

## 論文リスト

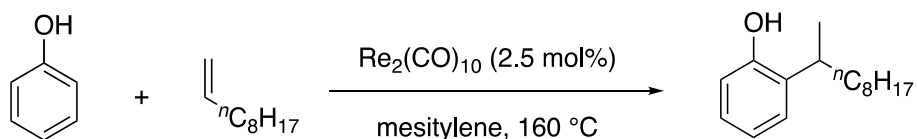
November 2, 2017

[2017]

[106] Kuninobu, Y.\*; Yamamoto, M.; Nishi, M.; Yamamoto, T.; Matsuki, T.; Murai, M.\*; Takai, K.\*

Rhenium-Catalyzed *ortho*-Alkylation of Phenols.

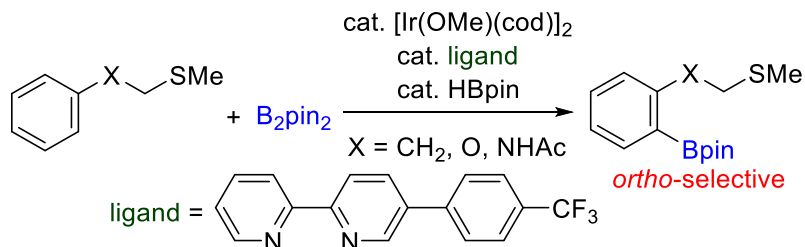
*Org. Synth.* **2017**, *94*, 280-291 (10.15227/orgsyn.094.0280).



[105] Li, H.-L.; Kanai, M.\*; Kuninobu, Y.\*

Iridium/Bipyridine-Catalyzed *ortho*-Selective C-H Borylation of Phenol and Aniline Derivatives.

*Org. Lett.* **2017**, in press (10.1021/acs.orglett.7b02936).

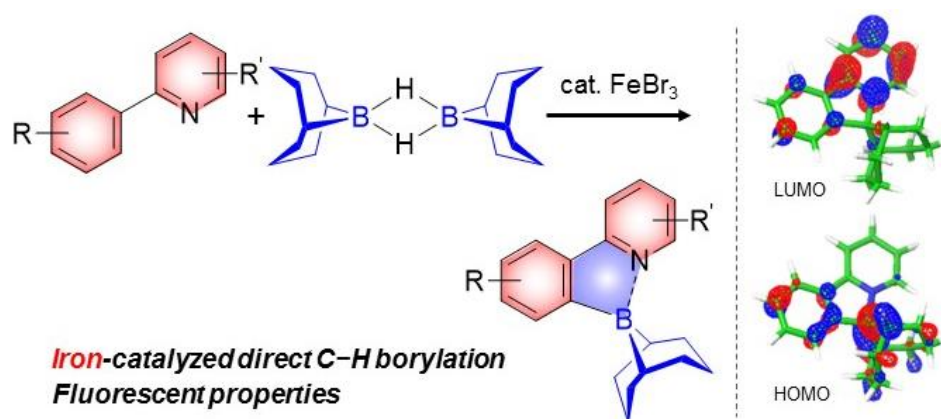


[104] Yoshigoe, Y.; Kuninobu, Y.\*

Iron-Catalyzed *ortho*-Selective C-H Borylation of 2-Phenylpyridines and Their Analogs.

*Org. Lett.* **2017**, *19*, 3450-3453 (10.1021/acs.orglett.7b01423).

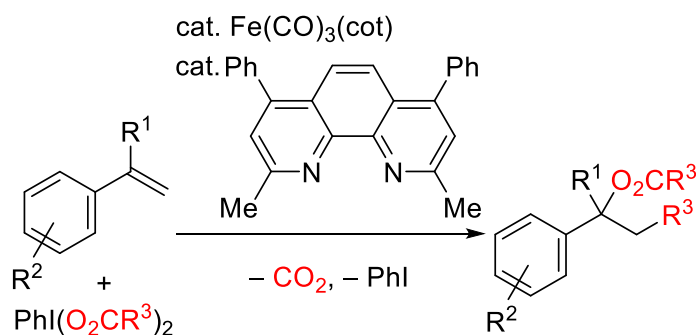
[*Synfacts* **2017**, *13*, 976]



[103] Wang, Z.; Kanai, M.; Kuninobu, Y.\*

Iron-Catalyzed Alkene Oxyalkylation Using Hypervalent Iodine(III) Reagents.

*Org. Lett.* **2017**, *19*, 2398-2401 (10.1021/acs.orglett.7b00923).

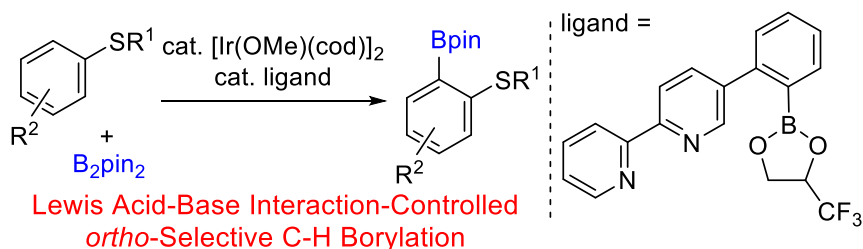


[102] Li, H.-L.; Kuninobu, Y.\*; Kanai, M.\*

Lewis Acid-Base Interaction-Controlled *ortho*-Selective C-H Borylation of Aryl Sulfides.

*Angew. Chem. Int. Ed.* **2017**, *56*, 1495-1499 (DOI: 10.1002/anie.201610041).

[*Synfacts* **2017**, *13*, 297]



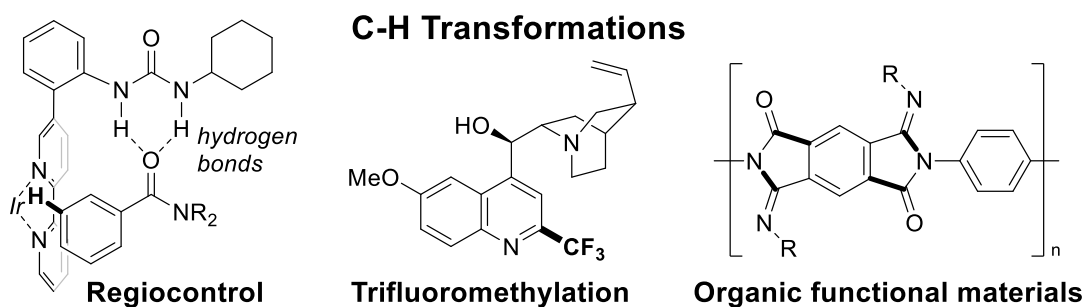
[2016]

[101] Kuninobu, Y.\*

Development of Novel C-H Bond Transformations Directed Towards Organic Functional Molecules.

*J. Synth. Org. Chem. Jpn.* **2016**, *74*, 1058-1068.

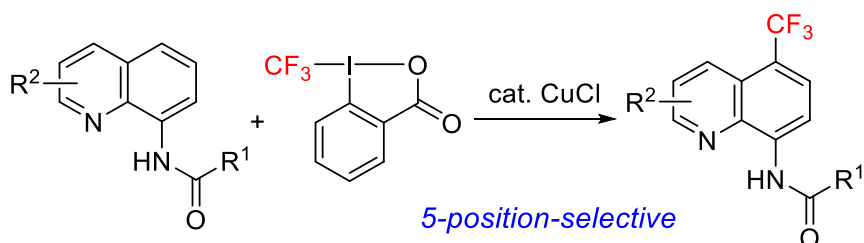
[Accounts]



[100] Kuninobu, Y.\*; Nishi, M.; Kanai, M.\*

5-Position-selective C-H Trifluoromethylation of 8-Aminoquinoline Derivatives.

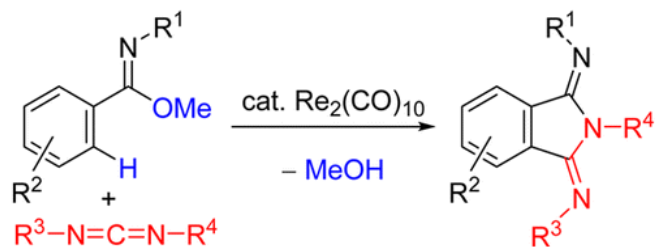
*Org. Biomol. Chem.* **2016**, *14*, 8092-8100 (DOI: 10.1039/C6OB01325B).



[99] Wang, J.; Sueki, S.; Kanai, M.; Kuninobu, Y.\*

Rhenium-Catalyzed Synthesis of 1,3-Diiminoisoindolines via Insertion of Carbodiimides into a C-H Bond of Aromatic and Heteroaromatic Imidates.

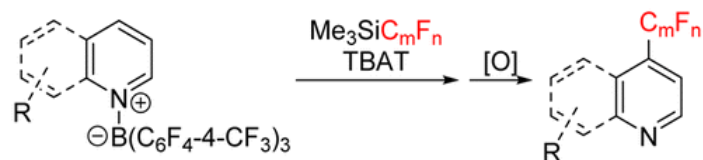
*Org. Lett.* **2016**, *18*, 2459-2462 (DOI: 10.1021/acs.orglett.6b01012).



[98] Nagase, M.; Kuninobu, Y.\*; Kanai, M.\*

4-Position-Selective C-H Perfluoroalkylation and Perfluoroarylation of Six-Membered Heteroaromatic Compounds.

*J. Am. Chem. Soc.* **2016**, *138*, 6103-6106 (DOI: 10.1021/jacs.6b01753).

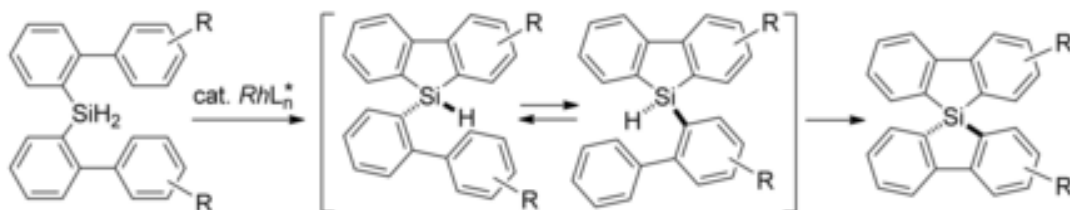


[97] Murai, M.\*; Takeuchi, Y.; Yamauchi, K.; Kuninobu, Y.; Takai, K.\*

Rhodium-Catalyzed Synthesis of Chiral Spiro-9-silabifluorenes via Dehydrogenative Silylation: Mechanistic Insights into the Construction of Tetraorganosilicon Stereocenters.

*Chem. Eur. J.* **2016**, *22*, 6048-6058 (DOI: 10.1002/chem.201504718).

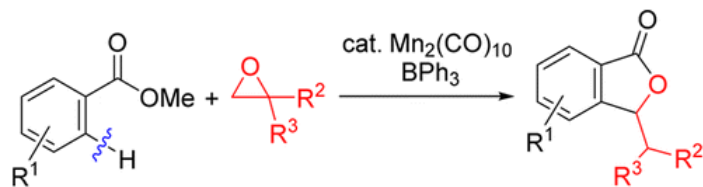
[Hot Paper]



[96] Sueki, S.; Wang, Z.; Kuninobu, Y.\*

Manganese- and Borane-Mediated Synthesis of Isobenzofuranones from Aromatic Esters and Oxiranes via C-H Bond Activation.

*Org. Lett.* **2016**, *18*, 304-307 (DOI: 10.1021/acs.orglett.5b03474).



**Cooperative Manganese and Borane Catalysis  
&  
First Example of Oxygen-Directing Group-Assisted  
Manganese-Catalyzed C-H Transformation**

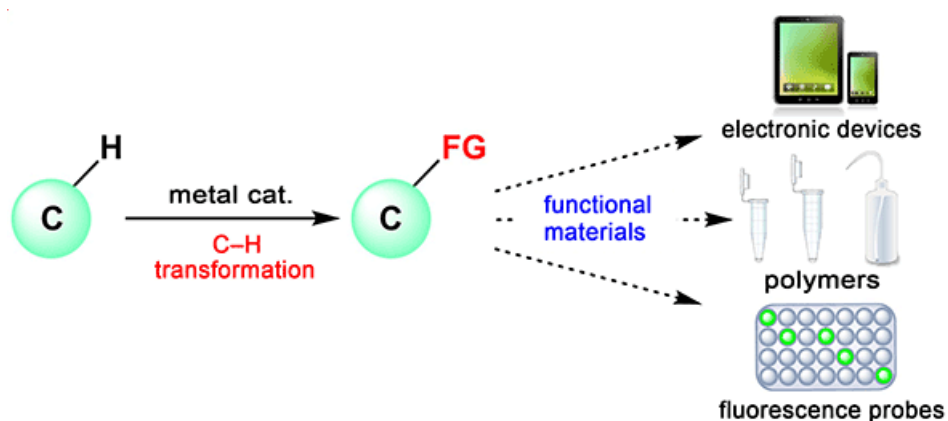
[2015]

[95] Kuninobu, Y.\*; Sueki, S.

C-H Bond Transformations Leading to the Synthesis of Organic Functional Materials.

*Synthesis* **2015**, 47, 3823-3845 (DOI: 10.1055/s-0035-1560346).

[Review] [Cover]



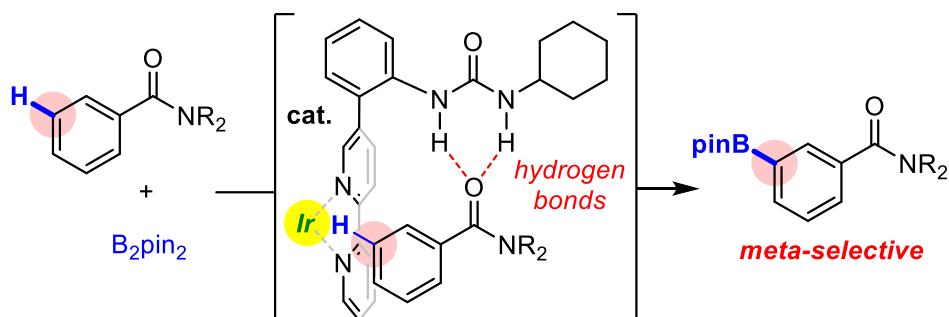
[94] Kuninobu, Y.\*; Ida, H.; Nishi, M.; Kanai, M.\*

A *meta*-selective C-H borylation directed by a secondary interaction between ligand and substrate.

*Nature Chem.* **2015**, 7, 712-717 (DOI: 10.1038/nchem.2322).

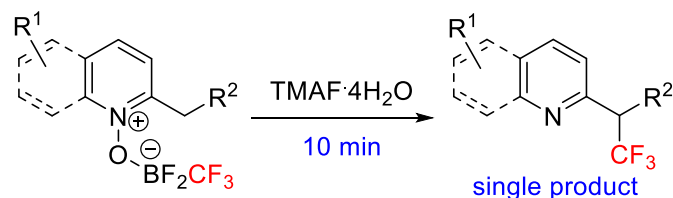
[Nature Chem. news & views: Ackermann, L.; Li, J. *Nature Chem.* **2015**, 7, 686-687]

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[93] Kuninobu, Y.\*; Nagase, M.; Kanai, M.\*

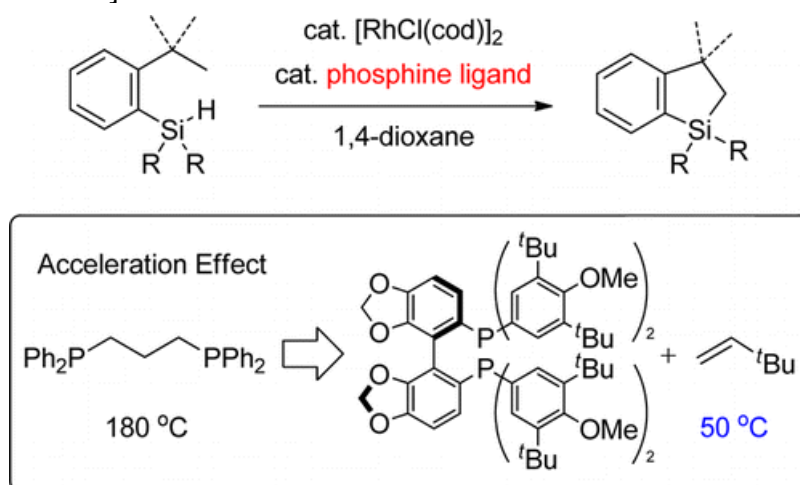
Benzylic C(sp<sup>3</sup>)-H Perfluoroalkylation of 6-Membered Heteroaromatic Compounds.  
*Angew. Chem. Int. Ed.* **2015**, *54*, 10263-10266 (DOI: 10.1002/anie.201505335).



[92] Murai, M.\*; Takeshima, H.; Morita, H.; Kuninobu, Y.; Takai, K.\*

Acceleration Effects of Phosphine Ligands on the Rhodium-Catalyzed Dehydrogenative Silylation and Germylation of Unactivated C(sp<sup>3</sup>)-H Bonds.  
*J. Org. Chem.* **2015**, *80*, 5407-5414 (DOI: 10.1021/acs.joc.5b00920).

[Featured Article]

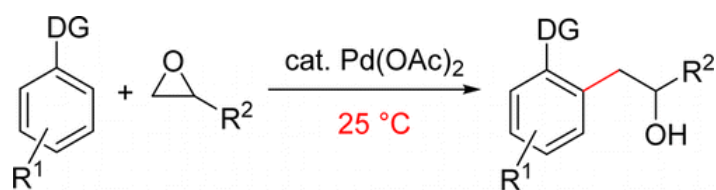


[91] Wang, Z.; Kuninobu, Y.\*; Kanai, M.\*

Palladium-Catalyzed Oxirane-Opening Reaction with Arenes via C-H Bond Activation.

*J. Am. Chem. Soc.* **2015**, *137*, 6140-6143 (DOI: 10.1021/jacs.5b02435).

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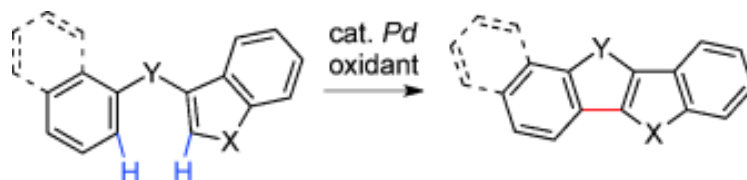
Gram scale, excellent yields

Rare example of transition metal-catalyzed  
C-H activation/C-C coupling using oxiranes

[90] Saito, K.; Chikkade, P. K.; Kanai, M.\*; Kuninobu, Y.\*

Palladium-Catalyzed Construction of Heteroatom-Containing  $\pi$ -Conjugated Systems by Intramolecular Oxidative C-H/C-H Coupling Reaction.

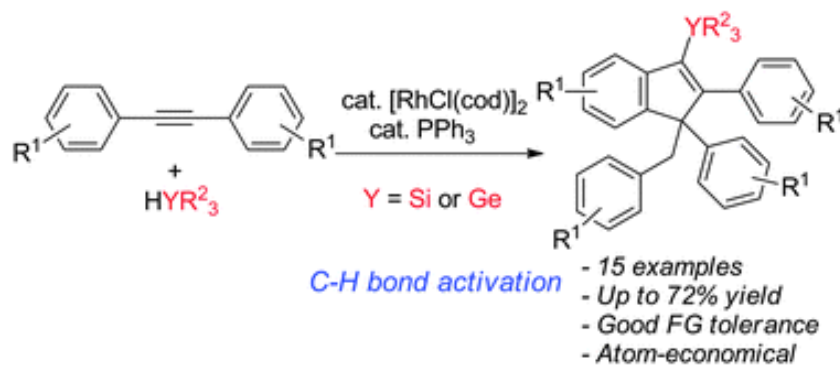
*Chem. Eur. J.* **2015**, *21*, 8365-8368 (DOI: 10.1002/chem.201501116).



[89] Sueki, S.; Kuninobu, Y.\*

Rhodium-Catalyzed Synthesis of Multi-Substituted Silylindenes from Aryl Alkynes and Hydrosilanes via C-H Bond Activation.

*Chem. Commun.* **2015**, *51*, 7685-7688 (DOI: 10.1039/c5cc01569c).

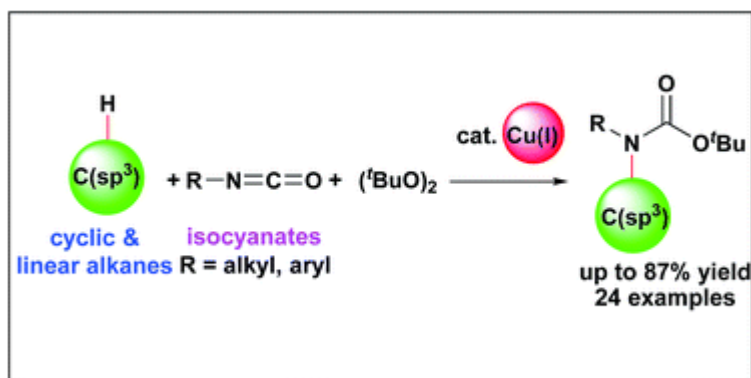


[88] Chikkade, P. K.; Kuninobu, Y.\*; Kanai, M.\*

Copper-Catalyzed Intermolecular C(sp<sup>3</sup>)-H Bond Functionalization Towards Synthesis of Tertiary Carbamates.

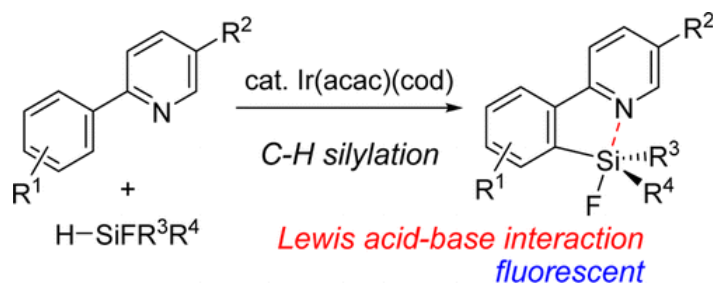
*Chem. Sci.* **2015**, *6*, 3195-3200 (DOI: 10.1039/C5SC00238A).

[Twenty-five most downloaded articles between April and June, 2015]



[87] Wakaki, T.; Kanai, M.\*; Kuninobu, Y.\*

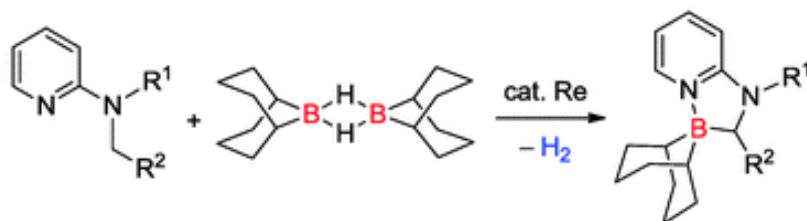
Iridium-Catalyzed *ortho*-Selective C-H Silylation of Aromatic Compounds Directed toward the Synthesis of  $\pi$ -Conjugated Molecules with Lewis Acid-Base Interaction.  
*Org. Lett.* **2015**, *17*, 1758-1761 (DOI: 10.1021/acs.orglett.5b00529).



[86] Murai, M.\*; Omura, T.; Kuninobu, Y.; Takai, K.\*

Rhenium-Catalysed Dehydrogenative Borylation of Primary and Secondary  $\text{C}(\text{sp}^3)\text{-H}$  Bonds Adjacent to a Nitrogen Atom.  
*Chem. Commun.* **2015**, *51*, 4583-4586 (DOI: 10.1039/C4CC09508A).

Dehydrogenative borylation of primary and secondary  $\text{C}(\text{sp}^3)\text{-H}$  bonds



Re-catalysed functionalization of  $\text{C}(\text{sp}^3)\text{-H}$  bond.

High atom economy. No oxidants, external ligands or additives.

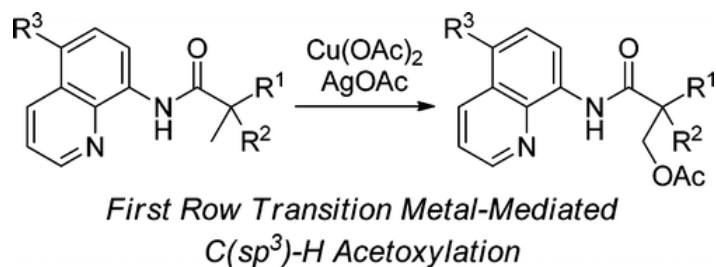


[2014]

[85] Wang, Z.; Kuninobu, Y.\*; Kanai, M.\* Copper-Mediated Direct C(sp<sup>3</sup>)-H and C(sp<sup>2</sup>)-H Acetoxylation.

*Org. Lett.* **2014**, *16*, 4790-4793 (DOI: 10.1021/ol5022542).

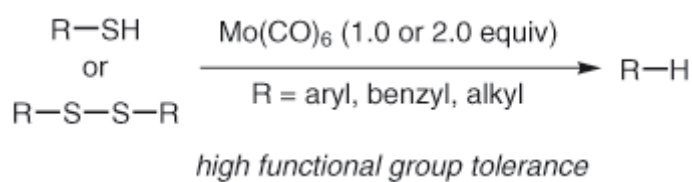
[*Synfacts* **2014**, *10*, 1310]



[84] Wang, Z.; Kuninobu, Y.\*; Kanai, M.\*

Molybdenum-Mediated Desulfurization of Thiols and Disulfides.

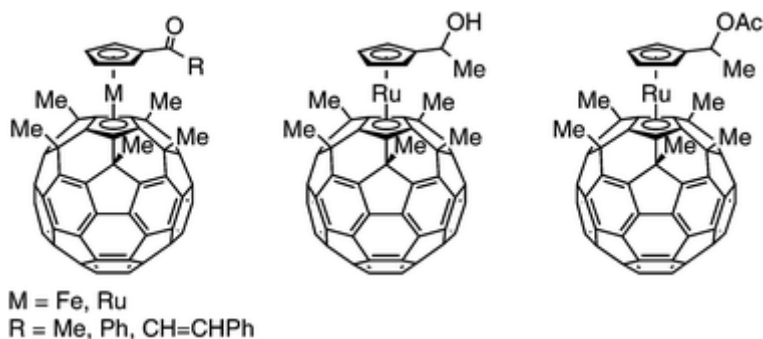
*Synlett* **2014**, *25*, 1869-1872 (DOI: 10.1055/s-0034-1378315).



[83] Matsuo, Y.\*; Kuninobu, Y.; Ito, S.; Sawamura, M.; Nakamura, E.\*

Fiedel-Crafts Functionalization of Cyclopentadienyl Ligand of Bucky Metallocenes.

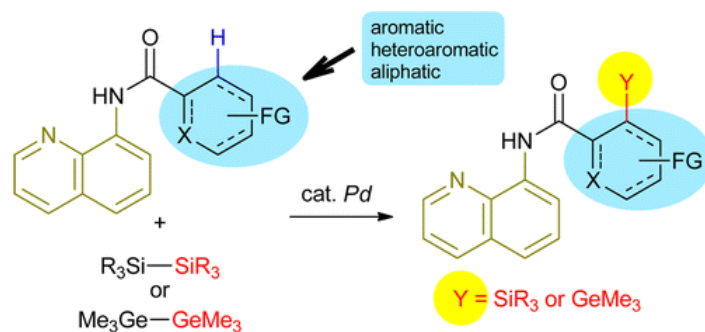
*Dalton Trans.* **2014**, *43*, 7407-7412 (DOI: 10.1039/c3dt52002a).



[82] Kanyiva, K. S.; Kuninobu, Y.\*; Kanai, M.\*

Palladium-Catalyzed C–H Silylation and Germanylation of Benzamides and Carboxyamides.

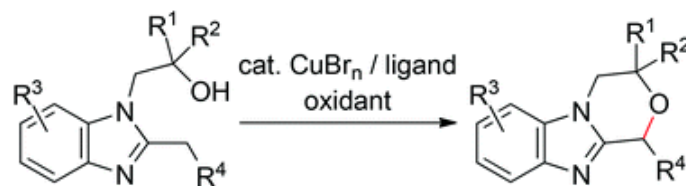
*Org. Lett.* **2014**, *16*, 1968-1971 (DOI: 10.1021/ol500519y).



[81] Takemura, N.; Kuninobu, Y.\*; Kanai, M.\*

Copper-Catalyzed Benzylic C(sp<sup>3</sup>)-H Alkoxylation of Heterocyclic Compounds.

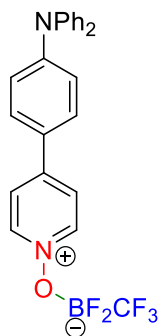
*Org. Biomol. Chem.* **2014**, *12*, 2528-2532 (DOI:10.1039/C4OB00215F).



[80] Nishida, T.; Fukazawa, A.; Yamaguchi, E.; Oshima, H.; Yamaguchi, S.; Kanai, M.\*; Kuninobu, Y.\*

Synthesis of Pyridine *N*-Oxide-BF<sub>2</sub>CF<sub>3</sub> Complexes and Their Fluorescence Properties.

*Chem. Asian J.* **2014**, *9*, 1026-1030 (DOI: 10.1002/asia.201301688).

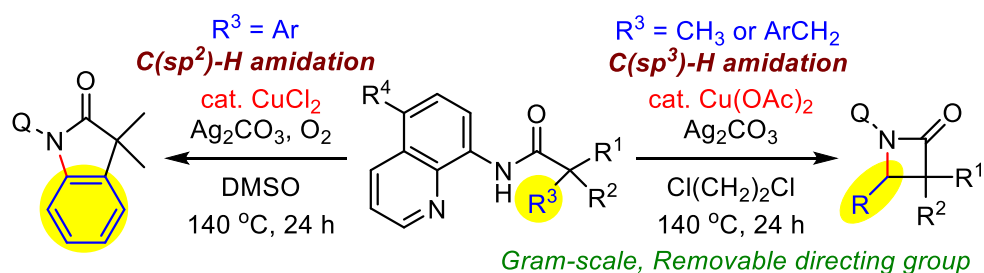


[79] Wang, Z.; Ni, J.; Kuninobu, Y.\*; Kanai, M.\*

Copper-Catalyzed Intramolecular C(sp<sup>3</sup>)-H and C(sp<sup>2</sup>)-H Amidation by Oxidative Cyclization.

*Angew. Chem. Int. Ed.* **2014**, 53, 3496-3499 (DOI: 10.1002/anie.201311105)

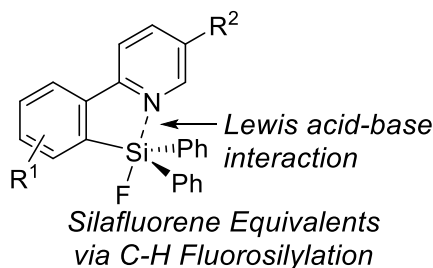
[*Synfacts* **2014**, 10, 570]



[78] Xiao, Q.; Meng, X.; Kanai, M.\*; Kuninobu, Y.\*

Palladium-Catalyzed C-H Fluorosilylation of 2-Phenylpyridines: Synthesis of Silafluorene Equivalents.

*Angew. Chem. Int. Ed.* **2014**, 53, 3168-3172 (DOI: 10.1002/anie.201310293).

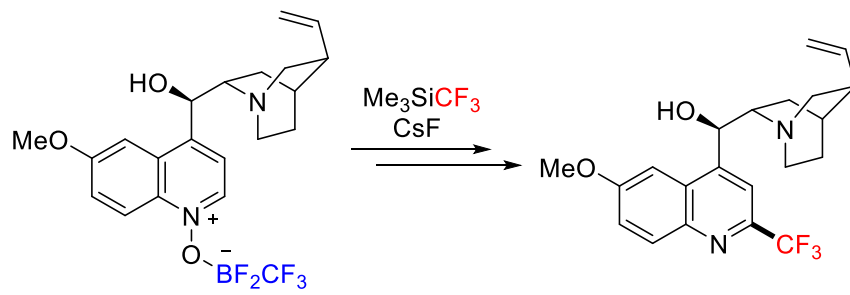


[77] Nishida, T.; Ida, H.; Kuninobu, Y.\*; Kanai, M.\*

Regioselective Trifluoromethylation of *N*-Heteroaromatic Compounds using Trifluoromethyldifluoroborane Activator.

*Nat. Commun.* **2014**, 5, 3387 (DOI: 10.1038/ncomms4387).

[Nature Communications Chemistry Selections]



*First example of 2-position-selective C-H trifluoromethylation*

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