

# Kuo-Wei Huang

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## EDUCATION:

2000-2004 Ph.D. Stanford University  
1993-1997 B.S. National Taiwan University

## WORK EXPERIENCE:

07.2018-present Professor of Chemical Science, KAUST  
07.2014-06.2018 Associate Professor of Chemical Science, KAUST  
10.2009-06.2014 Assistant Professor of Chemical Science, KAUST  
10.2007-09.2009 Assistant Professor, Department of Chemistry, National University of Singapore  
10.2004-09.2007 Goldhaber Distinguished Fellow, Brookhaven National Laboratory  
09.1999-07.2000 Full Time Teaching Assistant, Department of Chemistry, National Taiwan University  
01.1998-08.1999 Second Lieutenant, Taiwan Military Police Command

## HONORS, AWARDS, & RECOGNITIONS:

2017 Appreciation of distinguished teaching contribution, Ministry of Education, KSA  
2016 Rising Star, International Symposium for Young Chinese Chemists 2016  
2015 New Talents: Asia-Pacific, *Dalton Transactions*  
2014 Rising Stars Lectureship, 41<sup>st</sup> International Conference on Coordination Chemistry  
2013-2016 SABIC Presidential Chair Professorship (KAUST)  
2013 Asian Rising Stars Lectureship, the 15<sup>th</sup> Asian Chemical Congress  
2012 Danish Chemical Society Lectureship (Denmark)  
2012 RIKEN Visiting Fellowship (RIKEN, Japan)  
2012 Asian Core Program Lectureship (Singapore)  
2011, 2014 Award of Appreciation from King Abdulaziz and his Companions Foundation for Giftedness and Creativity (MAWHIBA) and Ministry of Education, KSA  
2010 KAUST 1<sup>st</sup> and 2<sup>nd</sup> Seed Fund Program Awards (KAUST)  
2008 UK-Singapore Partners In Science Collaboration Development Award  
2004-2007 Gertrude and Maurice Goldhaber Distinguished Fellowship (BNL/DOE)  
2002-2004 Regina Casper Stanford Graduate Fellowship (Stanford University)  
1993-1997 Yuan T. Lee Fellowship in Chemistry (CTCI Foundation)  
1993-1997 Tuition Scholarship (Ministry of Education, Taiwan)

- 1995,1997            President's Awards (National Taiwan University)
- 07.1993             Silver Medal, 25th International Chemistry Olympiad (Perugia, Italy)

#### **RESEARCH INTERESTS:**

1. Computational modeling and kinetic studies on transition metal catalysis and organocatalysis.
2. Small molecules activation and functionalization.
3. Hydrogen production and storage (water splitting and formic acid dehydrogenation).

#### **ACADEMIC AND SCIENTIFIC SERVICES:**

Director, Chemical Sciences Program, KAUST (2018-present)

Associate Editor, *Journal of Saudi Chemical Society* (2018 Impact factor: 2.759).

Elected member, Academic Council, KAUST (2012-14)

Chair, Imaging and Characterization Core Lab User Committee, KAUST (2012-15)

Organizing Committee, the 15<sup>th</sup> Asian Chemical Congress (ACC-15), 2013

Organizing Committee, the 41<sup>st</sup> International Conference on Coordination Chemistry (ICCC-41), 2014

Organizing Committee, 3<sup>rd</sup> International Conference on Molecular & Functional Catalysis (ICMFC-3), 2017

Organizing Committee, the 18<sup>th</sup> Asian Chemical Congress (ACC-18), 2019

#### **PATENT AND APPLICATIONS:**

1. **US Patent** No. 8,598,351 (2013); Title: Phospho-Amino Pincer-Type Ligands and Catalytic Metal Complexes Thereof.
2. **US Patent** No. 8,692,000 (2014); Title: A Novel Phase Transfer Catalyst.
3. **US Patent** No. 9,963,411 (2018); Title: "Utilization and Recycling of Emitted Carbon Dioxide"
4. **US Patent** No. 10,300,469 (2019); Title: "Metal-Ligand Cooperative Catalysis through NH arm deprotection/pyridine dearomatization for efficient hydrogen generation from formic acid"
5. US Provisional Patent Application No. 62/599,960, Title: "Efficient CO<sub>2</sub> Hydrogenation to Straight Chain Olefins Over Simple And Robust Alkali Promoted Fe Catalysts"
6. US Provisional Patent Application No. 62/356,144, Title: "Hydrogen generation from Formic Acid Catalyzed by a metal complex under Amine-free and aqueous conditions"
7. International Patent Application No. WO 2017/103820, Title: "Electricity Generation Devices Using Formic Acid"
8. International Patent Application No. PCT/IB2017/052742, Title: "Small Molecule N-(Alpha-Peroxy) Indole Compounds and Methods of Uses"
9. International Patent Application No. PCT/IB2017/0527466, Title: "Small Molecule N-(Alpha-Peroxy) Carbazole Compounds and Methods of Uses"
10. International Patent Application No. PCT/IB2015/056894, Title: "Novel Imines With Tunable Nucleophilicity and Steric Properties Through Metal Coordination: Applications as Ligands and Metalloorganocatalysts"
11. US Provisional Patent Application No. 61/910,516, Title: "Multi-metallic nanomaterials from Ni, Ag, Pd with Pt's catalytic activity"
12. International Patent Application No. PCT/IB2014/000597 (2013), Title: Membranes Including Nanotubes, Methods Of Making Membranes And Methods Of Desalination And Separation.
13. US Patent Application No. 13/886,464, Title: "System and Method For Dehydrogenative Coupling"
14. US Provisional Patent Application No. 62/727,664, Title: "Reusable catalysts for non-oxidative dehydrogenation of methanol to methyl formate at high formation rates"
15. US Provisional Patent Application No. 62/711,854, Title: "Catalysts That Include Iron, Cobalt, and Copper, and Methods for Making the Same"
16. US Provisional Patent Application No. 62/711,861, Title: "Methods for Forming Ethylbenzene from

Polystyrene”

17. US Provisional Patent Application No. 62/711,863, Title: “Methods for Catalytically Converting Petroleum Hydrocarbons”
18. US Provisional Patent Application No. 62/780,454, Title: “New Concept for the Generation of Heterogeneous Catalyst with Very High Activity in the Formic Acid Dehydrogenation”

#### **PUBLICATIONS:**

01. Huang, K.-W.; Waymouth, R. M. "Coordination Chemistry of Stable Radicals: Homolysis of a Titanium-Oxygen Bond." *J. Am. Chem. Soc.* **2002**, *124*, 8200-8201.
02. Mahanthappa, M. K.; Huang, K.-W.; Cole, A. P.; Waymouth, R. M. "Synthesis and molecular structure of titanium complexes containing a reduced TEMPO radical." *Chem. Commun.* **2002**, 502-503.
03. Huang, K.-W.; Waymouth, R. M. "Hydrolysis of CpTiCl<sub>2</sub>(TEMPO) and Its Application on One-pot Syntheses of CpTiCl(OR)<sub>2</sub> Complexes." *Dalton Trans.* **2004**, 354-356.
04. Huang, K.-W.; Han, J. H.; Cole, A. P.; Musgrave, C. B.; Waymouth, R. M. "Homolysis of Weak Ti-O Bonds: Experimental and Theoretical Studies of Titanium Oxygen Bonds Derived from Stable Nitroxyl Radicals" *J. Am. Chem. Soc.* **2005**, *127*, 3807-3816.
05. Zhang, J.; Grills, D. C.; Huang, K.-W.; Fujita, E.; Bullock, R. M. "Carbon-to-Metal Hydrogen Atom Transfer: Direct Observation Using Time-Resolved Infrared Spectroscopy" *J. Am. Chem. Soc.* **2005**, *127*, 15684-15685, Editors' Choice in *Science* **2005**, *310*, 748 (4th Nov 2005).
06. Zhang, J.; Huang, K.-W.; Szalda, D. J.; Bullock, R. M. "Efficient Synthesis of Os-Os Dimers: [Cp(CO)<sub>2</sub>Os]<sub>2</sub>, [Cp\*(CO)<sub>2</sub>Os]<sub>2</sub>, and [(Pr<sub>4</sub>C<sub>5</sub>H)(CO)<sub>2</sub>Os]<sub>2</sub>, and Computational Studies on the Relative Stabilities of Their Geometrical Isomers" *Organometallics* **2006**, *25*, 2209-2215.
07. DeBeer-George, S.; Huang, K.-W.; Waymouth, R. M.; Solomon, E. I. "Metal and Ligand K-edge XAS of Titanium-TEMPO Complexes: Determination of Oxidation States and Insights into Ti-O Bond Homolysis" *Inorg. Chem.* **2006**, *45*, 4468-4477.
08. Grills, D. C.; Huang, K.-W.; Muckerman, J. T.; Fujita, E. "Kinetic Studies of the Photoinduced Formation of Transition Metal-Dinitrogen Complexes Using Time-Resolved Infrared and UV-vis Spectroscopy" *Coord. Chem. Rev.* **2006**, *250*, 1681-1695.
09. Huang, K.-W.; Han, J. H.; Musgrave, C. B.; Waymouth, R. M. "Density Functional Calculations on Ti-TEMPO complexes 2: Influence of Ancillary Ligation on the Strength of the Ti-O bond" *Organometallics* **2006**, *25*, 3317-3323.
10. Kraft, B. M.; Huang, K.-W.; Cole, A. P.; Waymouth, R. M. "Synthesis, Structure, and Polymerization Activity of a Titanium Complex with a Chelating [(Hydroxy-κO)- amino-κN]phenolato(2-)-κO Ligand" *Helv. Chim. Acta* **2006**, *89*, 1589-1595.
11. Huang, K.-W.; Han, J. H.; Musgrave, C. B.; Fujita, E. "Carbon Dioxide Reduction by Pincer Rhodium η<sup>2</sup>-Dihydrogen Complexes: Hydrogen Binding Modes and Mechanistic Studies by Density Functional Theory Calculations" *Organometallics* **2007**, *26*, 508-513.
12. Huang, K.-W.; Grills, D. C.; Han, J. H.; Szalda, D. J.; Fujita, E. "Selective Decarbonylation of Formyl Compounds by a Pincer Rh(I) Complex" *Inorg. Chim. Acta* **2008**, *361*, 3327-3331.
13. Lee, R.; Lim, X.; Chen, T.; Tan, G. K.; Tan, C.-H.; Huang, K.-W. "Crystal Structures of Bicyclic Guanidinium Chloride: Implication of the Bifunctionality of Guanidines" *Tet. Lett.* **2009**, *50*, 1560-1562.
14. Jiang, Z.; Pan, Y.; Zhao, Y.; Ma, T.; Lee, R.; Yang, Y.; Huang, K.-W.; Wong, M. W.; Tan, C.-H. "Enantioselective and Diastereoselective Guanidine-Catalyzed Addition of Fluorocarbon Nucleophiles" *Angew. Chem. Int. Ed.* **2009**, *48*, 3627-3631.
15. Zhang, J.; Krause, J. A.; Huang, K.-W.; Guan, H. "Ancillary Ligand and Ketone Substituent Effects on the Rate of Ketone Insertion into Zr-C Bonds of Zirconocene-1-aza-1,3-diene Complexes" *Organometallics* **2009**, *28*, 2938-2946.
16. Liu, H.; Leow, D.; Huang, K.-W.; Tan, C.-H. "Enantioselective Synthesis of Chiral Allenoate by Guanidine-Catalyzed Isomerization of 3-Alkynoates" *J. Am. Chem. Soc.* **2009**, *131*, 7212-7213.
17. Lin, S.; Leow, J.; Huang, K.-W.; Tan, C.-H. "Enantioselective Protonation of Itaconimides with Thiols and the Rotational Kinetics of the Axially Chiral C-N Bond" *Chem. Asian J.* **2009**, *4*, 1741-1744.
18. Han, X.; Kwiatkowski, J.; Xue, F.; Huang, K.-W.; Lu, Y. "Asymmetric Mannich Reaction of Fluorinated Ketoesters Mediated by a Tryptophan-Derived Bifunctional Thiourea Catalyst: Creation of Chiral Fluorine-Containing Quaternary Centers" *Angew. Chem. Int. Ed.* **2009**, *48*, 7604-7607.

19. Jang, C.; Zhang, K.; Chi, C.; Huang, K.-W.; Wu, J. "Bis-N-annulated Quaterylenebis(dicarboximide)s As A New Soluble And Stable NIR Dye" *Org. Lett.* **2009**, *11*, 4508-4511.
20. Luo, J.; Qu, H.; Yin, J.; Zhang, X.; Huang, K.-W.; Chi, C. " $\pi$ -Conjugated Oligothiophene-anthracene Cooligomers: Synthesis, Physical Properties, and Self-assembly" *J. Mater. Chem.* **2009**, *19*, 8201-8211.
21. Zhang, K.; Huang, K.-W.; Li, J.; Luo, J.; Chi, C.; Wu, J. "A Soluble and Stable Quinoidal Bisanthene With NIR Absorption And Amphoteric Redox Behavior" *Org. Lett.* **2009**, *11*, 4854-4857.
22. Lee, R.; Yang, Y.; Tan, C.-H.; Huang, K.-W. "A Novel Heteroleptic Paddlewheel Diruthenium Bicyclic Guanidinate Complex: Synthesis, Structure, and Scope" *Dalton Trans.* **2010**, *39*, 723-725.
23. Li, J.; Zhang, K.; Zhang, X.; Huang, K.-W.; Chi, C.; Wu, J. "Meso-substituted Bisanthenes as New Soluble and Stable Near-infrared Dyes" *J. Org. Chem.* **2010**, *75*, 856-863.
24. Li, S.; Kee, C. W.; Huang, K.-W.; Hor, A. T. S.; Zhao, J. "Cyclopentadienyl Molybdenum(II/VI) N-Heterocyclic Carbene Complexes: Synthesis, Structure, and Reactivity under Oxidative Conditions" *Organometallics* **2010**, *29*, 1924-1933.
25. Jothibasu, R.; Huang, K.-W.; Huynh, H. V. "Synthesis of cis- and trans-Diisothiocyanato-Bis(NHC) Complexes of Ni(II) and Applications in the Kumada-Corriu Reaction" *Organometallics* **2010**, *29*, 3746-3752.
26. Jiao, C.; Huang, K.-W.; Guan, Z.; Xu, Q.-H.; Wu, J. "N-Annulated Perylene Fused Porphyrins with Enhanced Near-IR Absorption and Emission" *Org. Lett.* **2010**, *12*, 4046-4049.
27. Sun, Z.; Huang, K.-W.; Wu, J. "Soluble and Stable Zethrenebis(dicarboximide) and Its Quinone" *Org. Lett.* **2010**, *12*, 4690-4693.
28. Hou, D.-R.; Kuan, T.-C.; Li, Y.-K.; Lee, R.; Huang, K.-W. "A Mechanistic Study of the Ruthenium-Catalyzed [3+2]-Cycloaddition" *Tetrahedron* **2010**, *66*, 9415-9420.
29. Luo, J.; Huang, K.-W.; Qu, H.; Zhang, X.; Zhu, L.; Chan, H. S. O.; Chi, C. "H-shaped oligothiophenes with low band gaps and amphoteric redox properties" *Org. Lett.* **2010**, *12*, 5660-5663.
30. Wang, F.; Zhang, W.; Zhu, J.; Li, H.; Huang, K.-W.; Hu, J. "Chloride Ion-Catalyzed Generation of Difluorocarbene for efficient preparation of gem-difluorinated cyclopropenes and cyclopropanes" *Chem. Commun.* **2011**, *47*, 2411-2413.
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32. Luo, L.; Wang, H.; Han, X.; Xu, L.-W.; Kwiatkowski, J.; Huang, K.-W.; Lu, Y. "The Direct Asymmetric Vinylogous Aldol Reaction of Furanones with  $\alpha$ -Ketoesters: Access to Chiral  $\gamma$ -Butenolides and Glycerol Derivatives" *Angew. Chem. Int. Ed.* **2011**, *50*, 1861-1864.
33. Jiao, C.; Huang, K.-W.; Wu, J. "Perylene-Fused BODIPY Dye with Near-IR Absorption/Emission and High Photostability" *Org. Lett.* **2011**, *13*, 632-635.
34. Zhong, F.; Wang, Y.; Han, X.; Huang, K.-W.; Lu, Y. "L-Threonine-Derived Novel Bifunctional Phosphine-Sulfonamide Catalyst-Promoted Enantioselective Aza-Morita-Baylis-Hillman Reaction" *Org. Lett.* **2011**, *13*, 1310-1313.
35. Ma, T.; Fu, X.; Kee, C. W.; Zong, L.; Pan, Y.; Huang, K.-W.; Tan, C.-H. "Pentanidium Catalyzed Enantioselective Phase Transfer Conjugate Addition Reactions" *J. Am. Chem. Soc.* **2011**, *133*, 2828-2831.
36. Zhang, Y.; Kee, C. W.; Lee, R.; Fu, X.; Soh, J. Y.-T.; Loh, E. M. F.; Huang, K.-W.; Tan, C.-H. "Guanidine-catalyzed enantioselective desymmetrization of meso-aziridines" *Chem. Commun.* **2011**, *47*, 2897-3899.
37. Liu, C.; Zhu, Q.; Huang, K.-W.; Lu, Y. "Primary Amine/CSA Ion Pair: A Powerful Catalytic System for the Asymmetric Enamine Catalysis" *Org. Lett.* **2011**, *13*, 2638-2641.
38. Weng, Z.; Lee, R.; Jia, W.; Yuan, Y.; Wang, W. Xue, F.; Huang, K.-W. "Cooperative Effect of Silver in Copper-Catalyzed Trifluoromethylation of Aryl Iodides Using  $\text{Me}_3\text{SiCF}_3$ " *Organometallics* **2011**, *30*, 3229-3232.
39. Yang, Y.; Wei, X.; Pan, Y.; Lee, R.; Zhu, B.; Liu, H.; Yan, L.; Huang, K.-W.; Jiang, Z.; Tan, C.-H. "Highly Enantio- and Diastereoselective Synthesis of  $\beta$ -Methyl- $\gamma$ -Monofluoromethyl Substituted Alcohols" *Chem. Eur. J.* **2011**, *4*, 8066-8070.
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- Base-Catalyzed Highly Enantioselective Allylic Hydroxylation of Morita-Baylis-Hillman Carbonates with Water" *J. Org. Chem.* **2011**, *76*, 6894-6900.
42. Sun, Z.; Huang, K.-W.; Wu, J. "Soluble and Stable Heptazethrenebis(dicarboximide) with a Singlet Open-Shell Ground State" *J. Am. Chem. Soc.* **2011**, *133*, 11896-11899.
  43. Ranjit, S.; Lee, R.; Heryadi, D.; Shen, C.; Zhang, P.; Huang, K.-W.; Liu, X. "Copper-Mediated C-H Activation/C-S Cross-Coupling of Heterocycles with Thiols" *J. Org. Chem.* **2011**, *76*, 8999-9007.
  44. Ye, Q.; Chang, J.; Huang, K.-W.; Chi, C. "Thiophene-Fused Tetracene Diimide with Low Band Gap and Ambipolar Behavior" *Org. Lett.* **2011**, *13*, 5960-5963.
  45. Zeng, L.; Jiao, C.; Huang, X.; Huang, K.-W.; Chin, W.-S.; Wu, J. "Anthracene-fused BODIPYs as Near Infrared Dyes with High Photostability" *Org. Lett.* **2011**, *13*, 6026-6029.
  46. Li, J.; Jiao, C.; Huang, K.-W.; Wu, J. "Lateral extension of  $\pi$ -conjugation along the bay regions of bisanthene via Diels-Alder cycloaddition reaction" *Chem. Eur. J.* **2011**, *17*, 14672-14680.
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  48. Weng, Z.; Li, H.; He, W.; Yao, L.-F.; Tan, J.; Yuan, Y.; Huang, K.-W. "Mild Copper-Catalyzed Trifluoromethylation of Terminal Alkynes Using an Electrophilic Trifluoromethylating Reagent" *Tetrahedron* **2012**, *68*, 2527-2531.
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  58. Yao, L.-F.; Tan, D.; Mao, X.; Huang, K.-W. "A Route to Hydroxyfluorenes: TsOH-Mediated Condensation Reactions of 1,3-diketones with Propargylic Alcohols" *RSC Adv.* **2012**, *2*, 7594-7598.
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  62. Li, Y.; Heng, W.-K.; Lee, B. S.; Aratani, .; Zafra, J.; Bao, N.; Lee, R.; Sung, Y. M.; Sun, Z.; Huang, K.-W.; Webster, R.; Navarrete, J. T.; Kim, D.; Osuka, A.; Cordon, .; Ding, J.; Wu, J. "Kinetically Blocked Stable Heptazethrene and Octazethrene: Closed-Shell or Open-Shell in the Ground State?"

- J. Am. Chem. Soc.* **2012**, *134*, 14913-14922.
63. Zhang, W.; Tan, D.; Lee, R.; Tong, G.; Chen, W.; Qi, B.; Huang, K.-W.; Tan, C.-H.; Jiang, Z. "Highly Enantio- and Diastereoselective Reactions of  $\gamma$ -Substituted Butenolides Through Direct Vinylogous Conjugate Additions" *Angew. Chem. Int. Ed.* **2012**, *51*, 10069-10073.
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  67. Ni, Y.; Zeng, W.; Huang, K.-W.; Wu, J. "Benzene-fused BODIPYs: synthesis and the impact of fusion mode" *Chem. Commun.* **2013**, *49*, 1211-1219.
  68. Weng, Z.; He, W.; Chen, C.; Lee, R.; Tan, D.; Lai, Z.P.; Kong, D.; Yuan, Y.; Huang, K.-W. "An Air-Stable Copper Reagent for Nucleophilic Trifluoromethylthiolation of Aryl Halides" *Angew. Chem. Int. Ed.* **2013**, *52*, 1548-1552.
  69. Ye, Q.; Chang, J.; Huang, K.-W.; Shi, X.; Wu, J.; Chi, C. "Cyanated Diazatetracene Diimides with Ultrahigh Electron Affinity for n-Channel Field Effect Transistors" *Org. Lett.* **2013**, *15*, 1194-1197.
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230. Yuan, D.-J.; Yang, J.; Hengne, A. M.; Lin, T.-Z.; Mou, C.-Y.; Huang, K.-W. "Mesoporous silica-supported V-substituted heteropoly acid for efficient selective conversion of glycerol to formic acid" submitted.
231. Aljabri, N.; Lai, Z.; Huang, K.-W. "Selective Ethylbenzene Formation from Polystyrene over FeCuCo/Alumina under Mild Conditions" submitted.
232. Hengne, A. M.; Yuan, D.-J.; Date, N.; Kamble, S.; Rode,; Huang, K.-W. "Preparation and activity of copper-gallia nanocomposite catalysts for carbon dioxide hydrogenation to methanol" submitted.

**INVITED LECTURES\* AND SEMINARS:**

01. 06.2019 School of Chemistry & Chemical Engineering, Shanghai Jiao Tong University, China
02. 06.2019 Department of Chemistry, Fudan University, China
03. 06.2019 Shanghai Institute of Organic Chemistry, China
04. 05.2019 Department of Chemistry, University of Houston, USA
05. 05.2019 College of Science, National Taiwan Normal University, Taiwan
06. 05.2019 Department of Chemistry, Southern University of Science and Technology, China
07. 03.2019 Vidyasirimedhi Institute of Science and Technology, Thailand
08. 03.2019 Division of Chemistry and Biological Chemistry, NTU, Singapore
09. 01.2019 Department of Chemistry, National University of Singapore, Singapore
10. 12.2018\* 10<sup>th</sup> Singapore International Chemistry Conference (SICC10), Singapore
11. 12.2018\* GCC Pavilion Events, UN Climate Change Conference-COP24, Katowice, Poland
12. 11.2018 College of Environmental & Resource Sciences, Zhejiang University, China
13. 11.2018\* 18<sup>th</sup> Tateshina Conference on Organic Chemistry, Japan
14. 11.2018 Advanced Science Institute, RIKEN, Wako-shi, Japan
15. 10.2018 Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan
16. 10.2018 Department of Chemistry, National Chung Hsing University, Taichung, Taiwan
17. 10.2018 Department of Chemistry, University of Pennsylvania, USA
18. 08.2018 Dept. of Medicinal and Applied Chemistry, Kaohsiung Medical Univ., Taiwan
19. 08.2018\* The 43<sup>rd</sup> International Conference on Coordination Chemistry, Sendai, Japan
20. 07.2018 Chemicals R&D Division, Research and Development Centre, Saudi Aramco
21. 05.2018 Center of Basic Molecular Science, Tsinghua University, Beijing, China
22. 05.2018 Shanghai Institute of Organic Chemistry, Shanghai, China
23. 05.2018 Department of Chemistry, Peking University, Beijing, China
24. 04.2018 Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan
25. 01.2018\* KAUST Research Conference: New Challenges in Heterogeneous Catalysis, KAUST
26. 01.2018 Department of Chemistry, Boston College, USA
27. 01.2018 Department of Chemistry, University of Pennsylvania, USA
28. 01.2018 School of Pharmacy, University of Wisconsin–Madison, USA
29. 12.2017\* 10<sup>th</sup> National Conference on Organic Chemistry, Shenzhen, China
30. 12.2017\* S.-T. Yau Science Forum, Tsinghua University, Beijing, China
31. 11.2017 National Institute of Advanced Industrial Science and Technology, Miyagi, Japan
32. 11.2017 Department of Chemistry, Tohoku University, Miyagi, Japan

33. 10.2017 EPFL-KAUST Symposium, LPI-ISIC, EPFL, Switzerland
34. 10.2017 LSCI-ISIC, École Polytechnique Fédérale de Lausanne, Switzerland
35. 10.2017\* 12<sup>th</sup> National Conference on Physical Organic Chemistry, Wuhan, China
36. 05.2017 Department of Chemistry, National Taiwan University, Taipei, Taiwan
37. 05.2017 Institute of Chemistry, Academia Sinica, Taipei, Taiwan
38. 05.2017 Lanzhou Institute of Chemical Physics in Suzhou, Suzhou, China
39. 03.2017 Department of Chemistry, The Chinese University of Hong Kong, Hong Kong
40. 03.2017 Department of Chemistry, The University of Hong Kong, Hong Kong
41. 02.2017\* 3<sup>rd</sup> International Conference on Molecular and Functional Catalysis (ICMFC-3)
42. 01.2017\* 2017 International Workshop for collaboration in Hydrogen Energy
43. 12.2016\* The 10<sup>th</sup> World Bioenergy Symposium (WBS 2016), Dongguan, China
44. 12.2016\* The 14<sup>th</sup> International Symposium for Chinese Organic Chemists, Singapore
45. 12.2016 School of Chemistry, South China University of Technology, Guangzhou, China
46. 11.2016\* International Symposium in Catalysis and Fine Chemicals 2016, Taipei, Taiwan
47. 11.2016\* 6<sup>th</sup> International Kyoto Symposium on Organic Nanostructures, Kyoto, Japan
48. 10.2016\* 3<sup>rd</sup> Innovation for Cool Earth Forum (ICEF2016), Tokyo, Japan
49. 08.2016\* 2<sup>nd</sup> International conference on Advances in Functional Materials, Jeju Island, Korea
50. 07.2016\* 20<sup>th</sup> International Symposium on Homogeneous Catalysis (ISHCXX), Kyoto, Japan
51. 05.2016\* International Symposium for Young Chinese Chemists 2016, Shanghai, China
52. 04.2016\* KAUST-NTU-AS Workshop for Enhancing Collaborations on Research and Education in Chemical and Materials Sciences and Engineering, KAUST, Saudi Arabia
53. 03.2016 Department of Chemistry and Biochemistry, University of Notre Dame, USA
54. 03.2016 Department of Chemistry, Ohio State University, Columbus, Ohio, USA
55. 02.2016\* KAUST Research Conferences: Artificial Photosynthesis
56. 01.2016 KAUST Winter Enrichment Program 2016
57. 12.2015 College of Chemistry, Chemical Engineering and Material Science, Soochow University, Suzhou, China
58. 12.2015 Department of Chemistry, Fudan University, Shanghai, China
59. 12.2015 College of Chemistry and Molecular Engineering, Peking University, Beijing, China
60. 12.2015 John van Geuns Lecture, Van't Hoff Institute for Molecular Sciences, University of Amsterdam, The Netherlands
61. 11.2015 Department of Chemistry, Trinity University, San Antonio, Texas, USA
62. 11.2015\* 5<sup>th</sup> International Kyoto Symposium on Organic Nanostructures, Kyoto, Japan



63. 10.2015 National Chemical Laboratory, Pune, India
64. 10.2015 Department of Chemistry, Indian Institute of Technology Bombay, Mumbai, India
65. 08.2015\* Golden Jubilee Chemistry Conference, Singapore
66. 06.2015 Institute of Chemistry, Academia Sinica, Taipei, Taiwan
67. 06.2015 Department of Chemistry, National Sun Yat Sen University, Kaohsiung, Taiwan
68. 06.2015 Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan
69. 05.2015 The Institute of Materials Research and Engineering, Singapore
70. 05.2015 SABIC Corporate Research and Innovation (CRI) Center at KAUST
71. 04.2015\* 4<sup>th</sup> Grubbs Symposium, Ningbo University, Ningbo, China
72. 02.2015\* KAUST Research Conferences: Catalytic Carbon and hydrogen Management
73. 12.2014\* 8<sup>th</sup> Singapore International Chemistry Conference, Singapore
74. 12.2014 Xiamen University, Xiamen, China
75. 11.2014\* 4<sup>th</sup> International Kyoto Symposium on Organic Nanostructures, Kyoto, Japan
76. 10.2014 The University of Texas at Austin, Austin, TX, USA
77. 10.2014\* The 2014 ECS and SMEQ Joint International Meeting, Cancun, Mexico
78. 07.2014 Nanyang Technological University, Singapore
79. 07.2014\* The 41<sup>st</sup> International Conference on Coordination Chemistry
80. 06.2014 College of Chemistry and Molecular Engineering, Peking University, Beijing, China
81. 06.2014 Department of Chemistry, National Taiwan University, Taipei, Taiwan
82. 04.2014\* 3<sup>rd</sup> Grubbs Symposium, Ningbo University, Ningbo, China
83. 04.2014 Shanghai Institute of Organic Chemistry, Shanghai, China
84. 03.2014 Department of Chemistry, Rice University, Houston, TX, USA
85. 03.2014 SABIC Technology Center, Sugar Land, TX, USA
86. 12.2013 National Center for Nanoscience and Technology, Beijing, China
87. 12.2013 College of Chemistry and Chemical Engineering, Shihezi University, China
88. 12.2013\* 2013 International Symposium on Catalysis and Fine Chemicals (C&FC2013)
89. 10.2013\* The Sixth Asia-Pacific Congress on Catalysis (APCAT-6)
90. 10.2013 Department of Chemistry, University of Houston, Houston, TX, USA
91. 09.2013 Institute of Coal Chemistry, CAS, Taiyuan, China
92. 09.2013 University of Chinese Academy of Science, Beijing, China
93. 08.2013\* 15<sup>th</sup> Asian Chemical Congress, Singapore
94. 07.2013 Department of Chemistry, University of Texas, San Antonio, Texas, USA
95. 05.2013 College of Chemistry, Huainan Normal University, Huainan, China

96. 05.2013 College of Materials Science, Anhui University of Science and Technology, China
97. 05.2013\* 2<sup>nd</sup> Grubbs Symposium, Ningbo University, Ningbo, China
98. 04.2013\* 3<sup>rd</sup> KICP Symposium: "Filling up the Innovation Pipeline through Academic R&D Collaborations", KAUST, Thuwal, Saudi Arabia
99. 03.2013 Department of Chemistry, National University of Singapore, Singapore
100. 11.2012\* 2<sup>nd</sup> International Kyoto Symposium on Organic Nanostructures, Kyoto, Japan
101. 11.2012\* 4<sup>th</sup> RSC Dalton Transactions International Symposium, Singapore
102. 10.2012 Department of Chemistry, Aarhus University, Aarhus, Denmark
103. 10.2012 Department of Chemistry, University of Copenhagen, Copenhagen, Denmark
104. 07.2012\* 2<sup>nd</sup> International Conference on Molecular & Functional Catalysis, Singapore
105. 07.2012 Department of Chemistry, Nagoya University, Nagoya, Japan
106. 07.2012 Advanced Science Institute, RIKEN, Wako-shi, Japan
107. 03.2012 College of Chemistry, Chemical Engineering and Material Science, Soochow University, Suzhou, China
108. 02.2012\* 5<sup>th</sup> International Catalysis mini-symposium, Wuhan, China
109. 01.2012 Institute of Chemistry, Academia Sinica, Taipei, Taiwan
110. 01.2012 Department of Chemistry, National Taiwan University, Taipei, Taiwan
111. 01.2012 Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan
112. 01.2012 Department of Chemistry, National Sun Yat Sen University, Kaohsiung, Taiwan
113. 01.2012 Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan
114. 01.2012 Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan
115. 01.2012 Department of Chemistry, National Chung Hsing University, Taichung, Taiwan
116. 11.2011\* 1<sup>st</sup> ICE/KCC Symposium on Catalysis, KAUST, Thuwal, Saudi Arabia
117. 11.2011\* International Conference on Green & Sustainable Chemistry 2011, Singapore
118. 11.2011\* 1<sup>st</sup> International Kyoto Symposium on Organic Nanostructures, Kyoto, Japan
119. 11.2011 Guangzhou Institute of Energy Conversion, Guangzhou, China
120. 11.2011 Sun Yat-Sen University, Guangzhou, China
121. 09.2011\* 14<sup>th</sup> Asian Chemical Congress, Bangkok, Thailand
122. 08.2011 Shanghai Institute of Organic Chemistry, Shanghai, China
123. 03.2011 Department of Chemistry, King Saud University, Riyadh, Saudi Arabia
124. 12.2010\* KCC Symposium on Catalysis, KAUST, Thuwal, Saudi Arabia
125. 11.2010\* KICP Seminar Series: Beyond Wind and Solar. The Future of Fossil & Renewable Power Generation in KSA: New Technologies, Deployment Models, Enabling Policies, KAUST, Thuwal, Saudi Arabia

126. 11.2010\* First International Collaborative and Cooperative Chemistry Symposium in Frontiers in Molecular Design & Synthesis, Singapore
127. 11.2010\* 5<sup>th</sup> Asian Symposium of Advanced Organic Synthesis, Kyoto University, Japan
128. 07.2010\* International Conference on Molecular & Functional Catalysis, Singapore
129. 09.2009 Department of Chemistry, National Taiwan University, Taipei, Taiwan
130. 09.2009 Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan
131. 09.2009 Department of Chemistry, National Central University, Chung-Li, Taiwan
132. 09.2009 Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan
133. 09.2009 Department of Chemistry, National Sun Yat Sen University, Kaohsiung, Taiwan
134. 07.2009 Department of Chemistry, Peking University, Beijing, China
135. 07.2009 School of Chemical Biology and Biotechnology, Peking University Shenzhen Graduate School, Shenzhen, China
136. 07.2009 Department of Chemistry, East China University of Science and Technology, China
137. 07.2009 Shanghai Institute of Organic Chemistry, Shanghai, China
138. 02.2009 Department of Chemistry, University of Hyderabad, Hyderabad, India
139. 02.2009 Department of Chemistry, Indian Institute of Technology at Bombay, Mumbai, India
140. 02.2009 Laboratoire de Chimie Organométallique de Surface, CPE-Lyon, France
141. 12.2008 Department of Chemistry, University of Queensland, Queensland, Australia
142. 11.2008 Department of Chemistry, Wuhan University, Wuhan, China
143. 11.2008\* 4<sup>th</sup> Asian Symposium of Advanced Organic Synthesis, Kyoto University, Japan
144. 11.2008 Mitsui Chemicals, Chiba, Japan
145. 10.2008 Singapore National Institute of Chemistry, Singapore
146. 09.2008 School of Chemistry, University of Nottingham, Nottingham, United Kingdom
147. 09.2008 Department of Chemistry, University of Warwick, Coventry, United Kingdom
148. 08.2008 Department of Chemistry, Tamkang University, Tamsui, Taiwan
149. 07.2008\* The 9<sup>th</sup> International Symposium for Chinese Organic Chemists (ISCOC), China
150. 11.2007\* 3<sup>rd</sup> Asian Symposium of Advanced Organic Synthesis, Kyoto University, Japan