

List of Publications

Shô Itô

A. Original Papers

I. Nonbenzenoid Aromatic Chemistry

On the Synthesis of α -Thujaplicin (o-Isopropyltropolone).

T. Nozoe, Y. Kitahara and S. Itô

Proc. Japan Acad. **26** 7 47-49 1950

p-Aminohinokitiol and *m*-Isopropyl-*p*-tropoquinone.

T. Nozoe, S. Ebine, S. Itô and A. Konishi

Proc. Japan Acad. **27** 1 10-14 1951

On *p*-Aminotropolone.

T. Nozoe, S. Seto, S. Ebine and S. Itô

J. Am. Chem. Soc. **73** 1895 1951

On Hinopurpurins, the Rearrangement Products of Azohinokitiols (I).

T. Nozoe, S. Ebine, S. Itô and I. Takasu

Proc. Japan Acad. **27** 4 197-199 1951

Studies on Tropolone Derivatives. X. On *p*-Aminotropolone (II).

T. Nozoe, S. Seto, S. Itô and M. Satô

Proc. Japan Acad. **27** 8 426-429 1951

5-Hydroxy Derivatives of Tropolone, α -Thujaplicin and Hinokitiol.

T. Nozoe, S. Seto, S. Itô, M. Satô, and T. Katô

Proc. Japan Acad. **28** 9 488-492 1952

3-Phenyltropolone and its Derivatives. II.

T. Nozoe, S. Itô and K. Sonobe

Proc. Japan Acad. **29** 3 101-106 1953

On Hydroxyl Derivatives of Tropolone, α -Thujaplicin, and Hinokitiol, and the Attempted Preparation of the so-called "Tropoquinones"

T. Nozoe, S. Seto, S. Itô, M. Satô and T. Katô

Sci. Repts. Tohoku Univ., Ser. I **37** 2 191-210 1953

Action of Hydrogen Peroxide on Troponoids. I. Hinokitiol.

T. Nozoe, M. Satô, S. Itô, K. Matsui, and T. Ôzeki

Proc. Japan Acad. **30** 7 599-603 1954

Action of Hydrogen Peroxide on Troponoids. II. Tropolone, β -Methyltropolone, and α - and γ -Thuiaplicins.

T. Nozoe, S. Itô, K. Matsui and T. Ôzeki

Proc. Japan Acad. **30** 7 604-608 1954

Some Derivatives from Colchicine.

T. Nozoe, T. Ikemi and S. Itô

Proc. Japan Acad. **30** 7 609-613 1954

On 2-Phenyltropone and 3-Phenyltropolone. II.

T. Nozoe, S. Itô and K. Sonobe

Sci. Repts. Tohoku Univ., Ser. I **38** 2 141-156 1954

Some Derivatives from Colchicine.

T. Nozoe, T. Ikemi and S. Itô

Sci. Repts. Tohoku Univ., Ser. I **38** 2 117-129 1954

Action of Hydrogen Peroxide on Tropolones. I. Hinokitiol.

T. Nozoe, M. Satô, S. Itô, K. Matsui and T. Ozeki

Sci. Repts. Tohoku Univ., Ser. I **38** 3 190-208 1954

1,2,3-Triazaazulene Derivatives.

T. Nozoe, S. Itô and K. Matsui

Proc. Japan Acad. **30** 4 313-317 1954

On Quinoxalo[d]tropone Derivatives.

T. Nozoe, S. Itô, S. Suzuki and K. Hiraga

Proc. Japan Acad. **32** 344-348 1956

Studies on Quinoxalotropone Derivatives I. Quinoxalotropone and its Oxime.

S. Itô

Sci. Repts. Tohoku Univ., Ser. I **42** 4 236-246 1958

Pyrazino[d]tropone Derivatives.

S. Itô

Sci. Repts. Tohoku Univ., Ser. I **42** 4 247-251 1958

Studies on Quinoxalotropone Derivatives II, Condensation Products of 5-Nitro and 5-Nitroso-Tropolones with *o*-Phenylenediamine.

S. Itô

Sci. Repts. Tohoku Univ., Ser. I **43** 4 216-222 1959

Reaction of Tropylium Ion with Phenols.

T. Nozoe, S. Itô and T. Tezuka

Chem. And Ind. 1088-1089 1960

ハロトロポン類とチオ尿素との反応（第一報）1-チア-3-アザアズラン-2-オンの合成
野副鉄男, 伊東 橙, 北原和男, 大関孝夫

東北大学非水溶液化学研究所報告 **10** 1, 2 251-256 1961

Mass Spectrometry in Structural and Stereochemical Problems XXXVII. Tropone and Tropolone Derivatives.

J. M. Wilson, M. Ohashi, H. Budzikiewicz, C. Djerassi, S. Itô and T. Nozoe
Tetrahedron **19** 2247-2253 1963

Pure Quadrupole Resonance of Bromine in Bromotropolones.

R. Ikeda, D. Nakamura, S. Itô, H. Sugiyama and M. Kubo
Tetrahedron **20** 909-912 1964

Tautomerism in 3-Bromotropolone.

H. Sugiyama, S. Itô and T. Nozoe
Tetrahedron Lett. **3** 179-182 1965

Syntheses and Reactions of Deuterated Troponoids.

S. Itô, J. Tsunetsugu, T. Kanno, H. Sugiyama and H. Takeshita
Tetrahedron Lett. **41** 3659-3663 1965

Pyrazolotropolones and their Derivatives.

S. Itô, K. Takase, N. Kawabe and H. Sugiyama
Bull. Chem. Soc. Jpn. **39** 2 253-256 1966

Reaction of Tropone with Cyclopentadiene.

S. Itô, Y. Fujise, T. Okuda and Y. Inoue
Bull. Chem. Soc. Jpn. **39** 6 1351 1966

Pentacyclo[7.5.0.0^{2,7}0^{5,13}]octadeca-3, 10-dien-8-one.

S. Itô, Y. Fujise and M. C. Woods
Tetrahedron Lett. **12** 1059-1064 1967

The Maleic Anhydride Adducts of Tropolone and 2-Methoxytropone

S. Itô, H. Takeshita, Y. Shoji, Y. Toyooka and T. Nozoe
Tetrahedron Lett. **28** 3215-3218 1968

Acetolysis of exo-Tricyclo[4.4.1,1^{2,5}]heptadeca-3,7,9-trien-11-yl Toluene-*p*-sulphonate.

S. Itô, T. Otomo, Y. Fujise and K. Sakan
Chem. Comm. 782 1968

The Crystal and Molecular Structure of 2-Chlorotropone-Cycloheptatriene Adduct.

Y. Fukazawa, S. Itô and Y. Iitaka
Acta Cryst. **B25** 665-673 1969

Structure Determination of 2-Methoxytropone-cycloheptatriene Adducts by Mass Spectrometry.

S. Itô, Y. Fujise and M. Sato

Tetrahedron Lett. **9** 691-694 1969

The Reaction of 2-Chlorotropone with Cyclopentadiene.

S. Itô, K. Sakan and Y. Fujise

Tetrahedron Lett. 10 775-778 1969

Diels-Alder Reaction on Some Troponoids with Acrylonitrile.

S. Itô, H. Takeshita and Y. Shoji

Tetrahedron Lett. 23 1815-1818 1969

Cycloaddition Reaction of Tropone and Cyclopentadiene.

S. Itô, K. Sakan and Y. Fujise

Tetrahedron Lett. 33 2873-2876 1970

Cycloaddition Reaction of Tropylium Ion and Cyclopentadiene.

S. Itô and I. Itoh

Tetrahedron Lett. 31 2969-2972 1971

Ene Reaction of Azulenes with some *Dienophiles*.

S. Itô, H. Takeshita and T. Makino

Bull. Chem. Soc. Jpn. 44 7 1982-1983 1971

Crowded Tropolones. I. The Molecular Structure of 3,5,7-Tribromohinokitiol.

S. Itô, Y. Fukazawa and Y. Iitaka

Tetrahedron Lett. 9 741-744 1972

Crowded Tropolones. II. The Molecular Structures of 3,7-Dibromo- and 5,7-Dibromohinokitiol.

S. Itô, Y. Fukazawa and Y. Iitaka

Tetrahedron Lett. 9 745-748 1972

Cycloaddition Reaction of Troponoids with Maleic Anhydride, Mechanistic Study.

S. Itô, A. Mori, Y. Shoji and H. Takeshita

Tetrahedron Lett. 26 2685-2688 1972

Syntheses of 1, 6-Methano[10]annulen-11-ones from Tropone.

S. Itô, H. Ohtani, S. Narita and H. Honma

Tetrahedron Lett. 22 2223-2226 1972

Cycloaddition Reaction of Tropylium Ion and Cycloheptatriene.

S. Itô, A. Mori, I. Saito, K. Sakan, H. Ishiyama and K. Sasaki

Tetrahedron Lett. 21 2737-2740 1973

The Reaction of 2-Chlorotropone with Methyl Methacrylate.

H. Takeshita, M. Shima and S. Itô

Bull. Chem. Soc. Jpn. 46 2915-2917 1973

Cycloaddition Reaction of Tropone with 1, 1-Dimethyl-2,5-diphenyl-1-silacyclopentadiene.

Y. Fujise, Y. Chonan, H. Sakurai and S. Itô

Tetrahedron Lett. 17 1585-1588 1974

Cycloaddition Reaction of Troponoids with Dimethyl Maleate.

H. Takeshita, Y. Shoji and S. Itô

Bull. Chem. Soc. Jpn. **47** 4 1041-1042 1974

endo-Selectivity in the Cycloaddition Reactions of Tropylium Ion.

S. Itô, I. Itoh, I. Saito and A. Mori

Tetrahedron Lett. **44** 3887-3888 1974

The Molecular Structure of 1,6-Methano[10]annulen-11-one.

S. Itô and Y. Fukazawa

Tetrahedron Lett. **12** 1045-1048 1974

Synthesis of Cyclohepta-4,6-diene-1, 2, 3-trione, *o*-Tropoquinone.

M. Hirama and S. Itô

Tetrahedron Lett. **13** 1071-1074 1975

Syntheses of Cyclohepta-3, 6-diene-1, 2, 5-trione, *p*-Tropoquinone.

S. Itô, Y. Shoji, H. Takeshita, M. Hirama and K. Takahashi

Tetrahedron Lett. **13** 1075-1078 1975

Two Syntheses of Naphtho[2, 3-b]- and Naphtho[2, 3-d]tropones via Cycloaddition Reaction of Tropone.

Y. Fujise, H. Saito and S. Itô

Tetrahedron Lett. **14** 1117-1120 1976

Nucleophilic Reactions of *p*-Tropoquinone.

M. Hirama and S. Itô

Tetrahedron Lett. **27** 2339-2342 1976

Synthesis of anti-[2,2](2,6)azulenophane from 5-Methyltropolone.

N. Kato, Y. Fukazawa and S. Itô

Tetrahedron Lett. **24** 2045-2048 1976

Reaction of 5-Nitrosotropolone and its Acetate with Cyclopentadiene.

I. Saito, K. Sakan and S. Itô

Chemistry Lett. 253-256 1977

Cycloaddition Reaction of 5-Arylazotropolone Derivatives with

Cyclopentadiene. Cycloaddition of C=C-N=N Linkage.

S. Itô, and I. Saito

Tetrahedron Lett. **13** 1203-1206 1977

Thiele Acetylation of *p*-Tropoquinone, an Abnormal Ring Contraction.

M. Hirama and S. Itô

Chemistry Lett. 627-630 1977

Cycloaddition Reaction of 5-Phenylazotropones with Cyclopropene.

Y. Fujise, M. Sakaino and S. Itô

Tetrahedron Lett. 31 2663-2666 1977

Cycloaddition Reaction of Styryltropones with Maleic Anhydride.

I. Saito, Y. Watanabe and S. Itô

Tetrahedron Lett. 35 3049-3052 1977

2-クロロトロポンとリチウムフェニルアセチリドとの反応

竹下 齋, 山本徳雄, 清水 透, 伊東 橙

九州大学生産科学研究所報告第65号 7-11 1977

Isolation, Characterization and Molecular Structure of *o*-Tropoquinone.

M. Hirama, Y. Fukazawa and S. Itô

Tetrahedron Lett. 15 1299-1302 1978

Cycloaddition Reaction of *p*-Tropoquinone and its Utilization to the Synthesis of 1,2,5-Benzotropoquinone.

M. Hirama, Y. Koyama, Y. Shoji and S. Itô

Tetrahedron Lett. 26 2289-2292 1978

Synthesis and Physical Properties of [2](1,3)Azuleno[2]paracyclophane and 2,13-Dithia[3](1,3)azuleno[3]paracyclophane.

Y. Fukazawa, M. Aoyagi and S. Itô

Tetrahedron Lett. 12 1067-1070 1978

[2] Paracyclo[2](3, 7)tropolonophane. Synthesis, Physical Properties and Chemical Behavior.

N. Kato, Y. Fukazawa and S. Itô

Tetrahedron Lett. 13 1113-1116 1979

Chemical Reactions of *o*-Tropoquinone and its Derivatives.

M. Hirama, A. Kawamata and S. Itô

Chemistry Lett. 855-858 1979

1,2,3-Benzotropoquinone.

A. Kawamata, E. Kikuchi, M. Hirama, Y. Fujise and S. Itô

Chemistry Lett. 859-862 1979

Azulenophanes III. Syntheses and Physical Properties of [2.2](1,3)Azulenophane and 2,13-Dithia[3,3]azulenophane.

Y. Fukazawa, M. Aoyagi and S. Itô

Tetrahedron Lett. 12 1055-1058 1979

Azulenophane IV. [2.2](2,6)Azulenophane II. Isolation of *syn*- and *anti*-Isomers and their Physical Properties.

N. Kato, H. Matsunaga, S. Oeda, Y. Fukazawa and S. Itô

Tetrahedron Lett. 26 2419-2422 1979

Naphtho[1, 8-ab:4,5-a'b']diazulene, The First Nonalternant Isomer of Dibenzopyrene.

Y. Fukazawa, M. Aoyagi and S. Itô

Tetrahedron Lett. **22** 39 3879-3882 1981

A New Route to [3.5.3]Armilenium Ion.

Y. Fujise, H. Yashima, T. Sato and S. Itô

Tetrahedron Lett. **22** 15 1407-1408 1981

[2]Paracyclo[2](3,7)-*p*-Tropoquinonophane.

A. Kawamata, Y. Fukazawa, Y. Fujise and S. Itô

Tetrahedron Lett. **23** 10 1083-1086 1982

[4](2, 7)Troponophane.

Y. Fujise, T. Shiokawa, Y. Mazaki, Y. Fukazawa, M. Fujii and S. Itô

Tetrahedron Lett. **23** 15 1601-1064 1982

[3]Paracyclo- and [3]Metacyclo[3](3,7)-*p*-tropoquinonophanes.

A. Kawamata, Y. Fukazawa, Y. Fujise and S. Itô

Tetrahedron Lett. **23** 47 4955-4958 1982

Azulenophanes V. Synthesis and Physical Properties of [2](5,7)Azuleno[2]para- and Metacyclophanes.

Y. Fukazawa, M. Sobukawa and S. Itô

Tetrahedron Lett. **23** 20 2129-2132 1982

[8](3,7)Tropolonophane.

H. Saito, Y. Fujise and S. Itô

Tetrahedron Lett. **24** 36 3879-3882 1983

Azulenophane VI. Conformation of Dithia[3.3]azulenophanes.

Y. Fukazawa, M. Sobukawa, T. Shiokawa and S. Itô

Tetrahedron Lett. **24** 21 2199-2202 1983

Distorted Tropones—[3]- and [4] (2, 7)Troponophanes with an Extra Ethano Bridge.

Y. Fujise, Y. Mazaki, T. Shiokawa, Y. Fukazawa and S. Itô

Tetrahedron Lett. **25** 33 3611-3614 1984

[7]- and [6] (3, 7)Tropolonophanes.

H. Saito, Y. Fujise and S. Itô

Tetrahedron Lett. **25** 42 4761-4764 1984

Thermal Deoxygenation of *syn*-15,16-Dioxo-1,6:8,13-bismethano[14]annulene to the Pyrene Isomer Dicyclohepta[cd, gh]pentalene (Azuleno[2,1,8-*ij*]azulene).

E. Vogel, G. Markowitz, L. Schmalstieg, S. Itô R. Breuckmann and W. R. Roth

Angew. Chem. Int. Ed. Engl. **23** 9 719-720 1984

Mehrstufige reversible Redoxsysteme, XXXIX. Isomere Biazulenyle: UV/VIS-Spektroskopie, Voltammetrie und HMO-Energien.

S. Hünig, B. Ort, M. Hanke, C. Jutz, T. Morita, K. Takase, Y. Fukazawa, M. Aoyagi and S. Itô.

Liebigs Ann. Chem. 1952-1958 1984

A Bridged Triptycene—Intramolecular Diels-Alder Reaction of 16, 19-Dimethoxy-[2](9, 10)anthraceno[2]paracyclophe.

Y. Fukazawa, M. Kikuchi, O. Kajita and S. Itô

Tetrahedron Lett. 25 14 15051508 1984

Effect of Temperature and Counter Ion on the Skeletal Rearrangement of a Dihydro[10]annulen-11-one.

Y. Fujise, Y. Hasegawa and S. Itô

Tetrahedron Lett. 26 29 3511-3512 1985

Conformation of Dithia[3.3]- and [2.2]azuleno(2,6)pyridinophanes.

Y. Fukazawa, J. Tsuchiya, M. Sobukawa and S. Itô

Tetrahedron Lett. 26 44 5473-5476 1985

Conformation of Dithia[3.3]azulenofurano- and -thiophenophanes.

Y. Fukazawa, M. Kodama, J. Tsuchiya, Y. Fujise and S. Itô

Tetrahedron Lett. 27 17 1929-1932 1986

Syn-5,13-dimethyl[2.2]metacyclophe. Synthesis, Spectra and Thermal Stability.

Y. Fujise, Y. Nakasato and S. Itô

Tetrahedron Lett. 27 25 2907-2908 1986

[7]- and [9] (3,5)Troponephanes and the Corresponding Hydroxytropyliophanes.

H. Yamaga, Y. Fujise and S. Itô

Tetrahedron Lett. 28 5 585-588 1987

The Effect of Strain on the Tropone Ring. [3]- and [5] (2,7)Troponephanes.

Y. Mazaki, Y. Fujise, Y. Fukazawa and S. Itô

Tetrahedron Lett. 28 9 977-980 1987

Studies on Tropolene Derivative Having Monoamine Oxidase Inhibitory Activity.

M. Yamazaki, Y. Satoh, S. Itô

Yakugaku Zasshi 108 8 754-757 1988

Asymmetric Dihydroxylation of Alkenes with Osmium Tetroxide: Chiral N,N'-Dialkyl-2,2'-bipyrrrolidine Complex.

M. Hirama, T. Oishi and S. Itô

J. Chem. Soc., Chem. Commun. 10 665-666 1989

Steric Strain in *syn*[2.2]metacyclophane.

Shô Itô, Yoshisuke Nakasato, Yutaka Fujise, Hideaki Hioki and Miwa Nagaku and Yoshimasa Fukazawa

Tetrahedron Lett. **34** 23 3787-3788 1993

Benzene Ring Flipping in *syn*[2.2]metacyclophanes: Effect of Substituents.

Shô Itô, Yoshisuke Nakasato, Hideaki Hioki, Miwa Nagaku, Yukiko Kan and Yoshimasa Fukazawa

Tetrahedron Lett. **34** 23 3789-3792 1993

II. Natural Product Chemistry

The Isolation and Structure of Napellonine and Napelline.

K. Wiesner, Z. Valenta, J. F. King, R. K. Maudgal, L.G. Humber and S. Itô
Chem. and Ind. 173 1957

The Synthesis of 2-Ethyl-1:8-Dimethylphenanthrene, A Degradation Product of Methyl Vinhaticoate.

S. Itô and L. G. Humber
Chem. and Ind. 397 1957

The Structure of Napelline and Songorine.

K. Wiesner, S. Itô and Z. Valenta
Experientia 14 4 167 1958

Structure of Thujopsene.

T. Nozoe, H. Takeshita, S. Itô, T. Ozeki and S. Seto
Chem. Pharm. Bull. 8 10 936-938 1960

The Total Synthesis of Chlorophyll.

R.B. Woodward, W.A. Ayer, J.M. Beaton, F. Bickelhaupt, R. Bonnett, P. Buchschacher, G. L. Closs, H. Dutler, J. Hannah, F. P. Hauck, S. Itô A. Langemann, E. LeGoff, W. J. Amer. Chem. Soc. 82 3800-3801 1960

On the Alkaloid of *Fritillaria verticillata* Willd. var. *Thunbergii* Baker. (I). On the Position of the Secondary Hydroxyls and Skeleton of Verticine.

S. Itô, M. Kato, K. Shibata and T. Nozoe
Chem. Pharm. Bull. 9 3 253-255 1961

Structure of Widdrol.

S. Itô, K. Endo, H. Takeshita and T. Nozoe
Chem. and Ind. 1618 1961

On the Alkaloid of *Fritillaria verticillata* Willd. var. *Thunbergii* Baker. (II). The Structure of Verticine.

S. Itô, M. Kato, K. Shibata and T. Nozoe
Chem. Pharm. Bull. 11 10 1337-1340 1963

Configuration of Widdrol.

S. Itô, K. Endo and T. Nozoe
Chem. Pharm. Bull. 11 1 132-135 1963

Structures of α -Kessyl Alcohol and Kessyl Glycol.

S. Itô, M. Kodama and T. Nozoe
Tetrahedron Lett. 26 1787-1792 1963

Nuclear Magnetic Resonance Spectra of Veratrum Alkaloids.

S. Itô, J. B. Stothers and S. M. Kupchan

Tetrahedron **20** 913-928 1964

Stereochemistry of Widdrol.

S. Itô, K. Endo and T. Nozoe

Tetrahedron Lett. 46 3375-3379 1964

Chemical Constituents of Essential Oil of *Chamaecyparis Obtusa* (SIEB. et ZUCC.)

Y. Fujise, I. Maruta, S. Itô and T. Nozoe

Chem. Pharm. Bull. **12** 9 991-994 1964

Isolation of Trifolirhizin from *Ononis spinosa* L.

Y. Fujise, T. Toda and S. Itô

Chem. Pharm. Bull. **13** 1 93-95 1965

Structure of , β -Kessyl Ketone and β -Kessyl Alcohol.

H. Hikino, Y. Takeshita, Y. Hikino, T. Takemoto and S. Itô

Chem. Pharm. Bull. **13** 4 520-522 1965

Absolute Configuration of Pterocarpinoids.

S. Itô, Y. Fujise and A. Mori

Chem. Comm. 595 1965

New Constituents of *Thujopsis Dolabrata*.

S. Itô, K. Endo, H. Honma and K. Ota

Tetrahedron Lett. 42 3777-3781 1965

Stereochemistry of α -Kessyl Alcohol and Kessyl Glycol.

S. Itô, H. Hikino, M. Kodama, Y. Hikino and Y. Takeshita

Kogyo Kagaku Zasshi. **68** 5 804-807 1965

Structure of Camelliagenins.

S. Itô, M. Kodama and M. Konoike

Tetrahedron Lett. 7 591-596 1967

Structure and Absolute Configuration of α -Kessyl Alcohol and Kessyl Glycol.

S. Itô, M. Kodama, T. Nozoe, H. Hikino, Y. Hikino, Y. Takeshita and T. Takemoto

Tetrahedron **23** 553-563 1967

Chemical Constituents in the Essential Oil of the Leaves of *Chamaecyparis taiwanensis* MASAM.

T. Yoshida, K. Endo, S. Itô and T. Nozoe

Yakugaku Zasshi **87** 434 1967

Two New Triterpenes from *Camellia Sinensis* and *Camellia Sasanqua*.

S. Itô and T. Ogino

Tetrahedron Lett. 12 1127-1132 1967

Chamigrene, a Sesquiterpene Hydrocarbon of a Novel Carbon Skeleton.

S. Itô, K. Endo, T. Yoshida, M. Yatagai and M. Kodama

Chem. Comm. 186 1967

Structures of A₁-Barrigenol and R₁-Barrigenol.

S. Itô, T. Ogino, H. Sugiyama and M. Kodama

Tetrahedron Lett. 24 2289-2294 1967

Structure and Absolute Configuration of β-Kessyl Ketone and β-Kessyl Alcohol.

H. Hikino, Y. Takeshita, Y. Hikino, T. Takemoto and S. Itô

Chem. Pharm. Bull. 15 4 485-489 1967

The Identity of Dihydropriverogenin A and Camelliagenin A: A Revised Structure for Priverogenin A.

M. Kodama and S. Itô

Chem. and Ind. 1647 1967

Structure of Inumakilactone A, A Bisnorditerpenoid.

S. Itô, M. Kodama, M. Sunagawa, T. Takahashi, H. Imamura and O. Honda

Tetrahedron Lett. 17 2065-2070 1968

Isolation of A₁-Barrigenol from *Camellia Sasanqua*.

T. Ogino, T. Hayasaka and S. Itô

Chem. Pharm. Bull. 16 6 1132-1133 1968

Triterpenic Constituents of *Stewartia monadelpha* Sieb. et ZUCC. Camelliagenin A 16-Cinnamate as a Sapogenin.

T. Ogino, T. Hayasaka, S. Itô and T. Takahashi

Chem. Pharm. Bull. 16 9 1846-1847 1968

The Structure of Verticinone Methobromide.

S. Itô, Y. Fukazawa, T. Okuda and Y. Iitaka

Tetrahedron Lett. 51 5373-5375 1968

Alkaloids of *Veratrum album* subsp. *Iobelianum* (Bernh.) Suessenguth XX. Stereochemistry of Veramarine.

S. Itô, T. Ogino and J. Tomko

Coll. Czech. Chem. Comm. 33 4429 1968

Structures of Photolysis Products of Camphor (I).

H. Takeshita and Y. Fukazawa

Tetrahedron Lett. 30 3395-3398 1968

Configurations of Nagilactones C and D.

S. Itô M. Kodama, M. Sunagawa, H. Honma, Y. Hayashi, S. Takahashi, H. Ona, T. Sakan and T. Takahashi

Tetrahedron Lett. 34 2951-2954 1969

Structure of Cryptomerone, A Bisabolane Sesquiterpene from *Cryptomeria Japonica*.

S. Itô, M. Kodama, H. Nishiya and S. Narita

Tetrahedron Lett. 37 3185-3186 1969

Preparation of Epicamphor.

H. Takeshita, T. Muroi and S. Itô

Bull. Chem. Soc. Jan. 42 7 2068-2069 1969

Structures of Inumakilactones B and C, Lactones of Diterpenoid Origin.

S. Itô, M. Sunagawa, M. Kodama and H. Honma

Chem. Comm. 91-93 1971

Structure of the Norditerpene Ponalacltone A and its Glucoside, Plant Growth Inhibitors.

S. Itô, M. Kodama, M. Sunagawa, M. Koreeda and K. Nakanishi

Chem. Comm. 855-856 1971

10(S)-Hydroxy-6(R), 9(S)-oxidoctadecanoic Acid, A New Acid in Wool Fat.

S. Itô, K. Endo, S. Inoue and T. Nozoe

Tetrahedron Lett. 34 4011-4014 1971

Constituents of the Wood of *Trochodendron Aralioides*.

T. Makino, M. Kodama and S. Itô

Phytochemistry 10 1405 1971

Constituents of *Excoecaria Agallocha*.

T. Kawashima, T. Takahashi, Y. Inoue, M. Kodama and S. Itô

Phytochemistry 10 3308-3309 1971

Neutral Constituents of *Orixa Japonica*.

H. Abe, T. Kawashima, I. Maruta, M. Kodama and S. Itô

Phytochemistry 10 3330-3331 1971

The Structure and Stereochemistry of Hydroxyachillin.

F. W. Bachelor, A. B. Paralikar and S. Itô

Can. J. Chem. 50 333-335 1972

Structure of Baikeine, A Veratrum Alkaloid.

S. Itô, M. Miyashita, Y. Fukazawa, A. Mori, I. Iwai and M. Yoshimura

Tetrahedron Lett. 2961-2964 1972

Structure of the Further Norditerpenoids of *Podocarpus Macrophyllus*. Inumakilactone A Glucoside, a Plant Growth Inhibitor, and Inumakilactone E.

T. Hayashi, H. Kakisawa, S. Itô, Yuh Pan Chen and Hong-Yen Hsu

Tetrahedron Lett. 33 3385-3388 1972

Structure-activity Relationships of Podolactones and Related Compounds.

M. N. Galbraith, D.H.S. Horn, S. Itô, M. Kodama and J. M. Sasse

Agr. Biol. Chem. 36 2393-2396 1972

Conversion of Gurjunene to 10-Epizierone: Stereochemistry of Zierone.

H. Takeshita, M. Hirama and S. Itô

Tetrahedron Lett. 18 1775-1776 1972

A Revision of the Stereochemistry of Lactucin.

F. W. Bachelor and S. Itô

Can. J. Chem. 51 21 3626-3630 1973

α -Pseudowiddrene, A New Sesquiterpene Hydrocarbon from *Thujopsis Dolabrata* SIEB. et ZUCC.

S. Itô, K. Endo and H. Narita

Tetrahedron Lett. 12 1041-1043 1974

A Novel Rearrangement in C-20 Diterpene Alkaloids. Formation of Bridged Bicyclo-[4.3.1]dec-1-ene System.

M. Kodama, H. Kurihara and S. Itô

Tetrahedron Lett. 15 1301-1304 1975

Syntheses of Macrocyclic Terpenoids by Intramolecular Cyclization I. (\pm)-Cembrene-A, A Termite Trail Pheromone, and (\pm)-Nephthenol.

M. Kodama, Y. Matsuki and S. Itô

Tetrahedron Lett. 35 3065-3068 1975

Structure of Imperialine.

S. Itô, Y. Fukazawa and M. Miyashita

Tetrahedron Lett. 36 3161-3164 1976

Diterpenic Lactones of *Mallotus Repandus*.

T. Kawashima, T. Nakatsu, Y. Fukazawa and S. Itô

Heterocycles 5 227-232 1976

Synthesis of Macrocyclic Terpenoids by Intramolecular Cyclization II. Germacrane-type Sesquiterpenes.

M. Kodama, Y. Matsuki and S. Itô

Tetrahedron Lett. 14 1121-1124 1976

Structure of Inumakilactone D.

M. Kodama, C. Kabuto, M. Sunagawa and S. Itô

Tetrahedron Lett. 33 2909-2910 1977

Syntheses of Macrocyclic Terpenoids by Intramolecular Cyclization III. Model Reactions for the Synthesis of Cembrene and Thunbergol Derivatives.

M. Kodama, K. Shimada and S. Itô

Tetrahedron Lett. 32 2763-2764 1977

Synthesis of Macrocyclic Terpenoids by Intramolecular Cyclization IV. Synthesis of 6Z-Hedycaryols.

M. Kodama, S. Yokoo, H. Yamada and S. Itô

Tetrahedron Lett. 34 3121-3124 1978

Synthesis of Macrocyclic Terpenoids by Intramolecular Cyclization V. Transannular Reactions of Hedycaryol Isomers.

M. Kodama, S. Yokoo, Y. Matsuki and S. Itô

Tetrahedron Lett. 19 1687-1690 1979

Regio- and Stereoselective Cyclization of Linalool and Nerolidol with Mercuric Salts. Synthesis of Iridanols and Cyclonerodiol.

Y. Matsuki, M. Kodama and S. Itô

Tetrahedron Lett. 31 2901-2094 1979

C-C Bond Formation on Reduction of Organomercurial and its Application to Biomimetic Synthesis of Stobane Carbon Skeleton.

Y. Matsuki, M. Kodama and S. Itô

Tetrahedron Lett. 42 4081-4084 1979

Total Synthesis of Barbatane Sesquiterpenes: α - and β -Barbatenes, Gymnomitrol, and Isogymnomitrol.

M. Kodama, T. Kurihara, J. Sasaki and S. Itô

Can. J. Chem. 57 3343-3345 1979

Structure of Tyrivedin, The Immediate Precursor of Tyrian Purple.

Y. Fujise, K. Miwa and S. Itô

Chemistry Lett. 631-632 1980

Structures of Xantholides A and B, Two New Guaianolides from *Xanthium Canadense* Mill.

T. Tahara, Y. Sakurada, M. Kodama, Y. Fukazawa, S. Itô K. Kawazu and S. Nakajima

Tetrahedron Lett. 21 1861-1862 1980

Stereoselective Total Synthesis of Bazzanene.

M. Kodama, T. Takahashi, T. Kurihara and S. Itô

Tetrahedron Lett. 21 2811-2812 1980

Lactonas Sesquiterpenicas de Podanthus Mitiqui.

M. Hoeneisen, M. Kodama and S. Itô

Bol. Extrord. Soc. Chil. Quim. 25 4 201-202 1980

Mallotucin C and D, Two Diterpenic Lactones from *Mallotus Repandus*.

T. Nakatsu, S. Itô and T. Kawashima

Heterocycles **15** 241-244 1981

Sesquiterpene Lactones of *Podanthus Mitqui*.

M. Hoeneisen, M. Kodama and S. Itô

Phytochemistry **20** 7 1743 1981

Biomimetic Cyclization of Hedycaryol Derivatives. Unexpected Cyclization of Phenyl Sulfides with Methyl Iodide.

M. Kodama, K. Shimada and S. Itô

Tetrahedron Lett. **22** 16 1523-1526 1981

Biomimetic Transformations of Germacradienes. Stereospecific Conversion of Hedycaryol Phenyl Sulfides to Cadinanes.

M. Kodama, K. Shimada, T. Takahashi, C. Kabuto and S. Itô

Tetrahedron Lett. **22** 43 4271-4274 1981

Synthesis of Macroyclic Terpenoids by Intramolecular Cyclization VI. Synthesis of 3Z-Cembrene A and Cembrene.

K. Shimada, M. Kodama and S. Itô

Tetrahedron Lett. **22** 43 4275-4276 1981

Synthesis of Macroyclic Terpenoids by Intramolecular Cyclization VII. Total Synthesis of (\pm)-Cubitene.

M. Kodama, T. Takahashi, T. Kojima and S. Itô

Tetrahedron Lett. **23** 33 3397-3400 1982

Synthesis of Macroyclic Terpenoids by Intramolecular Cyclization VIII. Synthesis of Cembra-3E,7E,11E,15(17)-tetraen-trans-16,2-olide.

M. Kodama, T. Takahashi and S. Itô

Tetrahedron Lett. **23** 49 5175-5176 1982

Total Synthesis of (\pm)-Silphinene.

T. Tsunoda, M. Kodama and S. Itô

Tetrahedron Lett. **24** 1 83-86 1983

Total Synthesis of (" \pm)-Senoxydene".

T. Tsunoda, Y. Kabasawa, S. Itô and M. Kodama

Tetrahedron Lett. **25** 7 773-776 1984

Synthesis of Macroyclic Terpenoids by Intramolecular Cyclization IX. Total Synthesis of (\pm)-Obscuronatin and (\pm)-Biflora-4, 10(19), 15-triene.

M. Kodama, K. Okumura, Y. Kobayashi, T. Tsunoda and S. Itô

Tetrahedron Lett. **25** 50 5781-5784 1984

Convenient Synthesis of (*S*)-Citronellol of High Optical Purity.

M. Hirama, T. Noda and S. Itô

J. Org. Chem. **50** 1 127 1985

Total Synthesis of (-)-Vitrenal and its Biological Activity.

M. Kodama, U. S. F. Tambunan and T. Tsunoda

Tetrahedron Lett. **27** 10 1197-1200 1986

Total Synthesis of (-)-Vitrenal and its Biological Activity.

M. Kodama, U. S. F. Tambunan, T. Tsunoda and S. Itô

Bull. Chem. Soc. Jpn. **59** 6 1897-1900 1986

Enantiospecific Synthesis of the Spiroacetal Unit of Avermectin B_{1a}.

M. Hirama, T. Nakamine and S. Itô

Tetrahedron Lett. **27** 43 5281-5284 1986

Total Synthesis of (+)-Lauren-1-ene, The Unique Fenestrane Diterpene.

T. Tsunoda, M. Amaike, U. S. F. Tambunan, Y. Fujise, S. Itô and M. Kodama

Tetrahedron Lett. **28** 22 2537-2540 1987

Stereodivergent Total Synthesis of *N*-Acetylacosamine and *N*-Benzoylristosamine.

M. Hirama, T. Shigemoto and S. Itô

J. Org. Chem. **52** 15 3342-3346 1987

Stereocontrolled Construction of the Hexahydrobenzofuran Subunit of the Avermectins and the Milbemycins: The Aldol Strategy.

M. Hirama, T. Noda and S. Itô

J. Org. Chem. **53** 3 706-708 1988

Synthesis of the C₁₁-C₂₈ Subunit of the Avermectins.

M. Hirama, T. Nakamine and S. Itô

Tetrahedron Lett. **29** 10 1197-1198 1988

Synthesis of Macrocyclic Terpenoids by Intramolecular Cyclization XIII. Stereoselective Synthesis of (+)-Cubitene, A Component of Defense Secretion of Termites.

M. Kodama, T. Takahashi, T. Kojima and S. Itô

Tetrahedron **44** 23 7055-7062 1988

The Total Synthesis of Chlorophyll *a*.

R. B. Woodward, W. A. Ayer, J. M. Beaton, F. Bickelhaupt, R. Bonnett, P. Buchschacher, G. L. Closs, H. Dutler, J. Hannah, F. P. Hauck, S. Itô, A. Langemann, E. L. Goff, W.

Tetrahedron **46** 22 7599-7659 1990

Structure of Syzygiol: A Skin-Tumor Promotion Inhibitor.

M. Nishizawa, H. Yamada, J. Sano, S. Itô, Y. Hayashi, H. Ikeda, Chairul, M. Shiro and H. Tokuda

Tetrahedron Lett. **32** 2 211-212 1991

Simple Strategy for the Synthesis of the Avermectin-Milbemycin Family. Total Synthesis of Milbemycin α_1 .

M. Hirama, T. Noda, S. Yasuda and S. Itô
J. Am. Chem. Soc. **113** 5 1830-1832 1991

A Stereoselective Synthesis of (-)-Isoiridomyrmezin. Application of the Asymmetric Aza-Claisen Rearrangement

T. Tsunoda, S. Tatsuki, K. Kataoka and S. Itô
Chemistry Letter 3 543-546 1994

Stereoselective Synthesis of (+)-Swainsonine and (-)-8,8a-Di-*epi*-swainsonine

T. Oishi, T. Iwakuma, M. Hirama and S. Itô
SYNLETT 5 403-406 1995

A total synthesis of (-)-antimycin A_{3b}.

T. Tsunoda, T. Nishii, M. Yoshizuka, C. Yamasaki, T. Suzuki and S. Itô
Tetrahedron Lett. **41** in press

III. Chemical Reactions Including Pericyclic Reactions

Sensitized Photooxidation of Thujopsene: Synthesis of Thujopsadiene.

S. Itô, H. Takeshita and T. Muroi

Tetrahedron Lett. 36 3091-3094 1969

Sensitized Photooxidation of Thujopsenol: Biogenetic Type Synthesis of Mayurone.

H. Takeshita, T. Sato, T. Muroi and S. Itô

Tetrahedron Lett. 36 3095-3096 1969

Acid-Catalyzed Rearrangement of Thujopsene. I. Structure Determination of New Compounds.

S. Itô, M. Yatagai and K. Endo

Tetrahedron Lett. 16 1149-1152 1971

Acid-Catalyzed Rearrangement of Thujopsene II. The Reaction Pathway.

S. Itô, M. Yatagai, K. Endo and M. Kodama

Tetrahedron Lett. 16 1153-1156 1971

Dioxetane Intermediate in the Sensitized Photooxidation of Thujopsene.

S. Itô, H. Takeshita and M. Hirama

Tetrahedron Lett. 17 1181-1182 1971

Sensitized Photooxidation of Gurjunene: Cleavage of the Cyclopropane Ring.

S. Itô, H. Takeshita, M. Hirama and Y. Fukazawa

Tetrahedron Lett. 1 9-12 1972

Stereochemistry in the Cycloaddition of Oxyallyl and Conjugated Dienes.

S. Itô, H. Ohtani and S. Amiya

Tetrahedron Lett. 20 1737-1739 1973

Cycloaddition Reaction of Cycloheptatriene and Nitrosobenzene Derivatives.

S. Itô, S. Narita and K. Endo

Bull. Chem. Soc. Jpn. 46 11 3517-3519 1973

Skeletal Rearrangement in Dehydrogenation of Thujopsene and its Congeners.

S. Itô, M. Yatagai, K. Endo and Y. Ueda

Chemistry Lett. 117-120 1974

Synthetic Photochemistry. III. The Addition Reaction of Methyl Acetopyruvate to

Cycloheptatriene: An Ene Reaction and $(4+2)\pi$ and $(6+2)\pi$ Cycloadditions.

H. Takeshita, A. Mori and S. Itô

Bull. Chem. Soc. Jpn. 47 7 1767-1769 1974

Sensitized Photooxidation of Quadricyclane and Norbornadiene. New Types of Reaction of $^1\text{O}_2$.

T. Kobayashi, M. Kodama and S. Itô

Tetrahedron Lett. 9 655-658 1975

Acetolysis of Pentacyclo[7.5.0.0^{2,7}0^{5,13}]0^{6,12}]tetradeca-3, 10-dien-8-yl Toluene-*p*-sulfonate.

Y. Fujise, T. Nakatsu and S. Itô

Tetrahedron Lett. 44 3821-3824 1975

The Effect of Leaving Group Orientation on Solvolytic Cope Rearrangements. A Study of *exo*-Tricyclo[4.4.1.1^{2,5}]dodeca-3,7,9-trien-11-yl Tosylates and Derivatives.

S. Itô, I. Itoh, Y. Fujise, T. Nakatsu, C. A. Senkler and P. v. R. Schleyer

Bull. Chem. Soc. Jpn. 51 2379-2390 1978

Conclusive Evidence for [3,3] Sigmatropic Rearrangement in the Solvolysis of Some Bridged Tricyclic Tosylates.

Y. Fujise, T. Nakatsu, A. Nakamura and S. Itô

Tetrahedron Lett. 44 4293-4296 1978

Novel Oxidative Cyclization of Bridged Secondary Alcohols with Ceric Ammonium Nitrate.

Y. Fujise, E. Kobayashi, H. Tsuchida and S. Itô

Heterocycles 11 351-357 1978

Vinylogous di- π -Methane Rearrangement. Thermal Transposition of Bicyclo[4.4.1]undeca-2,4,7,9-tetraen-11-ol.

T. Sato and S. Itô

Tetrahedron Lett. 12 1051-1054 1979

Phenyl Migration in Bicyclo[5.3.1]undeca-1,3,5,8-tetraene-8-carboxy-N-methylanilide, A Unique Truce-Smiles Type Rearrangement of an Anilide.

Y. Fukazawa, N. Kato and S. Itô

Tetrahedron Lett. 23 4 437-438 1982

Formation and Rearrangement of Tricyclo[7.1.1.0^{4,10}]undeca-2,4,6,8-tetraen-10-ol, Novel Pathway from Bicyclo[4.4.1]undeca-1(10), 2,4, 8-tetraen-11-one to 4-Methylazulene.

Y. Fujise, T. Morishima, K. Namiwa, T. Shiokawa, Y. Fukazawa and S. Itô

Tetrahedron Lett. 24 39 4261-4264 1983

Diastereoselective Deoxygenation in Acyclic System. A Remarkable Assistance by the Neighboring Carbonate Group.

S. Lilitkarntakul, M. Hirama and S. Itô

Tetrahedron Lett. 28 11 1207-1210 1987

IV. Synthetic Methodology

Carbamate Mediated Functionalization of Unsaturated Alcohols II. Regio- and Stereo-selective Synthesis of 1, 3-syn and 1,2-anti Amino Alcohol Derivatives via Iodocarbamation.

M. Hirama, M. Iwashita, Y. Yamazaki and S. Itô
Tetrahedron Lett. **25** 43 4963-4964 1984

Intramolecular Michael Addition of *O*-Carbamate to α , β -Unsaturated Ester. A New Diastereoselective amination in an Acyclic System.

M. Hirama, T. Shigemoto, Y. Yamazaki and S. Itô
J. Am. Chem. Soc. **107** 6 1797 1985

Diastereoselective Synthesis of N-Acetyl-*D*, *L*-acosamine and N-Benzoyl-*D*, *L*-ristosamine.

M. Hirama, T. Shigemoto, Y. Yamazaki and S. Itô
Tetrahedron Lett. **26** 34 4133-4136 1985

Reversal of Diastereofacial Selectivity in the Intramolecular Michael Addition of d-Carbamoyloxy-*a,b*-unsaturated Esters. Synthesis of N-Benzoyl-*D,L*-daunosamine.

M. Hirama, T. Shigemoto and S. Itô
Tetrahedron Lett. **26** 34 4137-4140 1985

New Acyclic Approach to 3-Amino-2,3,6-trideoxy-*L*-hexoses: a Stereocontrolled Synthesis of N-Benzoyl L-Daunosamine.

M. Hirama, I. Nishizaki, T. Shigemoto and S. Itô
J. Chem. Soc., Chem. Commun. 393-394 1986

Trifunctional Chiral Synthons via Stereocontrolled Yeast Reduction. Preparation of Chiral Pentane-1,3,5-triol Derivatives.

M. Hirama, T. Nakamine and S. Itô
Chemistry Lett. 1381-1384 1986

Diastereofacial Selectivity in the Intramolecular Conjugate Addition of a Nitrogen Nucleophile; Stereocountrolled Piperidine Synthesis.

M. Hirama, T. Iwakuma and S. Itô
J. Chem. Soc., Chem. Commun. 1523-1524 1987

Conjugate Addition of Internal Nucleophile to Chiral Vinyl Sulfoxides with Stereogenic Center at the Allylic Carbon. "Intramolecular" Double Asymmetric Induction.

M. Hirama, H. Hioki, S. Itô and C. Kabuto
Tetrahedron Lett. **29** 25 3121-3124 1988

New Entry to *Syn*- β -hydroxy- α -amino Acids.

M. Hirama, H. Hioki and S. Itô
Tetrahedron Lett. **29** 25 3125-3128 1988

Aza-Claisen Rearrangement of Amide Enolates. Stereoselective Synthesis of 2,3-Disubstituted Carboxamides.

T. Tsunoda, O. Sasaki and S. Itô
Tetrahedron Lett. **31** 5 727-730 1990

An Efficient Method for Hydrolysis of *N*-Monosubstituted Amides via Acetoxypivalimides.

T. Tsunoda, O. Sasaki and S. Itô
Tetrahedron Lett. **31** 5 731-734 1990

An Efficient Method for Hydrolysis of *N*-Monosubstituted Amides. Utilization of Intramolecular N-O Acyl Migration in Hydroxypivalimides.

T. Tsunoda, O. Sasaki, O. Takeuchi and S. Itô
Tetrahedron **47** 24 3925-3934 1991

Site-Specific Generation of Nonstabilized α -Aminocarbanions. A Novel Methodology Toward the Synthesis of 2-Aminoalcohols.

T. Tsunoda, K. Fujiwara, Y. Yamamoto and S. Itô
Tetrahedron Lett. **32** 17 1975-1978 1991

Asymmetric Induction in Aza-Claisen Rearrangement of Carboxamide Enolates. Effect of Chiral Auxiliary on Nitrogen.

T. Tsunoda, M. Sakai, O. Sasaki, Y. Sako, Y. Hondo and S. Itô
Tetrahedron Lett. **33** 12 1651-1654 1992

Intramolecular Amidoalkylation of Chiral Iminium Ions: Stereoselective Synthesis of *syn*-1,3-Aminoalcohols

Hideaki Hioki, Manabu Okuda, Waka Miyagi and S. Itô
Tetrahedron Lett. **34** 38 6131-6134 1993

Asymmetric Aza-Claisen Rearrangement of Glycolamide and Glycinamide Enolates. Synthesis of Optically Active α -Hydroxy and α -Amino Acids.

Tetsuto Tsunoda, Shinji Tatsuki, Yoko Shiraishi, Masumi Akasaka and S. Itô
Tetrahedron Lett. **34** 20 3297-3300 1993

1,1'-(Azodicarbonyl)dipiperidine—Tributylphosphine, A New Reagent System for Mitsunobu Reaction.

Tetsuto Tsunoda, Yoshiko Yamamiya and S. Itô
Tetrahedron Lett. **34** 10 1639-1642 1993

N, N', N'-Tetramethylazodicarboxamide (TMAD), A New Versatile Reagent for Mitsunobu Reaction. Its Application to Synthesis of Secondary Amines

Tetsuto Tsunoda, Junko Otsuka, Yoshiko Yamamiya and Shô Itô
Chemistry Letter 3 539-542 1994

Application of the aza-Claisen rearrangement to the total synthesis of natural products:
(-)-Isoiridomyrmezin

Shô Itô and Tetsuto Tsunoda

Pure & Appl. Chem. **66** 10/11 2071-2074 1994

Novel Reactivity of Stabilized Methylenetributylphosphorane: A New Mitsunobu Reagent
Tetsuto Tsunoda, Fumie Ozaki and Shô Itô

Tetrahedron Lett. **35** 28 5081-5082 1994.7

Intramolecular Amidoalkylation of Chiral Imines and Iminium Ions: Stereoselective Synthesis of
anti-1,2- and -1,3-Aminoalcohols

Hideaki Hioki, Tatuo Izawa, Makoto Yoshizuka, Rieko Kunitake and Shô Itô

Tetrahedron Lett. **36** 13 2289-2292 1995

Mitsunobu Acylation of Sterically Congested Secondary Alcohols by *N,N,N',N'*-
Tetramethylazodicarboxamide—Tributylphosphine Reagent

Tetsuto Tsunoda, Yoshiko Yamamiya, Y. Kawamura and Shô Itô

Tetrahedron Lett. **36** 14 2529-2530 1995

Carbon-Carbon Bond Formation with New Mitsunobu Reagents

Tetsuto Tsunoda, Miwa Nagaku, Chisato Nagino, Yumi Kawamura, Fumie Ozaki, Hideaki
Hioki and Shô Itô

Tetrahedron Lett. **36** 14 2531-2534 1995

Mitsunobu-type Alkylation of *p*-Toluenesulfonamide. A Convenient New Route to Primary and
Secondary Amines

T. Tsunoda, H. Yamamoto, K. Goda and S. Itô

Tetrahedron Lett. **37** 14 2457-2458 1996

Mitsunobu-type Alkylation with Active Methine Compounds

T. Tsunoda, C. Nagino, M. Oguri and S. Itô

Tetrahedron Lett. **37** 14 2459-2462 1996

Formation of Heterocycles by the Mitsunobu Reaction. Seteroselective Synthesis of
(+)- α -Skyanthine

T. Tsunoda, F. Ozaki, N. Shirakata, Y. Tamaoka, H. Yamamoto and S. Itô

Tetrahedron Lett. **37** 14 2463-2466 1996

Mitsunobu Type C-N Bond Formation with 4,7-Dimethyl-3,5,7-Hexahydro-1,2,4,7-Tetrazocin-3,8-Dione(DHTD), A New Cyclic Azodicarboxamide.

T. Tsunoda, Y. Kawamura, K. Uemoto and S. Itô

Heterocycles **47** 1 177-179 1998

A facile one-pot cyanation of primary and secondary alcohols. Application of some new
Mitsunobu reagents

Tetsuto Tsunoda, Kaori Uemoto, Chisato Nagino, Megumi Kawamura, Hiroto Kaku and Shô
Itô

Tetrahedron Lett. **40** 41 7355-7358 1999

Arylmethyl phenyl sulfones, a new carbon nucleophile for Mitsunobu-type alkylation

Tetsuto Tsunoda, Kaori Uemoto, Tomoko Ohtani, Hiroto Kaku and Shô Itô

Tetrahedron Lett. **40** 41 7359-7362 1999

Cyanomethylenetrimethylphosphorane, a powerful reagent for the Wittig olefination of esters,
lactones and imides

Tetsuto Tsunoda, Harue Takagi, Daiki Takaba, Hiroto Kaku and Shô Itô

Tetrahedron Lett. **41** 2 235-237 2000

V. Physical Method and Physical Chemistry

A Microcell for NMR Spectral Measurements.

S. Itô and I. Miura

Bull. Chem. Soc. Jpn. **38** 12 2197-2199 1965

Solvent Shifts in the Nuclear Magnetic Resonance Spectra of Unsaturated Carbonyl Compounds.

Y. Fujise and S. Itô

Chem. Pharm. Bull. **14** 7 797-800 1966

Correlation of Methyl Signals in 3β -Hydroxyoleanenes.

S. Itô, M. Kodama and M. Sunagawa

Tetrahedron Lett. 40 3989-3992 1967

Abnormal Optical Rotatory Dispersion of Steroidal Tetrahydrofuranones.

S. Itô, K. Endo, T. Ogino, H. Takeuchi and T. Watanabe

Tetrahedron Lett. 27 2581-2586 1967

$\pi-\pi^*$ Circular Dichroism of α -Cyclopropyl- and α -Epoxy-ketones.

K. Kuriyama, H. Tada, Y. K. Sawa, S. Itô and I. Itoh

Tetrahedron Lett. 21 2539-2544 1968

Substituent Effect on the Methyl Signals in the NMR Spectra of Olean-12-en- 3β -ols Effect of the Hydroxyl and Acetoxy Groups.

S. Itô, M. Kodama, M. Sunagawa and T. Oba

Tetrahedron Lett. 34 2905-2908 1969

Substituent Effect in the Transannular π -Interaction of Bicyclo[3.2.2]nona-3,6-dien-2-one Derivatives.

S. Itô, H. Takeshita, Y. Shoji, Y. Toyooka and T. Nozoe

Tetrahedron Lett. 6 443-446 1969

Electron Spin Resonance Spectra of Radical Anions derived from Cyclohepta-3, 6-diene-1, 2, 5-trione and Cyclohepta-4,6-diene-1, 2, 3-trione.

H. Sakurai, A. Okada, Y. Shoji and S. Itô

Chemistry Lett. 539-542 1975

Hindered Rotation Around Amide OC-N Bonds. Its Energy Dependence on C-N-C Bond Angle.

T. Sato, Y. Fukazawa, Y. Fujise and S. Itô

Heterocycles **7** 2 807-815 1977

Conformation of Hedycaryol Isomers.

E. Osawa, K. Shimada, M. Kodama and S. Itô

Tetrahedron Lett. 25 2353-2354 1979

Magnetic Circular Dichroism and Anomalous Fluorescence Spectra of [2,2](2,6)Azulenophanes.
H. Yamaguchi, K. Ninomiya, M. Fukuda, S. Itô N. Kato and Y. Fukazawa
Chemical Physics Lett. **72** 2 297-300 1980

The Photoelectron Spectra of *anti*- and *syn*-[2,2](2,6)Azulenophane.
B. Kovac, M. Mohraz, E. Heilbronner, S. Itô Y. Fukazawa and P.M. Keehn
J. Electron Spectrosc. Relat. Phenom. **22** 327-332 1981

ESR and ENDOR Studies on Azulenophane Anion Radicals.
M. Iwaizumi, Y. Fukazawa, N. Kato and S. Itô
Bull. Chem. Soc. Jpn. **54** 1299-1304 1981

Circular Dichroism LXXXVI. CD of Chiral Vinyl-Cyclopropanes.
S. Itô, K. Kuriyama, T. Norin and G. Snatzke
Israel J. Chem. **22** 59-63 1982

B. Review Articles

シクロペンタジエニル化合物およびそのほかの芳香族化合物
野副鉄男, 伊東 橙,
大有機化学(小竹監修), 朝倉書店 **13** 1960

Recent Advances in the Chemistry of Azulenes and Natural Hydroazulenes.
T. Nozoe and S. Itô,
Progr. Chem. Org. Natur. Prod. (Zechmeister Ed.) Springer Verlag **19** 31 1961

トロポノイド化合物のマススペクトル
伊東 橙
化学の領域 **19** 7 505-513 1965

トロポノイドと共役オレフィンとの反応
伊東 橙
有機合成化学 **25** 10 858-868 1967

マキ科植物のジテルペン系ラクトン
伊東 橙, 児玉三明
化学の領域, 増刊86号 212-237 1968

Sester-, Tri and Higher Terpenoids.
S. Itô (Nakanishi, Goto, Itô, Natori and Nozoe, ed)
Natural Products Chemistry (Kodansha-Academic Press) **1** 313 1974

Alkaloids.
S. Itô (Nakanishi, Goto, Itô, Natori and Nozoe, Ed.)
Natural Products Chemistry (Kodansha-Academic Press) **2** 255 1974

Norditerpene Dilactones from Podocarpus Species.
S. Itô and M. Kodama
Heterocycles **4** 3 595-624 1976

トロピリウム化合物の熱環状付加反応
伊東 橙, 藤瀬 裕
有機合成化学 **35** 3 176-187 1977

The Thermal Cycloaddition Reactions of Tropylium Compounds.
S. Itô and Y. Fujise (Nozoe, Breslow, Hafner, Itô and Murata, Ed.)
Topics in Nonbenzenoid Aromatic Chemistry (Hirokawa Publ. Co.) **2** 91 1977

オレフィン環化反応-テルペノイドの閉環
伊東 橙, 児玉三明
有機合成化学 **36** 6 492-500 1978

環形成反応と合成-総論

伊東 橙, 児玉三明

化学総説 **31** 3-30 1981

炭素陰イオンを利用した閉環反応とそのテルペノイド合成への応用

児玉三明, 伊東 橙

化学総説 **31** 57-69 1981

Nonbenzenoid Phanes.

S. Itô

Pure and Appl. Chem. **54** 5 957-974 1982

Nonbenzenoid Phanes.

S. Itô, Y. Fujise and Y. Fukazawa (Keehn and Rosenfeld, Eds.)

Cyclophanes (Academic Press) **2** 485-520 1983

Di and Higher Terpenoids.

K. Nakanishi and S. Itô (Nakanishi, Goto, Itô, Natori and Nozoe, Eds.)

Natural Products Chemistry (Kodansha-Academic Press) **3** 105 1983

Synthesis of Polyquinane Terpenes.

S. Itô, M. Kodama, and T. Tsunoda (Zalewski and Skolik Eds.)

Natural Product Chemistry 1984 (Elsevier Sci. Publ.) 159-170 1985Asymmetric Induction in the Intramolecular Conjugate Addition of γ - or δ -Carbamoyloxy- α,β -Unsaturated Esters. A New Method for Diastereoselective Amination and Divergent Syntheses of 3-Amino-2,3,6-Trideoxhexoses.

M. Hirama and S. Itô.

Heterocycles **28** 2 1229-1247 1989

Total Synthesis of Polyquinane Terpenes.

S. Itô, T. Tsunoda, M. Kodama, Y. Fujise

Studies on Natural Product Chemistry (Elsevier) **3B** 117-124 1989

トロポロンから新芳香族化合物へ

伊東 橙

化学と工業 **42** 6 988-992 1989

A Few New Methods for Asymmetric Synthesis.

S. Itô and T. Tsunoda

Pure & Appl. Chem. **62** 7 1405-1408 1990

A Few New Methods Toward Asymmetric Synthesis.

Shô Itô and Tetsuto Tsunoda

Journal of the Chinese Chemical Society **39** 205-208 1992

アザクライゼン転位とその周辺 －発想と展開－
角田鉄人, 伊東 橩
有機合成化学協会誌 52 2 113-120 1994

新しい光延試薬の創製
角田鉄人, 伊東 橩
有機合成化学協会 55 7 631-641 1997

New Mitsunobu reagents in the C-C bond formation. Application to natural product synthesis
Shô Itô and Tetsuto Tsunoda

Pure & Appl. Chem. 71 6 1053-1057 1999