### Nishiyama Yutaka

# List of Publications (1986-2006)

# **Papers**

80. Synthesis of 1,4-diketones: reaction of  $\alpha$ -bromo ketones with tetrakis(dimethylamino)ethylene (TDAE) Nishiyama, Yutaka; Kobayashi, Akihiro *Tetrahedron Letters* **2006**, *47*(31), 5565-5567.

79. A facile method for the synthesis of 1,3-oxathiolan-2-ones by reaction of oxiranes, sulfur, and carbon monoxide

Nishiyama, Yutaka; Katahira, Chisato; Sonoda, Noboru *Tetrahedron* **2006**, *62*(24), 5803-5807.

78. A new method for the synthesis of 2-aryl-1*H*-benzimidazoles: Selenium-catalyzed reductive *N*-heterocyclization of benzylidene(2-nitroaryl)amines with carbon monoxide Nishiyama, Yutaka; Fujimoto, Mayu; Sonoda, Noboru *Synlett* **2006**, (1), 109-111.

77. A new method for synthesis of S-aryl-O-alkyl thiolcarbonates. Selenium-catalyzed reaction of alcohols with carbon monoxide and diaryl disulfides

Nishiyama, Yutaka; Maehira, Ken; Nakase, Junko; Sonoda, Noboru *Tetrahedron Letters* **2005**, *46*(43), 7415-7417.

76. A new method for the synthesis of organotellurium compounds by the use of reductive cleavage of the tellurium-tellurium bond with lanthanum metal

Nishiyama, Yutaka; Okada, Mitsuo; Nishino, Toshiki; Sonoda, Noboru *Bulletin of the Chemical Society of Japan* **2005**, *78*(2), 341-343.

75. A Facile Method for the Synthesis of Thiocarbamates: Palladium-Catalyzed Reaction of Disulfide, Amine, and Carbon Monoxide

Nishiyama, Yutaka; Kawamatsu, Hiroaki; Sonoda, Noboru *Journal of Organic Chemistry* **2005**, *70*(7), 2551-2554.

- 74. Reductive debromination of 1,2-bis(bromomethyl)arenes using tetrakis(dimethylamino)ethylene (TDAE) Nishiyama, Yutaka; Kawabata, Hiroshi; Kobayashi, Akihiro; Nishino, Toshiki; Sonoda, Noboru *Tetrahedron Letters* **2005**, *46*(5), 867-869.
- 73. Rhenium complex-catalyzed allylation of aldehydes with allyltributylstannane Nishiyama, Yutaka; Kakushou, Fujio; Sonoda, Noboru *Tetrahedron Letters* **2005**, *46*(5), 787-789.
- 72. A new method for the synthesis of 1,3-oxathiolan-2-ones by the reaction of epoxides with sulfur and carbon monoxide

Nishiyama, Yutaka; Katahira, Chisato; Sonoda, Noboru *Tetrahedron Letters* **2004**, *45*(46), 8539-8540.

71. Synthesis and characterization of triphenylene-dione half-disc mesogens Paraskos, Alexander J.; Nishiyama, Yutaka; Swager, Timothy M. *Molecular Crystals and Liquid Crystals* **2004**, *411*, 1405-1417.

- 70. A new synthetic method of 1,4-dihydro-2*H*-3,1-benzoxazin-2-ones. selenium-catalyzed reductive carbonylation of aromatic nitro compounds with carbon monoxide Nishiyama, Yutaka; Naitoh, Yoshitaka; Sonoda, Noboru *Synlett* **2004**, (5), 886-888.
- 69. A facile method for synthesis of alkyl phenyl selenides. The reaction of diphenyl diselenide with oxygen-containing compounds using La/Me<sub>3</sub>SiCl/cat.I<sub>2</sub>/cat.Cul system Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru *Chemistry Letters* **2003**, *32*(10), 918-919.
- 68. Dehalogenation of o-dihalo-substituted arenes and  $\alpha$ , $\alpha$ '-dihalo-substituted o-xylenes with lanthanum metal

Nishiyama, Yutaka; Kawabata, Hiroshi; Nishino, Toshiki; Hashimoto, Kouji; Sonoda, Noboru *Tetrahedron* **2003**, *59*(34), 6609-6614.

- 67. Phenyl Tributylstannyl Selenide as a Promising Reagent for Introduction of the Phenylseleno Group Nishiyama, Yutaka; Kawamatsu, Hiroaki; Funato, Saori; Tokunaga, Keiji; Sonoda, Noboru *Journal of Organic Chemistry* **2003**, *68*(9), 3599-3602.
- 66. Deoxygenative dimerization of benzylic and allylic alcohols, and their ethers and esters using lanthanum metal and chlorotrimethylsilane in the presence of a catalytic amount of iodine and copper(I) iodide Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru Bulletin of the Chemical Society of Japan 2003, 76(3), 635-641.
- 65. One-Pot Synthesis of Unsymmetrical Diorganyl Selenides: Reaction of Diphenyl Diselenide with Alkyl Halides in the Presence of Lanthanum Metal

Nishino, Toshiki; Okada, Mitsuo; Kuroki, Takamasa; Watanabe, Toshihisa; Nishiyama, Yutaka; Sonoda, Noboru

Journal of Organic Chemistry 2002, 67(24), 8696-8698.

64. Reaction of Carbonyl Compounds with Trialkylsilyl Phenylselenide and Tributylstannyl Hydride under Radical Conditions

Nishiyama, Yutaka; Kajimoto, Hiroyuki; Kotani, Kazuya; Nishida, Takuma; Sonoda, Noboru *Journal of Organic Chemistry* **2002**, *67*(16), 5696-5700.

63. Reaction of 1,2-dihalogen substituted arenes with lanthanum metal: a new generation method of benzyne

Kawabata, Hiroshi; Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru *Tetrahedron Letters* **2002**, *43*(28), 4911-4913.

- 62. Lanthanum metal-assisted deoxygenative coupling of alcohols Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru *Tetrahedron Letters* **2002**, *43*(20), 3689-3691.
- 61. Reductive dimerization and reduction of imines using lanthanum metal Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru *Heteroatom Chemistry* **2002**, *13*(2), 131-135.
- 60. Synthesis of 3,4-dihydroquinazolin-4-one: selenium-catalyzed reductive *N*-heterocyclization of *N*-(2-nitrobenzoyl)amides with carbon monoxide Nishiyama, Yutaka; Hirose, Masaharu; Kitagaito, Wataru; Sonoda, Noboru *Tetrahedron Letters* **2002**, *43*(10), 1855-1858.

- 59. Tributylstannyl Radical-Catalyzed Reaction of 1,2,3-Selenadiazoles with Olefins or Dienes Nishiyama, Yutaka; Hada, Yasunobu; Anjiki, Masahiro; Miyake, Kazuya; Hanita, Sakiko; Sonoda, Noboru *Journal of Organic Chemistry* **2002**, 67(5), 1520-1525.
- 58. Synthesis of selenol esters: palladium-catalyzed coupling of phenyl tributylstannyl selenide with aryl iodides and carbon monoxide

Nishiyama, Yutaka; Tokunaga, Keiji; Kawamatsu, Hiroaki; Sonoda, Noboru *Tetrahedron Letters* **2002**, *43*(8), 1507-1509.

- 57. Reduction of Organic Halides with Lanthanum Metal: A Novel Method for Generation of Alkyl Radicals Nishino, Toshiki; Watanabe, Toshihisa; Okada, Mitsuo; Nishiyama, Yutaka; Sonoda, Noboru *Journal of Organic Chemistry* **2002**, *67*(3), 966-969.
- 56. Hydrosilylation of Carbonyl Compounds Using a PhSeSiMe<sub>3</sub>/Bu<sub>3</sub>SnH/AIBN System Nishiyama, Yutaka; Kajimoto, Hiroyuki; Kotani, Kazuya; Sonoda, Noboru *Organic Letters* **2001**, *3*(20), 3087-3089.
- 55. Rhenium Complexes-Catalyzed Alkylation of Arenes with Alkyl Halides Nishiyama, Yutaka; Kakushou, Fujio; Sonoda, Noboru *Bulletin of the Chemical Society of Japan* **2000**, *73*(12), 2779-2782.
- 54. The reaction of 1,2,3-selenadiazole with olefins Nishiyama, Yutaka; Hada, Yasunobu; Iwase, Kuniko; Sonoda, Noboru *Journal of Organometallic Chemistry* **2000**, *611*(1-2), 488-493.
- 53. Reductive coupling of carbonyl compounds using lanthanum metal Nishino, Toshiki; Nishiyama, Yutaka; Sonoda, Noboru *Heteroatom Chemistry* **2000**, *11*(1), 81-85.
- 52. New Synthetic Method of Diorganyl Selenides: Palladium-Catalyzed Reaction of PhSeSnBu<sub>3</sub> with Aryl and Alkyl Halides
  Nishiyama, Yutaka; Tokunaga, Keiji; Sonoda, Noboru

Organic Letters **1999**, *1*(11), 1725-1727.

51. Catalytic use of organostannyl radical: the reaction of 1,2,3-selenadiazole with olefins in the presence of a catalytic amount of tributyltin hydride Nishiyama, Yutaka; Hada, Yasunobu; Anjiki, Masahiro; Hanita, Sakiko; Sonoda, Noboru

Tetrahedron Letters 1999, 40(34), 6293-6296.

50. Synthesis of indoles: selenium-catalyzed reductive *N*-heterocyclization of 2-nitrostyrenes with carbon monoxide

Nishiyama, Yutaka; Maema, Ryo; Ohno, Kengou; Hirose, Masaharu; Sonoda, Noboru *Tetrahedron Letters* **1999**, *40*(31), 5717-5720.

- 49. Regioselective alkylation of 1-alkoxy-3-phenylseleno-1-alkenes Nishiyama, Yutaka; Kishimoto, Yoshihiro; Itoh, Kazuyoshi; Sonoda, Noboru *Synlett* **1999**, (5), 611-613.
- 48. Selective synthesis of 1-alkoxy-3-phenylseleno-1-alkenes and 3-phenylselenoalkanals by the reaction of diisobutylaluminum phenylselenolate with  $\alpha,\beta$ -unsaturated acetals Nishiyama, Yutaka; Asano, Tomoyuki; Kishimoto, Yoshihiro; Itoh, Kazuyoshi; Ishii, Yasutaka *Tetrahedron Letters* **1998**, 39(47), 8685-8686.

- 47. Stereoselective reductive coupling of carbonyl compounds by a Sm/Et<sub>2</sub>All system Nishiyama, Yutaka; Shinomiya, Eiji; Kimura, Shouji; Itoh, Kazuyoshi; Sonoda, Noboru *Tetrahedron Letters* **1998**, *39*(22), *3705-3708*.
- 46. Activation of Sn-Se bond: regioselective ring opening reaction of epoxides with tributylstannyl phenylselenolate in the presence of a Lewis acid Nishiyama, Yutaka; Ohashi, Hironori; Itoh, Kazuyoshi; Sonoda, Noboru *Chemistry Letters* **1998**, (2), 159-160.
- 45. Stereoselective Synthesis of 2,2,5-Trisubstituted Tetrahydrofurans *via* the Lewis Acid Assisted Reaction of Cyclic Hemiketals with Nucleophiles Nishiyama, Yutaka; Katoh, Takeshi; Deguchi, Katsuya; Morimoto, Yorikazu; Itoh, Kazuyoshi

Journal of Organic Chemistry **1997**, 62(26), 9339-9341.

44. Stereoselective Reduction of  $\beta$ -Hydroxy Ketones with Aldehydes via Tishchenko Reactions Catalyzed by Zirconocene Complexes

Umekawa, Yuuji; Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1997**, *62*(10), 3409-3412.

- 43. Stereoselective synthesis of *trans*-2,5-disubstituted tetrahydrofurans *via* the Lewis acid mediated reduction of cyclic hemiketals with triphenylsilane
  Nishiyama, Yutaka; Tujino, Takashi; Yamano, Tadamichi; Hayashishita, Masayoshi; Itoh, Kazuyoshi *Chemistry Letters* **1997**, (2), 165-166.
- 42. Molybdovanadophosphate (NPMoV)/hydroquinone/O<sub>2</sub> system as an efficient reoxidation system in palladium-catalyzed oxidation of alkenes Yokota, Takahiro; Fujibayashi, Shinya; Nishiyama, Yutaka; Sakaguchi, Satoshi; Ishii, Yasutaka *Journal of Molecular Catalysis A: Chemical* **1996**, *114*(1-3), 113-122.
- 41. Aldol type condensation of imines catalyzed by samarium complexes Shiraishi, Hiroyuki; Kawasaki, Yumi; Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Tetrahedron Letters* **1996**, *37*(40), 7291-7294.
- 40. An efficient aerobic oxidation of various organic compounds catalyzed by mixed addenda heteropolyoxometalates containing molybdenum and vanadium

Fujibayashi, Shin-ya; Nakayama, Kouichi; Hamamoto, Masatoshi; Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka

Journal of Molecular Catalysis A: Chemical 1996, 110(2), 105-117.

39. Selective Oxidation of Monoterpenes with Hydrogen Peroxide Catalyzed by Peroxotungstophosphate (PCWP)

Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1996**, *61*(16), 5307-5311.

38. Alkane Oxidation with Molecular Oxygen Using a New Efficient Catalytic System: N-Hydroxyphthalimide (NHPI) Combined with Co(acac) $_n$  (n = 2 or 3)

Ishii, Yasutaka; Iwahama, Takahiro; Sakaguchi, Satoshi; Nakayama, Kouichi; Nishiyama, Yutaka *Journal of Organic Chemistry* **1996**, *61*(14), 4520-4526.

37. Oxidation of organic substrates with molecular oxygen catalyzed by vanadomolybdophosphate  $(NPV_6Mo_6)$  combined with *N*-hydroxyphthalimide (NHPI)

Sakaguchi, Satoshi; Nakayama, Koichi; Nishiyama, Yutaka; Ishii, Yasutaka

Technology Reports of the Kansai University 1996, 38, 123-131.

36. Reduction of aromatic nitro compounds by the Sm/R<sub>n</sub>SiCl<sub>4-n</sub>/Nal system: control of reducing ability of low valent samarium species

Nishiyama, Yutaka; Hatano, Tadashi; Emoto, Tetsuya; Muromachi, Akifumi; Ishii, Yasutaka *Technology Reports of the Kansai University* **1996**, 38, 113-121.

35. Acylation of Alcohols and Amines with Vinyl Acetates Catalyzed by Cp<sub>2</sub>Sm(thf)<sub>2</sub> Ishii, Yasutaka; Takeno, Mitsuhiro; Kawasaki, Yumi; Muromachi, Akifumi; Nishiyama, Yutaka; Sakaguchi, Satoshi

Journal of Organic Chemistry 1996, 61(9), 3088-3092.

- 34. Oxidative esterification of primary alcohols by NaBrO<sub>3</sub>/NaHSO<sub>3</sub> reagent in aqueous medium Takase, Kiyoshi; Masuda, Haruhoshi; Kai, Osamu; Nishiyama, Yutaka; Sakaguchi, Satoshi; Ishii, Yasutaka *Chemistry Letters* **1995**, (10), 871-872.
- 33. Aerobic oxidation of alcohols to carbonyl compounds catalyzed by N-hydroxyphthalimide (NHPI) combined with  $Co(acac)_3$

Iwahama, Takahiro; Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Tetrahedron Letters* **1995**, *36*(38), 6923-6926.

- 32. A New Coupling Reaction of Vinyl Esters with Aldehydes Catalyzed by Organosamarium Compounds Takeno, Mitsuhiro; Kikuchi, Shirou; Morita, Ken-Ichi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1995**, *60*(16), 4974-4975.
- 31. Novel Catalysis by *N*-Hydroxyphthalimide in the Oxidation of Organic Substrates by Molecular Oxygen Ishii, Yasutaka; Nakayama, Kouichi; Takeno, Mitsuhiro; Sakaguchi, Satoshi; Iwahama, Takahiro; Nishiyama, Yutaka

Journal of Organic Chemistry 1995, 60(13), 3934-3935.

30. A direct conversion of vic-diols into 1,2-diketones with aqueous hydrogen peroxide catalyzed by peroxotungstophosphate (PCWP)

Iwahama, Takahiro; Sakaguchi, Satoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Tetrahedron Letters* **1995**, *36*(9), 1523-1526.

- 29. New Generation Method for a Samarium(II) Equivalent: Me<sub>3</sub>SiX (X = Br and I)/Sm-Assisted Intermolecular Carbon-Carbon Bond Forming Reactions of Carbonyl Compounds Akane, Noriyuki; Hatano, Tadashi; Kusui, Hiroko; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1994**, *59*(25), 7902-7907.
- 28. A New Synthetic Method of Preparing Iodohydrin and Bromohydrin Derivatives through in situ Generation of Hypohalous Acids from  $H_5IO_6$  and  $NaBrO_3$  in the Presence of  $NaHSO_3$  Masuda, Haruyoshi; Takase, Kiyoshi; Nishio, Masahiro; Hasegawa, Akira; Nishiyama, Yutaka; Ishii, Yasutaka

Journal of Organic Chemistry 1994, 59(19), 5550-5555.

27. Oxidation of Allenes and Alkynes with Hydrogen Peroxide Catalyzed by Cetylpyridinium Peroxotungstophosphate (PCWP)

Sakaguchi, Satoshi, Watase, Seiji, Katayama, Yuji, Sakata, Yasuyuki, Nishiyama, Yutaka, Ishii, Yasutaka *Journal of Organic Chemistry* **1994**, *59*(19), 5681-5686.

26. Oxidation of phenols and hydroquinones by dioxygen catalyzed by mixed addenda heteropolyoxometalate on active carbon (NPV<sub>6</sub>Mo<sub>6</sub>/C) Fujibayashi, Shinya; Nakayama, Kouichi; Nishiyama, Yutaka; Ishii, Yasutaka *Chemistry Letters* **1994**, (7), 1345-1348.

25. Baeyer-Villiger Oxidation of Ketones Using Molecular Oxygen and Benzaldehyde in the Absence of Metal Catalysts

Kaneda, Kiyotomi; Ueno, Shinji; Imanaka, Toshinobu; Shimotsuma, Emi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1994**, *59*(11), 2915-2917.

24. Oxidation of benzylic derivatives with dioxygen catalyzed by mixed addenda metallophosphate containing vanadium and molybdenum

Nakayama, Kouichi; Hamamoto, Masatoshi; Nishiyama, Yutaka; Ishii, Yasutaka *Chemistry Letters* **1993**, (10), 1699-1702.

- 23. Oxidation of organic substrates by a molecular oxygen/aldehyde/heteropolyoxometalate system Hamamoto, Masatoshi; Nakayama, Kouichi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1993**, *58*(23), 6421-6425.
- 22. Selectivity in oxidation of sulfides with hydrogen peroxide by  $[\pi-C_5H_5N^+(CH_2)_{15}CH_3]_3PM_{12}O_{40}^{3-}$  and  $[\pi-C_5H_5N^+(CH_2)_{15}CH_3]_3\{PO_4[M(O)(O_2)_2]_4\}^3-$  (M = Mo or W) Ishii, Yasutaka; Tanaka, Hiroyuki; Nishiyama, Yutaka *Chemistry Letters* **1994**, (1), 1-4.
- 21. Selective dimerization of aldehydes to esters catalyzed by zirconocene and hafnocene complexes Morita, Kenichi; Nishiyama, Yutaka; Ishii, Yasutaka *Organometallics* **1993**, *12*(9), 3748-3752.
- 20. Intermolecular radical addition of 1-alkoxyalkyl radicals to vinyl derivatives Nishiyama, Yutaka; Yamamoto, Hisayuki; Nakata, Shinji; Ishii, Yasutaka *Chemistry Letters* **1993**, (5), 841-844.
- 19. Oxidation of aromatic amines with hydrogen peroxide catalyzed by cetylpyridinium heteropolyoxometalates Sakaue, Sigeki; Tsubakino, Takashi; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1993**, *58*(14), 3633-3638.
- 18. Direct synthesis of polysubstituted cyclopentenones from ketones and aldehydes catalyzed by zirconium compounds

Yuki, Tsuyoshi; Hashimoto, Motochika; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1993**, *58*(16), 4497-4499.

- 17. Generation and reaction of samarium(II) iodide equivalent from samarium and chlorotrimethylsilane/sodium iodide system in acetonitrile Akane, Noriyuki; Kanagawa, Yoshinori; Nishiyama, Yutaka; Ishii, Yasutaka *Chemistry Letters* **1992**, (12), 2431-2434.
- 16. A convenient synthesis of epoxides from olefins using molecular oxygen in the absence of metal catalysts

Kaneda, Kiyotomi; Haruna, Shigeru; Imanaka, Toshinobu; Hamamoto, Masatoshi; Nishiyama, Yutaka; Ishii, Yasutaka

Tetrahedron Letters 1992, 33(45), 6827-6830.

15. Selenium-assisted reduction of  $\alpha$ - and  $\beta$ -diketones with carbon monoxide and water Nishiyama, Yutaka; Inoue, Jun; Teranishi, Kazuyo; Moriwaki, Masami; Hamanaka, Sawako *Tetrahedron Letters* **1992** *33*(42), 6347-6350.

14.  $\alpha$ -Selective coupling reactions of allylic alcohols with aldehydes using trimethylsilyl chloride/sodium iodide/water-tin

Kanagawa, Yoshinori; Nishiyama, Yutaka; Ishii, Yasutaka *Journal of Organic Chemistry* **1992**, *57*(25), 6988-6991.

13. Synthetic application of selenostannanes: selenoalkoxylation of acetals Nishiyama, Yutaka; Aoyama, Satoshi; Hamanaka, Sawako *Phosphorus, Sulfur and Silicon and the Related Elements* **1992**, *67*(1-4), 267-270.

12. Oxidation of aliphatic and aromatic amines with hydrogen peroxide catalyzed by peroxoheteropoly oxometalates

Sakaue, Shigeki; Sakata, Yasuyuki; Nishiyama, Yutaka; Ishii, Yasutaka *Chemistry Letters* **1992**, (2), 289-292.

11. Synthesis of monoselenoacetals using diisobutylaluminum benzeneselenolate Nishiyama, Yutaka; Nakata, Shinji; Hamanaka, Sawako *Chemistry Letters* **1991**, (10), 1775-1776.

10. New agents for the selective reduction of the carbon-carbon double bond of  $\alpha,\beta$ -unsaturated carbonyl compounds

Nishiyama, Yutaka; Yoshida, Masanori; Ohkawa, Shigeo; Hamanaka, Sawako *Journal of Organic Chemistry* **1991**, *56*(23), 6720-6722.

9. Synthesis utilizing reducing ability of carbon monoxide: a new method for selective synthesis of diorgano selenides and diselenides using selenium-carbon monoxide-water reaction system
Nishiyama, Yutaka; Katsuura, Akio; Negoro, Atsuhito; Hamanaka, Sawako; Miyoshi, Noritaka; Yamana, Yoshihiro; Ogawa, Akiya; Sonoda, Noboru

Journal of Organic Chemistry 1991, 56(12), 3776-3780.

8. Selenium-catalyzed debromination of vic-dibromoalkanes and  $\alpha$ -bromo ketones with carbon monoxide and water

Nishiyama, Yutaka; Katsuen, Susumu; Jounen, Hiroshi; Hamanaka, Sawako; Ogawa, Akiya; Sonoda, Noboru

Heteroatom Chemistry 1990, 1(6), 467-474.

7. Reactions of diphenyl alkanes with carbon monoxide in the presence of aluminum chloride-hydrochloric acid

Okada, Takashi; Namba, Osamu; Kubo, Chikako; Nishiyama, Yutaka; Hamanaka, Sawako; Ogawa, Masaya *Chemistry Express* **1990**, *5*(5), 293-296.

6. Bis(acyl) diselenides as convenient acylating reagents Nishiyama, Yutaka; Katsuura, Akio; Okamoto, Youji; Hamanaka, Sawako *Chemistry Letters* **1989**, (10), 1825-1826.

5. Selective reduction of  $\alpha,\beta$ -unsaturated carbonyl compounds with carbon monoxide and water assisted by selenium

Nishiyama, Yutaka; Makino, Yasuhiko; Hamanaka, Sawako; Ogawa, Akiya; Sonoda, Noboru *Bulletin of the Chemical Society of Japan* **1989**, *62*(5), 1682-1684.

4. Selenium, carbon monoxide, and water as a new reduction system: reductive cleavage of disulfides and diselenides to thiols and selenols

Ogawa, Akiya; Nishiyama, Yutaka; Kambe, Nobuaki; Murai, Shinji; Sonoda, Noboru *Tetrahedron Letters* **1987**, *28*(28), 3271-3274.

3. Reductive thiolation of aromatic ketones and aldehyde with sulfur, carbon monoxide and water leading to thiols

Nishiyama, Yutaka; Ohtori, Yoichi; Hamanaka, Sawako; Ogawa, Akiya; Murai, Shinji; Sonoda, Noboru *Nippon Kagaku Kaishi* **1987**, (7), 1502-1504.

2. Carbonyl-to-methylene conversion: selenium-assisted reduction of aromatic ketones with carbon monoxide and water

Nishiyama, Yutaka; Hamanaka, Sawako; Ogawa, Akiya; Kambe, Nobuaki; Sonoda, Noboru *Journal of Organic Chemistry* **1988**, *53*(6), 1326-1329.

1. Reductive selenation of aliphatic ketones and aldehydes by selenium, carbon monoxide, and water leading to symmetrical diselenides

Nishiyama, Yutaka; Hamanaka, Sawako; Ogawa, Akiya; Murai, Shinji; Sonoda, Noboru *Synthetic Communications* **1986**, *16*(9), 1059-1066.

#### **Books and Reviews**

4. Utilization of phenyl trialkylstannyl selenide as a promising reagent for introduction of the phenylseleno group

Nishiyama, Yutaka; Sonoda, Noboru

Mini-Reviews in Organic Chemistry 2005, 2(2), 147-155.

- 3. Development of new synthetic reactions using samarium compounds as catalysts Nishiyama, Yutaka; Sakaguchi, Satoshi; Ishii, Yasutaka *Yuki Gosei Kagaku Kyokaishi* **2000**, *58*(2), 129-137.
- 2. Reductions with selenium reagents Nishiyama, Yutaka; Sonoda, Noboru, Edited by Back, Thomas G *Organoselenium Chemistry* **1999**, 113-129.
- 1. Development of new synthetic reactions using samarium compounds as catalysts Ishii, Yasutaka; Nishiyama, Yutaka; Kawasaki, Yumi; Tashiro, Daisuke; Shiraishi, Hiroyuki; Sakaguchi, Satoshi

Heteroatom Chemistry 1997, 17, 109-132.

#### **Others**

- 2. New generation method of carbon radicals and unstable intermediates by using lanthanum metal Nishiyama, Yutaka; Nishino, Toshiki; Kawabata, Hiroshi; Sonoda, Noboru *Kidorui* **2003**, *42*, 72-73.
- 1. Oxidation of organic compounds with molecular oxygen catalyzed by heteropolyoxometallates Nishiyama, Yutaka; Nakayama, Kouichi; Ishii, Yasutaka Edited by Barton, Derek H. R.; Martell, Arthur Earl; Sawyer, Donald T *Act. Dioxygen Homogeneous Catal. Oxid., [Proc. Int. Symp.]*, 5<sup>th</sup>, **1993**, 473.