



## Curriculum Vitae

Bukuo Ni, Ph.D  
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Chemistry Department  
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### EDUCATION/DEGREES

2004 Ph. D. in Organic Chemistry Shanghai Institute of Organic Chemistry (SIOC) Chinese Academy of Sciences, Shanghai, China  
1999 B.S. in Chemistry Department of Chemistry, Zhejiang University, Hangzhou, China

### PROFESSIONAL EXPERIENCE

Fall, 2018-Current	Associate Professor	Department of Chemistry, ETAMU
Fall, 2012-Spring, 2018	Assistant Professor	Department of Chemistry, TAMU-Commerce
Fall, 2010- Spring, 2012	Interim Assistant Professor	Department of Chemistry, TAMU-Commerce
Jan. 2008 - Aug. 2010	Research Assistant Professor	Department of Chemistry, TAMU-Commerce
Jan. 2005 - Dec. 2007	Postdoctoral Researcher	Department of Chemistry, TAMU-Commerce
July 2004- Jan. 2005	Senior Scientist	Sundia (Shanghai) MedTech Company Ltd. Shanghai, China

### TEACHING EXPERIENCES

Courses taught since 2012 are as follows:

- (1) CHEM 536: Organometallic Chemistry
- (2) CHEM 533: Kinetics and Mechanism
- (3) CHEM 531: Advanced Inorganic Chemistry
- (4) CHEM 513: Organic Mechanism and Structure
- (5) CHEM 527: Chemical and Biochemical Characteristic Methods I
- (6) CHEM 528: Chemical and Biochemical Characteristic Methods II
- (7) CHEM 597: Specific Topic: Organic Chemistry
- (8) CHEM 501 Graduate Seminar
- (9) CHEM 518: Thesis
- (10) CHEM 589: Organic Synthesis
- (11) CHEM 415 and 415L: Inorganic Chemistry with Lab
- (12) CHEM 401: Undergraduate Seminar
- (13) CHEM 397: Introduction to Research
- (14) CHEM 1305 and 1105L: Survey of General Chemistry with Lab
- (15) CHEM 201: Organic Chemistry Tutorial
- (16) CHEM 101 and 102: General Chemistry Tutorial
- (17) CHEM 212L: Organic Chemistry Lab

### AFFILIATIONS

American Chemical Society (ACS)

## **COLLABORATORS**

(1) Prof. Tuan Phan (Chemistry Department, Texas Southern University).

## **HONORS AND AWARDS**

Junior Faculty Research Award, Texas A&M University-Commerce, 2014

Global Fellow, Texas A&M University-Commerce, 2015

Faculty Senate Award "Ceaseless Industry" 2024

## **GRANT SUPPORT**

### ***Prior Internal***

"Chiral Pyrrolidine-Catalyzed Asymmetric Organic Reactions" Faculty Research Enhancement Project, \$8,000, 2009, 9 - 2010, 8

### ***External***

(1) (Co-PI) "Development and Study of Chiral Organocatalysts for Asymmetric Reactions" National Science Foundation, \$329,681, 2012, 6-2015, 5.

(2) (Co-PI) "Ecological role of Red Imported Fire Ants on Monarch Butterfly (*Danaus plexippus*) egg and larval survival in northeast Texas" Texas State Comptroller's Office, Interagency Task Force on Economic Growth and Endangered Species. \$92,605.00, 2016, 10-2018, 10

(3) PI "Synthesis of bioactive creatine species" Vital Pharmaceutical Company, \$5000, 2016

(4) Co-PI for the Proposal Title: REU Site: Research Experiences for Community College Students in Chemistry and Biochemistry at Texas A&M University-Commerce, \$501,233. 9/1/2024-8/31/2028

### ***Grants not funded***

(1) (PI) "Development of Transition Metal Complexes Catalyzed Asymmetric Synthesis" TAMU-C Research Enhancement, \$14,000. Submitted fall 2012.

(2) (PI) "Development of Chiral Diamines and Their Use as Ligands for Transition Metal Catalyzed Asymmetric Reactions" Welch Foundation, \$180,000. Submitted spring 2013.

(3) (PI) "Development of Chiral Diamines and Their Use as Ligands for Transition-Metal Catalyzed Asymmetric Reactions" Welch Foundation, \$180,000. Submitted in January 2014

(4) (PI) "RUI: Synthesis of Chiral Diamines and Their Use as Ligands for Asymmetric Reactions" NSF, \$252,563. Submitted in Step. 2013

(5) (PI) "Synthesis of Ionic Liquid Supported (ILS) Diamine/Metal Complexes and Their Use as Recyclable Catalysts for Asymmetric Reactions" ACS-PRF, \$70,000. Submitted in Oct. 2013. (The proposal was considered as a logical extension and was not sent out to review).

(6) Co-PI, "RUI: Development and Study of Recyclable Organocatalysts for Asymmetric Reactions" National Science Foundation, 2015, 6, 1-2018,5,31; \$449, 576. Submitted Sep. 2014.

(7) PI, "RUI: Development of Ionic Liquid Supported (ILS) Diamine Ligands for Asymmetric Synthesis" PI of National Science Foundation, 2015, 5, 1 - 2018, 4, 30; \$255,043. Submitted Sep. 2014.

- (8) PI, "The Study of Visible Light Photocatalyzed Cyclization of Allenes with Cyclopropylamines and Cyclobutylamines" ACS-PRF, \$70,000. Submitted in Oct. 2014.
- (9) PI, "The Study of Visible Light Photocatalyzed Cyclization of Allenes with Cyclopropylamines and Cyclobutylamines" Welch Foundation, \$195,000, submitted in January 2015.
- (10) Co-PI, "RUI: Development of Ionic Liquid Supported (ILS) Diamine Ligands for Asymmetric Synthesis" National Science Foundation, 2016, 6, 1 - 2019, 5, 30; \$363,078. Submitted Sep. 2015.
- (11) Co-PI, "RUI: Chelate-enhanced phytoremediation of acid mine drainage contaminated soil" National Science Foundation, 2016, 5, 1 - 2019, 4, 30; \$366,024. Submitted Oct. 2015.

## **THESES DIRECTED**

### *Graduate*

- (1) Ala' Ahmad, "Highly Chemoselective Transfer Hydrogenation of the C=C Bonds of  $\alpha$ -Keto Substituted Acrylate Compounds Catalyzed by an Iridium-TsEN Complex in Water" MS thesis, summer 2023.
- (2) Pojun Quan, "Development of imidazolium tethered TsDPENs ligands for Iridium (III) catalyzed Asymmetric transfer hydrogenation of keto phosphonates in water" Summer 2020
- (3) Gary George, "Extraction and Quantification of Cardiac Glycosides from *Asclepias Viridis* Leaves and *Danaus Plexippus* Leaves" MS thesis, Spring 2020
- (4) Robert Lynn Graham, "The Asymmetric Catalysis of Aldol and Michael Reactions" MS thesis, summer 2017.
- (5) Shengying Huang, "Ni(II)-diamine complexes catalyzed asymmetric sequential Michael reactions of phenylketoesters and nitroalkenes: synthesis of multifunctionalized cyclohexene derivatives" MS thesis, spring 2017.
- (6) Mengxia Sun, "Imidazolium Tethered TsDPENs as Efficient Ligands for Iridium Catalyzed Asymmetric Transfer Hydrogenation of Ketophosphonates in Water" MS thesis summer 2016.
- (7) Qian Liang, "Asymmetric Domino Michael-Henry Reaction of 1,2-Diones with Nitroolefins Catalyzed by Chiral Ni(II) Complexes" MS thesis, spring 2015.
- (8) Guowei Kang, "Imidazolium ion Tethered TsDPENs as Water-Compatible Ligands for Asymmetric Transfer Hydrogenation of Ketones" summer 2015.
- (9) QianKun Chen, "Highly Enantioselective Organocatalytic Michael Addition of Ketones to Nitroolefins on Water" MS thesis, fall 2012.
- (10) Zilong Zheng, "Design and Synthesis of Recyclable Chiral Organocatalysts for Asymmetric Michael Reactions" MS thesis, spring 2010.
- (11) Subrata K. Ghosh, "Design and Synthesis of Recyclable Organocatalysts for Highly Asymmetric Michael Addition in Aqueous Media" MS thesis, summer 2010 (Co-supervised with Dr. Headley).
- (12) Dhruva Sarkar, "Study of Organocatalyzed Asymmetric Synthesis of Aldol Reaction and Michael Addition Reactions" MS thesis, summer 2010 (Co-supervised with Dr. Headley).
- (13) Jianbin Wu, "Design and Synthesis of Chiral Organocatalysts for Asymmetric Michael Addition Reactions" MS thesis, spring 2009 (Co-supervised with Dr. Headley).

### *Undergraduate students trained*

Mahsa Fardin, Erica Parker, Simranjit Kaur, kritanjali dhungana, Ben Perkins, Kurt Harman, Ramesh Bhattarai, Elizabeth Long, Junpeng He, Sirong Lin, Autl Shiwakoti, Karen Scherer, Edna Martinez, Joann Campbell, Joann Jang, Jamie Keenan and Angelica Fuentes

### **PUBLICATIONS IN PEERS-REVIEWED SCIENTIFIC JOURNALS AT ETAMU**

- (1) Highly Chemoselective Transfer Hydrogenation of the C=C Bonds of  $\alpha$ -Keto Substituted Acrylate Compounds Catalyzed by an Iridium-TsEN Complex in Water  
Ala' Ahmad, Crystal Wong, Jordan Chapin, and **Bukuo Ni**, *Tetrahedron Letters* **2024**, *135*, 154904.
- (2) Asymmetric Synthesis of Spirooxindole Lactones by Ammonium-Tethered Chiral Organocatalysts catalyzed Michael Addition/Cyclization of 3-Hydroxyoxindoles with  $\alpha,\beta$ -Unsaturated Aldehydes  
Robert L. Graham, Kira Mills, Allan D. Headley and **Bukuo Ni**, *Current Catalysis*, **2023**, *12*, 34-42.
- (3) Electrochemical Selenium-Catalyzed N,O-Difunctionalization of Ynamides: Access to Polysubstituted Oxazoles  
Jun-Qi Zhang, Chunjiao Shen, Shihao Shuai, Ling Fang, Dandan Hu, Jiali Wang, Yu Zhou, **Bukuo Ni**, Hongjun Ren, *Organic Letters*, **2022**, *24*, 9419-9424
- (4) Bimetallic Metal–Organic Coordination Polymers Facilitated the Selective C–F Cleavage of Polyfluoroarenes  
Jun-Qi Zhang, Dandan Hu, Jiali Wang, Bukuo Ni, Hongjun Ren, *Org. Lett.* **2022**, *24*, 7905.
- (5) Ring-Opening Selenation of Cyclopropanol for the Selective Synthesis of  $\beta$ -Hydroxy-Substituted Selenylated Ketones  
Jun Yao, Dandan Hu, Jun-Qi Zhang, Yili Zhang, Xinyi Ma, Jiang Liu, Jiali Wang, Bukuo Ni, Hongjun Ren, *J. Org. Chem.* **2022**, *87*, 14685.
- (6) Cobalt-doped iron-based coordination polymer catalyst with unique shell-shaped agglomerate for enhancing the reaction activity of Kumada-coupling  
Dandan Hu, Jun-Qi Zhang, Jinyu Song, Bukuo Ni, Hongjun Ren, *Journal of Solid State Chemistry*, **2022**, *316*, 123559.
- (7) The role of neutral anions in ionic liquid as solvent media for the reactivity and stereoselectivity towards asymmetric Michael addition reaction of n-pentanal with  $\beta$ -nitrostyrene catalyzed by L-Proline  
Emmy M. Omar, Mohd Basyaruddin A. Rahman, Bukuo Ni, Allan, D. Headley, *Synthetic Communications*, **2019**, *49*, 1578-1591.
- (8) Novel Ammonium Ionic Liquid Supported (ILS) Diamine-Ni(II) Complexes Catalyzed Asymmetric Michael-Henry Cascade Reaction of 1,2-Dione with Nitroolefin  
Qian Liang, Seth Fernandez, Junpeng He and **Bukuo Ni** *Current Catalysis*, **2018**, *7*, 65-71.
- (9) Asymmetric Sequential Double Michael Reactions of  $\gamma,\delta$ -Unsaturated  $\beta$ -Ketoesters to Nitroolefins Catalyzed by Ni (II)-Diamine Complex  
Shengying Huang, Karen Scherer and **Bukuo Ni** *Catal. Commun.* **2017**, *102*, 67-70.
- (10) Study on the noncoincidence effect phenomenon using matrix isolated Raman spectra

and the proposed structural organization model of acetone in condense phase.

Wenwen Xu, Fengqi Wu, Yanying Zhao, Ran Zhou, Huigang Wang, Xuming Zheng, **Bukuo Ni**. *Scientific Reports*, **2017**, 7, 46851.

- (11) Morphology evolution and visible light driven photocatalysis study of Ti<sup>3+</sup> self-doped TiO<sub>2</sub>-x nanocrystals  
Fang Li, Tiehu Han, Huigang Wang, Xuming Zheng, Junmin Wan, **Bukuo Ni**. *Journal of Materials Research*, **2017**, 32, 1563.
- (12) Imidazolium ion tethered TsDPENs as Efficient Ligands for Iridium-Catalyzed Asymmetric Transfer Hydrogenation of  $\alpha$ -keto Phosphonates in Water  
Mengxia Sun, Joann Campbell, Guowei Kang, Huigang Wang, **Bukuo Ni\*** *J. Organometallic Chem.* **2016**, 810, 12.
- (13) Novel ionic liquid supported ruthenium-diamine complex catalyzed enantioselective hydrogenation of ketones in water  
Guowei Kang, Autl Shiwakoti, **Bukuo Ni\*** *Catal. Commun.* **2014**, 57, 111.
- (14) Asymmetric Domino Michael-Henry Reaction of 1,2-Diones with Nitroolefins Catalyzed by Chiral Bisoxazolidine-Ni(acac)<sub>2</sub> Complex  
Qian Liang, Junpeng He and **Bukuo Ni\*** *Tetrahedron: Asymmetry* **2014**, 25, 1146.  
**Highlighted by SYNFACTS.**
- (15) Highly Efficient Asymmetric Organocatalytic Michael Addition of  $\alpha,\alpha$ -Disubstituted Aldehydes to Nitroolefins under Solvent-Free Conditions  
Junpeng He, Qiankun Chen, and **Bukuo Ni\*** *Tetrahedron Lett.* **2014**, 55, 3030.
- (16) Optimization of Microwave-Assisted Michael Addition Reaction Catalyzed by L-Proline in Ionic Liquid Medium Using Response Surface Methodology  
Emmy M. Omar, Mohd B. A. Rahman, Emilia Abdulmalek, Bimo A. Tejo, **Bukuo Ni**, Allan D. Headley *Synth. Commun.* **2014**, 44, 381-398.
- (17) Highly Enantioselective Organocatalytic Michael Addition of Ketones to Nitroolefins in the Presence of Water  
Qiankun Chen, Yupu Qiao, and **Bukuo Ni\*** *Synlett.*, **2013**, 24, 839.
- (18) Highly Asymmetric Henry Reaction Catalyzed by Chiral Copper(II) Complexes  
**Bukuo Ni\*** and Junpeng He *Tetrahedron Lett.* **2013**, 54, 462.
- (19) Highly Active Water-Soluble and Recyclable Organocatalyst for the Asymmetric 1,4-Conjugate Addition of Nitroalkanes to  $\alpha,\beta$ -Unsaturated Aldehydes  
Subrata K. Ghosh, Zilong Zheng, and **Bukuo Ni\*** *Adv. Synth. Catal.* **2010**, 352, 2378.
- (20) Diarylprolinol Silyl Ether Salts as New, Efficient, Water Soluble, and Recyclable Organocatalysts for the Asymmetric Michael Addition in Water  
Zilong Zheng, Ben Perkins, and **Bukuo Ni\*** *J. Am. Chem. Soc.* **2010**, 132, 50.  
**Highlighted by SYNFACTS and selected by Org. Chem. Highlights.**
- (21) Organocatalytic Direct Asymmetric Crossed-Aldol Reactions of Acetaldehyde in Aqueous Media  
Yupu Qiao, Qiankun Chen, Sirong Lin, **Bukuo Ni,\*** and Allan D. Headley\* *J. Org. Chem.* **2013**, 78, 2693.
- (22) Asymmetric Michael Reactions Catalyzed by a Highly Efficient and Recyclable Quaternary Ammonium Ionic Liquid-Supported Organocatalyst in Aqueous Media  
Subrata K. Ghosh, Yupu Qiao, **Bukuo Ni\*** and Allan D. Headley\* *Org. Biomol. Chem.* **2013**, 11, 1801.
- (23) Highly Enantioselective and Recyclable Organocatalytic Michael Addition of

- Malonates to  $\alpha,\beta$ -Unsaturated Aldehydes in Aqueous Media  
Subrata K. Ghosh, Kritanjali Dhungana, Allan D. Headley,\* **Bukuo Ni\*** *Org. Biomol. Chem.* **2012**, *10*, 8322.
- (24) Asymmetric Michael Reaction of Acetaldehyde with Nitroolefins Catalyzed by Highly Water-Compatible Organocatalysts in Aqueous Media  
Yupu Qiao, Junpeng He, **Bukuo Ni**,\* Allan D. Headley\* *Adv. Synth. Catal.* **2012**, *354*, 2849.
- (25) The Application of a Recyclable Organocatalytic System to the Asymmetric Domino Michael/Henry Reaction in Aqueous Media  
Poornima Chintala, Subrata K. Ghosh, Elizabeth Long, Allan D. Headley,\* **Bukuo Ni\*** *Adv. Synth. Catal.* **2011**, *353*, 2905.
- (26) A Novel Recyclable Organocatalytic System for the Highly Asymmetric Michael Addition of Aldehydes to Nitroolefins in Water  
Dhruba Sarkar, Ramesh Bhattarai, Allan D. Headley\*, **Bukuo Ni\*** *Synthesis* **2011**, 1993.  
**Selected by Org. Chem. Highlights.**
- (27) A Practical and Highly Efficient Hydroacylation Reaction of Aldehydes with Azodicarboxylates in Water  
Qianying Zhang, Erica Parker, Allan D. Headley,\* and **Bukuo Ni\*** *Synlett* **2010**, 2453.
- (28) Ionic Liquid-Supported (ILS) Catalysts for Asymmetric Organic Synthesis  
**Bukuo Ni** and Allan D. Headley\* *Chem. Eur. J.* **2010**, *16*, 4426.
- (29) Di(methylimidazole)prolinol Silyl Ether Catalyzed Highly Michael Addition of Aldehydes to Nitroalkenes in Water  
Jianbin Wu, **Bukuo Ni**,\* and Allan D. Headley\* *Org. Lett.* **2009**, *11*, 3354. **Highlighted by SYNFACTS.**
- (30) Highly Efficient Hydroacylation Reaction of Aldehydes with Azodicarboxylates in Ionic Liquid as Media  
**Bukuo Ni**,\* Qianying Zhang, and Allan D. Headley\* *Adv. Synth. Catal.* **2009**, *351*, 875.
- (31) Ionic Liquid-Supported (ILS) (S)-Pyrrolidine Sulfonamide, a Recyclable Organocatalyst for the Highly Enantioselective Michael Addition to Nitroolefins  
**Bukuo Ni\***, Qianying Zhang, Kritanjali Dhungana, and Allan, D. Headley\* *Org. Lett.* **2009**, *11*, 1037.
- (32) Design and Synthesis of Distereogenic Chiral Ionic Liquids and Their Use as Solvents for Asymmetric Baylis-Hillman Reactions  
Satish Garre, Erica Parker, **Bukuo Ni\*** and Allan D. Headley\* *Org. Biomol. Chem.* **2008**, *6*, 3041 **Highlighted by SYNFACTS.**
- (33) Asymmetric Michael Addition Reactions of Aldehydes with Nitrostyrenes Catalyzed by Functionalized Chiral Ionic Liquids  
Qianying Zhang, **Bukuo Ni**,\* and Allan D. Headley\* *Tetrahedron* **2008**, *64*, 5091.
- (34) Pyrrolidine-Based Chiral Pyridinium Ionic Liquids (ILs) as Recyclable and Highly Efficient Organocatalysts for the Asymmetric Michael Addition Reactions.  
**Bukuo Ni**, Qianying Zhang, and Allan D. Headley\* *Tetrahedron Lett.* **2008**, *49*, 1249.
- (35) Chiral Imidazolium Ionic Liquids: their Synthesis and Influence on the Outcomes of Organic Reactions  
Allan D. Headley\* and **Bukuo Ni** *Aldrichimica Acta* **2007**, *40*, 107.
- (36) Functionalized Chiral Ionic Liquid as Recyclable Organocatalyst for Asymmetric Michael Addition to Nitrostyrenes.

- Bukuo Ni**, Qianying Zhang, and Allan D. Headley\* *Green Chem.* **2007**, *9*, 737.
- (37) Design and Synthesis of Fused-Ring Chiral Ionic Liquids from Amino acid Derivatives.  
**Bukuo Ni**, Satish Garre, and Allan D. Headley\* *Tetrahedron Lett.* **2007**, *48*, 1999.
- (38) Highly Enantioselective Michael Addition of Ketones to Nitroolefins Catalyzed by (S)-Pyrrolidine Arenesulfonamide  
**Bukuo Ni**, Qianying Zhang, and Allan D. Headley\* *Tetrahedron: Asymmetry* **2007**, *18*, 1443.
- (39) Ionic Liquid, [bmim][N(SO<sub>2</sub>CF<sub>3</sub>)<sub>2</sub>], Resulted in the First Catalyst-Free Aminohalogenation of Electron-Deficient Alkenes.  
Yi-Ning Wang, **Bukuo Ni**, Allan D. Headley\* and Guigen Li\* *Adv. Synth. Catal.* **2007**, *349*, 319.
- (40) Solvation Effects on Imidazolium Salts that Contain Alkyl Side Chains.  
Allan D. Headley\*, S. R. S. Saibabu Kotti<sup>#</sup> and **Bukuo Ni**, *Heterocycles* **2007**, *71*, 589.
- (41) Design and Synthesis of Novel Pyridinium Chiral Ionic Liquids Tethered to a Urea Functionality.  
**Bukuo Ni**, Qianying Zhang, and Allan D. Headley\* *J. Org. Chem.* **2006**, *71*, 9857.
- (42) Novel Imidazolium Chiral Ionic Liquids that Contain a Urea Functionality.  
**Bukuo Ni** and Allan D. Headley\* *Tetrahedron Letters*, **2006**, *47*, 7331.
- (43) The Design and Synthesis of C-2 Substituted Chiral Imidazole-Based Ionic Liquids from Amino Acid Derivatives.  
**Bukuo Ni**, Allan D. Headley\*, and Guigen Li\* *J. Org. Chem.* **2005**, *70*, 10600.

#### PEER-REVIEWED PUBLICATIONS DURING PH.D'S RESEARCH WORK

- (44) Intramolecular double or triple Suzuki Coupling reaction of substituted di- or tribromobenzenes to afford fused tri- or tetracycles with a benzene core.  
Shengming Ma\*, **Bukuo Ni**, Shaohui Lin, and Zhiqiang Liang *J. Organomet. Chem.* **2005**, *690*, 5389.
- (45) Exclusive Formation of Bicyclic Quinolizidine Alkaloid Skeleton via Double RCM reaction of N-Alkynyl-N-(1, ω)-alkadienyl Propenamide.  
Shengming Ma\*, **Bukuo Ni** and Zhiqiang Liang *J. Org. Chem.* **2004**, *69*, 6305.
- (46) Double RCM reaction of N-containing tetraenes. An efficient construction of bicyclic izidine alkaloid skeletons and the application to the synthesis of four stereoisomers of lupinine and their derivatives.  
Shengming Ma\* and **Bukuo Ni** *Chem. Eur. J.* **2004**, *10*, 3286.
- (47) Unexpected dramatic substituent effect for tuning the selectivity in the double ring-closing metathesis reaction of N-containing tetraenes. An efficient synthesis of bicyclic izidine alkaloid skeletons.  
Shengming Ma\* and **Bukuo Ni** *Org. Lett.* **2002**, *4*, 639.
- (48) Intramolecular triple Heck reaction. An efficient entry to fused tetracycles with a benzene core.  
Shengming Ma\* and **Bukuo Ni** *J. Org. Chem.* **2002**, *67*, 8280.
- (49) Studies on the oxidative addition reaction of 1,1-dibromo-1-alkenes, α-dehalopalladation, and the intramolecular bis(carbopalladation) reaction of alkenes to afford fused bicycles.  
Shengming Ma\*, Bin Xu and **Bukuo Ni** *J. Org. Chem.* **2000**, *65*, 8532.

## PRESENTATIONS, COLLOQUIA, AND INVITED TALKS

- (1) Bao Nhi Nguyen, Crystal Wong, Ala' Ahmad, **Bukuo Ni** "The Stereoselective Domino Michael-Henry Reaction of 1,2-Cyclohexanedione with Nitroolefins Catalyzed by an Amino Acid-Ni(acac)<sub>2</sub> Complex" Southwest Regional Meeting in Oklahoma City, OK, November 15-18, 2023
- (2) Ala' Ahmad, Crystal Wong, Jordan Chapin, and **Bukuo Ni** "Highly Chemoselective Transfer Hydrogenation of the C=C Bonds of  $\alpha$ -Keto Substituted Acrylate Compounds Catalyzed by an Iridium-TsEN Complex in Water" Southwest Regional Meeting in Baton Rouge, LA, November 6-9, 2022
- (3) Hoang Pham, Jeonming Lee Jeongmin Lee, Pojun Quan and **Bukuo Ni** "Asymmetric Transfer Hydrogenation of Ketophosphonates Catalyzed by Iridium (III) and Imidazolium Ion Tethered TsDPENs Ligands in Water" Southwest Regional Meeting in Austin, TX, October 30 - November 3, 2021
- (4) Nayeli Fuentes, Linh Truong, and **Bukuo Ni** "Asymmetric organocatalyzed double Michael reaction of  $\gamma$ ,  $\delta$ -unsaturated  $\beta$ -ketoesters with nitroalkenes generates functionalized 4-nitrocyclohexanone derivatives" 257th ACS National Meeting, Orlando, FL, United States, March 31-April 4, 2019.
- (5) Pojun Quan, Mengxia Sun and **Bukuo Ni** "Imidazolium Ion Tethered TsDPENs as Efficient Ligands for Iridium Catalyzed Asymmetric Transfer Hydrogenation of Ketophosphonates in Water" Midwest Regional Meeting of the American Chemical Society, Wichita, KS, United States, October 16-19, 2019.
- (6) Pojun Quan, Mengxia Sun and **Bukuo Ni** "Imidazolium Ion Tethered TsDPENs as Efficient Ligands for Iridium Catalyzed Asymmetric Transfer Hydrogenation of Ketophosphonates in Water" 16<sup>th</sup> Annual Pathways Student Research Symposium at Texas A&M International University, Laredo, TX, November 7-8, 2019.
- (7) Nayeli Fuentes, Linh Truong, and **Bukuo Ni** "Asymmetric organocatalyzed double Michael reaction of  $\gamma$ ,  $\delta$ -unsaturated  $\beta$ -ketoesters with nitroalkenes generates functionalized 4-nitrocyclohexanone derivatives" 74th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, November 7-10, 2018.
- (8) Kenneth Machenzie, Syed Shah Abdullah Hussaini, Ben W. Jang, **Bukuo Ni** "Heterogeneous, activated carbon-supported palladium catalysts for the partial hydrogenation of diphenylacetylene" 74th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, November 7-10, 2018.
- (9) Syed Shah Abdullah Hussaini, Kenneth Machenzie, Ben W. Jang, **Bukuo Ni** "Supported palladium catalysts for liquid phase semi-hydrogenation of alkynes" 74th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, November 7-10, 2018.
- (10) **Bukuo Ni** and Shengying Huang "Ni(II)-diamine complexes catalyzed asymmetric sequential Michael reactions of vinylketoesters and nitroalkenes for the synthesis of multifunctionalized cyclohexene derivatives" 254th ACS National Meeting in Washington, DC to be held August 20-24, 2017.
- (11) **Bukuo Ni** and Shengying Huang "Ni(II)-diamine complexes catalyzed asymmetric sequential Michael reactions of phenylketoesters and nitroalkenes: Synthesis of multifunctionalized cyclohexene derivatives" Southwest Regional Meeting (SWRM) of the American Chemical Society, Galveston, TX, November 10-13, 2016.

- (12) Seth R. Fernandez, Qian Liang, and **Bukuo Ni** “Novel ammonium Supported Ni(II)-Diamine Complexes Catalyzed Enantioselective Cascade Michael-Henry Reaction” Texas A&M System 13<sup>th</sup> Pathways Research Symposium, Prairie View, TX, Nov. 3-4, 2016.
- (13) Mengxia Sun, Joann Campbell, **Bukuo Ni** “Imidazolium ion tethered TsDPENs as efficient ligands for iridium catalyzed asymmetric transfer hydrogenation of ketophosphonates in water” 67<sup>th</sup> Southeast/71<sup>st</sup> Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015)
- (14) Shengying Huang, Karen Scherer, **Bukuo Ni** “Ni(II)-diamine complexes catalyzed asymmetric sequential Michael reactions of phenylketoesters and nitroalkenes: Synthesis of multifunctionalized cyclohexene derivatives” 67<sup>th</sup> Southeast/71<sup>st</sup> Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 4-7 (2015)
- (15) **Bukuo Ni** “Transition metal-chiral diamine complexes catalyzed asymmetric organic reactions” University of Arkansas, Fayetteville, AR, March 19, 2015.
- (16) Qian Liang, Junpeng He, **Bukuo Ni** “Novel ammonium Supported Ni(II)-Diamine Complexes Catalyzed Enantioselective Cascade Michael-Henry Reaction” 247<sup>th</sup> ACS National Meeting, Dallas, TX March 16-20, 2014.
- (17) Guowei Kang, Autl Shiwakoti, **Bukuo Ni** “Novel ionic liquid supported ruthenium-diamine complex catalyzed enantioselective hydrogenation of ketones in water” 247<sup>th</sup> ACS National Meeting, Dallas, TX March 16-20, 2014.
- (18) **Bukuo Ni**, Junpeng He, Qiankun Chen “Asymmetric Michael additions of  $\alpha,\alpha$ -disubstituted aldehydes to  $\beta$ -nitroalkenes catalyzed by chiral diamine catalysts under solvent-free conditions” 247<sup>th</sup> ACS National Meeting, Dallas, TX March 16-20, 2014.
- (19) Qian Liang, Junpeng He, **Bukuo Ni** “Bisoxazolidine-Ni(acac)<sub>2</sub> complex catalyzed enantioselective cascade Michael Henry reaction” 69<sup>th</sup> ACS SWRM, Waco, TX November 16-19, 2013.
- (20) Junpeng He, Qiankun Chen, **Bukuo Ni** “Asymmetric Michael addition of  $\alpha,\alpha$ -disubstituted aldehydes to  $\beta$ -nitroalkenes catalyzed by pyrrolidine-derived organocatalysts under solvent-free conditions” 46<sup>th</sup> ACS DFW meeting-in miniature, April 27, 2013
- (21) He, Junpeng; Dhungana, Kritanjali; **Ni, Bukuo** “Synthesis of chiral primary amines and their use as organocatalysts for asymmetric michael addition” 67<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Austin, TX, United States, November 9-12 (2011)
- (22) Qiao, Yupu; **Ni, Bukuo**; Headley, Allan D. “Highly water-soluble recyclable organocatalysts for the asymmetric reactions in aqueous media” 67<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Austin, TX, United States, November 9-12 (2011)
- (23) Bade, Anusha; Chintala, Poornima; **Ni, Bukuo**; Headley, Allan D. “Direct catalytic enantioselective Aldol reaction via a novel series of organocatalysts” 67<sup>th</sup> Southwest Regional Meeting of the American Chemical Society, Austin, TX, United States, November 9-12 (2011)
- (24) **Ni, Bukuo**; Ghosh, Subrata K.; Dhungana, Kritanjali; Headley, Allan D. “Development of effective, water-woluble and recyclable oganocatalyst for the asymmetric Michael

- addition” Joint 66th Southwest and 62nd Southeast Regional Meeting of the American Chemical Society, New Orleans, LA, United States, December 1-4 (2010).
- (25) Chintala, Poornima; Long, Elizabeth; **Ni, Bukuo**; Headley, Allan D. “Water-soluble and Recyclable Organocatalyst for Tandem Michael/Henry Reaction in Aqueous Media” Joint 66th Southwest and 62nd Southeast Regional Meeting of the American Chemical Society, New Orleans, LA, United States, December 1-4 (2010).
- (26) **Ni, Bukuo**; Ghosh, Subrata; Dhungana, Kritanjali; Headley, Allan D. “Highly active water-soluble and recyclable organocatalyst for the asymmetric 1,4-conjugate addition of carbanion to  $\alpha,\beta$ -unsaturated aldehydes” 240th ACS National Meeting, Boston, MA. August 22-26, 2010 (poster).
- (27) Ghosh, Subrata; Zheng, Zilong; Headley, Allan D.; **Ni, Bukuo** “Diarylprolinol Silyl Ether, A Highly Effective Chiral Organocatalyst for the Asymmetric Michael Addition in Water” 65th Southwest Regional Meeting of the American Chemical Society, El Paso, TX, United States, November 4-7 (2009).
- (28) Sarkar, Dhruva; Harman, Kurt; Ghosh, Subrata; **Ni, Bukuo**; Headley, Allan “Design of Primary Amino Acids Based Organocatalysts for Asymmetric Direct Syn-Aldol Reaction” 65th Southwest Regional Meeting of the American Chemical Society, El Paso, TX, United States, November 4-7 (2009).
- (29) **Ni, Bukuo**; Zhang, Qianying; Dhungana, Kritanjali; Headley, Allan D. “Ionic liquid-supported (ILS) (S)-pyrrolidine sulfonamide, an effective organocatalyst for the enantioselective Michael addition to nitroolefins” 238th ACS National Meeting, Washington, DC. August 16-20, 2009 (poster).
- (30) **Ni, Bukuo**; Zhang, Qianying; Garre, Satish; Headley, Allan D. “Ionic Liquid (ILs) as An Effective Medium for the Highly Efficient Hydroacylation Reaction of Aldehydes with Azodicarboxylates” 64th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4, 2008 (poster).
- (31) Dhungana, Kritanjali; Wu, Jianbin; **Ni, Bukuo**; Headley, Allan D. “Design and Synthesis of Pyrrolidine Based Chiral Ionic Liquid from Proline Derivative” 64th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4 (2008).
- (32) Parker, Erica; Zhang, Qianying; Garre, Satish; **Ni, Bukuo**; Headley, Allan D. “Efficient Hydroacylation Reaction of Aldehydes and Azodicarboxylates in Water” 64th Southwest Regional Meeting of the American Chemical Society, Little Rock, AR, United States, October 1-4 (2008).
- (33) **Ni, Bukuo**; Zhang, Qianying; Headley, Allan D. “Pyrrolidine-Based Chiral Pyridinium Ionic Liquids (ILs) as Recyclable and Highly Efficient Organocatalysts for the Asymmetric Michael Addition Reactions” 63rd Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, United States, November 4-7, 2007 (Oral)
- (34) Zhang, Qianying; **Ni, Bukuo**; Headley, Allan D. “Functionalized Chiral Ionic Liquid as Recyclable Organocatalyst for Asymmetric Michael Addition to Nitrostyrenes” 63rd Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, United States, November 4-7 (2007).
- (35) Garre, Satish; Headley, Allan D.; **Ni, Bukuo** “Design and Synthesis of Novel Fused-ring Chiral Ionic liquids” 62nd Southwest Regional Meeting of the American Chemical Society, Houston, TX, United States, October 19-22, 2006 (Oral)

- (36) **Ni, Bukuo**; Zhang, Qianying; Headley, Allan D “Design and Synthesis of Novel Pyridinium Chiral Ionic Liquids Tethered to a Urea Functionality” 62nd Southwest Regional Meeting of the American Chemical Society, Houston, TX, United States, October 19-22 (2006).
- (37) **Ni, Bukuo**; Headley, Allan D.; Li, Guigen “The Design and Synthesis of C-2 Substituted Chiral Imidazolium Ionic Liquids from Amino Acid Derivatives” 57th Southeast/61st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 1-4, 2005 (poster).

### **SERVICES TO THE DEPARTMENT, COLLEGE, AND UNIVERSITY**

- (1) 2012 fall-present, serve department scholarship committee
- (2) 2013 4,27 The 46<sup>th</sup> American chemical society DFW miniature meeting abstract coordinator
- (3) 2013 4,27 The 46<sup>th</sup> American chemical society DFW miniature meeting section 2 chair and judge
- (4) 2013,4-5 Physiology assistant professor position search committee.
- (5) 2013 spring, effort aimed at recruiting a graduate student to chemistry department (Guowei Kang)
- (6) 2013, 9-present, Chemistry departmental curriculum committee member
- (7) 2013, 10-present, Chemistry department head position search committee
- (8) 2013,11- College scholarship committee member
- (9) 2014, 11-2016, 11, Admissions and Retention of Students sub-committee of the faculty senate
- (10) 2014, 11- present, Serve as a library representative for the chemistry department
- (11) 2015, 10, 17 Serve Mane event
- (12) 2015, 10, 28 Reprehensive of Chemistry Department for CoSE Graduate Explore
- (13) 2015, 11, 3-7 Drove the van and took students to attend ACS SWRM/SERM at Memphis
- (14) 2015, 12, 5- representative of Chemistry department for undergraduate orientation
- (15) 2015, 9-12 Search Committee for Chemical Inventory and Manager Position
- (16) 2016, 6, 13 – Took summer REU students to the field trip to Eastman Chemical Company
- (17) 2016, 8, 10 Reprehensive of Chemistry Department for CoSE undergraduate orientation
- (18) 2016, 11, 10-12 Drove the van and took students to attend ACS regional at Galveston, TX
- (19) 2016, 9-present, Serve as a committee for The Research and Creative Activities
- (20) fall-present-Graduate representative of Graduate School for graduate dissertation proposals and evaluating the proposals, 2016-present
- (21) Committee on Graduate School Representatives, 2016-present
- (22) Senate Faculty Awards committee, 2018-present
- (23) Chemistry departmental T&P committee, 2018-present
- (24) Faculty Development Grant Committee, 2019,9-present

### **Master theses defense committees Served:**

- (1) Ting Zhou, Masters candidate, defended fall 2012
- (2) Anusha Bade, Masters candidate, defended fall 2012

- (3) (Chair) Qiankun Chen, Masters candidate, defended fall 2012
- (4) Chirag Savla, Masters candidate, defended summer 2013
- (5) Swetha Bathula, Masters candidate, defended summer 2013
- (6) Kristine Jang, Masters candidate, defended summer 2013
- (7) Chiranjeevi Ravichetti, Masters candidate, defended summer 2013
- (8) Sruthi Konakanchi, Masters candidate, defended summer 2013
- (9) Xiaowen Wu, Masters candidate, defended fall 2013
- (10) Uday Kunar Boga Raja, Masters candidate, defended fall 2013
- (11) Sahithi Cheruku, Masters candidate, defended fall 2013
- (12) Sripragna Burugupalli, Masters candidate, defended fall 2013
- (13) Arjun Malipeddi, Masters candidate, defended fall 2013
- (14) Mihira Vasana, Masters candidate, defended fall 2013
- (15) Aisha Awad Alshahrani, Masters candidate, defended summer 2014.
- (16) Hind Alshehri, Masters candidate, defended summer 2014.
- (17) Maha Ali Aljowni, Masters candidate, defended summer 2014.
- (18) Pavani Malla, Masters candidate, defended summer 2014.
- (19) Maha Alqurafi, Masters candidate, defended Fall 2014
- (20) Bhargavi Sowmya Chilukuri, Masters candidate, defended Fall 2014
- (21) (Chair) Qian Liang, Masters candidate, defended Fall 2015
- (22) (Chair) Guowei Kang, Masters candidate, defended summer 2015
- (23) Elizabeth Jang, Honor Undergraduate thesis defended summer 2015
- (24) Nanda Kumar Katakam, Masters candidate, defended summer 2016
- (25) Arash Mirjalili, Masters candidate, defended summer 2016
- (26) Syed Zia Ul Quasim, Masters candidate, defended summer 2016
- (27) (Chair) Mengxia Sun, Masters candidate, defended summer 2016
- (28) Krishna, Masters candidate, defended fall 2016
- (29) (Chair) Shengying Huang, Masters candidate, defended spring 2017
- (30) Rajpal Vangala, Masters candidate, defended spring 2017
- (31) Wentao Xie, Masters candidate, defended spring 2017
- (32) Swetha Chinthala, Masters candidate, defended summer 2017
- (33) Jayendra Chundururu, Masters candidate, defended summer 2017
- (34) Sandhya Pola, Masters candidate, defended summer 2017
- (35) Apoorva Kasetti, Masters candidate, defended summer 2017
- (36) Junyi He, Masters candidate, defended summer 2017
- (37) (Chair) Robert Lynn Graham, Masters candidate, defended summer 2017
- (38) Eswara Chandra Murahari, Masters candidate, defended fall 2017
- (39) Irfan Omer, Masters candidate, defended summer 2018
- (40) Anvesh Domakonda, Masters candidate, defended summer 2018
- (41) Samatha Shashi Ravi Rudrangi, Masters candidate, defended summer 2018
- (42) SYED SHAH ABDULLAH HUSSAINI, Masters candidate, defended fall 2018
- (43) TengTeng Lyu, Masters candidate, defended fall 2018
- (44) Lisa C. Latta, Undergraduate Honor thesis, defended fall 2018
- (45) (Chair) Gary George, , Masters candidate, defended spring 2020
- (46) Akram Bani Ahmad, Masters candidate, defended spring 2020
- (47) (Chair) Pojun Quan, Masters candidate, defended summer 2020
- (48) Ramneetpreet Grill, Masters candidate, defended fall 2020

- (49) Oladapo Falokun, Masters candidate, defended spring 2021
- (50) Tarek Haque, Masters candidate, defended summer 2021

### **PROFESSIONAL SERVES**

- (1) I am currently serving as a reviewer for numerous journals, such as *J. Am. Chem. Soc.*; *Org. Lett.*; *Chemical Reviews*; *Adv. Synth. Catal.*; *Chem. Commun.*; *Synlett.*; *Tetrahedron*; *Tetrahedron Lett.*; *Lett. Org. Chem.*; *Magnetic Resonance in Chemistry*, and *Chirality*.
- (2) Serve as a reviewer for national-wide proposals ACS-PRF since 2012
- (3) Serve as Editorial Board of Dataset Papers in Chemistry since 2012
- (4) Serve as Associate Editor of the Journal of Recyclable Catalysis since 2014
- (5) Sever as a panel reviewer for NSF-Graduate Research Fellowship Program 2016
- (6) Serve as Editorial Board of the Journal Current Catalysis since March 2016