Dennis Chung-Yang Huang

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Current Affiliation

Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University

Job title	Associate Professor (tenure-track)
Research area	synthetic organic chemistry, transition metal catalysis, photochemistry

EXPERIENCE

2020–2021	API Process R&D Chemist @ ScinoPharm Taiwan
2019–2020	Substitute Military Serviceman @ Aviation Police Bureau
2015–2018	Humboldt Postdoctoral Research Fellow @ Humboldt-Universität zu Berlin
	• Research Advisor: Prof. Stefan Hecht
2009	MIT-Japan MISTI Program Fellow @ The University of Tokyo
	• Research Advisor: Prof. Eiichi Nakamura & Prof. Koji Harano

EDUCATION

2010–2015	Ph.D., Chemistry @ Princeton University, USA
	• Thesis Advisor: Prof. Abigail Doyle
2006–2010	B.S., Chemistry @ Massachusetts Institute of Technology, USA
	• Thesis Advisor: Prof. Rick Danheiser
	• concentration courseworks on Japanese studies
2003–2006	High School @ Kaohsiung Municipal Kaohsiung Senior Hight School, Taiwan

AWARDS AND HONORS

Humboldt Postdoctoral Research Fellowship	2016–2018
Merck-Patchett Summer Fellowship	2014
Taiwan MOE Technologies Incubation Scholarship	2013–2015
Eli Lilly - Edward C. Taylor Fellowship	2013
Merck Index Award	2010
Phi Beta Kappa	2010
MIT-Japan MISTI Summer Research Fund	2009
CRC Freshman Chemistry Achievement Award	2007
Silver medal at 38th International Chemistry Olympiad (Gyeongsan, Korea)	2006
Silver medal at 37th International Chemistry Olympiad (Taipei, Taiwan)	2005

PUBLICATIONS

8. Process patent with ScinoPharm Taiwan, *application submitted*.

7. Jovaišaitė, J.; Budzák, S.; **Huang, C.-Y.**; Baronas, P.; Tulaitė, K.; Juršėnas, S.*; Jacquemin, D.*; Hecht, S.* "Mechanistic Insights into the Photoisomerization of *N, N'*-Disubstituted Indigos." *Manuscript submitted*.

6. **Huang, C.-Y.**; Bonasera, A.; Hristov, L.; Garmshausen, Y.; Schmidt, B. M.; Jacquemin, D.*; Hecht, S.* "*N,N'*-Disubstituted Indigos as Readily Available Red-Light Photoswitches with Tunable Thermal Half-Lives." *J. Am. Chem. Soc.*, **2017**, *139*, 15205–15211.

5. Woods, B. P.; Orlandi, M.; **Huang, C.-Y.**; Sigman, M. S.*; Doyle, A. G.* "Nickel-Catalyzed Enantioselective Reductive Cross-Coupling of Styrenyl Aziridines." *J. Am. Chem. Soc.*, **2017**, *139*, 5688–5691.

4. **Huang, C.-Y.**; Doyle, A. G.* "Electron-Deficient Olefin Ligands Enable Generation of Quaternary Carbons by Ni-Catalyzed Cross-Coupling." *J. Am. Chem. Soc.*, **2015**, *137*, 5638–5641.

3. **Huang, C.-Y.**; Doyle, A. G.* "The Chemistry of Transition Metals with Three-Membered Ring Heterocycles." *Chem. Rev.*, **2014**, 114, 8153–8198.

2. Nielsen, D. K.; **Huang, C.-Y.**; Doyle, A. G.* "Directed Nickel-Catalyzed Negishi Cross-Coupling of Alkyl Aziridines." *J. Am. Chem. Soc.*, **2013**, *135*, 13605–13609.

1. **Huang, C.-Y.**; Doyle, A. G.* "Nickel-Catalyzed Negishi Alkylations of Styrenyl Aziridines." *J. Am. Chem. Soc.*, **2012**, *134*, 9541–9544.

CONFERENCE PROCEEDINGS

2. Woods, Brian, **Huang, C.-Y.**; Doyle, A. G. "Nickel-Catalyzed Enantioselective Cross Coupling of Aziridines." *252nd ACS National Meeting*, **2016**, ORGN-87.

1. **Huang, C.-Y.**; Doyle, A. G. "Nickel-Catalyzed Negishi Alkylations of Styrenyl Aziridines." *244th ACS National Meeting*, **2012**, ORGN-510.

PRESENTATIONS

13. "From Organic Chemistry to Blue Jeans." National Chiayi Senior High School (Science Class), Chiayi, Taiwan, November 2018.

12. **ORCHEM 2018** (poster #P113), Berlin, Germany, September 2018.

11. **7th EuCheMS Chemistry Congress** (oral & poster #PO96S), Liverpool, UK, August 2018.

10. **"***N,N'*-Disubstituted Indigos as Red-Light Photoswitches with Tunable Thermal Half-Lives.**"*** Max Planck Institute for Polymer Research (invited by Dr. Akimitsu Narita), Mainz, Germany, August 2018.

9. **Network Meeting of the Alexander von Humboldt Foundation** (poster #P35), Bielefeld, Germany, October 2017.

8. **GDCh WiFo: The Scientific Forum Chemistry 2017 Anniversary Congress** (poster #PH 010), Berlin, Germany, September 2017.

7. "*N*-Substituted Indigos as Red-Light Photoswitches with Tunable Thermal Half-Lives." **12th Phenics International Network Symposium** (oral presentation), Strasbourg, France, July 2017.

6. **The 28th International Conference on Photochemistry** (poster #MIM-POS-20), Strasbourg, France, July 2017.

5. "*N*-Substituted Indigo Photoswitches." **8th International Symposium on Photochromism** (oral presentation #O-17), Shanghai, China, November 2016.

4. **26th International Conference on Organometallic Chemistry** (poster #1P151), Sapporo, Japan, July 2014.

3. **16th Biennial Eli Lilly Grantee Symposium** (poster), Indianapolis, IN, USA, March 2014.

2. "Nickel-Catalyzed Negishi Alkylations of Styrenyl Aziridines." **244th ACS National Meeting** (oral presentation #510), Philadelphia, PA, USA, August 2012.

1. "The Industrial Applications of Cross-Coupling Reactions." LCY Chemical Corporation (invited talk), Taipei, Taiwan, January 2012.

TEACHING EXPERIENCE

◆ *Practical Course Co-Assistant, Advanced Organic Chemistry* 2018
Department of Chemistry, Humboldt-Universität zu Berlin
◆ *Private Tutor, Organic Chemistry I, II* 2016
Berlin
◆ *Laboratory Teaching Assistant, Organic Chemistry I, II* 2011–2012
Department of Chemistry, Princeton University
◆ *Undergraduate tutor, Organic Chemistry I, II, Physical Chemistry I* 2007–2008
Department of Chemistry, Massachusetts Institute of Technology

MENTORING

◆ Bachelor thesis student, Humboldt-Universität zu Berlin 2017
"*Dynamic Covalent Chemistry with Indigo Photoswitches*"
◆ Master student, Humboldt-Universität zu Berlin 2016–2017
"*Development of Water-Soluble Indigo Photoswitches*"
◆ Visiting student, Humboldt-Universität zu Berlin 2015–2016
"*An Exploration of Indigo Functionalization*"
◆ Graduate student, Princeton University 2014–2015
"*Parameterization of Electron-Deficient Olefin Ligands*"
◆ Undergraduate thesis student, Princeton University 2014–2015
"*Mechanistic Investigations of Nickel-Catalyzed Aziridine Cross Couplings*"
◆ Undergraduate researcher, Mercer County Community College 2012
"*Preparation and Evaluation of Electron-Deficient Olefin Ligands*"

ACADEMIC COLLABORATORS

◆ Prof. Akimitsu Narita @ Okinawa Institute of Science and Technology
bottom-up synthesis of functional materials
◆ Prof. Denis Jacquemin @ Université de Nantes, France
theoretical chemistry, computational photochemistry
◆ Prof. Šimon Budzák @ Matej Bel University, Slovakia
theoretical chemistry, computational photochemistry
◆ Prof. Arri Priimägi @ Tampere University of Technology, Finland
photonic materials, functional supramolecular systems
◆ Prof. Saulius Antanas Juršėnas @ Vilnius University, Lithuania
fluorescence spectroscopy, transient spectroscopy

PROJECTS

◆ Commercialization of "Fro-DO" ligand (product # 804371) with Sigma-Aldrich (2015)
◆ A Data Science Approach for the Analysis of Hammett Values (2019) *https://github.com/dennishcy/*

OUTREACH ACTIVITIES

Know it Wall (journal article contributor) 2019
ORCHEM 2018 (event staff), Berlin, Germany 2018
Super Science Saturday: New Jersey State Science Festival, Trenton ACS, USA 2011–2015
42th National Organic Symposium (event staff), Princeton, USA 2011
Study-Abroad Seminar (organizer), Kaohsiung Senior High School, Taiwan 2010

LANGUAGES

Human languages Chinese (native), English (fluent), Japanese (JLPT N1), German (CEFR B2~C1), Italian (beginner)
Computer languages Python (elementary), R (elementary)