HAO WANG

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EDUCATION:

University of Illinois at Urbana-Champaign (UIUC) **November 2013 - Present**
Postdoctoral Fellow in Organic Chemistry
Advisor: Professor Scott E. Denmark

University of California, Los Angeles (UCLA) **September 2013**
Ph.D. in Organic Chemistry **GPA: 3.9/4.0**

Hong Kong Baptist University, Hong Kong SAR, China **December 2007**
Master of Science in Organic Chemistry

Wuhan University, Hubei, China **June 2005**
Bachelor of Science in Applied Chemistry

WORK EXPERIENCE:

Amgen Inc, Thousand Oaks, CA **Summer 2012**
Medicinal Chemistry Intern, Therapeutic Discovery Department

- Used coupling reactions to synthesize a variety of different pyridazinone derivatives
- Studied and executed "click and activate" strategy for preparation of drug candidates in library synthesis
- Developed Cu-catalyzed C-H arylation methodologies for multicomponent synthesis of quinolinones, optimized reaction conditions and maximized yields up to 84%

RESEARCH EXPERIENCE:

University of Illinois at Urbana-Champaign (UIUC) **November 2013 - Present**
Postdoctoral Fellow

- Studied cinchona alkaloid-based phase-transfer catalysts for enantioselective cyclopropanation reactions

University of California, Los Angeles (UCLA) **September 2008 – June 2013**
Graduate Researcher

- Explored mechanisms and stereoselectivities of synthetic useful organic reactions using computational chemistry, provided guidance to experimentalists to make predictions for asymmetric reactions used in synthesis
- Synthesized photoswitchable hemicarcerand, characterized its photochemical properties and investigated its complexation abilities with different guest molecules

Hong Kong Baptist University, Hong Kong SAR, China **January 2006 - December 2007**
Graduate Researcher

- Designed and synthesized novel fluorescent probes for metals and biological active molecules such as ATP
- Established binding mode between receptors and analytes through combined spectroscopic methods such as ^{1}H-NMR

HONORS & AWARDS:

- Thomas L. and Ruth F. Jacobs Dissertation Award, UCLA **June 2013**
- Christopher S. Foote Graduate Fellowship in Organic Chemistry, UCLA **April 2011**
- Ace Style International Limited Scholarship, Hong Kong Baptist University **December 2007**
- Exchange program scholarship, Hong Kong Baptist University **September 2004**

PRESENTATIONS & POSTERS:

- "One-pot, Three-Component Synthesis of Multisubstituted Quinolinones via Click-Amidation-Knoevenagel-(C-H Arylation) Cascade Reaction". Amgen Summer Intern Presentation, Thousand Oaks, CA **September 2012**
- "Study of Activation Effects of Triazolyl Related Heteroaryl Groups on S_NAr Reactions". Amgen Summer Intern/Co-op Poster Session, Thousand Oaks, CA **July 2012**
- "Cholic Acid-Based Fluorescent Sensor for Enantioselective Recognition of Trifunctional Aminoacids". Poster in the 14th Symposium on Chemistry Postgraduate Research, Hong Kong **April 2007**
- "Cholic Acid-Based Fluorescent Chemosensors for Metal Ions". Poster in the 9th International Symposium for Chinese Organic Chemists (ISCOC-9), Singapore **December 2006**

PROFESSIONAL SKILLS:

- Organic Synthesis Techniques: Proficient in TLC, Recrystallization, Column Chromatography
- Analytic Instruments: Experienced in NMR, HPLC, LC-MS, IR, UV-Vis, Fluorescence
- Computer Research Programs: Familiar with ChemDraw, Scifinder, Spartan, Gaussian09, Origin
- Computer Software: Proficient in Microsoft Word, Excel, PowerPoint, Outlook
- Language: Fluent in English, Chinese (Mandarin and Cantonese)

PUBLICATIONS:

- **Hao Wang** and K. N. Houk. "Torsional Control of Stereoselectivities in Electrophilic Additions and Cycloadditions to Alkenes" *Chem. Sci.* **2014**, *5*, 462-470.
- **Hao Wang,** Wenyuan Qian and Jennifer Allen. "Copper-Catalyzed Domino Cycloaddition/C-N Coupling/Cyclization/(C-H Arylation): An Efficient Three-Component Synthesis of Nitrogen Polyheterocycles" *Angew. Chem., Int. Ed.* **2013**, *52*, 10992-10996.
- Fang Liu, **Hao Wang** and Kendall N. Houk. "Gating in Host-guest Chemistry" *Curr. Org. Chem.* **2013**, *17*, 1470-1480.
- Tom Mejuch, Noga Gilboa, Eric Gayon, **Hao Wang**, K. N. Houk and Ilan Marek. "Axial Preferences in Allylation Reactions via the Zimmerman-Traxler Transition State" *Acc. Chem. Res.* **2013**, *46*, 1659-1669.
- Hongkun Lin, Wenbo Pei, **Hao Wang**, Kendall N. Houk, and Isaac J. Krauss. "Enantioselective Homocrotylboration of Aliphatic Aldehydes" *J. Am. Chem. Soc.* **2013**, *135*, 82–85.
- **Hao Wang**, Fang Liu, Roger C. Helgeson, and K. N. Houk. "Reversible Photochemically-Gated Transformation of A Hemicarcerand to a Carcerand" *Angew. Chem., Int. Ed.* **2013**, *52*, 655-659.
- **Hao Wang**, Pankaj Jain, Jon C. Antilla, and K. N. Houk. "Origins of Stereoselectivities in Chiral Phosphoric Acid Catalyzed Allylborations and Propargylations of Aldehydes" *J. Org. Chem.* **2013**, *78*, 1208–1215.
- **Hao Wang**, Philipp Kohler, Larry E. Overman and K. N. Houk. "Origins of Stereoselectivities of Dihydroxylations of cis-Bicyclo[3.3.0]octenes" *J. Am. Chem. Soc.* **2012**, *134*, 16054−16058.
- Pankaj Jain, **Hao Wang**, K. N. Houk and Jon C. Antilla. "Brønsted Acid-Catalyzed Asymmetric Propargylation of Aldehydes" *Angew. Chem., Int. Ed.* **2012**, *51*, 1391-1394.

- Fang Liu, **Hao Wang** and K. N. Houk. "Gated Container Molecules" *Sci. China. Chem.* **2011**, *54*, 2038-2044.
- **Hao Wang**, Damian A. Allen, Michael E. Jung, and K. N. Houk. "Computational Elucidation of the Origins of Reactivity and Selectivity in Non-Aldol Aldol Rearrangements of Cyclic Epoxides" *Org. Lett.* **2011**, *13*, 3238-3241.
- Noga Gilboa, **Hao Wang,** K. N. Houk, and Ilan Marek. "Axial Preferences in Allylations via the Zimmerman-Traxler Transition State" *Chem. Eur. J*. **2011**, *17*, 8000–8004.
- **Hao Wang**, Karol Michalak, Michaz Michalak, Gonzalo Jimenez-Oses, J. Wicha, and K. N. Houk. "Steric Control of α- and β-Alkylation of Azulenone Intermediates in a Guanacastepene **A** Synthesis" *J. Org. Chem.* **2010**, *75*, 762–766.
- Na Shao, **Hao Wang**, Xia-Di Gao, Rong-Hua Yang, and Wing-Hong Chan. "Spiropyran-Based Fluorescent Anion Probe and Its Application for Urinary Pyrophosphate Detection" *Anal. Chem.* **2010**, *82*, 4628-4636.
- Na Shao, Jian-Yu Jin, **Hao Wang**, Jing Zheng, Rong-Hua Yang, Wing-Hong Chan and Zeper Abliz. "Design of Bis-spiropyran Ligands as Dipolar Molecule Receptors and Application to in Vivo Glutathione Fluorescent Probes" *J. Am. Chem. Soc.* **2010**, *132*, 725-736.
- Na Shao, Xia-Di Gao, **Hao Wang**, Rong-Hua Yang, and Wing-Hong Chan. "Spiropyran-based optical approaches for mercury ion sensing: Improving sensitivity and selectivity via cooperative ligation interactions using cysteine" *Anal. Chim. Acta.* **2009**, *655*, 1-7.
- Na Shao, Jian-Yu Jin, **Hao Wang**, Ying Zhang, Rong-Hua Yang, and Wing-Hong Chan. "Tunable photochromism of spirobenzopyran via selective metal ion coordination: An efficient visula and ratioing fluorescent probe for divalent copper ion" *Anal. Chem.* **2008**, *80*, 3466-3475.
- **Hao Wang** and Wing-Hong Chan. "Cholic acid-based fluorescent probe for enantioselective recognition of trifunctional aminoacids" *Org. Biomol. Chem.* **2008**, *6*, 929-934.
- **Hao Wang** and Wing-Hong Chan. "A cholic acid-based fluorescent chemosensor for the detection of ATP" *Org. Biomol. Chem.* **2008**, *6*, 162-168.
- **Hao Wang** and Wing-Hong Chan. "Cholic acid-based fluorescent sensor for mercuric and methyl mercuric ion in aqueous solutions" *Tetrahedron.* **2007**, *63*, 8825-8830.
- Ya-Li Chen, Chun-Kit Hau, **Hao Wang**, Hao He, Man-Shing Wong, and Albert W. M. Lee. "Oxadisilole-Fused Isobenzofurans. Synthesis and Characterization of Oxadisilole-Substituted Acenes" *J. Org. Chem.* **2006**, *71*, 3512-3517.
- Shi-Ren Deng, Lei Wu, **Hao Wang**, Bin Zhou, Zao-Ying Li, and Yun-Hong Zhou. "Synthesis and Structure of a Novel Disulfide-Containing Aniline" *Synth. Commun.* **2005**, *35*, 129-135.