

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 1958Studies 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 徹, 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}0^{6,12}]tetradeca-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}]dodeca-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 齊, 山本徳雄, 清水 透, 伊東 檉

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-Benzotroppoquinone.

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*-Troppoquinone and its Derivatives.

M. Hirama, A. Kawamata and S. Itô

Chemistry Lett. 855-858 1979

1,2,3-Benzotroppoquinone.

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[l, 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

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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]paracyclophane.

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

Tetrahedron Lett. **25** 14 1505-1508 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

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

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

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

Tetrahedron Lett. **27** 17 1929-1932 1986

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

Y. Fujise, Y. Nakasato and S. Itô

Tetrahedron Lett. **27** 25 2907-2908 1986

[7]- and [9] (3,5)Troponophanes 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)Troponophanes.

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'-bipyrrolidine 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.

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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
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the Secondary Hydroxyls and Skeleton of Verticine.

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Chem. Pharm. Bull. **9** 3 253-255 1961

Structure of Widdrol.

S. Itô, K. Endo, H. Takeshita and T. Nozoe
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On the Alkaloid of *Fritillaria verticillata* Willd. var. *Thunbergii* Baker. (II). The Structure of
Verticine.

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Configuration of Widdrol.

S. Itô, K. Endo and T. Nozoe
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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

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Isolation of Trifolirhizin from *Ononis spinosa* L.

Y. Fujise, T. Toda and S. Itô

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

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

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

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

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M. Kodama and S. Itô

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