

出國報告（出國類別：其它-參訪交流）

赴日與日本 JST 召開合作計畫審查會及 Asian Core Program-
Cutting-Edge Organic Chemistry in Asia 年會出國報告

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派赴國家：日本

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壹、目的

2013 年 11 月 19-21 日，本會與日本 JST 在東京 JST 總部召開審查會，由本會國合處林處長偕承辦人共同出席。另於 11 月 24-28 日由日本科學振興會(JSPS)在日本召開 Asian Core Program-The 4th New Phase International Conference in Cutting-Edge Organic Chemistry in Asia，台方由清華大學化學系汪炳鈞教授率領台灣有機化學領域專家及博士生分別在千葉和大阪出席與會，共有亞洲地區 300 多位學者專家出席年會。

貳、過程與觀察

■主要行程/

1.出席與日本 JST 共同計畫審查會及工作會議

由本會國合處林宗泰處長偕承辦人赴日本東京與JST召開審查會。本次審查會分由本處林處長、JST國際科學科學技術部部長川真田一穗(Kazuho KAWAMATA)參事役主持及致詞，並由JST承辦人金子惠美進行本項合作計畫之背景說明及出席人員自我介紹。雙方對於每一申請案均已事前溝通，對於部分個案雖有審查成績和意見不同之處，但在面對面逐一審視討論，惟因2014年度JST預算有限，本次審查會共核定以生物電子和光電("Bioelectronics" and "Biophotonics")為主題的研究共3案，將自2014年1月1日起開始執行，為期3年。另會中對於2013年12月在台召開新領域「Fuel Cell-Energy Carrier」的台日研討會，JST將由黑木敏高理事率團，共有18位團員來訪，JST亦希望本會屆時可以協助安排黑木理事在台的參訪行程及拜會本會高層長官。

2. Asian Core Program-The 4th New Phase International Conference in Cutting-Edge Organic Chemistry in Asia

Asian Core Program 是日本學術振興會(Japan Society for the Promotion of Science, JSPS)在2005年所新創的重點計畫，以鼓勵亞洲國家以核心領域共同合作並培養年青研究人才。亞洲核心計畫-尖端有機化學(Asian Core Program on Cutting-Edge Organic Chemistry in Asia)為2005年由日本名古屋大學磯部稔教授發起，結合台灣、韓國、中國、泰國等國之優秀有機化學家進行國際性學術交流活動，以對等的原則，透過由日本學術振興會(JSPS)以國際合作交流的方式建立之合作協議計畫，每年舉行大會一次，加上透過各國演講者的巡迴演講來協助或補充學者間自行接觸交流之不足，以促進或加速優勢的領域或有機化學次學門之交流及合作，進而促進雙方建立合作關係，及分享研究成果，提升亞太區的有機化學研究在世界上之學術地位。

第一階段(Phase I)於2005~2010執行，新加坡、馬來西亞及香港於第一階段末期加入此合作協議計畫，第二階段(Phase II)於2010年後繼續執行，過去第一屆至第七屆分別在日本沖繩(2006)、韓國釜山(2007)、中國杭州(2008)、泰國曼谷(2009)、台灣新竹(2010)、中國香港(2011)及新加坡(2012)舉行，各參與國選派優秀學者參與此項活動，並於年會中遴選優秀研究學者至該國進行為期一週的演講系列。另為鼓勵博士生參與國際學術會議的經驗，於2011年開始籌辦Junior International Conference。

12月23日至24日在千葉舉辦的3rd Junior International Conference 主要重點是以參與Asian Core Program(台灣、大陸、

日本、泰國、香港以及韓國)國家的青年研究學者為主，每個國家分別派出4至5個博士生發表論文，而其餘未進行論文發表的學生也以Poster的方式呈現出該研究成果與大家分享。在兩天一夜的密集會議當中，相互腦力激盪接受挑戰，不僅是分享彼此學術研究的經驗與成果，也更瞭解其他同儕對於有機學術研究的熱誠以和求真不懈的信念，對於初入學術研究的青年博士生而言，積極參與國際學術活動，將有助於增廣國際視野。

本次(2013)大會輪由日本大阪大學化學系村田道雄教授主辦，JSPS淺島理事出席大會致詞，並邀請泰國公主Chulabhorn MAHIDOL進行Keynote Lecture。會期由2013年11月25至28日，在大阪市內 Grand Cube Osaka, Osaka International Convention Center 舉行，出席參與的國家有地主國日本(51人)、台灣(22人)、韓國(12人)、香港(16人)、馬來西亞(5人)、泰國(10人)、新加坡(13人)、中國(25人)、菲律賓(1人)，總共155人參與學術研討會議。本次研討會的會議主題相當廣泛，涵蓋有機合成、有機反應、奈米化學、生物有機化學、綠色化學，結構與材料科學，及環境化學。四天的議程包含一個Keynote演講，27場演講，以及127篇壁報論文。本次會議邀請演講共有27位，台灣有四位，分別是中央研究院基因體中心洪上程教授、中山大學化學系王志偉教授、清華大學化學系陳建添教授、及台灣大學化學系楊吉水教授。

今年的年會輪由日本主辦，JSPS淺島理事出席大會致詞，並邀請泰國公主Chulabhorn MAHIDOL進行Keynote Lecture。首先由大會主席日本千葉大學的西田教授及大阪大學的村田教授致歡迎詞，簡單開幕式結束後，立即開始學術演講，第一場由Chulabhorn 教授演講泰國藥用植物、菌類植物及海中生物單離

的天然物及其生物活性，接下來是壁報論文A組編號單數者發表論文(60分鐘)，壁報論文本此共約127篇，分A組單號、A組雙號、B組單號及B組雙號四組在三天的會程中穿插發表。A單壁報論文發表後為二位邀請演講，第一位為日本東京工業大學 Ohmori教授演講天然物 cavicularin的全合成，第二位為武漢大學張旭穆教授的演講，內容為不對稱氮化反應。接下來為午餐，在午餐的同時，由西田教授主持Junior ACP獲獎學生的演講，今年Junior ACP由千葉大學主辦，為本活動的另一個特色。午餐後，接下來為三位邀請演講，分別由新加坡南洋理工大學Philip W. H. Chan演講金催化炔類化合物的環合反應、上海有機研究所劉元紅教授演講金離子催化炔與呋喃的環合加形成成茶衍生物、及中央研究院基因體中心洪上程教授，接下來為休息時間及壁報論文A組雙號的報告，最後為三位邀請演講，分別由北京大學賈彥興教授演講吲哚(indole)類天然物的合成、韓國延世大學張祐銅教授演講卟啉 (porphyrin)受體的研究，最後為日本名古屋大學忍久保洋教授演講雙蒽啉合成新的卟啉，探討作為新一代材料的基材的可能性。本次會議的演講內容相當多元化，上台演講者多非常年輕，尤其是中國大陸代表團，這是台灣年輕學者未來應該努力的方向。學術活動至下午六點結束，隨後前往會議室進行Asian Core Program 的年度檢討會議，由於本次ACP計畫(Phase II)將於2015年三月結束，會中討論本活動在未來延續性的可能，以及如何提攜下一代的研究水準及學術交流，並決議對於本次會議未盡事項將留待103年4月，由台灣清華大學籌辦會議續談。

11月27日的會程有六位邀請演講，邀請演講中間穿插B組單號的壁報論文發表，邀請演講者分別為南京大學張艷演講寡肽作

為探針的化學生物研究、日本東北大學上田實演講具生物活性天然物的糖基化、韓國高麗大學Jong Seung Kim演講新型化學螢光感應器探討器官及癌細胞的作用、四川大學劉波演講天然物bolivianine的仿生合成、韓國首爾大學Sanghee Kim演講已熟知的有機化學反應作為天然物全合成的策略、最後為北京大學深圳分校黃湧演講銻金屬催化炔類化合物與芳香疊氮化合物形成吡啶天然物的合成研究。

11月28日的會程安排十三位演講，上午10:30至11:30為B組雙號的壁報論文發表，中午有Coordinator會議，會中討論各國邀請其他國家學者Lectureship Award受獎者訪問的名單。晚上的重頭戲為Lectureship Award的頒獎典禮，本次Lectureship Award頒發給86人次，各國獲獎情形為中國22人次、香港4人次、日本24人次、韓國8人次、馬來西亞2人次、新加坡12人次、泰國4人次，台灣代表團獲獎的有10人次，為楊吉水教授(2014將訪問中國及新加坡)、吳學亮教授(訪問韓國及新加坡)、陳建添教授(訪問日本)、洪上程教授(訪問馬來西亞)、李進發教授(訪問新加坡)、林文偉教授(訪問泰國)、磯部稔教授(訪問中國)及蒙國光教授(訪問中國)。

參、心得

此次會議可以瞭解亞洲各國化學界研究人員所進行的研究，並提供我國學者思考在研究上各國的差異和最新的研究趨勢和自覺，以加強補足。在會議過程也觀察到亞洲各國在有機化學領域的發展實力，台灣在此領域的年青化學家雖也表現不俗，但仍需多在國際會議歷練，才能保有前輩們所具有的競爭實力。本次會議，感受到中國、日本、新加坡年輕一代充滿活力，中國政府對科學研究也大力支持，研究經費充裕，台灣若不加油，幾年後恐怕會落後很多，本次出席會議收穫極豐富。

Asian Core Program為日本JSPS所創辦，在本次會議中亦得知本項計畫將在2015年執行到期後完成階段性任務退場，並改以其他方式呈現。在過去8年的補助執行經驗，此一計畫是支持我國特定學術社群參與投入國際區域科研學術計畫，並能以資深學者帶領培植年青學人持續不輟耕耘並結聚合作，對於展現我國科研能量參與國際活動已發揮顯著成效。

肆、建議事項

應多提供鼓勵資深學者帶領年青學人參與國際合作活動的機制，對於增進國際區域合作的傳承和能量應有助益。

附件:會議議程

The 8th International Conference on Cutting-Edge Organic Chemistry in Asia
The 4th New Phase International Conference on Cutting-Edge Organic Chemistry in Asia

Conference Program

I Scientific Program

	Nov. 25 (Mon)	Nov. 26 (Tue)	Nov. 27 (Wed)	Nov. 28 (Thu)
8:30-9:00			Poster Mounting PB	
9:00-9:15			OP 9 Y. Zhang	OP 15 Y. Zhao
9:15-9:30		Opening Remarks		
9:30-10:00		Keynote Lecture Her Royal Highness Princess Chulabhorn Mahidol	OP 10 M. Ueda	OP 16 H. Kim
10:00-10:30			OP 11 J.S. Kim	OP 17 J.-S. Yang
10:30-10:45		Group Photo		
10:45-11:00		Coffee and Poster Presentation 1 PA(odd number)	Coffee and Poster Presentation 3 PB(odd number)	Coffee and Poster Presentation 4 PB(even number)
11:00-11:30			OP 12 B. Liu	OP 18 Y.M.A. Yamada
11:30-11:45		OP 1 K. Ohmori		
11:45-12:00			OP 13 S. Kim	OP 19 H.-F. Chow
12:00-12:15		OP 2 X. Zhang		
12:15-12:30			OP 14 Y. Huang	
12:30-12:45				Lunch/ Business Meeting 2
12:45-13:00				
13:00-13:30		Lunch/ Short Presentations(SP1-5)	Lunch	
13:30-14:00				OP 20 X. Jiang
14:00-14:30		OP 3 P.W.H. Chan		OP 21 W.-Y. Yu
14:30-15:00		OP 4 Y. Liu		OP 22 J. Wang
15:00-15:30		OP 5 S.-C. Hung		OP 23 C.W. Ong
15:30-16:00		Coffee and Poster Presentation 2 PA(even number)		Coffee
16:00-16:30			Excursion	OP 24 M. Sukwattanasinit
16:30-17:00		OP 6 Y. Jia		OP 25 C.-T. Chen
17:00-17:30		OP 7 W.-D. Jang		OP 26 H.A. Tajuddin
17:30-18:00	Arrival and Registration / Poster Mounting PA (Grand Cube 12F)	OP 8 H. Shinokubo		OP 27 M.S. Wong
18:00-18:30				
18:30-20:30	Welcome Reception (Grand Cube 12F)	Friendship Dinner 1 / Business Meeting 1	Friendship Dinner 2	Banquet (Rihga Royal Hotel 2F)

I Social Program

Welcome Reception (Restaurant Grand Toque, Grand Cube Osaka 12F)	Nov.25th (day 1)	18:30
Conference Banquet (Rihga Royal Hotel Osaka, WESTWING 2F)	Nov.28th (day 4)	18:30

Program

|| November 25, 2013 (Monday)

17:00 - 18:30	Arrival and Registration Poster Mounting PA (Grand Cube Osaka 12F)
18:30 - 20:30	Welcome Reception

|| November 26, 2013 (Tuesday)

9:15-9:30	Opening Remarks
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Keynote Lecture Chair; Minoru Isobe (National Tsing Hua University)

9:30 - 10:30	Diverse Natural Products from Thai Medicinal Plants, Fungi and Marine Organisms 1 <u>Her Royal Highness Princess Chulabhorn Mahidol</u> (Chulabhorn Research Institute and Chulabhorn Graduate Institute)
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10:30 - 10:45	Group Photo
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10:45 - 11:45	Coffee and Poster Presentation 1 PA (odd number)
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Session 1 Chair; Henry N.C. Wong (Chinese Academy of Science)

11:45 - 12:15	OP-1 Taking the Strain: Asymmetric Total Synthesis of (-)-Cavicularin 2 <u>Ken Ohmori</u> (Department of Chemistry, Tokyo Institute of Technology)
12:15 - 12:45	OP-2 Recent Advances in Asymmetric Catalytic Hydrogenation 3 <u>Xunxi Zhang</u> (College of Chemistry and Molecular Sciences, Wuhan University)
12:45 - 14:00	Lunch / Student short oral presentation (SP) Chair; Atsushi Nishida (Chiba University)

Session 2 Chair; Teck-Peng Loh (Nanyang Technological University)

14:00 - 14:30	OP-3 Gold-Catalyzed Alkyne Cycloisomerization-Based Strategies for the Synthesis of Complex Molecules 4 <u>Philip Wai Hong Chan</u> (Division of Chemistry and Biological Chemistry, Nanyang Technological University)
14:30 - 15:00	OP-4 Gold-Catalyzed Novel Cascade Reactions 5 <u>Yuanhong Liu</u> (State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry)
15:00 - 15:30	OP-5 Chemoglycomics Approach for Probing Infectious Diseases 6 <u>Shang-Cheng Hung</u> (Genomics Research Center, Academia Sinica)

The 8th International Conference on Cutting-Edge Organic Chemistry in Asia
The 4th New Phase International Conference on Cutting-Edge Organic Chemistry in Asia

November 26, 2013 (Tuesday)

15:30-16:30 Coffee and Poster Presentation 2 PA (even number)

Session 3

Chair; Sung Ho Kang (KAIST)

16:30-17:00	OP-6	Natural Products as a Driving Force for Discovery in Organic Chemistry 7
		<u>Yanxing Jia</u> (School of Pharmaceutical Sciences, Peking University)
17:00-17:30	OP-7	Porphyrin-based Functional Biomimetic Materials 8
		<u>Woo-Dong Jang</u> (Department of Chemistry, Yonsei University)
17:30-18:00	OP-8	From Dipyrins to New Porphyrinoids 9
		<u>Hiroshi Shinokubo</u> (Department of Applied Chemistry, Graduate School of Engineering, Nagoya University)
18:30-20:30		Friendship Dinner 1 Business Meeting 1 (Rihga Royal Hotel Osaka 2F)

November 27, 2013 (Wednesday)

8:30-9:00 Poster Mounting PB (Grand Cube Osaka 12F)

Session 4 **Chair; Noorsaadah Binti Abd. Rahman (University of Malaya)**

9:00-9:30 OP-9 Chemical Biological Applications of Photo-active Molecules 10
Yan Zhang
 (School of Chemistry and Chemical Engineering, Nanjing University)

9:30-10:00 OP-10 '*Glycosylation Switching*': *In vivo* Glycosylation of Bioactive Natural Products
 Regulates Their Mode-of-action 11
Minoru Ueda
 (Department of Chemistry, Tohoku University)

10:00-10:30 OP-11 New Drug Delivery System: Organ and Cancer Specific Targeting Fluorescent Probe . . . 12
Jong Seung Kim
 (Department of Chemistry, Korea University)

10:30-11:30 Coffee and Poster Presentation 3 PB (odd number)

Session 5 **Chair; Somsak Ruchirawat (Chulabhorn Research Institute)**

11:30-12:00 OP-12 Biomimetic Total Synthesis of Bolivianine 13
Bo Liu
 (College of Chemistry, Sichuan University)

12:00-12:30 OP-13 Mining and Polishing of the Old Treasure Reactions for the Total Synthesis of Natural
 Products 14
Sanghee Kim
 (College of Pharmacy, Seoul National University)

12:30-13:00 OP-14 Design of Novel C-H Directing Groups for the Synthesis of Indole Analogues . . . 15
Yong Huang
 (Shenzhen Graduate School, Peking University)

13:00-14:00 Lunch

14:00-20:30 Excursion or Free Time

18:30-20:30 Friendship Dinner 2

I November 28, 2013 (Thursday)

Session 6		Chair; Aug Li (Shanghai Institute of Organic Chemistry)
9:00-9:30	OP-15	Photo-Switching on Nanoparticles 16 <u>Yanli Zhao</u> (Division of Chemistry and Biological Chemistry, Nanyang Technological University)
9:30-10:00	OP-16	Controlling Helical Chirality for Chirality Sensing and Asymmetric Coordination Chemistry 17 <u>Hyunwoo Kim</u> (Department of Chemistry, KAIST)
10:00-10:30	OP-17	Aggregation-Induced Emission of GFP-like Chromophores via Exclusion of Solvent-Solute Hydrogen Bonding 18 <u>Jye-Shane Yang</u> (Department of Chemistry, National Taiwan University)
10:30-11:30		Coffee and Poster Presentation 4 PB (even number)
Session 7		Chair; Byeong Moon Kim (Seoul National University)
11:30-12:00	OP-18	Convolutd Polymeric Cu Catalysts for Batch & Microflow Huisgen Cyclization . . . 19 <u>Yoichi M. A. Yamada</u> (Center for Sustainable Resource Science, Green Nanocatalysis Research Team, RIKEN)
12:00-12:30	OP-19	Click Oligomers and Polymers - Novel Motifs for Molecular Recognition and Self-Assembly 20 <u>Hak-Fun Chow</u> (Department of Chemistry, The Chinese University of Hong Kong)
12:30-13:30		Lunch Business Meeting 2 (Rihga Royal Hotel Osaka 2F)
Session 8		Chair; Bing-Jun Uang (National Tsing Hua University)
13:30-14:00	OP-20	Pd-Catalyzed Reactions from Unactivated Csp ³ -I Bond and the Applications in Total Synthesis of Natural Products 21 <u>Xuefeng Jiang</u> (Department of Chemistry, East China Normal University)
14:00-14:30	OP-21	Catalytic C-H Bond Cross Coupling Reactions for C-C and C-N Bond Formations . . . 22 <u>Wing-Yiu Yu</u> (State Key Laboratory of Chirosciences and Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University)
14:30-15:00	OP-22	Efficient Assembly of Biologically Active Small Molecules 23 <u>Jian Wang</u> (Department of Chemistry, National University of Singapore)

November 28, 2013 (Thursday)

15:00-15:30 OP-23 Hypervalent Iodine (III) Chemistry- Some New Aspect in C-H Activation for Coupling and Oxidation Reactions 24
Chi Wi Ong
(Department of Chemistry, National Sun Yat Sen University)

15:30-16:00 Coffee

Session 9

Chair; Seijiro Matsubara (Kyoto University)

16:00-16:30 OP-24 Optical Sensing Materials from Acetylenic Building Blocks 25
Mongkol Sukwattanasinuil
(Department of Chemistry, Faculty of Science, Chulalongkorn University)

16:30-17:00 OP-25 Complementary Helicity Interchange of Optically Switchable Supramolecular-Enantiomeric Helicenes with (-)-Gel-Sol-(+)-Gel Ternary Logic 26
Chien-Tien Chen
(Department of Chemistry, National Tsing Hua University)

17:00-17:30 OP-26 Synthesis and Critical Micellar Concentration of Sugar-based Surfactants 27
Haini Anuar Tajuddin
(Department of Chemistry, University of Malaya)

17:30-18:00 OP-27 Multifunctional Cyanines for Bio-sensing, Bio-imaging and β -Amyloid Peptide Aggregation Inhibition 28
Man Shing Wong
(Department of Chemistry, Hong Kong Baptist University)

18:30-21:00 Banquet

Poster Presentation

1 November 26, 2013 (Tuesday)

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