

PERSONAL:

Name: Lei Wu
Department: Department of Chemistry, College of Sciences
Gender: Male
Degree: Ph.D.
Title: Professor, Doctoral supervisor
Major: Organic Chemistry
Graduated University: Institute of Chemistry, Chinese Academy of Science
Research Field: Synthesis and application of novel organometallic catalysts; Nanomaterials for catalysis (nanosized metal catalysts and MOF); Novel asymmetric catalysis by combinatory metals; Photoredox catalysis by organic dyes
Tel: +86-25-84395351
Email: rickywu@njau.edu.cn



PROFESSIONAL PREPARATIONS:

Nanjing Agricultural University; Aug. 2012-Present; Full Professor in Chemistry, Deputy Dean of College of Sciences, NAU

Harbin Institute of Technology; Sept. 2010-Aug. 2012; Associate Professor in Chemistry

University of Notre Dame (IN, USA); March. 2009-May. 2010; Postdoctoral Research Associate

Syracuse University (NY, USA); Nov. 2007-Feb. 2009; Postdoctoral Research Associate

Institute of Chemistry, Chinese Academy of Science; Sep. 2004-July 2007; Ph.D. (Organic Chemistry), Advisor: Prof. Qing-Hua Fan

AWARDS AND APPOINTMENTS:

2013 “333 High-Talent Project” of Jiangsu Province;

2012 Current Organic Chemistry, Guest Editor;

GRANTS AND PROJECTS:

National Science Foundation of China, No. 21002019; 21372118

NJAU startup funding;

USA: NSF-CMMI (Grant No.:0727491);

PUBLICATIONS:

- (37). Yao-Zhong Chen[#], Jie Zhu[#], Jin-Jin Wu, **Lei Wu***, Organobase Catalyzed Straightforward Synthesis of Phosphinyl Functionalized 2H-Pyran Cores from Allenylphosphine Oxides and 1,3-Diones, *Organic & Biomolecular Chemistry*, **2018**, In Revision. (SCI IF₂₀₁₇: 3.423)
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- (35). Wen-Chao Yang, Kai Wei, Xue Sun, Jie Zhu, **Lei Wu***, Cascade C(sp³)-S Bond Cleavage and Imidoyl C-S Formation: A Radical Cyclization of 2-Isocyanaryl Thioethers toward 2-Substituted Benzothiazoles, *Organic Letters*, **2018**, 20(10), 3144-3147. (SCI IF₂₀₁₇: 6.492)

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- (33). Teng Liu, Xue Sun, **Lei Wu***, Palladium-Catalyzed Cascade C-O Cleavage and C-H Alkenylation of Phosphinyl Allenes: An Expedient Approach to 3-Alkenyl Benzo[*b*]phosphole Oxides, *Advanced Synthesis & Catalysis*, **2018**, 360(10), 2005-2012. (SCI IF₂₀₁₆: 5.646)
- (32). Jie Zhu,* Wen-Chao Yang, Xiao-Dong Wang, **Lei Wu***, Photoredox Catalysis in C-S bonds Construction: Recent Progress in Photo-catalyzed Formation of Sulfones and Sulfoxides, *Advanced Synthesis & Catalysis*, **2018**, 360(3), 386-400. (Front Cover Picture, Selected as "Very Important Publication (VIP)", "ESI Highly Cited Paper", SCI IF₂₀₁₆: 5.646)
- (31). Peng Dai[#], Kai Luo[#], Xiang Yu, Wen-Chao Yang, **Lei Wu***, Wei-Hua Zhang*, Tert-Butyl Nitrite Mediated Expedient Methylsulfoxidation of Tetrazole-amines with DMSO: Metal-free Synthesis of Antifungal Active Methylsulfinyl-1H-tetrazole Derivatives, *Advanced Synthesis & Catalysis*, **2018**, 360(3), 468-473. (SCI IF₂₀₁₆: 5.646)
- (30). Jie Zhu, Xiao-Tao Sun, Xiao-Dong Wang, **Lei Wu***, Enantioselective Dihydroxylation of Alkenes Catalyzed by 1,4-Bis(9-O-dihydroquinidiny)phthalazine-Modified Binaphthyl-Osmium Nanoparticles, *ChemCatChem*, **2018**, 10(8), 1788-1792. (SCI IF₂₀₁₆: 4.803)
- (29). Ling Zhang, Jie Zhu, Jing Ma, **Lei Wu***, Wei-Hua Zhang*, Visible-Light-Driven α -Allenyl C-O Bond Cleavage and Alkenyl C-S Formation: Metal-free and Oxidant-free Thiolation of Allenyl Phosphine Oxides, *Organic Letters*, **2017**, 19(23), 6308-6311. (SCI IF₂₀₁₆: 6.579)
- (28). Yun-Tao Xia, Jing Ma, Xiao-Dong Wang, Lei Yang, **Lei Wu***, Enantioselective Hydrogenation of N-heteroaromatics Catalyzed by Chiral Diphosphines Modified Binaphthyl Palladium Nanoparticles, *Catalysis Science & Technology*, **2017**, 7(23), 5515-5520. (SCI IF₂₀₁₆: 5.773)
- (27). Kai Luo, Ling Zhang, Jing Ma, Qiang Sha, **Lei Wu***, Acetic Acid-Mediated Sulfonylation of Allenylphosphine Oxides: Divergent Synthesis of Bifunctionalized 1,3-Butadienes and Allenes, *Journal of Organic Chemistry*, **2017**, 82(13), 6978-6985. (SCI IF₂₀₁₆: 4.849)
- (26). Wen-Chao Yang, Peng Dai, Kai Luo, Yi-Gang Ji, **Lei Wu***, Aldehydes as Carbon Radical Acceptors: Silver Nitrate Catalyzed Cascade Decarboxylation and Oxidative Cyclization toward Dihydroflavonoid Derivatives, *Advanced Synthesis & Catalysis*, **2017**, 359(14), 2390-2395. (Journal Most Accessed Article in 05/2017, SCI IF₂₀₁₆: 5.646)
- (25). Jie Zhu[#], Mao Mao[#], Huan-Jing Ji, Jiang-Yan Xu, **Lei Wu***, Palladium-catalyzed Cleavage of α -Allenyl Aryl Ether toward Pyrazolemethylene-Substituted Phosphinyl Allenes and Their Transformations via Alkenyl C-P(O) Cleavage, *Organic Letters*, **2017**, 19(8), 1946-1949. (SCI IF₂₀₁₆: 6.579)
- (24). Xiao-Tao Sun[#], Jie Zhu[#], Yun-Tao Xia, **Lei Wu***, Palladium Nanoparticles Stabilized by Metal-Carbon Covalent Bonds as Expedient Heterogeneous Catalyst for Oxidative Dehydrogenation of N-Heterocycles, *ChemCatChem*, **2017**, 9(13), 2463-2466. (SCI IF₂₀₁₆: 4.803)
- (23). Yi-Gang Ji, Kai Wei, Teng Liu, **Lei Wu***, Wei-Hua Zhang*, "Naked" Iridium (IV) Oxide Nanoparticles as Expedient and Robust Catalysts for Hydrogenation of Nitrogen

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- (21). Mao Mao#, Ling Zhang#, Yao-Zhong Chen, Jie Zhu, **Lei Wu***, Palladium-Catalyzed Coupling of Allenylphosphine Oxides with N-Tosylhydrazones toward Phosphinyl [3]Dendralenes, *ACS Catalysis*, **2017**, 7(1), 181-185. (SCI IF₂₀₁₆: 10.614, Open Access, Designated as ACS Editor's Choice, "ESI Highly Cited Paper")
- (20). Yun-Tao Xia, Xiao-Tao Sun, Ling Zhang, Kai Luo, **Lei Wu***, Metal-free Hydrogen Atom Transfer from Water: Expeditious Hydrogenation of N-Heterocycles Mediated by Diboronic Acid, *Chemistry-A European Journal*, **2016**, 22, 17151-17155. (SCI IF: 5.771)
- (19). Wen-Chao Yang, Peng Dai, Kai Luo, **Lei Wu***, Iodide/tert-Butyl Hydroperoxide -Mediated Benzylic C–H Sulfonylation and Peroxidation of Phenol Derivatives, *Advanced Synthesis & Catalysis*, **2016**, 358, 3184-3190. (SCI IF: 6.453)
- (18). Yu Zhang, Jie Zhu, Yun-Tao Xia, Xiao-Tao Sun, **Lei Wu***, Efficient Hydrogenation of N-heterocycles Catalyzed by Carbon-Metal Covalent Bonds Stabilized Palladium Nanoparticles: Synergistic Effects of Particle Size and Water, *Advanced Synthesis & Catalysis*, **2016**, 358, 3039-3045. (SCI IF:6.453)
- (17). Kai Luo, Yao-Zhong Chen, Li-Xian Chen, **Lei Wu***, Autoxidative C(sp²)–P Formation: Direct Phosphorylation of Heteroarenes under Oxygen, Metal-Free, and Solvent-Free Conditions. *Journal of Organic Chemistry*, **2016**, 81, 4682-4689. (Highlighted by ChemInform)
- (16). Kai Luo, Yao-Zhong Chen, Wen-Chao Yang, Jie Zhu, **Lei Wu***, Cross-Coupling Hydrogen Evolution by Visible Light Photocatalysis Toward C(sp²)-P Formation: Metal-free C-H Functionalization of Thiazole Derivatives with Diarylphosphine Oxides, *Organic Letters*, **2016**, 18, 452-455. ("ESI Highly Cited Paper", Highlighted by *ChemInform*)
- (15). Yu Zhang, Mao Mao, Yi-Gang Ji, Jie Zhu, **Lei Wu***, Modular metal–carbon stabilized palladium nanoparticles for the catalytic hydrogenation of N-heterocycles, *Tetrahedron Letters*, **2016**, 57, 329-332.
- (14). Yao-Zhong Chen, Ling Zhang, Ai-Min Lu, Fang Yang and **Lei Wu***, α -Allenyl Ethers as Starting Materials for Palladium Catalyzed Suzuki–Miyaura Couplings of Allenylphosphine Oxides with Arylboronic Acids, *Journal of Organic Chemistry*, **2015**, 80, 673-680.
- (13). Teng Liu, Yun-Tao Xia, Jie Zhu, Ai-Min Lu, **Lei Wu***, Metal-free synthesis of chlorinated and brominated phosphinoyl 1,3-butadiene derivatives and its synthetic applications, *Tetrahedron Letters*, **2015**, 56, 6508-6512.
- (12). Teng Liu, Jie Dong, Shu-Jun Cao, Li-Cheng Guo and **Lei Wu***, Suzuki–Miyaura coupling of phosphinoyl- α -allenic alcohols with arylboronic acids catalyzed by a palladium complex "on water": an efficient method to generate phosphinoyl 1,3-butadienes and derivatives, *RSC Advances*, **2014**, 4, 61722-61726.
- (11). Yi-Gang Ji, **Lei Wu***, Qing-Hua Fan*, Recent Progress of Metal/Metal Oxide Nanoparticles for Asymmetric Hydrogenation and Transfer Hydrogenation, *Acta Chimica Sinica*, **2014**, 72, 798-808.

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- (9). Yan-fei Wang*, Zhanmin Xiao, **Lei Wu***, Metal-nanoparticles Supported on Solid as Heterogeneous Catalysts, *Current Organic Chemistry*, **2013**, *17*, 1325-1333.
- (8). **Lei Wu***, Xiao Zhang, Qing-Qing Chen, An-Kun Zhou, A novel copper-catalyzed reductive coupling of N-tosylhydrazones with H-phosphorus oxides, *Organic & Biomolecular Chemistry*, **2012**, *10*, 7859-7862.
- (7). **Lei Wu***, Xiǎo Zhang and Zhimin Tao, A Mild and Recyclable Nano-sized Catalyst for the Stille Reaction in Water, *Catalysis Science & Technology*, **2012**, *2*, 707-710.
- (6). **Lei Wu***, Jie Ling, Zong-quan Wu, a Highly Active and Recyclable Catalyst: Phosphine Dendrimer-Stabilized Nickel Nanoparticles for the Suzuki Coupling Reaction. *Advanced Synthesis & Catalysis*, **2011**, *353*, 1452-1456.
- (5). **Lei Wu**, Yan-Mei He, Qing-Hua Fan*, Controlled Reversible Anchoring of η^6 -Arene/TsDPEN-Ru(II) Complex onto Magnetic Nanoparticles: A New Strategy for Catalyst Separation and Recycling, *Advanced Synthesis & Catalysis*, **2011**, *353*, 2915-2919.
- (4). **Lei Wu***, A Facile Tandem Reactions to Access β -Hydroxy- α,α -difluoroketone Derivatives Catalyzed by Titanocene Dichloride/ Magnesium, *Journal of Fluorine Chemistry*, **2011**, *132*, 367-372.
- (3). **Lei Wu**, Jyotsana Lal, Karen A. Simon, Erik A. Burton and Yan-Yeung Luk* Non-Amphiphilic Assembly in Water: Polymorphic Nature, Thread Structure and Thermodynamic Incompatibility, *Journal of American Chemical Society*, **2009**, *131*, 7430-7443.
- (2). **Lei Wu**, Zhi-Wei Li, Feng Zhang, Yan-Mei He, Qing-Hua Fan*, Air-Stable and Highly Active Dendritic Phosphine Oxide-Stabilized Palladium Nanoparticles: Preparation, Characterization and Applications in the Carbon-Carbon Bond Formation and Hydrogenation Reactions, *Advanced Synthesis & Catalysis*, **2008**, *350*, 846-862.
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BOOK CHAPTERS:

- (2). **Lei Wu**, Ji Liu, Baode Ma and Qing-Hua Fan, Homogeneous Asymmetric Catalysis Using Immobilized Chiral Catalysts, (BOOK TITLE: Bridging Heterogeneous and Homogeneous Catalysis: Concepts, Strategies, and Applications, Edited by Prof. Can Li), **2014**, Wiley-VCH, P111-148. Book Linkage: <http://www.wiley.com/WileyCDA/WileyTitle/productCd3527335838.subjectCd-CH86.html>
- (1). Yi-Gang Ji, **Lei Wu***, Recyclable Metal Nanoparticulate Catalysts Based on Dendrimers, (BOOK TITLE: Dendrimers: Synthesis, Applications and Role in Nanotechnology) Nova Science Publishers, New York **2013**, P249-263 (Chapter 11). Book Chapter Linkage: https://www.novapublishers.com/catalog/productinfo.php?products_id=44405