of accelerating the scientific communications among Asian countries and regions. Prof. Ding was invited by the Japanese side and then took a lecture tour in the following year. At the same time, we also invited two Japanese chemists and two Korean chemists to visit mainland China for a lecture series.

For the ICCEOCA-1 at Okinawa, Japan, in October 2006, the number of the attendees from mainland China increased to fourteen. Among them, Professors Wei-Dong Li (Lanzhou University), Mei-Xiang Wang (Institute of Chemistry, Chinese Academy of Sciences), Zhenfeng Xi (Peking University), Ming-Hua Xu (SIOC), Zhu-Jun Yao (SIOC), and Hongbin Zhai (SIOC) gave oral presentations on their research. From then on, more and more of our colleagues from the main universities and institutes in Mainland China have been involved in the ACP-CEOCA, and the participants from Mainland China increased to nearly 40 in the latest 10th conference in Malaysia. We would like to say that the conferences and the following visits not only provided a great platform for communication, inspirations, and collaborations among Asian organic chemists, but also witnessed the rapid growth and development of organic chemistry in China.

As a major funding partner, National Natural Science Foundation of China (NSFC) generously supported the activities of the ACP-CEOCA through various projects from the Bureau of International Cooperation. Through the support of NSFC and the local government, on the 19–23 October, 2008, China hosted the ICCEOCA-3 in Hangzhou, a famous touristic city in China (Figure 13). The organizing team was headed by Professors Zhu-Jun Yao (SIOC) and Yan-Guang Wang (Zhejiang University) made significant contributions to the success of this conference. Prof. Dr. H. R. H. Princess Chulabhor Mahidol, Thailand presented the conference and delivered a plenary lecture at the ICCEOCA-3 on Thai medicinal plants, marine natural products, and lamellarin synthesis. Three years later, Prof. Pei-Qiang Huang and his colleagues at Xiamen University successfully organized the 1<sup>st</sup> Junior International Conference on Cutting-Edge Organic Chemistry in Asia on December 9–11, 2011 (Figure 14). Forty two Ph.D. students and 13 experienced scien-



Figure 13. The ICCEOCA-3, Hangzhou, China (19–23 October, 2008).



Figure 14. The 1st Junior ICCEOCA-3, Xiamen, China (19–23 October, 2008).

tists attended the first conference in Xiamen. The junior conference series have provided young students precious opportunities to exchange scientific opinions and expertise, and it is now a regular satellite program of ACP-CEOCA, mainly for the younger generation of organic chemists.

Over the last decade, we have enjoyed ten successful ACP-CEOCA conferences and invited nearly 100 organic chemists from Asian countries and regions to visit us. The number of attendees from Mainland China keeps increasing, and this reflects the remarkable influence of this program as well as the rapid growth of the organic chemistry community here. Many of our colleagues, especially the young chemists, took the opportunity from this program to deliver their first talk at an international meeting. Meanwhile, the themes of the conferences have expanded from organic synthesis to a much wider cutting-edge spectrum, including material science, chemical biology, energy and environmental chemistry, as well as many other fields using the “organic language”. Encouraged by what we have gained from this program, we believe that its second decade will bring us more enjoyable experiences, and more importantly, promote the development of organic chemistry and facilitate its applications, which are ultimately beneficial to the society and economy of Asia.

## Ten Years ACP in Taiwan

**Biing-Jiun Uang<sup>\*[g]</sup> and Chun-Chen Liao<sup>[g]</sup>**

Ten years ago, Minoru Isobe invited Taiwan to join the Asian Core Program on Cutting-Edge Organic Chemistry in Asia, which was supported by the Japan Society for the Promotion of Science (JSPS) as the first multinational Asian Core Program (ACP). Minoru Isobe paid a visit to Taiwan to explain the aims and goals of the program. In the morning of September 18<sup>th</sup> 2005 (Sunday), Minoru Isobe, Chun-Chen Liao, Chien-Hong Cheng, Wen-Feng Liaw, Man-Kit Leung, Biing-Jiun Uang, and Chin-Fa Yeh had a meeting in Room 112 of the Chemistry Building, National Tsing Hua University, Hsinchu, Taiwan to discuss details for the ACP Program (Figure 15). After the meeting, colleagues in Taiwan, headed by Chun-Chen Liao, decided to write a Five-Year activity proposal to the National Science Council (NSC, now the Ministry of Science and Technology) for

a matching fund of the JSPS ACP program, and the proposal was fortunately approved. In this proposal, fourteen professors from four core institutions were invited to join the program at the beginning. The fourteen professors were invited to participate in the 0<sup>th</sup> International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-0) that was organized by Isobe on 8–12



Figure 15. Group photo taken after the meeting in the chemistry building at the NTHU (18 September, 2005).

March, 2006, at the Noyori Conference Hall, Nagoya University, Japan, and this is where the first stage structure was established.

The ICCEOCA-1 was held at Tiruru, Naha City, Okinawa, Japan, on 16–20 October, 2006. The Taiwanese ACP team expanded from fourteen members to twenty members and six core institutions. Although twenty professors were invited to the conference, only eighteen professors from Taiwan were able to participate in the conference. The Taiwanese ACP team took an opportunity to host the post-symposium of the ICCEOCA-1 at Hsinchu Lakeshore Hotel on the 21–24 October, 2006 (Figure 16). The symposium featured two keynote lectures, which were delivered by Chi-Huey Wong and Minoru Isobe, 28 invited lectures, and 102 poster presentations. More than 230 participants from six countries attended the post-conference. It was very beneficial between the participating countries to strengthen friendships or establish new friendships and networking when the lectureship tour started in 2007. From 2007 to 2009, a Taiwanese delegate attended the ACP in Busan, Hangzhou, and Bangkok with 18–20 delegate members. In 2009, Chun-Chen Liao retired from the National Tsing Hua University and Biing-Jiun Uang succeeded the position along with Chun-Cheng Lin and Chien-Tien Chen as the ACP team coordinators for Taiwan.



**Figure 16.** Group photo taken at the ICCEOCA-1 post-symposium at the Lakeshore Hotel, Hsinchu, Taiwan.

The new phase of the ACP-CEOCA has been continued from the first phase in 2010 and the Taiwanese ACP team had the good fortune to receive support for the ACP activities by the National Science Council for another five years. The first New Phase International Conference was organized as NICCEOCA-1, the equivalent of the ICCEOCA-5, on 7–11 November, 2010, at the Ambassador Hotel, Hsinchu, Taiwan. The Taiwanese ACP team volunteered to host the 0<sup>th</sup> Junior ICCEOCA at the National Tsing Hua University (6–8 November, 2010) before the main activity NICCEOCA-1. There were 33 invited lectures and 126 poster presentations and more than 160 participants attended the NICCEOCA-1/ICCEOCA-5. In the 0<sup>th</sup> Junior ICCEOCA, chaired by Chun-Cheng Lin, four students from each of the participating countries were invited to the conference and each student gave a 12 minute oral presentation. The aims and goals for the Junior ICCEOCA were to set a platform for young organic chemists to showcase their scientific work, to learn and stimulate chemistry from each other, and to make friends and network. Although it was only a one-day scientific program, it was a quite successful. A couple of students from China and Hong Kong stayed at the NICCEOCA-1/ICCEOCA-5 (Figure 17).

In 2013, all the member countries agreed to continue this program during the business meeting at the ICCEOCA-8 in Osaka, Japan, as the ACP program was so successful. The issue of host countries for ICCEOCA-10 to ICCEOCA-14 was discussed and decided. The Taiwanese ACP team volunteered to host a start-up conference on 19–22 April, 2014 at the National Tsing Hua University, Hsinchu (Figure 18). During the start-up conference, all the member countries reconfirmed the continuation of the activities for another five years, although the funding situations for some countries are not clear. The ICCEOCA-10 will be held in Kaohsiung on the 2–6, November and the Junior ICCEOCA-5 will be held in Taipei during October 30–November 2, 2015.

The core members and institutes of the Taiwanese ACP team are growing continuously. Currently, the Taiwanese ACP team consists of more than 50 members from 13 institutes. After two phases of the ACP program, the Taiwanese ACP team has benefited not only from the annual ACP conference but also the mutual visits of lectureship tours from the participating



**Figure 17.** a) A student was asking a question during the Junior ICCEOCA-0 (JACP-0), Hsinchu, Taiwan. (b) A group photo was taken in front of the chemistry building at National Tsing Hua University during the JICCEOCA-0.



**Figure 18.** Group photo taken in front of the chemistry building, National Tsing Hua University, Hsinchu, Taiwan (during the start-up conference for the 3rd phase ACP).

countries. In addition, the ACP program has helped the networking among the PI's, and their international collaborations have been very fruitful (Figure 19).

## Hong Kong Report

Pauline Chiu\*<sup>[h]</sup>

As the ACP program completes its 10<sup>th</sup> year, the organic chemistry community in the Special Administrative Region of Hong Kong has also participated in the program for just as



Figure 19. The ICCEOCA-5 at the Ambassador Hotel, Hsinchu, Taiwan (7–11 November, 2010).

long—because it was one of the founding membership countries/regions. Over the last two phases, all of the organic chemists in this region have been able to participate and attend the invited annual conferences. Over 40 lectureship awards have been given to Hong Kong chemists to make lecture tours in the ACP member countries over these years. Postgraduate students from Hong Kong also took part in all of the Junior ACP conferences. A number of lectureship awards were given by Hong Kong to recognize the research of the participants. It was a particular pleasure to host the chemists who visited Hong Kong for the first time as a result of the lectureship awards.

In addition to participation in the annual conferences, and welcoming visiting chemists, a particular highlight was the hosting of the 6th International Conference on cutting-edge organic chemistry in Hong Kong on 11–15 December, 2011 (Figure 20). The conference was organized and led by Prof. Henry N. C. Wong and colleagues from the Chinese University of Hong Kong. A total of 150 participants from all the ACP regions and countries attended this meeting (Figure 21).

Other than these quantifiable outcomes, significant networking made possible as a result of the conferences and lectureship tour visits facilitated additional scientific and educational activities. For example, Prof. Man-Kin Wong of the Hong Kong Polytechnic University got to know Prof. Ping Kongsaree of Mahidol University, Thailand, from the ACP-ICCEOCA conference in 2011. Eventually, their discussions resulted in a two-month exchange studentship for an MPhil student from Thailand to do research at the Hong Kong Polytechnic University. This MPhil student has since continued on to pursue her Ph.D. degree with Prof. Kongsaree. The exchange was an excellent experience for both the host and the exchange student. Prof. Wong also established good ties with Prof. Takanori Fukushima (Tokyo Institute of Technology) during his lectureship tour to Hong Kong in 2010. Since then, a student from Prof. Wong's group has been accepted for Ph.D. studies in Prof. Fukushima's laboratory.

Another student exchange emerged from the lectureship tour of Prof. Pauline Chiu of the University of Hong Kong to Taiwan, where a student from the National Tsinghua University that attended her lecture became interested in the chemistry that she presented, and subsequently he applied for funding to undertake a short exchange research stay with Prof. Chiu in Hong Kong. Hong Kong Polytechnic University also established ties and discussions with Prof. Katsunori Tanaka of RIKEN, to set up a more long-term student exchange training program, due to their common research interests and complementary expertise. Prof. Tanaka's postgraduate student will be coming to Hong Kong in the summer of 2015. Then, a postgraduate student from Hong Kong will visit the Riken laboratory in the subsequent years.

In short, the ACP conferences and lectureship tours have been seminal in making new networking and connections between faculty members of different countries possible. It is expected that these opportunities will foster future international student exchanges and research collaborations.



Figure 20. Lectureship award ceremony at the ICCEOCA-6 in Hong Kong: 7 lectureship award recipients were invited to Hong Kong by Prof. Wong (first from the right) and Prof. Shing (first from the left) from the Chinese University of Hong Kong.

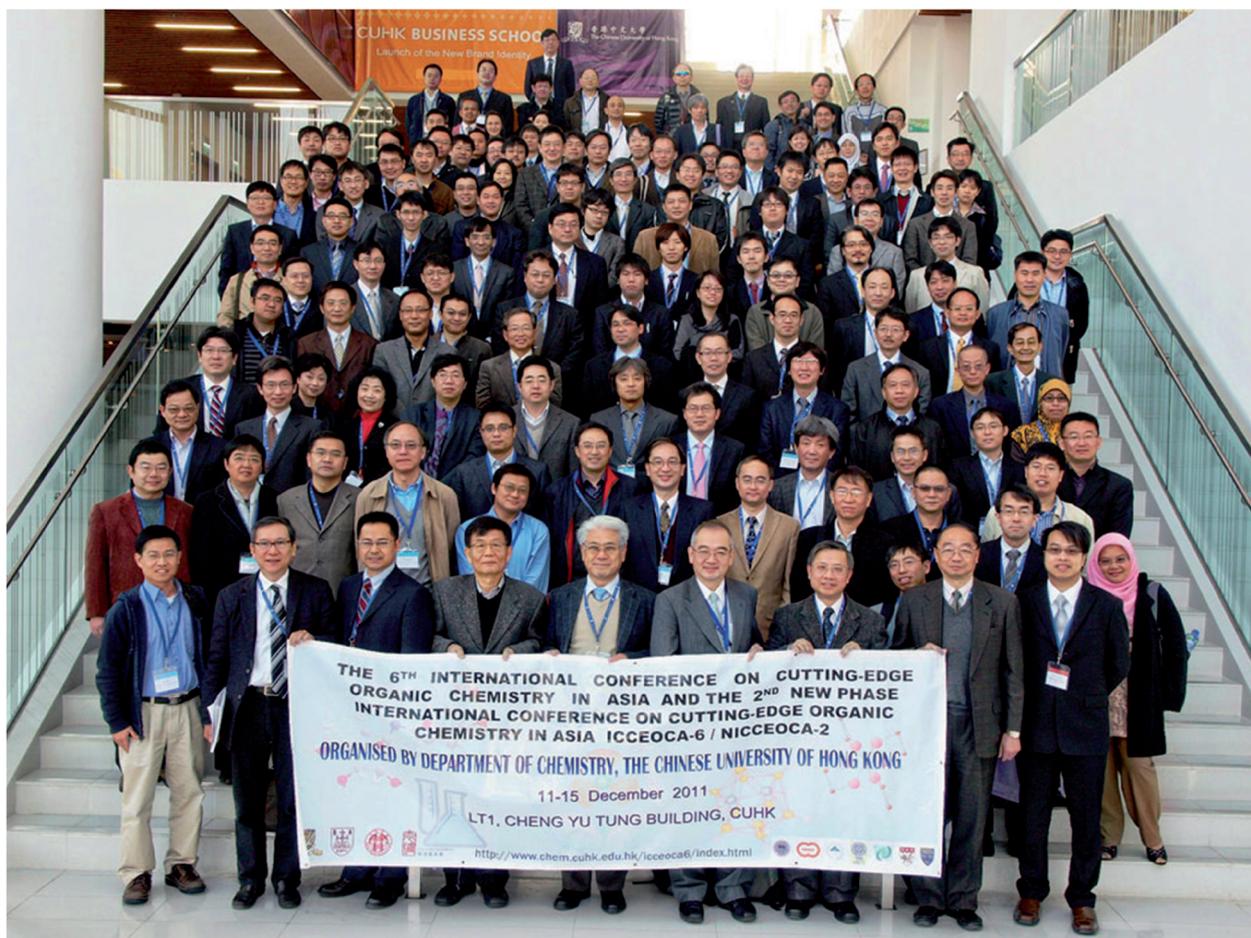


Figure 21. All of the participants in the ICCEOCA-6, Hong Kong.

## Current Status of Organic Chemistry in South Korea

B. Moon Kim\*<sup>†</sup>

Since the Korean Chemical Society (KCS) was established in 1945, organic chemistry has been an important discipline to boost Korean economy and science both in academia and industrial sectors. Since 1977, organic chemists in South Korea have been gathering together for monthly organic chemistry seminars. The enthusiasm from this rather small organic chemistry community has brought the foundation of the Organic Chemistry Division of the KCS in 1982 as the first division of the KCS. This has catalyzed the formation of many other divisions in the KCS and now the Organic Chemistry Division has more than 200 active members, most of whom are principal investigators in academia, government research institutes or research laboratories in private industry. In 1980, the first bilateral inter-country joint seminar program was held by the organic chemists of Korea and Japan, as a token of the Korean organic chemists' move towards international cooperation, and now the organic chemistry society has many active participations in either bilateral or multilateral joint symposia or seminars with many countries both inside and outside Asia including the ICCEOCA. Countries involved in joint seminars or symposia with

Korean organic chemistry society include China, France, Germany, Hungary, India, Italy, Japan, Poland, Taiwan, and USA.

Other societies that the organic chemists in South Korea are associated with include the Korean Society of Organic Synthesis (KSOS). Organic chemists from societies other than KSC such as the Pharmaceutical Society of Korea are members of the KSOS. The KSOS had its 5<sup>th</sup> International Symposium in November last year in beautiful Haeundae, Busan (Figure 22) and (Figure 23).

For the year 2015, there will be an annual Organic Chemistry Division Symposium on 15 February, 2015, which is the 34<sup>th</sup> symposium from its inception. This symposium will be held at the Korea Research Institute of Chemical Technology in Daejeon. Also, a summer workshop is scheduled on the 24–25 of August in Geoje Island—a beautiful island located at the southeastern part of the Korean peninsula, which is a part of the Korean Marine National Park. Usually the summer workshop attracts more than 500 members, most of whom will present scientific papers for active and informal discussions on various aspects of organic chemistry. The organic division will actively participate in two annual meetings of the KCS; these meetings are scheduled in the spring at the KINTEX convention center on 15–17 of April in Ilsan, near Seoul and in the fall at the EXCO Convention Center in Daegu.



Figure 22. Lectureship recipients to Japan in the ICCEOCA-2 in Busan, Korea.



Figure 23. The Korean attendants in the ICCEOCA-5, Taiwan.

Organic chemists in South Korea are looking forward and have high expectations for the year 2015 as there will be major International Conferences such as the International Union of Pure and Applied Chemistry (IUPAC) Conference in August in Busan and the 10<sup>th</sup> AFMC International Medicinal Chemistry Symposium (AIMECS) in Jeju Island, along with a few bilateral joint symposia such as the Korea–Japan Joint

Organic Chemistry Seminar and Korea–China Joint Organic Chemistry Symposium. Of course the 10<sup>th</sup> ICCEOCA is one of the top conferences that Korean chemists are keeping on their conference lists.

As for the International Conference on Cutting-Edge Organic Chemistry in Asia, South Korean organic chemists have been participating in this conference since the beginning of this inter-Asia conference. Korea has hosted the 2<sup>nd</sup> ICCEOCA conference in Busan and is planning to host the 12<sup>th</sup> conference in 2016. Attendance to the ICCEOCA from the Korean side has been around 15 every year, although Korean organic chemists have not received any financial support from the funding agencies in Korea for the conference. However, most Korean organic chemists have been using their personal research grants to attend the ICCEOCA meeting and also to host the invited speakers from the participating countries. Sometimes the travel expenses within the country are provided by personal donations from the professors in each hosting institution. This, however, has not stopped the Korean organic chemists from actively participating in the ICCEOCA meetings (Figure 24). Young organic chemists from Korea have also been attending the Junior ACP conference since 2012. On average about 8 students have been attending the Junior ACP since 2012. As we will be entering the second decade of the ICCEOCA, we are looking forward to an even more successful cooperation and fruitful interaction among organic chemists throughout the Asian countries.

### A Key Programme that Helps the Growth of Organic Chemistry Research in Singapore

Teck Peng Loh<sup>[i]\*</sup>

Year 2015 is a special and significant year for the Asian Core Program: Cutting-Edge Organic Chemistry in Asia. Established



Figure 24. All the participants in the ICCEOCA-2 in Busan, 2007.

in October 2005, the Asian Core Program aims to bring together the key researchers in Organic Synthesis in Asia to network as well as to share cutting-edge research through this program.

Asian Core Program took off after the support from the Japan Society for the Promotion of Science (JSPS). Prior to the approval from JSPS, much discussion and research on the content for the program have been meticulously thought out and planned out by Professor Minoru Isobe. Much work and time have been invested to introduce this program as well as in seeking unanimous support from the coordinators from the various Asian Countries.

Over the past decade, the Asian Core Program has grown with a humble beginning under the stewardship of the leader, Professor Minoru Isobe with his team of pioneer coordinators and the subsequent leader, Professor Atsushi Nishida to become one of the most important programs in the Organic Chemistry field in Asia. We have noticed that the number of participants grew over the years and the qualities of the presentations are increasingly impressive. The annual meeting (rotating among these countries) provides a platform for the researchers to showcase their work. With pressure and friendly competition, researchers from Singapore have shown substantial improvement in their research level as well as presentations. On the other hand, the junior ACP is another program initiated that was beneficial for our students.

The selection criteria for the awardees are getting tougher each year owing to the strong competition from each country. The number of awards seems to be on the rise to welcome

awardees to the respective awarding country to give presentations and interact with the faculty members of the awarded country. This provides valuable opportunities for young as well as established researchers to showcase their work as well as interact with the wider audience of the visiting country. In addition, the funding availabilities allocated to the Asian Core Program are also readily available in the recent years. All these are the examples of the success of the ACP, the reputations that it has established over all these years; the ACP program is gaining much visibility and popularity over the years and Singapore, as a member of the program, is honored to be part of this program.

I would like to also take this opportunity to express my utmost appreciation to everyone, especially to Professor Minoru Isobe and Professor Atsushi Nishida who have toiled for and contributed to the success of the ACP for the past 10 years. Moving forward, I wish the ACP every success in its future endeavors and that it continues to build upon this momentum to create greater milestones advancing organic chemistry research in the many more decades to come.

- [1] M. Isobe, P. Chiu, *Chem. Asian J.* **2006**, *1*, 18–20.
- [2] M. Isobe, P. Chiu, *Chem. Asian J.* **2007**, *2*, 452–454.
- [3] M. Isobe, T. Nishikawa, P. Chiu, *Chem. Asian J.* **2010**, *5*, 660–666.
- [4] A. Nishida, B. J. Uang, M. Chittchang, M. Isobe, *Chem. Asian J.* **2011**, *6*, 1300–1303.
- [5] M. Isobe, M. Murata, S. Hanashia, A. Nishida, T. P. Loh, N. A. Rahman, N. Thasana, M. Chittchang, *Chem. Asian J.* **2014**, *9*, 1689–1696.

---

Received: January 23, 2015