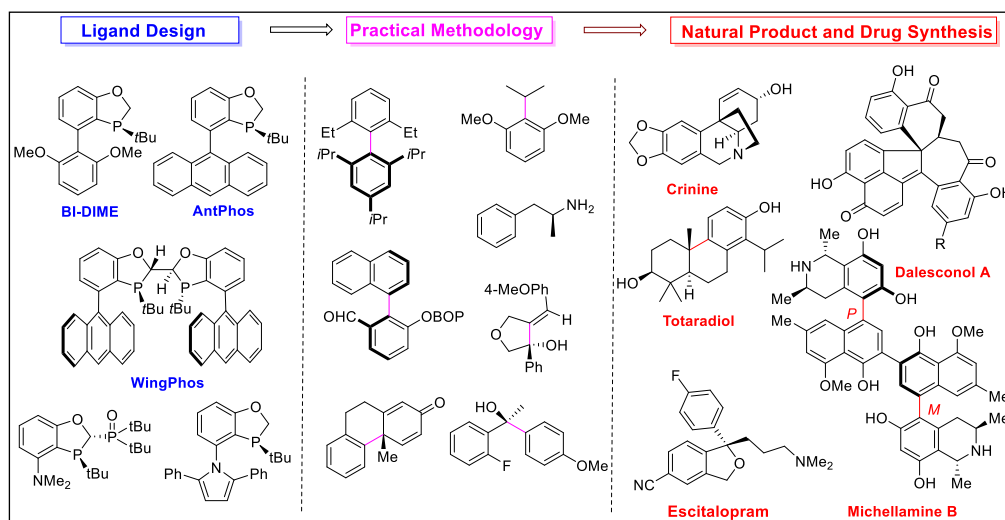


Wenjun Tang, Ph.D.

Research Professor
State Key Laboratory of Chemical Biology
Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences
345 Ling Ling Road, Shanghai 200032
Email: tangwenjun@sioac.ac.cn; Phone: 18221164930
Webpage: <http://wenjuntang.sioac.ac.cn>, <http://zejunpharma.com>

RESEARCH INTERESTS

- ❖ Design and development of novel, efficient, and practical chiral catalytic reactions
- ❖ Total synthesis of complex and biologically active natural products
- ❖ Development of efficient, economical, and green chemical processes for pharmaceutically important molecules



EDUCATION

- 2003-2005 Postdoctoral research, Organic Chemistry, The Scripps Research Institute
Advisor: Professor K. C. Nicolaou
- 1998-2003 Ph. D., Organic and Organometallic Chemistry, The Pennsylvania State University
Thesis title: "Development of Efficient Chiral Ligands for Asymmetric Catalysis"
Advisor: Professor Xumu Zhang
- 1995-1998 M.S., Organic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences
Thesis title: "Synthetic Studies of Benzolactam V8 Derivatives"
Advisor: Professor Dawei Ma
- 1991-1995 B. Eng., Pharmaceutical Engineering, East China University of Sciences and Technology
Thesis title: "Synthetic Studies of Enofloxacin and Vitamin E Succinate"
Advisor: Professor Guohou Cheng

WORK EXPERIENCE

- 2018-present President, CEO, and chief scientist, ZejunPharma
Dedicated to catalytic synthetic technology and thrived to be a reliable provider of special catalysts, ligands, pharmaceutical intermediates, and special API for pharmaceutical and bio-pharmaceutical companies worldwide. The company currently supply a series of efficient and structurally unique phosphorus ligands, chiral diamines, and polymeric ligands from gram to metric ton scale.
- 2019-present Chief Professor, School of Chemistry and Materials Science, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences
- 2011.7-present Research Professor, State Key Laboratory of Bioorganic and Natural Products Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, P. R. China
- Lead a group of students, postdocs, and lab assistants in various research areas; Develop a unique ligand system for green syntheses of chiral natural products and drugs that have been widely applied in both academia and industry; Develop several novel catalytic reactions for efficient syntheses of natural products and small molecule drugs; Specialized in asymmetric cross-coupling reactions, asymmetric hydrogenation, asymmetric boration, and asymmetric cyclization; Specialized in developing highly efficient catalytic reactions (high TONs) and green synthesis of drugs.
- 2009-2011 Principal Scientist, Department of Chemical Development, Boehringer Ingelheim Pharmaceuticals, Inc.
2005-2009 Senior Scientist, Department of Chemical Development, Boehringer Ingelheim Pharmaceuticals, Inc.
- Made numerous contributions on many key BI projects as a lead process chemist; designed and developed practical and economical synthetic processes; produced and delivered various drug substances in multi kilograms
- 2003-2005 Postdoctoral Research Associate, Department of Chemistry, The Scripps Research Institute
- Accomplished the structural determination and first total synthesis of a complex marine toxin --- azaspiracid (Highlight in C&ENews, **2004**)
 - Developed a novel, catalytic asymmetric three-component reaction for the synthesis of chiral 2,3-disubstituted cycloalkanone
 - Furnished a key intermediate with correct stereochemistry for the synthesis of a complex metabolite-Vannusal
- 1998-2003 Research Assistant, Department of Chemistry, The Pennsylvania State University
- Developed several structurally novel, efficient, and practical chiral phosphorous and nitrogen ligands for asymmetric hydrogenation such as TangPhos (Highlight in C&ENews, **2002**), BINAPINE (Highlight in C&EN news, **2003**), *o*-Ph-HexaMeO-BIPHEP, *o*-BINAPO, phospholane oxazoline, and NOBIN-based ligands
 - Investigated extensively various metal-catalyzed asymmetric reactions, particularly asymmetric hydrogenation, asymmetric cyclopropanation, asymmetric Michael addition, and asymmetric Heck reaction.
 - Established several excellent hydrogenation and cyclopropanation catalysts for efficient syntheses of important chiral intermediates (α -amino acids, β -amino acids, chiral amines)
 - Developed a novel synthesis of an antidepressant drug, sertraline via asymmetric hydrogenation by using a new designed catalyst
- 1995-1998 Research Assistant, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences
- Accomplished the synthesis of a series of Benzolactam V8 derivatives in seeking novel isozyme-selective Protein Kinase C regulators.

1994-1995 Research Assistant, Department of Pharmaceutical Engineering, East China University of Sciences and Technology

- Improved a synthetic step for the synthesis of Enofloxacin. Conducted the synthetic study of Vitamin E succinate
- Gained strong training in chemical engineering and pharmaceutical engineering. Familiarized the manufacturing process of drugs.

AWARDS

1. Royal Society of Chemistry Organic Chemistry Horizon Prize: Robert Robinson Prize in Synthetic Organic Chemistry, 2024
2. Chinese Academy of Sciences Excellent Teaching Award, 2023
3. WuXi AppTech Life Science and Chemistry Award, 2019
4. National “Ten-thousand Talents” Program, 2019
5. Young and Middle-Aged Leading Scientists, Engineers and Innovators, 2018
6. The National Science Fund for Distinguished Young Scholars, 2017
7. Asian Core Program Lectureship Award, 2015
8. National Homogeneous Catalysis Youth Award, 2015
9. May 4th Medal, The Science and Technology Commission of Shanghai Municipality, 2014
10. Shanghai “Pujiang Talents” Program, 2013
11. Thieme Chemistry Journal Award, 2012
12. Excellence in Action Award, 2010, Boehringer Ingelheim Pharmaceuticals, Inc.
13. President’s Award, 2009, Boehringer Ingelheim Pharmaceuticals, Inc.
14. Individual Excellence Award, 2009, Boehringer Ingelheim Pharmaceuticals, Inc.
15. Team Spirit Award (twice), 2008, Boehringer Ingelheim Pharmaceuticals, Inc.
16. Golden Achievement Award, 2007, Boehringer Ingelheim Pharmaceuticals, Inc.
17. Golden Achievement Award, 2006, Boehringer Ingelheim Pharmaceuticals, Inc.
18. Golden Achievement Award, 2005, Boehringer Ingelheim Pharmaceuticals, Inc.
19. Dalalian Fellowship, 2002, The Pennsylvania State University
20. Dalalian Fellowship, 2001, The Pennsylvania State University
21. Dalalian Graduate Research Award, 2000, The Pennsylvania State University

PROFESSIONAL AFFILIATIONS American Chemical Society, Chinese Chemical Society, Royal Chemical Society

2023-- Secretary of Commission of Process Chemistry, Chinese Chemical Society

2020-- Member of Commission of Agrochemistry, Chinese Chemical Society

2023-- Member of Commission of Phosphorus Chemistry, Chinese Chemical Society

JOURNAL PUBLICATIONS

- 1 Yaodong Lin, Guangqing Xu, **Wenjun Tang*** Chiral Polymeric Diamine Ligands for Iridium-Catalyzed Asymmetric Transfer Hydrogenation *J. Am. Chem. Soc.* **2024**, in press.
- 2 Yiwen Lv, Haihua Liao, **Wenjun Tang*** Synthesis of a Sitagliptin Intermediate via Ruthenium-Catalyzed Asymmetric Hydrogenation of Enamine Ester *Chin. J. Org. Chem.* **2024**, in press.
- 3 Wenfeng Dong, Nan Wang, He Yang, Guangqing Xu, **Wenjun Tang*** A Polymeric Phosphorus Ligand for the Synthesis of Herbicide Rinskor *Acta Chimica Sinica* **2024**, in press.
- 4 Zhen Cao, Dongyang He, **Wenjun Tang*** Catalysis and Synthesis Enabled by P-Chiral Dihydrobenzoxaphosphole Ligands *Org. Process Res. Dev.* **2024**, 28, 949.
- 5 Heng Bai, Wei Gu, Di Zhao, Guangqing Xu,* **Wenjun Tang*** Synthesis of dydrogesterone by aromatization-dearomatization strategy *Green Synth. Catal.* Doi: 10.1016/j.gresc.2023.12.001
- 6 Henian Peng, Dake Zhao, **Wenjun Tang,*** Ai Peng* Dienediamine: A Safe Surrogate of Herbicide Paraquat *Mol. Plant* **2023**, 16, 1962-1975.
- 7 Ziyue Liu, Ben Gao, Konstantin Chernichenko, He Yang,* , Sebastien Lemaire,* **Wenjun Tang*** Enantioselective C–H Arylation for Axially Chiral Heterobiaryls *Org. Lett.* **2023**, 25, 7004-7008.
- 8 He Yang, Hanxiao Yu, Stolarzewicz,* **Wenjun Tang*** Enantioselective transformations in the synthesis of therapeutic agents *Chem. Rev.* **2023**, 123, 9397-9446.
- 9 Jiawei Sun, Yuan Chen, Sherif Shaban Ragab, Wei Gu, Ziqiang Tang, Yuexun Tang, and **Wenjun Tang*** “Total Syntheses of Polyhydroxylated Steroids via Unsaturation-Functionalization Strategy” *Angew. Chem., Int. Ed.* **2023**, 135, e202303639.
- 10 Mingkang Zhou, Yaodong Lin, Xiao-Xuan Chen, Guangqing Xu,* Lung Wa Chung,* **Wenjun Tang*** "Asymmetric Synthesis of Vicinal Tetrasubstituted Diamines via Reductive Coupling of Ketimines Templated by Chiral Diborons" *Angew. Chem., Int. Ed.* **2023**, 135, e202300334.
- 11 Yuxin Zhu, Wenfeng Dong, **Wenjun Tang*** "Palladium-Catalyzed Cross-Couplings in the Synthesis of Agrochemicals". *Advanced Agrochem* **2022**, 1, 125-138
- 12 Bowen Li, Bangke Luo, He Yang,* **Wenjun Tang*** Heck Reaction of *N*-Heteroaryl Halides for the Concise Synthesis of Chiral α -Heteroaryl-substituted Heterocycles *Angew. Chem. Int. Ed.* **2022**, 61, e202209087.
- 13 He Yang, **Wenjun Tang*** Enantioselective Construction of ortho-Sulfur- or Nitrogen-Substituted Axially Chiral Biaryls and Asymmetric Synthesis of Isoplagiochin D *Nat. Commun.* **2022** 13, 4577.

- 14 Minghui Zhu, Peixin Wang, Qinglong Zhang, **Wenjun Tang**,* Weiwei Zi* Diastereodivergent Aldol-type Coupling of Alkoxyallenes with Pentafluorophenyl Esters Enabled by Synergistic Palladium/Chiral Lewis Base Catalysis *Angew. Chem. Int. Ed.* **2022**, 61, e202207621.
- 15 Xuehua Kang, Chao Qian, He Yang, Jicheng Shi,* Jerome Claverie,* **Wenjun Tang*** Protection-group-free enantioselective tandem allylic substitution of o-phenylenediamines and o-aminophenols *Green Synth. Catal.* **2022**, 3, 185.
- 16 Zhenya Li, Ronghua Xu, Huichuang Guo, He Yang, Guangqing Xu, Enxue Shi,* Junhua Xiao,* **Wenjun Tang*** *Org. Lett.* **2022**, 24, 714.
- 17 Ting Wu, Qinghai Zhou, **Wenjun Tang*** Enantioselective α - Carbonylative Arylation for Facile Construction of Chiral Spirocyclic β,β' - Diketones *Angew. Chem. Int. Ed.* **2021**, 60, 9978-9983.
- 18 Duanshuai Tian, Ronghua Zhu, Jinbin Zhu, Jianxun Huang, Wei Dong, Jerome P. Claverie, **Wenjun Tang*** Asymmetric Hydroesterification of Diarylmethyl Carbinols *Angew. Chem. Int. Ed.* **2021**, 60, 6305-6309.
- 19 “Synthesis of α -Heteroaryl Propionic Esters by Palladium-Catalyzed α -Heteroarylation of Silyl Ketene Acetals” Bowen Li, Bangke Luo, Caroline A. Blakemore,* Aaron C. Smith, Daniel W. Widlicka, Simon Berritt, **Wenjun Tang*** *Org. Lett.* **2021**, doi:10.1021/acs.orglett.1c02257.
- 20 Wei Tian, Bowen Li, Duanshuai Tian, **Wenjun Tang*** Regioselective 2-alkylation of indoles with α -bromo esters catalyzed by Pd/P,P=O system” *Chin. Chem. Lett.* **2021**, doi: 10.1016/j.cclet.2021.06.091
- 21 Jiawei Sun, Wei Gu, He Yang,* **Wenjun Tang*** Enantioselective total synthesis of parnafungin A1 and 10a-epi-hirtusneanine” *Chem. Sci.* **2021**, doi: 10.1039/D1SC02919C
- 22 Fen Wan, Nan Wang, Yuxin Zhu, Chuyan Tang, Jarome P. Claverie,* **Wenjun Tang*** Enantioselective Hydrogenation of Cyclic Tetrasubstituted-Olefinic Dehydroamino Acid Derivatives *Chem. Commun.* **2021**, 57, 5546-5549.
- 23 Henian Peng, Tiejun Li; Duanshuai Tian, He Yang, Guangqing Xu, **Wenjun Tang*** Metal-Free Reduction of Unsaturated Carbonyls, Quinones, and Pyridinium Salts with Tetrahydroxydiboron/Water *Org. Biomol. Chem.* **2021**, 19, 4327-4337.
- 24 Ronghua Xu, Zhenhua Gao, Yiteng Yu, Yehua Tang; Duanshuai Tian, Tian Chen, Yibing Chen, Guangqing Xu,* Enxue Shi,* **Wenjun Tang**,* A Facile and Practical Preparation of P-Chiral Phosphine Oxides *Chem. Commun.* **2021**, 57, 3335-3338.
- 25 Jiawei Sun, He Yang,* **Wenjun Tang*** Recent advances in total syntheses of complex dimeric natural products *Chem. Soc. Rev.* **2021**, 50, 2320-2336.
- 26 Fen Wan, **Wenjun Tang*** Phosphorus Ligands from the Zhang Lab: Design, Asymmetric Hydrogenation, and Industrial Applications *Chin. J. Chem.* **2021**, 39, 954-968.
- 27 Ting Wu, **Wenjun Tang*** “Construction of Bridged Polycyclic Skeletons via Transition-Metal Catalyzed Carbon-Carbon Bond-Forming Reaction” *Chem. Eur. J.* **2021**, 27, 3944-3956.

- 28 Muinat A. Aliyu, Bowen Li, He Yang, **Wenjun Tang*** Palladium-catalyzed reductive cross-coupling between α -bromo carboxamides and terminal alkynes *Org. Chem. Front.* **2020**, 7, 3505-3508.
- 29 Kaidi Li, Ming Nie, **Wenjun Tang*** "Synthesis of α -tertiary allylsilanes by palladium-catalyzed hydrosilylation of 1,1-disubstituted allenes" *Green Synth. Catal.* **2020**, 1, 171-174.
- 30 Hanxiao Yu, He Yang,* Enxue Shi,* **Wenjun Tang*** "Development and Clinical Application of Phosphorus-Containing Drugs" *Med. Drug. Discov.* **2020**, 8, 100063.
- 31 Bowen Li, Muinat Aliyu, Zhenhua Gao, Tiejun Li, Wei Dong, Junchen Li, Enxue Shi,* **Wenjun Tang*** "A General Synthesis of Chiral α,α -Diaryl Carboxamides by Enantioselective Palladium-Catalyzed Cross-Coupling *Org. Lett.* **2020**, 13, 4974-4978.
- 32 Ting Wu, Xuehua Kang, Heng Bai, Wenrui Xiong, Guangqing Xu, **Wenjun Tang*** Enantioselective Construction of Spiro Quaternary Carbon Stereocenters via Pd-Catalyzed Intramolecular α -Arylation *Org. Lett.* **2020**, 22, 4602-4607.
- 33 Chao Qian, **Wenjun Tang*** A Versatile Synthesis of Vinyl-substituted Heterocycles via Regio- and Enantioselective Pd-Catalyzed Tandem Allylic Substitution *Org. Lett.* **2020**, 22, 4483-4488.
- 34 Mingkang Zhou, Kaidi Li, Dongping Chen, Ronghua Xu, Guangqing Xu,* **Wenjun Tang*** Enantioselective Reductive Coupling of Imines Templated by Chiral Diboron *J. Am. Chem. Soc.* **2020**, 142, 10337-10342.
- 35 He Yang, Jiawei Sun, Wei Gu, **Wenjun Tang***, Enantioselective Cross-Coupling for Axially Chiral Tetra-*ortho*-Substituted Biaryls and Asymmetric Synthesis of Gossypol" *J. Am. Chem. Soc.* **2020**, 142, 8036-8043.
- 36 Ziyue Liu, Tiejun Li, Jianhong Zhao,* **Wenjun Tang*** A Substituted Tricyclohexylphosphane with "conformational lock" *Tetrahedron* **2020**, 76, 131216.
- 37 Ronghua Xu, He Yang*, **Wenjun Tang***, "Efficient Synthesis of Chiral Drugs Facilitated by P-Chiral Phosphorus Ligands", *Chin. J. Org. Chem.* **2020**, 14, 581 (Account)
- 38 "P-Chiral Phosphorus Ligands for Cross-Coupling and Asymmetric Hydrogenation Reactions" Ting Wu, Guangqing Xu, **Wenjun Tang***, *Aldrichimica ACTA* **2020**, 53, 27.
- 39 "Enantioselective Formation of Quaternary Carbon Stereocenters in Natural Product Synthesis: A Recent Update" Chengxi Li, Sherif Shaban Ragab, Guodu Liu,* **Wenjun Tang***, *Nat. Prod. Rep.* **2020**, 37, 276.
- 40 "Expedite Construction of Various Bridged Polycyclic Skeletons by Palladium-Catalyzed Dearomatization" Xingye Mu, Henian Peng, Wenrui Xiong, Ting Wu, **Wenjun Tang*** *Angew. Chem. Int. Ed.* **2020**, 59, 8143-8147.
- 41 "Efficient Enantioselective Syntheses of Chiral Natural Products Facilitated by Ligand Design" He Yang, **Wenjun Tang*** *Chem. Rec.* **2020**, 20, 23-40.
- 42 "Enantioselective Rhodium-Catalyzed Addition of Arylboroxines to N-Unprotected Ketimines: Efficient Synthesis of Cipargamin" Jinbin Zhu, Linwei Huang, Wei Dong, Naikai Li, Xingxin Yu, Wei-Ping Deng,* **Wenjun Tang*** *Angew. Chem. Int. Ed.* **2019**, 16119-16123.

- 43 “Stereo-electronic Effects in Ligand Design: Enantioselective Rhodium-Catalyzed hydrogenation of Aliphatic Cyclic Tetrasubstituted Enamides and Concise Synthesis of (R)-Tofacitinib” Chengxi Li, Feng Wan, Yuan Chen, Henian Peng, **Wenjun Tang**,* Shu Yu,* J. Christopher McWilliams,* Jason Mustakis, Lacey Samp, Robert J. Maguire, *Angew. Chem. Int. Ed.* **2019**, 58, 13573-13583.
- 44 “Enantioselective Palladium-Catalyzed Cross-Coupling between α -Bromo Carboxamides and Arylboronic Acids” Bowen Li, Tiejun Li, Myinat A. Aliyu, Zhen Hua Li, **Wenjun Tang*** *Angew. Chem. Int. Ed.* **2019**, 58, 11355-11359.
- 45 “P-Chiral Phosphorus Ligands on the Basis of a 2,3-Dihydrobenzo[d][1,3]oxaphosphole Motif for Asymmetric Catalysis” Guangqing Xu, Chris H. Senanayake, **Wenjun Tang*** *Acc. Chem. Res.* **2019**, 52, 1101-1112.
- 46 “P-Chiral Monophosphorus Ligands for Asymmetric Copper-Catalyzed Allylic Alkylation” Wenrui Xiong, Guangqing Xu, Xinhong Yu*, **Wenjun Tang*** *Organometallics* **2019**, 38, 4003.
- 47 “Enantioselective palladium-catalyzed C(sp²)-H carbamoylation” Wenfeng Dong, Guangqing Xu, **Wenjun Tang*** *Tetrahedron* **2019**, 75, 3239-3247.
- 48 “Ligand-free nickel-catalyzed Kumada couplings of aryl bromides with *tert*-butyl Grignard reagents” Zhenghan Wu, Tengda Si, Guangqing Xu, Bin Xu,* **Wenjun Tang*** *Chin. Chem. Lett.* **2019**, 30, 597–600. .
- 49 “Efficient Nickel-Catalyzed Regioselective Enantioselective Intramolecular Reductive Cyclization of N-Alkynones” Guodu Liu, Wenzhen Fu, Xingye Mu, Ting Wu, Ming Nie, Kaidi Li, Xiaodong Xu, **Wenjun Tang*** *Communication. Chemistry* **2018**, 1, 90. DOI: 10.1038/s42004-018-0092.
- 50 “Optically active N-Alkyl Aziridines via Stereospecific Reductive Cyclization of α -Mesylated Acetamides” Duanshuai Tian, Henian Peng, Ziyue Liu, **Wenjun Tang*** *Org. Chem. Front.* **2018**, 5, 2723-2727.
- 51 “Efficient Synthesis of (-)-Corynoline by Enantioselective Palladium Catalyzed α -Arylation with Sterically Hindered Substrates” Xiaofeng Rao,§ Naikai, Li,§ Heng Bai,§ Chaodi Dai, Zheng Wang, **Wenjun Tang*** *Angew. Chem. Int. Ed.* **2018**, 57, 12328-12332.
- 52 “Stereospecific Nucleophilic Substitution with Arylboronic Acids as Nucleophiles in the Presence of a CONH Group” Duanshuai Tian,§ Chengxi Li,§ Guoxian Gu, Henian Peng, Xumu Zhang,* **Wenjun Tang*** *Angew. Chem. Int. Ed.* **2018**, 57, 7176-7180.
- 53 “Asymmetric Construction of 3-Azabicyclo[3.1.0]hexane Skeleton with Five Contiguous Stereogenic Centers by Cu-Catalyzed 1,3-Dipolar Cycloaddition of Trisubstituted Cyclopropenes” Hua Deng, Wu-Lin Yang, Fei Tian, Wenjun Tang, Wei-Ping Deng,* *Org. Lett.* **2018**, 20, 4121-4125.
- 54 “Enantioselective Synthesis of Chiral-at-Cage o-carborane via Pd-Catalyzed Asymmetric B-H Substitution” Ruofei Chen, Bowen Li, Jie Wu, Jie Zhang, Zaozao Qiu, **Wenjun Tang**, Shu-Li You, Yong Tang, Zuowei Xie *J. Am. Chem. Soc.* **2018**, 140, 4508-4511.

- 55 "Asymmetric Synthesis of 3,4-Dihydroquinolin-2-ones via a Stereoselective Palladium-Catalyzed Decarboxylative [4+2] Cycloaddition" Jing-Hai Jin, Hao Wang, Zhong-Tao Yang, Wu-Lin Yang, **Wenjun Tang**,* Wei-Ping Deng* *Org. Lett.* **2018**, *20*, 104-107.
- 56 "Efficient P-Chiral Biaryl Bisphosphorus Ligands for Palladium-Catalyzed Asymmetric Hydrogenation" Wenhao Jiang, Qing Zhao, **Wenjun Tang*** *Chin. J. Chem.* **2018**, *36*, 153-156.
- 57 "Efficient Cross-Coupling of Aryl/Alkenyl Triflates with Acyclic Secondary Alkylboronic Acids" Tengda Si, Bowen Li, Wenrui Xiong, Bin Xu*, **Wenjun Tang*** *Org. Bioorg. Chem.* **2017**, *15*, 9903-9909.
- 58 "Practical and Asymmetric Reductive Coupling of Isoquinolines Templated by Chiral Diborons" Dongping Chen, Guangqing Xu, Qinghai Zhou, Lung Wa Chung, **Wenjun Tang*** *J. Am. Chem. Soc.* **2017**, *139*, 9767-9770.
- 59 Total Synthesis and Stereochemical Assignment of Delavatine A: Rh-Catalyzed Asymmetric Hydrogenation of Inden-Type Tetrasubstituted Olefins and Kinetic Resolution through Pd-Catalyzed Triflamide-Directed C-H Olefination" Zhongyin Zhang, Jinxin Wang, Jian Li, Fan Yang, **Wenjun Tang**, Weiwei He, Jian-Jun Fu, Yun-Heng Shen, Ang Li, Wei-Dong Zhang, *J. Am. Chem. Soc.* **2017**, *139*, 5558-5567.
- 60 "Efficient Syntheses of (-)-Crinine and (-)-Aspidospermidine, and the Formal Synthesis of (-)-Minfiensine by Enantioselective Intramolecular Dearomative Cyclization" Kang Du, He Yang, Pan Guo, Liang Feng, Guangqing Xu, Qinghai Zhou, Lung Wa Chung, **Wenjun Tang*** *Chem. Sci.* **2017**, *8*, 6247-6256.
- 61 "Enantioselective Palladium-Catalyzed Diboration of 1,1-Disubstituted Allenes" Jiawang Liu, Ming Nie, Qinghai Zhou, Shen Gao, Wenhao Jiang, Lung Wa Chung,* **Wenjun Tang**,* Kuiling Ding,* *Chem. Sci.* **2017**, *8*, 5161-5165.
- 62 "Efficient Enantioselective Syntheses of (+)-Dalesconol A & B" Guoqing Zhao, Guangqing Xu, Chao Qian, **Wenjun Tang*** *J. Am. Chem. Soc.* **2017**, *139*, 3360-3363.
- 63 "Sequential C-H Arylation and Enantioselective Hydrogenation Enables Ideal Asymmetric Entry to the Indenopiperidine Core of an 11 β -HSD-1 Inhibitor" Xudong Wei, **Wenjun Tang** et al. *J. Am. Chem. Soc.* **2016**, *138*, 15473-15481.
- 64 "Transition-Metal-Free Stereospecific Cross-Coupling with Alkenylboronic Acids as Nucleophiles" Chengxi Li, Yuanyuan Zhang, Qi Sun, Tongnian Gu, Henian Peng, **Wenjun Tang*** *J. Am. Chem. Soc.* **2016**, *138*, 10774-10777.
- 65 "Highly Enantioselective Rhodium-Catalyzed Addition of Arylboroxines to Simple Ketones: Efficient Synthesis of Escitalopram" Linwei Huang, Jinbin Zhu, Guangjun Jiao, Zheng Wang, Xinxin Yu, Wei-Ping Deng,* **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2016**, *55*, 4527.
- 66 "Synthesis of Chiral 1,4-Benzodioxanes and Chromans by Enantioselective Palladium-Catalyzed Alkene Aryloxyarylation" Naifu Hu, Ke Li, Zheng Wang, **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2016**, *55*, 5044.
- 67 "Transition-Metal-Free Stereospecific Cross-Coupling with Alkenylboronic Acids as Nucleophiles". Chengxi Li, Yuanyuan Zhang, Qi Sun, Tongnian Gu, Henian Peng, **Wenjun Tang*** *J. Am. Chem. Soc.* **2016**, *138*, 15473-15481

- 68 “Addressing the Challenges in Suzuki–Miyaura Cross-Couplings by Ligand Design” Chengxi Li, Dongping Chen, **Wenjun Tang*** *Synlett* **2016**, 27, 2183-2200 (*invited account*)
- 69 “Chiral Monophosphorus Ligands for Asymmetric Catalytic Reactions” Wenzhen Fu, **Wenjun Tang*** *ACS Catal.* **2016**, 6, 4814 (*invited review*)
- 70 “Transition-metal catalyzed asymmetric carbon–carbon cross-coupling with chiral ligands” He Yang, Xingtong Yang, **Wenjun Tang*** *Tetrahedron* **2016**, 72, 6143 (*invited review*).
- 71 “Synthesis of Triptoquinone H and its C-5 Epimer via Efficient Asymmetric Dearomative Cyclization” Zhen Cao, Kang Du, Jianhui Liu,* **Wenjun Tang*** *Tetrahedron* **2016**, 72, 1782-1786.
- 72 “Efficient synthesis of chiral biaryls via asymmetric Suzuki-Miyaura cross-coupling of ortho-bromo aryl triflates” Xingtong Yang, Guangqing Xu, **Wenjun Tang*** *Tetrahedron* **2016**, 72, 5178-5183(*Invited paper*).
- 73 “Enantioselective Nickel-Catalyzed Alkylative Alkyne-Aldehyde Cross-Couplings” Ming Nie, Wenzhen Fu, Ziping Cao, **Wenjun Tang*** *Org. Chem. Front.* **2015**, 2, 1322-1325.
- 74 “Efficient Synthesis of P-Chiral Biaryl Phosphonates by Stereoselective Intramolecular Cyclization” Guangqing Xu, Minghong Li, Shouliang Wang, **Wenjun Tang*** *Org. Chem. Front.* **2015**, 2, 1342-1345.
- 75 “Concise and Practical Asymmetric Synthesis of a Challenging Atropisomeric HIV Integrase Inhibitor” Keith R. Fandrick, Wenjie Li, Yongda Zhang, Wenjun Tang, Joe Gao, Sonia Rodriguez, Nitinchandra D. Patel, Diana C. Reeves, Jiang-Ping Wu, Sanjit Sanyal, Nina Gonnella, Bo Qu, Nizar Haddad, Jon C. Lorenz, Kanwar Sidhu, June Wang, Shengli Ma, Nelu Grinberg, Heewon Lee, Youla Tsantrizos, Marc-André Poupart, Carl A. Busacca, Nathan K. Yee, Bruce Z. Lu, Chris H. Senanayake *Angew. Chem., Int. Ed.* **2015**, 54, 7144-7148
- 76 “Synthesis of Chiral α -Amino Tertiary Boronic Esters by Enantioselective Hydroboration of α -Arylenamides” Naifu Hu,† Guoqing Zhao,† Yuanyuan Zhang, Xiangqian Liu, Guangyu Li, **Wenjun Tang*** *J. Am. Chem. Soc.* **2015**, 137, 6746-6749.
- 77 “Concise and Practical Asymmetric Synthesis of a Challenging Atropisomeric HIV Integrase Inhibitor” Keith R. Fandrick, Wenjun Tang, et al. *Angew. Chem. Int. Ed.* **2015**, 54, 7144-7148.
- 78 “Enantioselective Palladium-Catalyzed Dearomative Cyclization for Efficient Synthesis of Terpenes and Steroids” Kang Du, Pan Guo, Yuan Chen, Zheng Cao, **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2015**, 54, 3033 (*hot paper, highlighted by Synfacts*).
- 79 “Efficient Syntheses of Sterically Hindered Acyclic Secondary Alkyl Arenes by Suzuki-Miyaura Cross-Couplings” Chengxi Li, Tianyu Chen, Guolan, Xiao, Bowen Li, **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2015**, 54, 3792.
- 80 “Highly Enantioselective Nickel-Catalyzed Intramolecular Reductive Cyclization of Alkynone” Wenzhen Fu, Ming Nie, Aizhen Wang, **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2015**, 54, 2520. (*Highlighted by Synfacts*)
- 81 “Development of an Enantioselective Hydrogenation Route to (S)-1-(2-(Methylsulfonyl)pyridine-4-yl)propan-1-amine” Jonathan T. Reeves, **Wenjun Tang**, et al. *Org. Process Res. Dev.* **2014**, 18, 904.
- 82 “Development of Efficient Asymmetric Suzuki-Miyaura Couplings and Synthetic Applications” Guangqing Xu, Qing Zhao, **Wenjun Tang*** *Chin. J. Org. Chem.* **2014**, 34, 1919-1940. (*Invited Account, Cover Paper*)
- 83 “Sterically Demanding Aryl-Alkyl Suzuki-Miyaura Coupling” Chengxi Li, Guolan Xiao, Qing Zhao, Huimin Liu, Tao Wang, **Wenjun Tang*** *Org. Chem. Front.* **2014**, 1, 225-229 (highlighted as OCF Cover Paper)
- 84 “Efficient Syntheses of Korupensamine A, B and Michellamine B by Asymmetric Suzuki-Miyaura Coupling Reactions” Guangqing Xu, Wenzhen Fu, Guodu Liu, Chris H. Senanayake, **Wenjun Tang*** *J. Am. Chem. Soc.* **2014**, 136, 570–573 (highlighted as JACS Cover Paper, by Synfacts)
- 85 “Practical Syntheses of N-Acetyl (E)- β -Arylenamides” Zhihua Cai, Guodu Liu, Guangjun Jiao, Chris H. Senanayake, **Wenjun Tang*** *Synthesis* **2013**, 45, 3355-3360.

- 86 “Search for Ideal P-Chiral Phosphorus Ligands for Practical Asymmetric Hydrogenation and Asymmetric Suzuki-Miyaura Coupling” Guodu Liu, Guangqing Xu, Renshi Luo, **Wenjun Tang*** *Synlett*, **2013**, 24, 2465–247. (Synfacts, invited review)
- 87 “Asymmetric Ring-Opening of Oxabenzonorbornadiene with Amines Promoted by a Chiral Iridium-monophosphine catalyst” Renshi Luo, Jianhua Liao, Ling Xie, **Wenjun Tang*** Albert S. C. Chan *Chem. Commun.* **2013**, 49, 9959-9961.
- 88 “A Chiral Ruthenium –Monophosphine Catalyst for Asymmetric Addition of Arylboronic Acids to Aryl Aldehydes” Ke Li, Naifu Hu, Renshi Luo, Weicheng Yuan, **Wenjun Tang*** *J. Org. Chem.* **2013**, 78, 6350-6355.
- 89 “Enantioselective Rhodium-Catalyzed Addition of Arylboronic Acids to Trifluoromethyl Ketones” Renshi Luo, Ke Li, Yuling Hu, **Wenjun Tang*** *Adv. Syn. Cat.* **2013**, 355, 1297-1302 (Highlighted by Synfacts)
- 90 “Design of Phosphorus Ligands with Deep Chiral Pockets: Practical Synthesis fo Chiral β -Arylamines by Asymmetric Hydrogenation” Guodu Liu, Xiangqian Liu, Zhihua Cai, Guangjun Jiao, Guangqing Xu, **Wenjun Tang*** *Angew. Chem., Int. Ed.* **2013**, 52, 4235-4238 (Highlighted in *Chin. J. Org. Chem.*; *Chemistry Portal Highlights*)
- 91 “An Efficient Method for Sterically Demanding Suzuki-Miyaura Coupling Reactions” Qing Zhao, Chengxi Li, Chris H. Senanayake, **Wenjun Tang*** *Chem. Eur. J.*, **2013**, 19, 2261
- 92 “The P-Chiral Phosphane Ligand (MeO-BIBOP) for Efficient and Practical Large-Scale Rh-Catalyzed Asymmetric Hydrogenation of N-Acetyl Enamides with High TONs” Wenjie Li,* Sonia Rodriguez, Adil Duran, Xiufeng Sun, **Wenjun Tang***, Ajith Premasiri, Jun Wang, Kanwar Sidhu, Nitinchandra D. Patel, Jolaine Savoie, Bo Qu, Heewon Lee, Nizar Haddad, Jon C. Lorenz, Larry Nummy, Azad Hossain, Nathan Yee, Bruce Lu, Chris H. Senanayake *Org. Process Res. Dev.* **2013**, 12, 1061-1065.
- 93 “Synthesis of a Sodium-Hydrogen Exchange Type 1 (NHE-1) Inhibitor; an Efficient Cu-catalyzed Conjugated Addition of a Grignard Reagent to an Acetyl Pyridinium Salt.” **Wenjun Tang**, Nitinchandra Patel, Xudong Wei,* Denis Byrne, Ashish Chitroda, Bikshandarkoil Narayanan, Alexander Sienkiewicz, Laurence J. Nummy, Max Sarvestani, Shengli Ma, Nelu Grinberg, Heewon Lee, Soojin Kim, Zhibin Li, Earl Spinelli, Bing-Shiou Yang, Nathan Yee, and Chris H. Senanayake, *Org. Process Res. Dev.* **2013**, 17, 382.
- 94 “Efficient Chiral Monophosphorus Ligands for Asymmetric Suzuki–Miyaura Coupling Reactions” **Wenjun Tang,*** Nitinchandra D. Patel, Guangqing Xu, Xiaobing Xu, Jolaine Savoie, Shengli Ma, Ming-Hong Hao, Santosh Keshipeddy, Andrew G. Capacci, Xudong Wei, Yongda Zhang, Joe J. Gao, Wenjie Li, Sonia Rodriguez, Bruce Z. Lu, Nathan K. Yee, and Chris H. Senanayake *Org. Lett.* **2012**, 14 , 2258–2261
- 95 “A Practical Asymmetric Synthesis of Isopropyl (1*R*,2*S*)-Dehydrocoronamate” **Wenjun Tang,*** Xudong Wei, Nathan K. Yee, Nitinchandra Patel, Heewon Lee, and Chris H. Senanayake, *Org. Proc. Res. Dev.* **2011**, 15, 1207-1211
- 96 “A Mild Palladium-Catalyzed Suzuki Coupling Reaction of Quinoline Carboxylates with Boronic Acid” Wenjie Li,* Joe J. Gao, Yongda Zhang, **Wenjun Tang**, Heewon Lee, Keith R. Fandrick, Bruce Lu, and Chris H Senanayake *Adv. Syn. Cat.* **2011**, 353, 1671-1675.
- 97 “A Facile Synthesis of N-Acetyl Enamides by Reductive Acetylation of Oximes Mediated with Ferrous Acetate: Synthesis of N-(1-(4-Bromophenyl)vinyl)acetamide” **Wenjun Tang,*** Nitinchandra D. Patel, Xudong Wei, Nathan K. Yee, and Chris H. Senanayake *Org. Syn.* **2013**, 90, 62-73.
- 98 “Efficient Monophosphorus Ligands for Palladium-Catalyzed Miyaura Borylation” **Wenjun Tang,*** Santosh Keshipeddy, Yongda Zhang, Xudong Wei, Jolaine Savoie, Nitinchandra D. Patel, Nathan K. Yee, and Chris H. Senanayake *Org. Lett.* **2011**, 13, 1366-1369.
- 99 “Dihydrobenzooxaphosphole-Based Monophosphorus Ligands for Palladium-Catalyzed Amination Reactions” Sonia Rodriguez,* Bo Qu, Nizar Haddad, Diana Reeves, **Wenjun Tang,*** Dhileepkumar Krishnamurthy and Chris H. Senanayake *Adv. Asy. Cat.* **2011**, 353, 533-537

- 100 "A General and Special Catalyst for Suzuki-Miyaura Coupling Processes" **Wenjun Tang**,* Andrew G. Capacci, Xudong Wei, Wenjie Li, Andre White, Nitinchandra D. Patel, Jolaine Savoie, Joe J. Gao, Sonia Rodriguez, Bo Qu, Nizar Haddad, Bruce Z. Lu, Dhileepkumar Krishnamurthy, Nathan K. Yee and Chris H. Senanayake, *Angew. Chem., Int. Ed.* **2010**, 49, 5879-5883. Highlighted as "Synfact of the month" by Synfacts in Nov. 2010.
- 101 "Copper Catalyzed Asymmetric Propargylation of Aldehydes" Daniel R. Fandrick, Keith R. Fandrick, Jonathan T. Reeves, Zhulin Tan, **Wenjun Tang**, Andrew G. Capacci, Sonia Rodriguez, Jinhua J. Song, Heewon Lee, Nathan K. Yee and Chris H. Senanayake, *J. Am. Chem. Soc.* **2010**, 132, 7600-7601.
- 102 "Novel and Efficient Chiral Bisphosphorus Ligands for Rhodium-Catalyzed Asymmetric Hydrogenation" **Wenjun Tang**,* Andrew G. Capacci, Andre White, Shengli Ma, Sonia Rodriguez, Bo Qu, Jolaine Savoie, Nitinchandra Patel, Xudong Wei, Nizar Haddad, Nelu Grinberg, Nathan K. Yee, Dhileep Krishnamurthy, and Chris H. Senanayake, *Org. Lett.* **2010**, 12, 1104-1107. Highlighted by Synfacts.
- 103 "Novel, Tunable, and Efficient Chiral Bisdihydrobenzoxaphosphole Ligands for Asymmetric Hydrogenation" **Wenjun Tang**,* Bo Qu, Andrew Capacci, Sonia Rodriguez, Xudong Wei, Nizar Haddad, Bikashandarkoil Narayanan, Shengli Ma, Nelu Grinberg, Nathan K. Yee, and Chris H. Senanayake, *Org. Lett.* **2010**, 12, 176-179
- 104 "Chromatographic and Spectroscopic Studies on the Chiral Recognition of Sulfated beta-Cyclodextrin as Chiral Mobile Phase Additive." Shengli Ma, Sherry Shen, Nizar Haddad, **Wenjun Tang**, Jing Wang, Heewon Lee, Nathan Yee, Chris Senanayake, Nelu Grinberg, *J. Chromatography A*, **2009**, 1216, 1232-1240
- 105 "A Facile and Practical Synthesis of *N*-Acetyl Enamides" **Wenjun Tang**,* Andrew Capacci, Max Sarvestani, Xudong Wei, Nathan K. Yee, and Chris H. Senanayake, *J. Org. Chem.* **2009**, 74, 9528-9530
- 106 "Formation of 2-Trifluoromethylphenyl Grignard Reagent via Magnesium-Halogen exchange: Process Safety Evaluation and Concentration Effect" **Wenjun Tang**,* Max Sarvestani,* Xudong Wei, Nitinchandra Patel, Bikshandarkoil Narayanan, Laurence J. Nummy, Denis Byrne, Heewon Lee, Nathan Yee, and Chris H. Senanayake, *Org. Proc. Res. Dev.* **2009**, 13, 1426-1430.
- 107 "Development of a Preparative-Scale Asymmetric Synthesis of (R)-p-Tolyl Methyl Sulfoxide for Use in a One-Pot Synthesis of a Drug Intermediate Containing a Trifluoromethyl-Substituted Alcohol Functionality," Zhengxu Han, Jinhua J. Song, Nathan K. Yee, Yibo Xu, **Wenjun Tang**, Jonathan T. Reeves, Zhulin Tan, Xiao-Jun Wang, Bruce Lu, Dhileepkumar Krishnamurthy, Chris H. Senanayake, *Org. Proc. Res. Dev.* **2007**, 11, 605-608.
- 108 "Structure toxicity relationships of synthetic azaspiracid-1 and analogs in mice," Emiko Ito, Michael O. Frederick, Theocharis V. Koftis, **Wenjun Tang**, Goran Petrovic, Taotao Ling, and K. C. Nicolaou, *Harmful Algae* **2006**, 5, 586-591.
- 109 "Total synthesis and structural elucidation of azaspiracid-1. Final assignment and total synthesis of the correct structure of azaspiracid-1," K. C. Nicolaou, Theocharis V. Koftis, Stepan Vyskocil, Goran Petrovic, **Wenjun Tang**, Michael O. Frederick, David Y.-K. Chen, Yiwei Li, Taotao Ling, and Yoichi M. A. Yamada, *J. Am. Chem. Soc.* **2006**, 128, 2859-2872.
- 110 "Total synthesis and structural elucidation of azaspiracid-1. Synthesis-based analysis of originally proposed structures and indication of their non-identity to the natural product," K. C. Nicolaou, David Y.-K. Chen, Yiwei Li, Noriaki Uesaka, Goran Petrovic, Theocharis V. Koftis, Federico Bernal, Michael O. Frederick, Mugesh Govindasamy, Taotao Ling, Petri M. Pihko, **Wenjun Tang**, and Stepan Vyskocil, *J. Am. Chem. Soc.* **2006**, 128, 2258-2267.
- 111 "A catalytic asymmetric three-component 1,4-addition/aldol reaction: Enantioselective synthesis of the spirocyclic system of vannusal A," K. C. Nicolaou, **Wenjun Tang**, Philippe Dagneau, and Raffaella Faraoni, *Angew. Chem., Int. Ed.* **2005**, 44, 3874-3879.
- 112 "Structural revision and total synthesis of Azaspiracid-1, part 2: Definition of the ABCD domain and total synthesis," K. C. Nicolaou, Theocharis V. Koftis, Stepan Vyskocil, Goran Petrovic, Taotao Ling, Yoichi M. A. Yamada, **Wenjun Tang**, and Michael O. Frederick, *Angew. Chem., Int. Ed.* **2004**, 43, 4312-4318.

- 113 “Structural revision and total synthesis of Azaspircad-1, part 1: Intelligence Gathering and tentative proposal,” K. C. Nicolaou, Stepan Vyscoci, Theocharis V. Koftis, Yoichi M. A. Yamada, Taotao Ling, David Y.-K. Chen, **Wenjun Tang**, Goran Petrovic, Michael O. Frederick, Yiwei Li, and Masayuki Sataki, *Angew. Chem., Int. Ed.* **2004**, 43, 4318-4324.
- 114 “Synthesis of a new class of conformationally rigid phosphino-oxazolines: Highly enantioselective ligands for Ir-catalyzed asymmetric hydrogenation,” Duan Liu, **Wenjun Tang**, and Xumu Zhang, *Org. Lett.* **2004**, 6, 513-516.
- 115 “Enantioselective hydrogenation of tetrasubstituted olefines of cyclic β -(acylamino) acrylates” **Wenjun Tang**, Shulin Wu, and Xumu Zhang, *J. Am. Chem. Soc.* **2003**, 125, 9570-9571.
- 116 “A P-chiral-bisphosphine ligand for practical synthesis of β -aryl β -amino acids via asymmetric hydrogenation,” **Wenjun Tang**, Weimin Wang, Yongxiang Chi, and Xumu Zhang, *Angew. Chem., Int. Ed.* **2003**, 42, 3509-3511.
- 117 “New chiral phosphorous ligands for enantioselective hydrogenation,” **Wenjun Tang**, and Xumu Zhang, *Chem. Rev.* **2003**, 103, 3029-3069.
- 118 “Asymmetric hydrogenation of itaconic acid and enol acetate derivatives with the Rh-TangPhos catalyst,” **Wenjun Tang**, Duan Liu, and Xumu Zhang, *Org. Lett.* **2003**, 5, 205-207.
- 119 “A new class of phospholane-oxazoline ligands for Ir-catalyzed asymmetric hydrogenation,” **Wenjun Tang**, Weimin Wang, and Xumu Zhang, *Angew. Chem., Int. Ed.* **2003**, 42, 943-946.
- 120 “Aromatic nucleophilic substitution or CuI-catalyzed coupling route to Martinell Acid,” Dawei Ma, Chengfeng Xia, Jiqing Jiang, Jianhua Zhang, and **Wenjun Tang**, *J. Org. Chem.* **2003**, 68, 442-451.
- 121 “Highly enantioselective hydrogenation of enol acetates catalyzed by Ru-TunaPhos complexes,” Shulin Wu, Weimin Wang, **Wenjun Tang**, Min Lin, and Xumu Zhang, *Org. Lett.* **2002**, 4, 4495-4497.
- 122 “Highly efficient synthesis of chiral beta-amino acid derivatives via asymmetric hydrogenation,” **Wenjun Tang**, and Xumu Zhang, *Org. Lett.* **2002**, 4, 4159-4161.
- 123 “A practical synthesis of 2-amino-2'-hydroxy-1,1'-binaphthyl (NOBIN),” Karsten Korber, **Wenjun Tang**, Xinquan Hu, and Xumu Zhang, *Tetrahedron Lett.* **2002**, 43, 7163-7165.
- 124 “An ortho-substituted BIPHEP ligand and its applications in Rh-catalyzed hydrogenation of cyclic enamides,” **Wenjun Tang**, Yongxiang Chi, and Xumu Zhang, *Org. Lett.* **2002**, 4, 1695-1698.
- 125 “A chiral 1,2-bisphospholane ligand with a novel structural motif: Applications in highly enantioselective Rh-catalyzed hydrogenations,” **Wenjun Tang**, and Xumu Zhang, *Angew. Chem., Int. Ed.* **2002**, 41, 1612-1614.
- 126 “Highly effective chiral ortho-substituted BINAPO ligands (o-BINAPO): Applications in Ru-catalyzed asymmetric hydrogenations of beta-aryl-substituted beta-(acylamino)acrylates and beta-keto esters,” Yong-Gui Zhou, **Wenjun Tang**, Wenbo Wang, Wenge Li, and Xumu Zhang, *J. Am. Chem. Soc.* **2002**, 124, 4952-4953.
- 127 “A new chiral ruthenium complex for catalytic asymmetric cyclopropanation,” **Wenjun Tang**, Xinquan Hu, and Xumu Zhang, *Tetrahedron Lett.* **2002**, 43, 3075-3078.
- 128 “General and stereospecific route to 9-substituted, 8,9-disubstituted, and 9,10-disubstituted analogues of benzolactam-V8,” Dawei Ma, **Wenjun Tang**, Alan P. Kozikowski, Nancy E. Lewin, and Peter M. Blumberg, *J. Org. Chem.* **1999**, 64, 6366-6373.
- 129 “Stereospecific synthesis of 9-substituted benzolactam-V8 from L-tyrosine via orientation transfer of aromatic nitration,” Dawei Ma, and **Wenjun Tang**, *Tetrahedron Lett.* **1998**, 39, 7369-7372.

BOOK CHAPTERS

1. "Asymmetric Synthesis of Axially Chiral Natural Products" He Yang and **Wenjun Tang**. In Book "Axially Chiral Compounds", Edited by Bin Tan, Wiley-VCH, **2021**
2. "Synthesis of Heteroatom Stereocenters by Enantioselective C–H Functionalization" Zhen Cao, and **Wenjun Tang**. In Book "Handbook of CH-Functionalization", Edited by Debabrata Maiti. Wiley-VCH, **2021**.
3. "Chiral monophosphorus ligands" Wenjun Tang, Feng Wan, He Yang, In book "Chiral Ligands: Evolution of Ligand Libraries for Asymmetric Catalysis", pa77-105, Editor: Montserrat Diéguez, CRC press, Boca Raton, USA, **2021**
4. "The other bisphosphine ligands for enantioselective alkene hydrogenation," Yongxiang Chi, **Wenjun Tang**, and Xumu Zhang, In Book "Handbook of Homogeneous Hydrogenation", pa 853-882, Editor(s): De Vries, Johannes G.; Elsevier, Cornelis J., Wiley-VCH, Weinheim, Germany, **2007**.
5. "Rhodium-catalyzed asymmetric hydrogenation," Yongxiang Chi, **Wenjun Tang**, and Xumu Zhang, In Book "*Modern Rhodium-Catalyzed Organic Reactions*", pa 1-31, Editor: P. Andrew Evans, Wiley-VCH, Weinheim, Germany, **2005**.

DISSERTATIONS

1. "Development of efficient chiral ligands for asymmetric catalysis," **Wenjun Tang**, The Pennsylvania State University, **2003**.
2. "Synthetic studies of benzolactam V8 derivatives," **Wenjun Tang**, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, **1998**.

PATENTS

1. "Bis(pinacolato)diboron, preparation method thereof, intermediate thereof and application thereof" **Wenjun Tang**, Guangqing Xu, Mingkang Zhou CN111440205 A
2. "Chiral bisphosphine ligand, its preparation method, its intermediate, and its application" **Wenjun Tang**, Wenzhen Fu, Guodu Liu, CN109293700A
3. "Method for synthesizing chiral 1,2-diamine compounds" **Wenjun Tang**, Dongping Chen, Guangqing Xu, CN108929268 A
4. "Preparation method of metal complex applied to asymmetric hydrogenation of cyclic alkyl tetrasubstituted alkenyl amide, and key intermediate of tofacitinib" **Wenjun Tang**, Chengxi Li, Feng Wan, CN107445999 A
5. "Bidentate phosphine-phosphine oxide ligand and metal catalyst containing the ligand for use in Suzuki-Miyaura coupling reaction to synthesize non-cyclic alkyl aromatics and catalytic synthesis of gossypol" **Wenjun Tang**, Chengxi Li, CN104650145 A
6. "Preparation of polymeric phosphine ligand for transition metal complexes" **Wenjun Tang**, Wenfeng Dong, CN114805674 A
7. "Oxycodone compound, and its intermediate and preparation method" **Wenjun Tang**, He Yang, CN114573508 A
8. "Bidentate phosphine-phosphine oxide ligand and its intermediate, preparing method and application" **Wenjun Tang**, Bowen Li, CN111848680 A
9. "Preparation of gossypol, derivatives and intermediates thereof" **Wenjun Tang**, He Yang, CN111848374 A
10. "Phosphine ligand and preparation method thereof, and application in catalytic synthesis of ortho-tetra-substituted biaromatics" **Wenjun Tang**, He Yang, CN111662331 A

11. "Metal complex, intermediate, and preparation method and application thereof" **Wenjun Tang**, Siyao Xu, CN11018918 A
12. "Preparation of chiral heterocyclic compound" **Wenjun Tang**, Chao Qiao, CN110452183 A
13. "Tertiary amine compound and its intermediate, diphosphine ligand, and their preparation method" **Wenjun Tang**, Jinbin Zhu, CN110437230 A
14. "Benzodiazepinephospholephosphine oxide ligand and complex, preparation method and its application" **Wenjun Tang**, Tengda Si, Bowen Li, CN109096338 A
15. "Biaryl diphosphine ligand, its preparation method and its application" **Wenjun Tang**, Wenhao Jiang, CN107827929 A
16. "Aryl substituted alcohols and synthetic methods of escitalopram" **Wenjun Tang**, Lingwei Huang, Jinbin Zhu, ZL201610056390.3, CN105732249
17. "Transition metal complexes and preparation of chiral α -amino boronic esters" **Wenjun Tang**, Naifu Hu, Guoqing Zhao, ZL201510206929.4, CN106146543
18. "An expedite method for the synthesis of 3,4-disubstituted-2,3-dihydro[d][1,3]oxophosphole" **Wenjun Tang**, Wenzhen Fu, ZL201310504826.7, CN104558038
19. "P-chiral Phosphorus ligands, their metal complexes, and applications" **Wenjun Tang**, Guodu Liu, ZL201310020371.1, CN103087105.
20. "Method for stereoselective synthesis of 1,4-protected 9-hydroxy-5-oxo-1,4-diaza-spiro[5,5]undecanes" Juergen Schnaubelt, **Wenjun Tang**, WO2013117568
21. "Monophosphorus Ligands and Their Use in Cross-Coupling Reactions" Nizar Haddad, Bo Qu, Chris H. Senanayake, **Wenjun Tang**, Xudong Wei, Nathan K. Yee, PCT Int. Appl. (2011), WO 2011126917 (major contributor)
22. "Novel Chiral Phosphorus Ligands" Bo Qu, Chris H. Senanayake, **Wenjun Tang**, Xudong Wei, Nathan K. Yee, PCT Int. Appl. (2011), 53pp. WO 2011056737 (major contributor)
23. "A Process for the Preparation of Quinoline Derivatives for Use as HIC Intergrase Inhibitors" Wenjie Li, Philomen De Croos, Keith R. Fandrick, Joe Ju Gao, Nizar Haddad, Zhi-Hui Lu, Bo Qu, Sonia Rodriguez, Chris H. Senanayake, Yongda Zhang, **Wenjun Tang**, PCT Int. Appl. (2012), WO 2012138670.
24. "Process for preparation of alkoxybromochloroarylquinolines from alkoxydichloroquinolines" Nitinchandra D. Patel, Chris H. Senanayake, **Wenjun Tang**, Xudong Wei, Nathan K. Yee, PCT Int. Appl. (2010), 29pp. WO 2010129451
25. "Process for preparation of (S)-3-[4-(benzyloxy)-3,5-dimethylphenyl]-2-[4-(2-oxo-4,5-dihydro-1H-benzo[d][1,3]diazepin-3(2H)-yl)piperidine-1-carbonyloxy]propanoic aci and related compounds." Nizar Haddad, Dhileepkumar Krishnamurthy, Diana C. Reeves, Chris H. Senanayake, **Wenjun Tang**, Nathan K. Yee, PCT Int. Appl. (2010), 24pp. WO 2010048138
26. "Synthesis of 3-aminotetrahydrofuran-3-carboxylic acid derivatives for use as medicaments," Han, Zhengxu; Gerlach, Kai; Krishnamurthy, Dhileepkumar; Matthes, Burkhard; Nar, Herbert; Priepke, Henning; Schuler-Metz, Annette; Senanayake, Chris H.; Sieger, Peter; **Tang, Wenjun**; Wienen, Wolfgang; Xu, Yibo; Yee, Nathan K. PCT Int. Appl. (2008), 178pp. WO 2008080891
27. "Processes for the preparation of glucopyranosyl-substituted benzyl or benzene derivatives," Matthias Eckhardt, Frank Himmelsbach, Xiao-Jun Wang, Xiufeng Sun, Li Zhang, **Wenjun Tang**, Dhileepkumar Krishnamurthy, Chris H. Senanayake, Zhengxu Han, PCT Int. Appl. (2006), 88pp. WO 2006120208

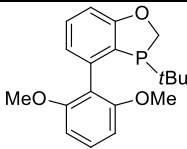
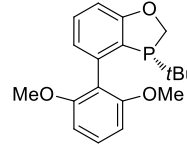
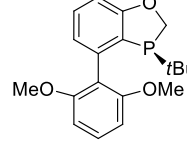
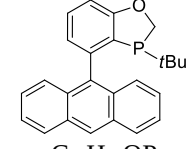
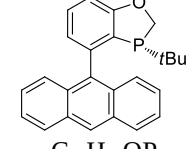
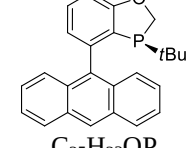
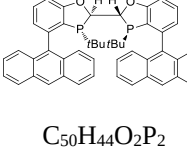
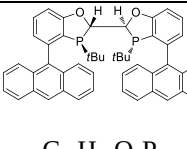
28. “Preparation of chiral cyclic amino acids and derivatives,” Xumu Zhang and **Wenjun Tang**, US Pat. Appl. Publ. (2004), US

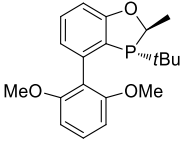
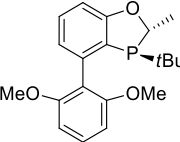
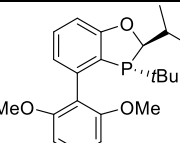
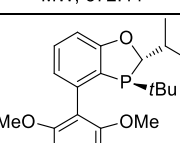
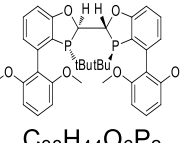
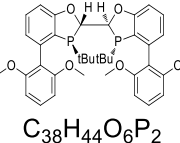
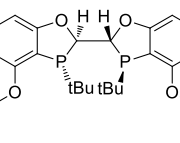
List of commercialized ligands						
No	Nickname	Full name	Structure	CAS No.	Spec.	Cat. No.

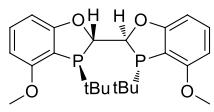
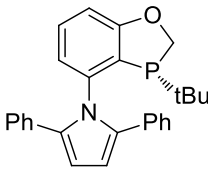
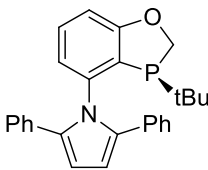
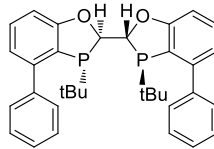
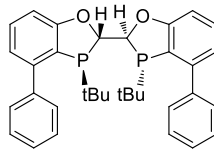
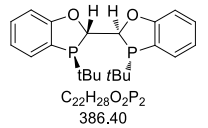
2004242889.

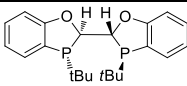
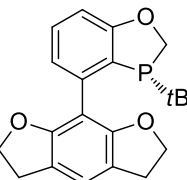
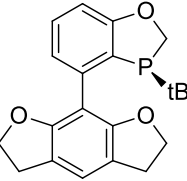
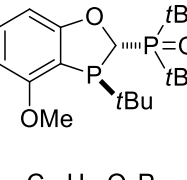
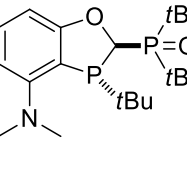
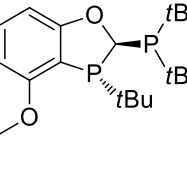
29. “P-Chiral phospholanes and phosphocyclic compounds and their use in asymmetric catalytic reactions” Xumu Zhang and **Wenjun Tang**, US Pat. Appl. Publ. (2004), US 2004229846.

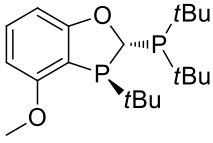
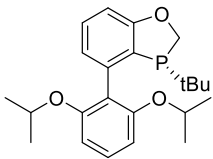
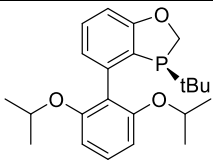
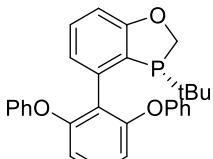
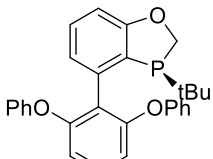
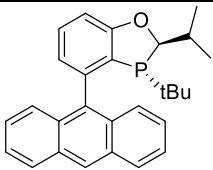
30. “P-Chiral phospholanes and phosphocyclic compounds and their use in asymmetric catalytic reactions” Xumu Zhang and **Wenjun Tang**, PCT Int. Appl. (2003) WO 2003042135.

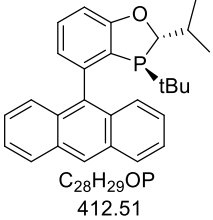
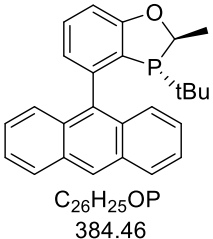
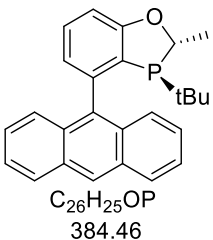
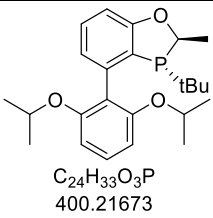
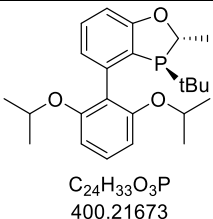
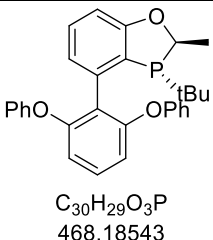
1	<i>rac</i> -BIDIME	3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₁₉ H ₂₃ O ₃ P MW: 330.36	1246888-90-3	97% purity	ZJ-0011
2	(<i>R</i>)-BIDIME	(<i>R</i>)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₁₉ H ₂₃ O ₃ P MW: 330.36	1338454-03-7	97% purity >99% ee	ZJ-0022
3	(<i>S</i>)-BIDIME	(<i>S</i>)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₁₉ H ₂₃ O ₃ P MW: 330.36	1373432-09-7	97% purity >99% ee	ZJ-0018
4	<i>rac</i> -AntPhos	4-(anthracen-9-yl)-3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₂₅ H ₂₃ OP MW: 370.42	1268693-24-8	97% purity	ZJ-0014
5	(<i>R</i>)-AntPhos	(<i>R</i>)-4-(anthracen-9-yl)-3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₂₅ H ₂₃ OP MW: 370.42	1456816-37-7	97% purity >99% ee	ZJ-0026
6	(<i>S</i>)-AntPhos	(<i>S</i>)-4-(anthracen-9-yl)-3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 C ₂₅ H ₂₃ OP MW: 370.42	1807740-34-6	97% purity >99% ee	ZJ-0024
7	(2 <i>R</i> ,2 <i>R</i> ',3 <i>R</i> ,3 <i>R</i> ')-WingPhos	(2 <i>R</i> ,2' <i>R</i> ,3 <i>R</i> ,3' <i>R</i>)-4,4'-di(anthracen-9-yl)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 C ₅₀ H ₄₄ O ₂ P ₂ MW: 738.83	1884680-45-8	97% purity >99% ee	ZJ-0031
8	(2 <i>S</i> ,2 <i>S</i> ',3 <i>S</i> ,3 <i>S</i> ')-WingPhos	(2 <i>S</i> ,2' <i>S</i> ,3 <i>S</i> ,3' <i>S</i>)-4,4'-di(anthracen-9-yl)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 C ₅₀ H ₄₄ O ₂ P ₂ MW: 738.83	1435940-19-4	97% purity >99% ee	ZJ-0032

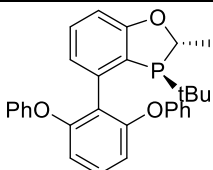
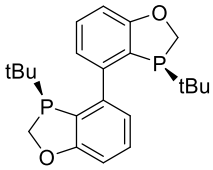
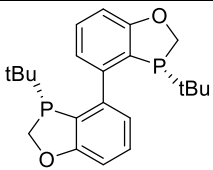
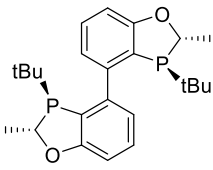
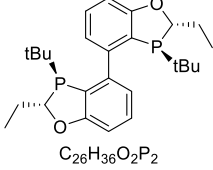
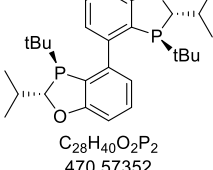
9	(2R,3R)-Me-BIDIME	(2R,3R)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{20}H_{25}O_3P$ MW: 344.38	1477517-18-2	97% purity >99% ee	ZJ-0034
10	(2S,3S)-Me-BIDIME	(2S,3S)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{20}H_{25}O_3P$ MW: 344.38	1373432-11-1	97% purity >99% ee	ZJ-0040
11	(2R,3R)-iPr-BIDIME	(2R,3R)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-isopropyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{22}H_{29}O_3P$ MW: 372.44	1477517-19-3	97% purity >99% ee	ZJ-0036
12	(2S,3S)-iPr-BIDIME	(2S,3S)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-isopropyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{22}H_{29}O_3P$ MW: 372.44	1477517-21-7	97% purity >99% ee	ZJ-0042
13	(2R,2'R,3R,3'R)-Bis-BIDIME	(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-4,4'-bis(2,6-dimethoxyphenyl)-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{38}H_{44}O_6P_2$ 658.70	1884680-48-1	97% purity >99% ee	ZJ-0044
14	(2S,2'S,3S,3'S)-Bis-BIDIME	(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-4,4'-bis(2,6-dimethoxyphenyl)-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{38}H_{44}O_6P_2$ 658.70	1435940-21-8	97% purity >99% ee	ZJ-0046
15	(2R,2'R,3R,3'R)-MeO-BIBOP	(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-4,4'-dimethoxy-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{24}H_{32}O_4P_2$ 446.46	1228758-57-3	97% purity >99% ee	ZJ-0048

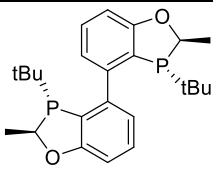
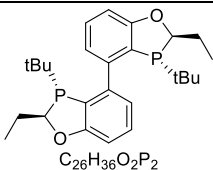
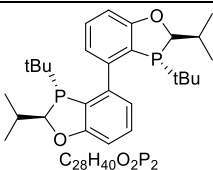
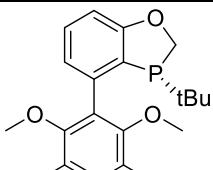
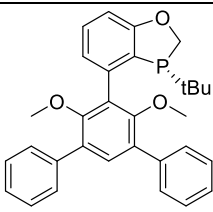
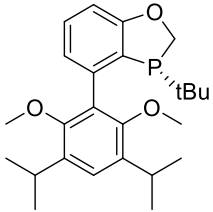
16	(2S,2'S,3S,3'S)-MeO-BIBOP	(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-4,4'-dimethoxy-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{24}H_{32}O_4P_2$ 446.46	1202033-19-9	97% purity >99% ee	ZJ-0050
17		(R)-1-(3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-4-yl)-2,5-diphenyl-1H-pyrrole	 $C_{27}H_{26}NOP$ 411.48	1884457-40-2	97% purity >99% ee	ZJ-0065
18		(S)-1-(3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-4-yl)-2,5-diphenyl-1H-pyrrole	 $C_{27}H_{26}NOP$ 411.48	1683581-58-9	97% purity >99% ee	ZJ-0067
19	(2R,2'R,3R,3'R)-Ph-BIBOP	(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-4,4'-diphenyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{34}H_{36}O_2P_2$ 538.60	2301856-53-9	97% purity >99% ee	ZJ-0069
20	(2S,2'S,3S,3'S)-Ph-BIBOP	(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-4,4'-diphenyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{34}H_{36}O_2P_2$ 538.60	1202033-21-3	97% purity >99% ee	ZJ-0086
21	(2S,2'S,3S,3'S)-BIBOP	(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{22}H_{28}O_2P_2$ 386.40	1202033-17-7	97% purity >99% ee	ZJ-0072

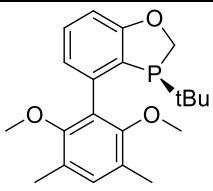
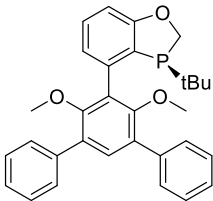
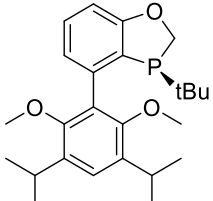
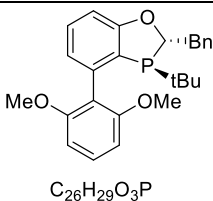
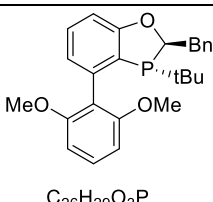
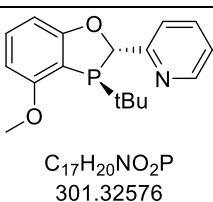
22	(2R,2'R,3R,3'R)-BIBOP	(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-2,2'-bibenzo[d][1,3]oxaphosphole	 $C_{22}H_{28}O_2P_2$ 386.40	1610785-35-7	97% purity >99% ee	ZJ-0075
23		(R)-3-(tert-butyl)-4-(2,3,5,6-tetrahydrobenzo[1,2-b:5,4-b']difuran-8-yl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{23}O_3P$ 354.39	1835717-07-1	97% purity >99% ee	ZJ-0077
24		(S)-3-(tert-butyl)-4-(2,3,5,6-tetrahydrobenzo[1,2-b:5,4-b']difuran-8-yl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{23}O_3P$ 354.39	Unknown	97% purity >99% ee	ZJ-0079
25		di-tert-butyl(3-(tert-butyl)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)phosphine oxide	 $C_{20}H_{34}O_3P_2$ 384.43	1788085-46-0	97% purity	ZJ-0081(rac)
26		di-tert-butyl(3-(tert-butyl)-4-(dimethylamino)-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)phosphine oxide	 $C_{21}H_{37}NO_2P_2$ 397.48	1788085-47-1	97% purity	ZJ-0083(rac)
27	(2S,3R)-MeO-POP	(2S,3R)-3-(tert-butyl)-2-(di-tert-butylphosphino)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{20}H_{34}O_2P_2$ 368.44	1215081-28-9	97% purity >99% ee	ZJ-0087

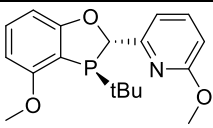
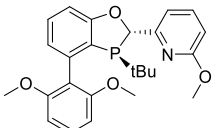
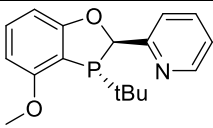
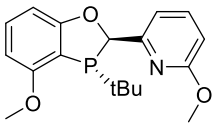
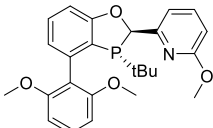
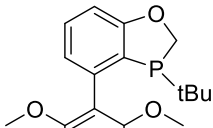
28	(2R,3S)-MeO-POP	(2R,3S)-3-(tert-butyl)-2-(di-tert-butylphosphino)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{20}H_{34}O_2P_2$ 368.44	N/A	97% purity >99% ee	ZJ-0088
29		(R)-3-(tert-butyl)-4-(2,6-diisopropoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{23}H_{31}O_3P$ 386.20	1338454-38-8	97% purity >99% ee	ZJ-0089
30		(S)-3-(tert-butyl)-4-(2,6-diisopropoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{23}H_{31}O_3P$ 386.20	N/A	97% purity >99% ee	ZJ-0090
31		(R)-3-(tert-butyl)-4-(2,6-diphenoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{29}H_{27}O_3P$ 454.17	1441830-74-5	97% purity >99% ee	ZJ-0091
32		(S)-3-(tert-butyl)-4-(2,6-diphenoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{29}H_{27}O_3P$ 454.16978	N/A	97% purity >99% ee	ZJ-0092
33		(2R,3R)-4-(anthracen-9-yl)-3-(tert-butyl)-2-isopropyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{28}H_{29}OP$ 412.51	1891002-60-0	97% purity >99% ee	ZJ-0094

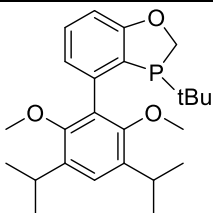
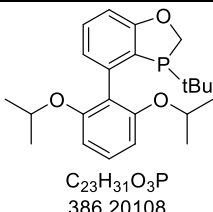
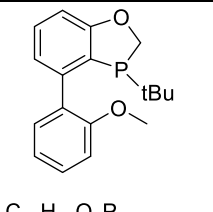
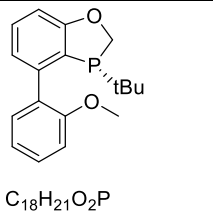
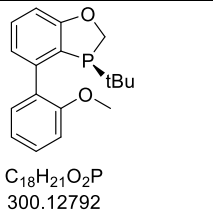
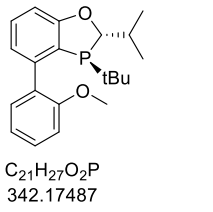
34		(2S,3S)-4-(anthracen-9-yl)-3-(tert-butyl)-2-isopropyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{28}H_{29}OP$ 412.51	1891002-61-1	97% purity >99% ee	ZJ-0096
35		(2R,3R)-4-(anthracen-9-yl)-3-(tert-butyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{26}H_{25}OP$ 384.46	1477517-20-6	97% purity >99% ee	ZJ-0098
36		(2S,3S)-4-(anthracen-9-yl)-3-(tert-butyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{26}H_{25}OP$ 384.46	1884594-02-8	97% purity >99% ee	ZJ-0100
37		(2R,3R)-3-(tert-butyl)-4-(2,6-diisopropoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{24}H_{33}O_3P$ 400.21673	N/A	97% purity >99% ee	ZJ-0101
38		(2S,3S)-3-(tert-butyl)-4-(2,6-diisopropoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{24}H_{33}O_3P$ 400.21673	N/A	97% purity >99% ee	ZJ-0102
39		(2R,3R)-3-(tert-butyl)-4-(2,6-diphenoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{30}H_{29}O_3P$ 468.18543	N/A	97% purity >99% ee	ZJ-0103

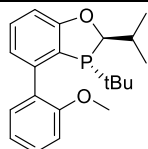
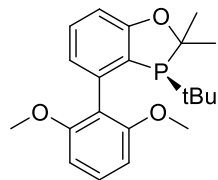
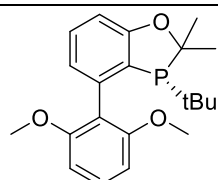
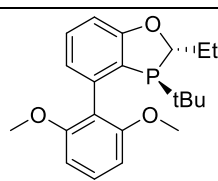
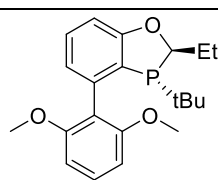
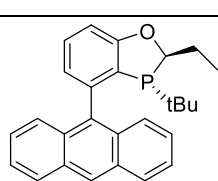
40		(2S,3S)-3-(tert-butyl)-4-(2,6-diphenoxyphenyl)-2-methyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{30}H_{29}O_3P$ 468.18543	N/A	97% purity >99% ee	ZJ-0104
41		(3S,3'S)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{22}H_{28}O_2P_2$ 386.41152	2207601-04-3	97% purity >99% ee	ZJ-0105
42		(3R,3'R)-3,3'-di-tert-butyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{22}H_{28}O_2P_2$ 386.41152	2214207-73-3	97% purity >99% ee	ZJ-0106
43		(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-2,2'-dimethyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{24}H_{32}O_2P_2$ 414.46552	2207601-10-1	97% purity >99% ee	ZJ-0107
44		(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-2,2'-diethyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{26}H_{36}O_2P_2$ 442.51952	N/A	97% purity >99% ee	ZJ-0108
45		(2S,2'S,3S,3'S)-3,3'-di-tert-butyl-2,2'-diisopropyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{28}H_{40}O_2P_2$ 470.57352	2207601-12-3	97% purity >99% ee	ZJ-0109

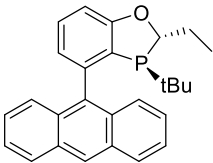
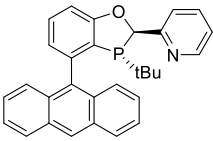
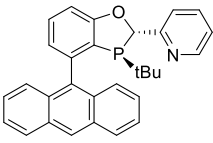
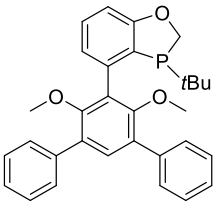
46		(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-2,2'-dimethyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{24}H_{32}O_2P_2$ 414.46552	2214207-74-4	97% purity >99% ee	ZJ-0110
47		(2R,2'R,3R,3'R)-3,3'-di-tert-butyl-2,2'-diethyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{26}H_{36}O_2P_2$ 442.51952	N/A	97% purity >99% ee	ZJ-0111
48		(2R,2'S,3R,3'R)-3,3'-di-tert-butyl-2,2'-diisopropyl-2,2',3,3'-tetrahydro-4,4'-bibenzo[d][1,3]oxaphosphole	 $C_{28}H_{40}O_2P_2$ 470.57352	2214207-75-5	97% purity >99% ee	ZJ-0112
49		(R)-3-(tert-butyl)-4-(2,6-dimethoxy-3,5-dimethylphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	N/A	97% purity >99% ee	ZJ-0113
50		(R)-3-(tert-butyl)-4-(4',6'-dimethoxy-[1,1':3',1''-terphenyl]-5'-yl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{31}H_{31}O_3P$ 482.20108	N/A	97% purity >99% ee	ZJ-0114
51		(R)-3-(tert-butyl)-4-(3,5-diisopropyl-2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{25}H_{35}O_3P$ 414.23238	N/A	97% purity >99% ee	ZJ-0115

52		(S)-3-(tert-butyl)-4-(2,6-dimethoxy-3,5-dimethylphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	2021202-03-7	97% purity >99% ee	ZJ-0116
53		(S)-3-(tert-butyl)-4-(4',6'-dimethoxy-[1,1':3',1''-terphenyl]-5'-yl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{31}H_{31}O_3P$ 482.20108	2021201-99-8	97% purity >99% ee	ZJ-0117
54		(S)-3-(tert-butyl)-4-(3,5-diisopropyl-2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{25}H_{35}O_3P$ 414.23	N/A	97% purity >99% ee	ZJ-0118
55		(2S,3S)-2-benzyl-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{26}H_{29}O_3P$ 420.18543	1373432-13-3	97% purity >99% ee	ZJ-0119
56		(2R,3R)-2-benzyl-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{26}H_{29}O_3P$ 420.18543	1884457-36-6	97% purity >99% ee	ZJ-0120
57		2-((2S,3S)-3-(tert-butyl)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)pyridine	 $C_{17}H_{20}NO_2P$ 301.32576	N/A	97% purity >99% ee	ZJ-0123

58		2-((2S,3S)-3-(tert-butyl)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)-6-methoxypyridine	 $C_{18}H_{22}NO_3P$ 331.35176	1777796-37-8	97% purity >99% ee	ZJ-0125
59		2-((2S,3S)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)-6-methoxypyridine	 $C_{25}H_{28}NO_4P$ 437.47576	2003230-67-7	97% purity >99% ee	ZJ-0127
60		2-((2R,3R)-3-(tert-butyl)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)pyridine	 $C_{17}H_{20}NO_2P$ 301.32576	1542796-07-5	97% purity >99% ee	ZJ-0157
61		2-((2R,3R)-3-(tert-butyl)-4-methoxy-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)-6-methoxypyridine	 $C_{18}H_{22}NO_3P$ 331.35176	1542796-16-6	97% purity >99% ee	ZJ-0159
62		2-((2R,3R)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)-6-methoxypyridine	 $C_{25}H_{28}NO_4P$ 437.47576	N/A	97% purity >99% ee	ZJ-0161
63		3-(tert-butyl)-4-(2,6-dimethoxy-3,5-dimethylphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	N/A	97% purity >99% ee	ZJ-0128

64		3-(tert-butyl)-4-(3,5-diisopropyl-2,6-dimethoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{25}H_{35}O_3P$ 414.23238	N/A	97% purity >99% ee	ZJ-0129
65		3-(tert-butyl)-4-(2,6-diisopropoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{23}H_{31}O_3P$ 386.20108	N/A	97% purity >99% ee	ZJ-0130
66		3-(tert-butyl)-4-(2-methoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{18}H_{21}O_2P$ 300.12792	1246888-88-9	97% purity >99% ee	ZJ-0136
67		(R)-3-(tert-butyl)-4-(2-methoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{18}H_{21}O_2P$ 300.12792	1338454-28-6	97% purity >99% ee	ZJ-0137
68		(S)-3-(tert-butyl)-4-(2-methoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{18}H_{21}O_2P$ 300.12792	N/A	97% purity >99% ee	ZJ-0138
69		(2S,3S)-3-(tert-butyl)-2-isopropyl-4-(2-methoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_2P$ 342.17487	N/A	97% purity >99% ee	ZJ-0139

70		(2R,3R)-3-(tert-butyl)-2-isopropyl-4-(2-methoxyphenyl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_2P$ 342.17487	N/A	97% purity >99% ee	ZJ-0140
71		(S)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,2-dimethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	2227217-19-6	97% purity >99% ee	ZJ-0141
72		(R)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2,2-dimethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	N/A	97% purity >99% ee	ZJ-0142
73		(2S,3S)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-ethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	2247162-97-4	97% purity >99% ee	ZJ-0143
74		(2R,3R)-3-(tert-butyl)-4-(2,6-dimethoxyphenyl)-2-ethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{21}H_{27}O_3P$ 358.16978	N/A	97% purity >99% ee	ZJ-0144
75		2R,3R)-4-(anthracen-9-yl)-3-(tert-butyl)-2-ethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{27}H_{27}OP$ 398.48576	N/A	97% purity >99% ee	ZJ-0145

76		(2S,3S)-4-(anthracen-9-yl)-3-(tert-butyl)-2-ethyl-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{27}H_{27}OP$ 398.48576	1884594-03-9	97% purity >99% ee	ZJ-0146
77		2-((2R,3R)-4-(anthracen-9-yl)-3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)pyridine	 $C_{30}H_{26}NOP$ 447.51776	1542796-14-4	97% purity >99% ee	ZJ-0147
78		2-((2S,3S)-4-(anthracen-9-yl)-3-(tert-butyl)-2,3-dihydrobenzo[d][1,3]oxaphosphol-2-yl)pyridine	 $C_{30}H_{26}NOP$ 447.51776	N/A	97% purity >99% ee	ZJ-0148
79		3-(tert-butyl)-4-(4',6'-dimethoxy-[1,1':3',1''-terphenyl]-5'-yl)-2,3-dihydrobenzo[d][1,3]oxaphosphole	 $C_{31}H_{31}O_3P$ 482.20108	N/A	97% purity >99% ee	ZJ-0162