

Publication List 01/2021 (Azusa Kondoh)

Original Paper

- (1) "Enantioselective Protonation through Hydrophosphinylation of 1,1-Vinyl Azaheterocycle N-Oxides Catalyzed by Chiral Bis(guanidino)iminophosphorane as Higher Order Organosuperbase" Saikat Das, Qiupeng Hu, [Azusa Kondoh](#), Masahiro Terada*, *Angew. Chem. Int. Ed.* **2021**, 60, 1417–1422.
- (2) "Brønsted Base - Catalyzed Formal Reductive [3+2] Annulation of 4,4,4-Trifluorocrotonate and α -Iminoketones" [Azusa Kondoh](#)*, Masahiro Terada*, *Chem. Eur. J.* **2021**, 27, 585–588.
- (3) "Enantioselective hydrophosphinylation of 1-alkenylphosphine oxides catalyzed by chiral strong Brønsted base" [Azusa Kondoh](#)*, Sho Ishikawa, Masahiro Terada*, *Org. Biomol. Chem.* **2020**, 18, 7814–7817.
- (4) "Synthesis of diarylalkanes through an intramolecular/intermolecular addition sequence by auto-tandem catalysis with strong Brønsted base" [Azusa Kondoh](#)*, Chaoyan Ma, Masahiro Terada*, *Chem. Commun.* **2020**, 56, 10894–10897.
- (5) "Brønsted Base-Catalyzed Transformation of α,β -Epoxyketones Utilizing [1,2]-Phospha-Brook Rearrangement for the Synthesis of Allylic Alcohols Having a Tetrasubstituted Alkene Moiety" [Azusa Kondoh](#), Naoko Tasato, Takuma Aoki, Masahiro Terada*, *Org. Lett.* **2020**, 22, 5170–5175.
- (6) "Synthesis of Tetrasubstituted Furans through One-Pot Formal [3 + 2] Cycloaddition Utilizing [1,2]-Phospha-Brook Rearrangement" [Azusa Kondoh](#), Kohei Aita, Sho Ishikawa, Masahiro Terada*, *Org. Lett.* **2020**, 22, 2105–2110.
- (7) "Development of Chiral Organosuperbase Catalysts Consisting of Two Different Organobase Functionalities" [Azusa Kondoh](#), Masafumi Oishi, Hikaru Tezuka, Masahiro Terada*, *Angew. Chem. Int. Ed.* **2020**, 59, 7472–7477.
- (8) "Development of Chiral Ureates as Chiral Strong Brønsted Base Catalysts" [Azusa Kondoh](#), Sho Ishikawa, Masahiro Terada*, *J. Am. Chem. Soc.* **2020**, 142, 3724–3728.
- (9) "Synthesis of Trisubstituted Allenamides Utilizing 1,2-Rearrangement of Dialkoxyposphoryl Moiety under Brønsted Base Catalysis" [Azusa Kondoh](#), Ryosuke Ozawa, Masahiro Terada*, *Chem. Lett.* **2019**, 48, 1164–1167.
- (10) "Organocatalytic Nucleophilic Substitution Reaction of *gem*-Difluoroalkenes with Ketene Silyl Acetals" [Azusa Kondoh](#), Kazumi Koda, Masahiro Terada*, *Org. Lett.* **2019**, 21, 2277–2280.
- (11) "Enantioselective Intramolecular Nicholas Reaction Catalyzed by Chiral Phosphoric Acid: Enantio-convergent Synthesis of Seven-membered Cyclic Ethers from Racemic Diols" Yusuke Ota, [Azusa Kondoh](#), Masahiro Terada*, *Angew. Chem. Int. Ed.* **2018**, 57, 13917–13921.
- (12) "Efficient Synthesis of Polysubstituted Pyrroles Based on [3+2] Cycloaddition Strategy Utilizing [1,2]-Phospha-Brook Rearrangement under Brønsted Base Catalysis" [Azusa Kondoh](#), Akio Iino, Sho Ishikawa, Takuma Aoki, Masahiro Terada*, *Chem. Eur. J.* **2018**, 24, 15246–15253.
- (13) "Brønsted Base-Catalyzed Reductive Cyclization of Alkynyl α -Iminoesters through Auto-Tandem Catalysis" [Azusa Kondoh](#), Masahiro Terada*, *Org. Lett.* **2018**, 20, 5309–5313.
- (14) "Organocatalytic Arylation of α -Ketoesters Based on Umpolung Strategy: Phosphazene-Catalyzed S_NAr Reaction Utilizing [1,2]-Phospha-Brook Rearrangement" [Azusa Kondoh](#), Takuma Aoki, Masahiro Terada*, *Chem. Eur. J.* **2018**,

- (15) “Chiral Brønsted acid-catalyzed intramolecular S_N2' reaction for enantioselective construction of a quaternary stereogenic center” Masahiro Shimizu, Jun Kikuchi, [Azusa Kondoh](#), Masahiro Terada*, *Chem. Sci.* **2018**, 9, 5747–5757.
- (16) “Enantioselective direct Mannich-type reactions of 2-benzylpyridine N-oxides catalyzed by chiral bis(guanidino)-iminophosphorane organosuperbase” Qiupeng Hu, [Azusa Kondoh](#), Masahiro Terada*, *Chem. Sci.* **2018**, 9, 4348–4351.
- (17) “Enantioselective Formal [3+2] Cycloaddition of Epoxides with Imines under Brønsted Base Catalysis: Synthesis of 1,3-Oxazolidines with Quaternary Stereogenic Center” [Azusa Kondoh](#), Shiori Akahira, Masafumi Oishi, Masahiro Terada*, *Angew. Chem. Int. Ed.* **2018**, 57, 6299–6303.
- (18) “Brønsted Base-Catalyzed Umpolung Intramolecular Cyclization of Alkynyl Imines” [Azusa Kondoh](#), Masahiro Terada*, *Chem. Eur. J.* **2018**, 24, 3998–4001.
- (19) “Intramolecular addition of benzyl anion to alkyne utilizing [1,2]-phospha-Brook rearrangement under Brønsted base catalysis” [Azusa Kondoh](#), Ryosuke Ozawa, Takuma Aoki, Masahiro Terada*, *Org. Biomol. Chem.* **2017**, 15, 7277–7281.
- (20) “Synthesis of Indolizine Derivatives Utilizing [1,2]-Phospha-Brook Rearrangement/Cycloisomerization Sequence” [Azusa Kondoh](#), Kazumi Koda, Yuji Kamata, Masahiro Terada*, *Chem. Lett.* **2017**, 46, 1020–1023.
- (21) “Synthesis of Enantioenriched γ -Amino- α,β -unsaturated Esters Utilizing Palladium-Catalyzed Rearrangement of Allylic Carbamates for Direct Application to Formal [3 + 2] Cycloaddition” [Azusa Kondoh](#), Yuji Kamata, Masahiro Terada*, *Org. Lett.* **2017**, 19, 1682–1685.
- (22) “Generation and Application of Homoenolate Equivalents Utilizing [1,2]-Phospha-Brook Rearrangement under Brønsted Base Catalysis” [Azusa Kondoh](#), Takuma Aoki, Masahiro Terada*, *Chem. Eur. J.* **2017**, 23, 2769–2773.
- (23) “Synthesis of 2,3-allenylamides utilizing [1,2]-phospha-Brook rearrangement and their application to gold-catalyzed cycloisomerization providing 2-aminofuran derivatives” [Azusa Kondoh](#), Sho Ishikawa, Takuma Aoki, Masahiro Terada*, *Chem. Commun.* **2016**, 52, 12513–12516.
- (24) “Enantioconvergent Nucleophilic Substitution Reaction of Racemic Alkyne–Dicobalt Complex (Nicholas Reaction) Catalyzed by Chiral Brønsted Acid” Masahiro Terada*, Yusuke Ota, Feng Li, Yasunori Toda, [Azusa Kondoh](#), *J. Am. Chem. Soc.* **2016**, 138, 11038–11043.
- (25) “Brønsted base-catalyzed three-component coupling reaction of α -ketoesters, imines, and diethyl phosphite utilizing [1,2]-phospha-Brook rearrangement” [Azusa Kondoh](#), Masahiro Terada*, *Org. Biomol. Chem.* **2016**, 14, 4704–4711.
- (26) “Novel Methodology for the Efficient Synthesis of 3-Aryloxindoles: [1,2]-Phospha-Brook Rearrangement–Palladium-Catalyzed Cross-Coupling Sequence” [Azusa Kondoh](#), Akira Takei, Masahiro Terada*, *Synlett* **2016**, 27, 1848–1883.
- (27) “Enantioselective intramolecular cyclization of alkynyl esters catalyzed by chiral Brønsted base” [Azusa Kondoh](#), Hoa Thi Quynh Tran, Kyoko Kimura, Masahiro Terada*, *Chem. Commun.* **2016**, 52, 5726–5729.
- (28) “Construction of Vicinal Quaternary Stereogenic Centers by Enantioselective Direct Mannich-Type Reaction Using a Chiral Bis(guanidino)iminophosphorane Catalyst” Tadahiro Takeda, [Azusa Kondoh](#), Masahiro Terada*, *Angew. Chem.*

Int. Ed. **2016**, 55, 4734–4737.

- (29) “Chiral Brønsted acid-catalyzed enantioselective Friedel–Crafts reaction of 2-methoxyfuran with aliphatic ketimines generated *in situ*” [Azusa Kondoh](#), Yusuke Ota, Takazumi Komuro, Fuyuki Egawa, Kyohei Kanomata, Masahiro Terada*, *Chem. Sci.* **2016**, 7, 1057–1062.
- (30) “Enantioselective Addition of a 2-Alkoxy carbonyl-1,3-Dithiane to Imines Catalyzed by a Bis(guanidino)iminophosphorane Organosuperbase” [Azusa Kondoh](#), Masafumi Oishi, Tadahiro Takeda, Masahiro Terada*, *Angew. Chem. Int. Ed.* **2015**, 54, 15836–15839.
- (31) “Ring Expansion of Epoxides under Brønsted Base Catalysis: Formal [3+2] Cycloaddition of β,γ -Epoxy Esters with Imines Providing 2,4,5-Trisubstituted 1,3-Oxazolidines” [Azusa Kondoh](#), Kenta Odaira, Masahiro Terada*, *Angew. Chem. Int. Ed.* **2015**, 54, 11240–11244.
- (32) “Synthesis of Phenanthrene Derivatives by Intramolecular Cyclization Utilizing [1,2]-Phospha-Brook Rearrangement Catalyzed by Brønsted Base” [Azusa Kondoh](#), Takuma Aoki, Masahiro Terada*, *Chem. Eur. J.* **2015**, 21, 12577–12580.
- (33) “Brønsted base-catalyzed α -oxygenation of carbonyl compounds utilizing [1,2]-phospha-Brook rearrangement” [Azusa Kondoh](#), Masahiro Terada*, *Org. Chem. Front.* **2015**, 2, 801–805.
- (34) “Kinetic Resolution of Racemic Amino Alcohols through Intermolecular Acetalization Catalyzed by Chiral Brønsted Acid” Takuto Yamanaka, [Azusa Kondoh](#), Masahiro Terada*, *J. Am. Chem. Soc.* **2015**, 137, 1048–1051.
- (35) “Synthesis of Intermediary P3 Phosphazanium Framework and Its Derivatization to Chiral Cationic Macrocycles Including Two P3 Phosphazanium Units with Hydrogen Bond Donor Sites” Masahiro Terada*, Kengo Goto, Takashi Ikehara, [Azusa Kondoh](#), *Heterocycles* **2015**, 90, 1396–1404.
- (36) “Intramolecular Cyclization of Alkynyl α -Ketoanilide Utilizing [1,2]-Phospha-Brook Rearrangement Catalyzed by Phosphazene Base” [Azusa Kondoh](#), Takuma Aoki, Masahiro Terada*, *Org. Lett.* **2014**, 16, 3528–3531.
- (37) “Design and Synthesis of Helically Chiral Spirocyclic P3 Phosphazenes and Characterization of Their Onium Salts” Masahiro Terada*, Kengo Goto, Masafumi Oishi, Tadahiro Takeda, Eunsang Kwon, [Azusa Kondoh](#), *Synlett* **2013**, 2531–2534.
- (38) “Phosphazene-catalyzed intramolecular cyclization of nitrogen-tethered alkynyl esters” [Azusa Kondoh](#), Kenichi Ando, Masahiro Terada*, *Chem. Commun.* **2013**, 49, 10254–10256.
- (39) “Increasing the Structural Span of Alkyne Metathesis” Peter Persich, Josep Llaveria, Rudy Lhermet, Teresa de Haro, Robert Stade, [Azusa Kondoh](#), Alois Fürstner*, *Chem. Eur. J.* **2013**, 19, 13047–13058.
- (40) “Brønsted Base Catalyzed [2,3]-Wittig/Phospha-Brook Tandem Rearrangement Sequence” [Azusa Kondoh](#), Masahiro Terada*, *Org. Lett.* **2013**, 15, 4568–4571.
- (41) “Total Synthesis of Nominal Gobienine A” [Azusa Kondoh](#), Alexander Arlt, Barbara Gabor, Alois Fürstner*, *Chem. Eur. J.* **2013**, 19, 7731–7738.
- (42) “Optimized Synthesis, Structural Investigations, Ligand Tuning and Synthetic Evaluation of Silyloxy-Based Alkyne Metathesis Catalysts” Johannes Heppekaussen, Robert Stade, [Azusa Kondoh](#), Günter Seidel, Richard Goddard, Alois Fürstner*, *Chem. Eur. J.* **2012**, 18, 10281–10299.

- (43) "Palladium-catalyzed Alkynylthiolation of Alkynes with Triisopropylsilylethynyl Sulfide" Masayuki Iwasaki, Daishi Fujino, Tatsuya Wada, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Chem. Asian J.* **2011**, 6, 3190–3194.
- (44) "Catalysis-Based and Protecting-Group-Free Total Synthesis of the Marine Oxylipins Hybridolactone and the Ecklonialactones A, B, and C" Volker Hickmann, [Azusa Kondoh](#), Barbara Gabor, Manuel Alcarazo, Alois Fürstner*, *J. Am. Chem. Soc.* **2011**, 133, 13471–13480.
- (45) "Palladium-Catalyzed Addition of Silyl-Substituted Chloroalkynes to Terminal Alkynes" Tatsuya Wada, Masayuki Iwasaki, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Chem. Eur. J.* **2010**, 16, 10671–10674.
- (46) "Synthesis of 2-Indolylphosphines by Palladium-Catalyzed Annulation of 1-Alkynylphosphine Sulfides with 2-Iodoanilines" [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Org. Lett.* **2010**, 12, 1476–1479.
- (47) "Rhodium-catalyzed dehydrogenative borylation of cyclic alkenes" [Azusa Kondoh](#), Timothy F. Jamison*, *Chem. Commun.* **2010**, 46, 907–909.
- (48) "Radical Addition of Polyhaloalkanes to 2-Ethynyl-4,4,5,5-tetramethyl-1,3,2-dioxaborolane" Tatsuya Wada, Yuto Sumida, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Bull. Chem. Soc. Jpn.* **2009**, 82, 1433–1435.
- (49) "Nickel-Catalyzed Cross-Coupling Reactions of Alkyl Aryl Sulfides and Alkenyl Alkyl Sulfides with Alkyl Grignard Reagents Using (Z)-3,3-Dimethyl-1,2-bis(diphenylphosphino)but-1-ene as Ligand" Shigenari Kanemura, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Synthesis* **2008**, 2659–2664.
- (50) "Synthesis of Bulky Arylphosphanes by Rhodium-Catalyzed Formal [2+2+2] Cycloaddition Reaction and Their Use as Ligands" Takayuki Kobatake, [Azusa Kondoh](#), Suguru Yoshida, Hideki Yorimitsu*, Koichiro Oshima*, *Chem. Asian J.* **2008**, 3, 1613–1619.
- (51) "Regio- and Stereoselective Hydroamidation of 1-Alkynylphosphine Sulfides Catalyzed by Cesium Base" [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Org. Lett.* **2008**, 10, 3093–3095.
- (52) "Regio- and Stereoselective Additions of Diphenyldithiophosphinic Acid to N-(1-Alkynyl)amides and 1-Alkynyl Sulfides" Shigenari Kanemura, [Azusa Kondoh](#), Hiroto Yasui, Hideki Yorimitsu*, Koichiro Oshima*, *Bull. Chem. Soc. Jpn.* **2008**, 81, 506–514.
- (53) "Rhodium-Catalyzed Reaction of 1-Alkynylphosphines with Water Yielding (E)-1-Alkenylphosphine Oxides" [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Bull. Chem. Soc. Jpn.* **2008**, 81, 502–505.
- (54) "Intermolecular Radical Addition of Alkylthio- and Arylthiodiphenylphosphines to Terminal Alkynes" Tatsuya Wada, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Org. Lett.* **2008**, 10, 1155–1157.
- (55) "Synthesis of Bulky Phosphines by Rhodium-Catalyzed Formal [2+2+2] Cycloaddition Reactions of Tethered Diynes with 1-Alkynylphosphine Sulfides" [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *J. Am. Chem. Soc.* **2007**, 129, 6996–6997.
- (56) "Carbocupration of 1-Alkynylphosphines Followed by Trapping with Electrophiles" Shigenari Kanemura, [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Org. Lett.* **2007**, 9, 2031–2033.
- (57) "Palladium-Catalyzed anti-Hydrothiolation of 1-Alkynylphosphines" [Azusa Kondoh](#), Hideki Yorimitsu*, Koichiro Oshima*, *Org. Lett.* **2007**, 9, 1383–1385.

- (58) "Copper-catalyzed *anti*-Hydrophosphination Reaction of 1-Alkynylphosphines with Diphenylphosphine Providing (Z)-1,2-Diphosphino-1-alkenes" Azusa Kondoh, Hideki Yorimitsu*, Koichiro Oshima*, *J. Am. Chem. Soc.* **2007**, 129, 4099–4104.
- (59) "A New Approach to 4-Aryl-1,3-butanediols by Cobalt-Catalyzed Sequential Radical Cyclization-Arylation Reaction of Silicon-Tethered 6-Iodo-1-hexene Derivatives" Hidenori Someya, Azusa Kondoh, Akinori Sato, Hirohisa Ohmiya, Hideki Yorimitsu*, Koichiro Oshima*, *Synlett* **2006**, 3061–3064.
- (60) "Nucleophilic aromatic substitution reaction of nitroarenes with alkyl- or arylthio groups in dimethyl sulfoxide by means of cesium carbonate" Azusa Kondoh, Hideki Yorimitsu*, Koichiro Oshima*, *Tetrahedron* **2006**, 62, 2357–2360.
- (61) "Stereoselective Hydrothiolation of Alkynes Catalyzed by Cesium Base: Facile Access to (Z)-1-Alkenyl Sulfides" Azusa Kondoh, Kazuaki Takami, Hideki Yorimitsu*, Koichiro Oshima*, *J. Org. Chem.* **2005**, 70, 6468–6473.

Accounts and Reviews

- (1) "Development of Molecular Transformations on the Basis of Catalytic Generation of Anionic Species by Organosuperbase" Azusa Kondoh*, Masahiro Terada*, *Bull. Chem. Soc. Jpn.* **2021**, 94, 339–356
- (2) "Chapter 2: Application of Axially Chiral Organocatalysts" Azusa Kondoh, Masahiro Terada, in *Atropisomerism and Axial Chirality*, J. M. Lassaletta Ed., pp. 99–147, World Scientific, **2019**.
- (3) "Novel Transformations Utilizing [1,2]-Phospha-Brook Rearrangement Under Brønsted Base Catalysis" Azusa Kondoh, Masahiro Terada, *Journal of Synthetic Organic Chemistry, Japan*, **2018**, 76, 151–163.
- (4) "Palladium-Catalyzed 1,1-Difunctionalization of Terminal Alkenes" Azusa Kondoh, *Journal of Synthetic Organic Chemistry, Japan*, **2011**, 69, 1160–1161.
- (5) "1-Alkynylphosphines and Their Derivatives as Key Starting Materials in Creating New Phosphines" Azusa Kondoh, Hideki Yorimitsu*, Koichiro Oshima*, *Chem. Asian J.* **2010**, 5, 398–409.