## **PUBLICATIONS**

- Shigehiko Sugasawa, Yoshio Ban, and Ruriko Mochizuki: Reaction between Sulfaguanidine and 1,3-Ketoaldehydes. Syrithesis of p-Aminobenzenesulfonamide-methylpyrimidine. 1. Yakugaku Zasshi, 1949, 69, 82-85.
- 2. Shigehiko Sugasawa and Yoshio Ban: The Oxidation of 1-Methyl-3-ethylpyridinium Salt. *Yakugaku Zasshi*, 1952, **72**, 1336-1339.
- Yoshio Ban: Preparation of β-(3,4-Dimethoxyphenyl)-ethylamine. Yakugaku Zasshi, 1954, 74, 212-213.
- 4. Yoshio Ban: Studies on the Synthesis of Emetine. II. Synthesis of Rubremetinium Bromide. *Chem. Pharm. Bull. (Tokyo)*, 1955, **3**, 53-59.
- 5. Shigehiko Sugasawa and Yoshio Ban: Studies on the Synthesis of Emetine. II. Synthesis of rac Rubremetinium Bromide. *Proc. Japan Acad.*, 1955, **31**, 31-35.
- W. G. Dauben, Yoshio Ban, and J. H. Richards: Biosynthesis of the Triterpene, Eburicoic Acid: The Utilization of Methyl-labeled Acetate. *J. Am. Chem. Soc.*, 1957, 79, 968-970.
- 7. Yoshio Ban and Takeshi Oishi: The Preparation of 2-(Substituted phenyl)ethanols. *Chem. Pharm. Bull. (Tokyo)*, 1958, **6**, 574-576.
- 8. Yoshlo Ban, Masanao Terashima, and Osamu Yonemitsu: Stereochemistry of Emetine. *Chemistry and Industry (London)*, 1959, 568.
- 9. Yoshio Ban, Masanao Terashima, and Osamu Yonemitsu: Absolute Stereochemical Configuration of Emetine. *Chemistry and Industry (London)*, 1959, 569.
- Shigehiko Sugasawa, San-ya Akaboshi, and Yoshio Ban: Reaction of 1-Phenyl-2(1H)-pyridones with Phosphoryl Chloride. Formation of 1-Phenethyl-2-chloropyridinium Salts. (Preliminary Communication). Chem. Pharm. Bull., 1959, 7, 263-264.
- Yoshio Ban, Osamu Yonemitsu, Takeshi Oishi, Susumu Yokoyama, and Masako Nakagawa: Reaction of 1-Phenyl-2(1H)-pyridones with Phosphoryl Chloride. Formation of 1-Phenethyl-2-chloropyridinium Salts. (Full Paper). Chem. Pharm. Bull. (Tokyo), 1959, 7, 609-615.
- 12. Yoshio Ban, Osamu Yonemitsu, and Masanao Terashima: Preliminary Studies on the Stereochemistry of Emetine. I. Mercuric Acetate Dehydrogenation of (-)-2'-Acylemetines. *Chem. Pharm. Bull. (Tokyo)*, 1960, **8**, 183-193.
- Yoshio Ban, Osamu Yonemitsu, and Masanao Terashima: Preliminary Studies on the Stereochemistry of Emetine. II. Ultraviolet and Infrared Absorption Spectra of 3,4-Dihydro-isoquinoline and its Homologs. Chem. Pharm. Bull. (Tokyo), 1960, 8, 194-202.

- Yuichi Kanaoka, Yoshio Ban, Takeshi Oishi, Osamu Yonemitsu, Masanao Terashima, Tetsuo Kimura, and Masako Nakagawa: Infrared Spectra of Some Indole and Pyrrole Compounds. Chem. Pharm. Bull. (Tokyo), 1960. 8, 294-301.
- 15. Yoshio Ban and Osamu Yonemitsu: The Enamine-Immonium Cation System of 9,10-Dimethoxy-1,2,3,4,6,7-hexahydro(a)quinolizinium Salt. *Chem. Pharm. Bull. (Tokyo)*, 1960, **8**, 653-655.
- 16. Yoshio Ban and Masako Seo: A Novel Synthetic Method for β-Carboline Derivatives. *Chemistry and Industry (London)*, 1960, 235.
- 17. Yoshio Ban and Takeshi Oishi: Syntheses of 3-Spiro-oxindole Derivatives. *Chemistry and Industry (London)*, 1960, 349.
- Yoshio Ban and Masako Seo: The Synthesis of β-Carboline Derivatives. I. A Synthesis of Some 12H-Indolo(2, 3-a)pyridocolinium Salts, Including Flavopereirine. Tetrahedron, 1961, 16, 5-10.
- Yoshio Ban and Masako Seo: The Synthesis of β-Carboline Derivatives. II. A Synthesis of Some Benz-indolo(2, 3-a)pyridocolinium Salts, Including Sempervirine. *Tetrahedron*, 1961, 16, 11-15.
- 20. Yoshio Ban and Osamu Yonemitsu: Absolute Stereochemistry of Yohimbine and Reserpine. *Chemistry and Industry (London)*, 1961, 948.
- 21. Yoshio Ban and Takeshi Oishi: Stereospecific Syntheses of rac-N-Methylrhynchophyllane for Stereochemistry of Rhynchophylline. *Tetrahedron Letters*, 1961, 791-795.
- Yoshio Ban and Masanao Terashima: Studies on the Structure of Rubremetinium Cation: A New Synthesis of C-Bisnorrubremetinium Salt and Its Model Compound. *Tetrahedron Letters*, 1961, 796-801.
- 23. Yoshio Ban and Osamu Yonemitsu: The Absolute Stereochemistry of Yohimbine by Chemical Correlation with Dihydrocorynantheane. *Tetrahedron Letters*, 1962, 181-184.
- 24. Yoshio Ban and Masako Seo: Total Synthesis of Alstoniline. J. Org. Chem., 1962, 27, 3380.
- 25. Yoshio Ban and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derivatives. I. Syntheses of 1-Methyl-2', 3', 10', 10a'-tetrahydrospiro-(indoline-3,1' (5H)-pyrrolo(1,2-b)isoquinoline)-2-one and Its Homologs. Chem. Pharm. Bull. (Tokyo), 1963, 11, 441-445.
- Yoshio Ban and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derivatives. II. Syntheses of 1-Methylspiro(indoline-3,1'-pyrrolizidine and Indolizidine)-2-one. Chem. Pharm. Bull. (Tokyo), 1963, 11, 446-451.
- Yoshio Ban and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derivatives. III. Stereospecific Syntheses of rac-N-Methylrhynchophyllane for Stereochemistry of Rhynchophylline and Isorhynchophylline. Chem. Pharm. Bull. (Tokyo), 1963, 11, 451-460.
- 28. Osamu Yonemitsu, Yasuhiko Sato, Shiro Nishioka, and Yoshio Ban: The Absolute Configuration of Sarkomycin. (Communication). *Chemistry and Industry (London)*, 1963, 490.
- Yasuhiko Sato, Shiro Nishloka, Osamu Yonemitsu, and Yoshio Ban: The Absolute Configuration of Sarkomycin. (Full Paper). Chem. Pharm. Bull. (Tokyo), 1963, 11, 829-834.

- Yoshio Ban and Masako Seo: The Synthesis of β-Carboline Derivatives. III. A Synthesis of 10-Methoxy-6,7-dihydro-12H-indolo(2,3-a)-quinolizinium Salts. *Chem. Pharm. Bull. (Tokyo)*, 1963, 11, 1193-1195.
- Takeshi Oishi, Shizuo Maeno, and Yoshio Ban: The Synthesis of 3-Spirooxindole Derivatives. IV.
   The Conversion of 3-Spirooxindole to Indole Derivative. Chem. Phram. Bull. (Tokyo), 1963, 11, 1195-1197.
- 32. Yoshio Ban and Osamu Yonemitsu: The Absolute Stereochemistry of Yohimbine and Reserpine. (Full Paper). *Tetrahedron*, 1964, **20**, 2877-2884.
- 33. Yoshio Ban and Takeshi Wakamatsu: Direct Amination of 3-Ethylpyridine. *Chemistry and Industry (London)*, 1964, 710.
- 34. Yuichi Kanaoka, Takamitsu Sekine, Minoru Machida, Yaeko Soma, Kazutaka Tanizawa, and Yoshio Ban: Studies on Protein-Sulfhydryl Reagents. I. Synthesis of Benzimidazole Derivatives of Maleimide: Fluorescent Labeling of Maleimide. *Chem. Pharm. Bull. (Tokyo)*, 1964, **12**, 127-134.
- Yuichi Kanaoka, Osamu Yonemitsu, Kazutaka Tanizawa, and Yoshio Ban: Polyphosphate Esters as Synthetic Reagents. I. Synthesis of 2-Substituted Benzimidazoles. Chem. Pharm. Bull. (Tokyo), 1964, 12, 773-778.
- 36. Yuichi Kanaoka, Eisuke Sato, Osamu Yonemitsu, and Yoshio Ban: Bischler-Napieralski Reaction by Means of Polyphosphate Esters and Synthesis of 5H-2-Benzazepine Derivatives. *Tetrahedron Letters*. 1964. 2419-2422.
- 37. Yuichi Kanaoka, Osamu Yonemitsu, Kazutaka Tanizawa, Kiyoko Matsuzaki, and Yoshio Ban: A Novel Preparation of Aryl Esters. *Chemistry and Industry (London)*, 1964, 2102.
- 38. Yoshio Ban and Masako Seo: The Synthesis of β-Carboline Derivatives. IV. Total Synthesis of Alstoniline. Chem. Pharm. Bull. (Tokyo), 1964, 12, 1296-1301.
- 39. Yoshio Ban and Masako Seo: The Synthesis of β-Carboline Derivatives. V. A Synthesis of 1-Methyl-1,2,3,4,7,8,-hexahydro13H-benz(g)-indolo(2,3-a)quinolizinium Salts. *Chem. Pharm. Bull.* (*Tokyo*), 1964, 12, 1378-1380.
- 40. Yoshio Ban and Ichizo Inoue: The Synthesis of β-Carboline Derivatives. VI. A Synthesis of 3-Ethyl-10-methoxy-12H-indolo(2,3-a)-quinolizinium Salt. *Chem. Pharm. Bull. (Tokyo)*, 1964, **12**, 1381-1383.
- Yoshio Ban, Reiji Sakaguchi, and Masako Nagai (nee, Seo): The Synthesis of β-Carboline Derivatives. VII. The Isolation of the Possible Intermediate in the Condensation of 3-(2bromoethyl)indole and 2-Halogenopyridine. Chem. Pharm. Bull. (Tokyo), 1965, 13, 931-934.
- Yoshio Ban and Masanao Terashima: Studies on the Structure of (+)-Rubremetinium Cation. A New Synthesis of C-Bisnor-rubremetinium Cation and its Model Compound. Chem. Pharm. Bull. (Tokyo), 1965, 13, 775-785.
- 43. Yoshio Ban, Yasuhiko Sato, Masako Nagai (nee Seo), Takeshi Oishi, Masanao Terashima, Osamu Yonemitsu, and Yuichi Kanaoka: Total Synthesis of (±)-Aspidospermine. *Tetrahedron Letters*, 1965, 2261-2268.

- 44. Yuichi Kanaoka, Minoru Machida, Osamu Yonemitsu, and Yoshio Ban: Polyphosphate Esters as a Synthetic Agent. III. Amide and Peptide Syntheses. *Chem. Pharm. Bull. (Tokyo)*, 1965, **13**, 1065-1072.
- 45. Yoshio Ban and Yasuhiko Sato: Studies on the Structures of Some Cholestanoindoles. *Chem. Pharm. Bull. (Tokyo)*, 1965, **13**, 1073-1077.
- Yuichi Kanaoka, Yoshio Ban, Osamu Yonemitsu, Kimiko Irie, and Koichi Miyashita: Fischer Indole Synthesis and Ethylation of 2,3-Disubstituted Indoles with Polyphosphate Esters. Chemistry and Industry (London), 1965, 473.
- Yuichi Kanaoka, Yoshio Ban, Koichi Miyashita, Kimiko Irie, and Osamu Yonemitsu:
   Polyphosphate Ester as a Synthetic Agent. V. The Fischer Indole Synthesis with Polyphosphate Esters. Chem. Pharm. Bull. (Tokyo), 1966, 14, 934-939.
- 48. A. Brossi, M. Gerecke, A. R. Battersby, R. S. Kapil, Yoshio Ban, and Masanao Terashima: Rubremetinium and Rubremetaminium Cations. *Experientia*, 1966, **22**, 134-137.
- Yoshio Ban, Takeshi Oishi, Miwako Ochiai, Takeshi Wakamatsu, and Yasuo Fujimoto: The Synthesis and Stereochemistry of Isoquinuclidine Derivatives. *Tetrahedron Letters*, 1966, 6385-6391.
- Yuichi Kanaoka, Eisuke Sato, and Yoshio Ban: Polyphosphate Ester as a Synthetic Agent. VI.
   The Bischler-Napieralski Reaction of Tryptamine and Tryptophan Derivatives by Means of Polyphosphate Ester. Chem. Pharm. Bull. (Tokyo), 1967, 15, 101-107.
- 51. Yoshio Ban, Takeshi Oishi, Yoshiko Kishio, and Ikuo Iijima: The Fischer Indole Synthesis with Formic Acid. I. A Convenient Synthesis of 4a-Ethyl-9-formyl-1,2,3,4,4a,9a,-hexahydro-9H-carbazole. *Chem. Pharm. Bull. (Tokyo)*, 1967, 15, 531-533.
- 52. Yuichi Kanaoka, Kazutaka Tanizawa, Eisuke Sato, Osamu Yonemitsu, and Yoshio Ban: Polyphosphate Ester as a Synthetic Agent. IV. A Novel Preparation of Aryl Esters. *Chem. Pharm. Bull. (Tokyo)*, 1967, **15**, 593-595.
- Yuichi Kanaoka, Minoru Machida, Yoshio Ban, and Takamitsu Sekine: Fluorescene and Structure
  of Proteins as Measured by Incorporation of Fluorophore. II. Synthesis of Maleimide Derivatives
  as Fluorescene-Labeled Protein-Sulfhydryl Reagents. Chem. Pharm. Bull. (Tokyo), 1967, 15,
  1738-1743.
- Takeshi Oishi, Masako Nagai, and Yoshio Ban: The Reactions of Activated Amides. Part II. A New Synthetic Route to β,β'-Disubstituted Indoline Derivatives. *Tetrahedron Letters*, 1968, 491-495.
- 55. Takeshi Osihi, Miwako Ochiai, Masako Nagai, and Yoshio Ban: The Reactions of Activated Amides. Part III. An Activation of the α-Position of Tertiary Amide Carbonyl. *Tetrahedron Letters*, 1968, 497-502.
- Yoshio Ban, Takeshi Wakamatsu, Yasuo Fujimoto, and Takeshi Oishi: The Total Synthesis of dl-Epiibogamine. Tetrahedron Letters, 1968, 3383-3386.

- 57. Yuichi Kanaoka, Osamu Yonemitsu, Eisuke Sato, and Yoshio Ban: Polyphosphate Ester as a Synthetic Agent. VII. The Beckmann Rearrangement and Formation of Amidines with PPE. *Chem. Pharm. Bull. (Tokyo)*, 1968, **16**, 280-284.
- 58. Yoshio Ban, Masako Nakagawa, and Tadashi Nakata (in part): Studies on the Bischler-Napieralski Reaction with Unsaturated Lactams. Syntheses of 5,6,9,10,11,12-Hexahydro-2,3-dimethoxybenzo(4,5-a)benzo(f)quinolizinium and Dihydrosempervirine Salts. *Chem. Pharm. Bull.* (*Tokyo*), 1968, 16, 516-522.
- 59. Yoshio Ban and Tetsuo Kimura: The Synthesis of β-Carboline Derivatives. VIII. Syntheses of Bisnorflavocarpine and Its Relatives. *Chem. Pharm. Bull. (Tokyo)*, 1968, 16, 549-552.
- 60. Muneyoshi Ikezaki, Takeshi Wakamatsu, and Yoshio Ban: The Total Synthesis of dl-Ibogamine. *J. Chem. Soc., Chem. Commun.*, 1969, 88-89.
- 61. Tetsuo Kimura and Yoshio Ban: The Synthesis of β-Carboline Derivatives. IX. Syntheses of 2-(1-Hydroxymethyl-propyl)-1,2,3,4,6,7-hexahydro-12H,12bH-indolo(2,3-a)quinolizine (10-Desoxy-18,19-dihydro-15-epihunterburnine). *Chem. Pharm. Bull. (Tokyo)*, 1969, 17, 296-305.
- 62. Takeshi Oishi, Masako Nagai, Takeshi Ohnuma, Hitoshi Moriyama, Koichi Tsutae, Miwako Ochiai, and Yoshio Ban: The Reactions of Activated Amides. I. The Reactions of Iminoethers Derived from the Secondary Amides with the Nucleophiles. *Chem. Pharm. Bull. (Tokyo)*, 1969, 17, 2306-2313.
- 63. Takeshi Oishi, Miwako Ochiai, Tsuneki Nakayama, and Yoshio Ban: The Reactions of Activated Amides. IV. The Reactions of Amide Acetals with Esters. Chem. Pharm. Bull. (Tokyo), 1969, 17, 2314-2318.
- 64. Yoshio Ban, Ikuo Iijima, Masao Akagi, and Takeshi Oishi: The Stereochemistry of Intermediates in the Total Synthesis of dl-Aspidospermine. *Tetrahedron Letters*, 1969, 2067-2071.
- 65. Yoshio Ban, Masao Akagi, and Takeshi Oishi: Synthesis and Stereochemistry of Octahydro-4H-pyrrolo(3,2,1-i,j)quinolin-9(2H)-one. *Tetrahedron Letters*, 1969, 2057-2062.
- Masao Akagi, Takeshi Oishi, and Yoshio Ban: The Syntheses of dl-Octahydro-4H-indolizino(1,8a,b)carbazoles. Tetrahedron Letters, 1969, 2063-2065.
- 67. Yoshio Ban and Ikuo Iijima: The Synthesis of a Racemic Stereoisomer of Aspidospermine. Tetrahedron Letters, 1969, 2523-2525.
- 68. Noriyoshi Sakabe, Yuji Sendo, Ikuo lijima, and Yoshio Ban: The X-ray Analysis of One Racemic Stereoisomer of Deacetylaspidospermine. *Tetrahedron Letters*, 1969, 2527-2530.
- Osamu Yonemitsu, Koichi Miyashita, Yoshio Ban, and Yuichi Kanaoka: Polyphosphate Ester as a Synthetic Agent. IX. A Novel Synthesis of Ethylindolenines by Ethylation of 2,3-Disubstituted Indoles with Polyphosphate Ester. *Tetrahedron*, 1969, 25, 95-100.
- Ichizo Inoue and Yoshio Ban: Studies on the Synthesis of Aspidosperma and Related Alkaloids.
   Part II. A Synthetic Approach to the C-21 Oxygenated Aspidosperma Alkaloids. J. Chem. Soc. (C), 1970, 602.

- 71. Takeshi Oishi, Kazuyuki Kamata, and Yoshio Ban: Activation of Weak Organic Bases: the Alkylation of NN-Disubstituted Sulphonamides. *J. Chem. Soc., Chem. Commun.*, 1970, 777-778.
- 72. Takeshi Oishi, Miwako Mori, and Yoshio Ban: The Conversion of Thion Esters to Thiol Esters by Et<sub>3</sub>O+BF<sub>4</sub><sup>-</sup> (1). *Tetrahedron Letters*, 1971, 1777-1780.
- 73. Jyousuke Shimizu, Shinichi Murakami, Takeshi Oishi, and Yoshio Ban: The Fischer Indole Synthesis with Formic Acid. II. The Synthesis of Hexahydrocyclopent(b)indoles. *Chem. Pharm. Bull. (Tokyo)*, 1971, **19**, 2561-2566.
- Takeshi Oishi, Miwako Mori, and Yoshio Ban: Activation of Weak Organic Bases. III. The Reactions of Divalent Sulfides with Acid Chlorides in the Presence of Friedel-Crafts Catalysts. Chem. Pharm. Bull. (Tokyo), 1971, 19, 1863-1870.
- 75. Takeshi Oishi, Miwako Mori, and Yoshio Ban: Activation of Weak Organic Bases. V. The Alkylation of Thiono Esters by Diethoxycarbonium Hexachloroantimonate +CH(OC<sub>2</sub>H<sub>5</sub>)<sub>2</sub>-SbCl<sub>6</sub><sup>-</sup>. Chem. Pharm. Bull. (Tokyo), 1971, 19, 1871-1875.
- 76. Miwako Mori, Mariko Shiozawa, Takeshi Oishi, and Yoshio Ban: Activation of Weak Organic Bases. VI. The Alkylation of Thiol Ester by Triethyloxonium Salt and Diethoxycarbonyl Salt. +CH(OC<sub>2</sub>H<sub>5</sub>)<sub>2</sub>-SbCl<sub>6</sub>\*. Chem. Pharm. Bull. (Tokyo), 1971, 19, 2033-2040.
- 77. Yoshio Ban, Hitoshi Kinoshita, Shinji Murakami, and Takeshi Oishi: Synthesis and Stereochemistry of 4a-Methyl-1,2,3,4,4a,9a-hexahydrocarbazole and Its Relatives. *Tetrahedron Letters*, 1972, 3687-3690.
- 78. Takeshi Oishi, Kouichi Kamemoto, and Yoshio Ban: A Novel Cleavage of Thioketals through the Alkylation by Et<sub>3</sub>O+BF<sub>4</sub><sup>-</sup>. *Tetrahedron Letters*, 1972, 1085-1088.
- Yoshio Ban, Masahiko Seto, and Takeshi Oishi: Stereoselective Total Synthesis of dl-Rhynchophylline and dl-Isorhychophylline. Tetrahedron Letters, 1972, 2113-2116.
- Takeshi Oishi, Kazuyuki Kamata, Sadako Kosuda, and Yoshio Ban: Synthesis and Reaction of N-Methyl-N-tosylpyrrolidinium Perchlorate, a Selective Tosylating Reagent. J. Chem. Soc., Chem. Commun., 1972, 1148-1149.
- 81. Takeshi Ohnuma, Masako Nagai, Yuji Sendo, Takeshi Oishi, and Yoshio Ban: The Conversion of Oxindoles to the Aspidosperma Skeleton. The Synthesis of dl-N(a)-Acetyl-desethylaspidospermidine. *Tetrahedron Letters*, 1972, 5023-5026.
- Yuji Sendo, Masako Nagai, Takeshi Oishi, and Yoshio Ban: The Total Synthesis of dl-N(a)-Acetyl-7-ethyl-5-desethylaspidospermidine. Tetrahedron Letters, 1972, 5027-5030.
- Miwako Mori, Takeshi Oishi, and Yoshio Ban: Activation of Weak Organic Bases. VIII. The Rearrangement of Alkyl Thiono Esters to Alkyl Thiol Esters by Use of the Meerwein Reagent. Int. J. Sulfur. Chem., 1972, 2, 79-87.
- 84. Takeshi Oishi, Hiroshi Nakakimura, Miwako Mori, and Yoshio Ban: The Reactions of Activated Amides. V. The Reactions of Cyclic Amide Acetals with Electrophiles. *Chem. Pharm. Bull.* (*Tokyo*), 1972, **20**, 1735-1739.

- 85. Takeshi Oishi, Shinichi Murakami, and Yoshio Ban: The Reactions of Activated Amides. VI. The Reactions of 1-Methyl-2-pyrrolidone Dimethylacetal and 2-Methylmercapto-1-methyl-2-pyrroline with Dimethyl Acetylenedicarboxylate. *Chem. Pharm. Bull. (Tokyo)*, 1972, 20, 1740-1744.
- Takeshi Ohnuma, Takeshi Oishi, and Yoshio Ban: Synthetic Entry to the Hexacyclic
   Aspidosperma Alkaloids. Total Synthesis of dl-4-Hydroxyaspidofractinine. J. Chem. Soc., Chem. Commun., 1973, 301-302.
- Miwako Mori, Shigeko Nishimura, and Yoshio Ban: An Unusual Rearrangement Reaction of N-Alkyl-α-haloacetanilides with Grignard Reagents. A Synthesis of Indole-3-acetic Acid. Tetrahedron Letters, 1973, 4951-4954.
- 88. Kyoyu Sasaki, Yuji Sendo, Masao Akagi, and Yoshio Ban: The Stereochemistry of *dl*-6α-β-Ethyl-1,2,5,6,6a,7,8,9,9a-α, 9b-α-decahydro-4H-pyrrolo(3,2,1-i,j)quinolin-9β-ol. *Heterocycles*, 1974, **2**, 33-37.
- 89. Yoshio Ban, Masayuki Kimura, and Takeshi Oishi: A Synthesis of dl-Dihydrodeoxyepiallocernuine by Application of a Facile Hofmann-Loeffler Type of Photocyclization. *Heterocycles*, 1974, 2, 323-328.
- Takeshi Ohnuma, Takeshi Oishi, and Yoshio Ban: Total Synthesis of Alkaloid, dl-Deoxyaspidodispermine. J. Chem. Soc., Chem. Commun., 1974, 296-297.
- Yoshio Ban, Naomasa Taga, and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derívatives.
   Total Syntheses of dl-Formosanine, dl-Isoformosanine, dl-Mitraphylline and dl-Isomitraphylline.
   Tetrahedron Letters, 1974, 187-190.
- 92. Takeshi Oishi, Haruko Takechi, Koichi Kamemoto, and Yoshio Ban: Cleavage of the Ethylenethioacetal Groups in the Nitrogen Containing Heterocycles. *Tetrahedron Letters*, 1974, 11-14.
- 93. Takeshi Oishi, Haruko Takechi, and Yoshio Ban: Ketene Thioacetal Monosulfonium Salts; A Two-Carbon Michael Acceptor. *Tetrahedron Letters*, 1974, 3757-3760.
- 94. Takeshi Wakamatsu, Kozo Akasaka, and Yoshio Ban: A Convenient Synthesis of Ketones. Tetrahedron Letters, 1974, 3879-3882.
- 95. Takeshi Wakamatsu, Kozo Akasaka, and Yoshio Ban: A New Synthesis of 1,4-Diketones. Application to a Synthesis of Dihydrojasmone and cis-Jasmone. *Tetrahedron Letters*, 1974, 3883-3886.
- 96. Khoichi Seki, Takeshi Ohnuma, Takeshi Oishi, and Yoshio Ban: The Total Synthesis of the Alkaloid dl-1-Acetylaspidospermidine. *Tetrahedron Letters*, 1975, 723-726.
- 97. Yoshio Ban, Takeshi Ohnuma, Khoichi Seki, and Takeshi Oishi: The Total Synthesis of the Alkaloid dl-1-Acetylaspidoalbidine. *Tetrahedron Letters*, 1975, 727-730.
- 98. Masako Nakagawa, Masakatsu Tonozuka, Michiko Obi, Midori Kiuchi, Tohru Hino, and Yoshio Ban: Synthesis of 5,6-Dihydro-2-pyrone and 2-Pyrone. *Synthesis*, 1975, 510-511.

- 99. Masako Nakagawa, Midori Kiuchi, Michiko Obi, Masakatsu Tonozuka, Kazumi Kobayashi, Tohru Hino, and Yoshio Ban: Reaction of Tryptamine and Aniline with δ-Valerolactone and Its Dehydro Derivatives. A New Synthesis of 1,2,3,4,6,7,12,12b-Octahydroindolo(2,3-a)quinolizine. Chem. Pharm. Bull. (Tokyo), 1975, 23, 304-312.
- 100. Yoshio Ban, Masahiko Seto, and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derivatives.
  VII. Total Synthesis of Alkaloids, dl-Rhynchophylline and dl-Isorhynchophylline. Chem. Pharm.
  Bull. (Tokyo), 1975, 23, 2605-2613.
- 101. Yoshio Ban, Naomasa Taga, and Takeshi Oishi: The Synthesis of 3-Spirooxindole Derivatives.
  VIII. Total Synthesis of dl-Formosanine, dl-Isoformosanine, dl-Mitraphylline and dl-Isomitraphylline. Chem. Pharm. Bull. (Tokyo), 1976, 24, 736-751.
- 102. Yoshio Ban, Masayuki Kimura, and Takeshi Oishi: A Synthesis of dl-Dihydrodeoxyepiallocernuine by Application of a Facile Hofmann-Loeffler Type of Photocyclization. Chem. Pharm. Bull. (Tokyo), 1976, 24, 1490-1496.
- Masahiko Seto, Takeshi Oishi, Hiroshi Mitsuhashi,and Yoshio Ban: The Synthesis of 3-Spirooxindole Derivatives. IX. The Reactions of 2-Hydroxytryptamine with Hemiacetals. *Chem. Pharm. Bull. (Tokyo)*, 1976, **24**, 1393-1397.
- Masako Nakagawa, J. Saegusa, Masakatsu Tonozuka, Michiko Obi, Midori Kiuchi, and Tohru
   Hino: 5,6-Dihydro-2H-pyran-2-one and 2H-Pyran-2-one. *Organic Syntheses*, 1976, 20, Vol. 54.
   Edited by E. Baumgarten, John Wiley and Sons, Inc., New York.
- 105. Masayuki Kimura and Yoshio Ban: A Synthesis of 1,3-Diaza Heterocycles. A Hofmann-Loeffler Type of Photocyclization in the Absence of Strong Acid. Synthesis, 1976, 201-202.
- 106. Yoshio Ban and Yasushi Honma: The Total Synthesis of dl-Aspidofractinine. *Tetrahedron Letters*, 1976, 1111-1114.
- Miwako Mori and Yoshio Ban: The Reactions and Syntheses with Organometallic Compounds.
   III. The Synthesis of Indole Derivatives via Arylnickel Complex. Tetrahedron Letters, 1976, 1803-1806.
- 108. Miwako Mori and Yoshio Ban: The Reactions and Syntheses with Organometallic Compounds. IV. The New Synthesis of Oxindole Derivatives by Utilization of Organonickel Complex. Tetrahedron Letters, 1976, 1807-1810.
- 109. Takeshi Wakamatsu, Mineo Fukui, and Yoshio Ban: A Novel Alkylation of Alicyclic 1,2-Enediolates. A Facile Synthesis of Oxoalkanenitriles. *Synthesis*, 1976, 341-342.
- 110. Yasushi Honma, Takeshi Ohnuma, and Yoshio Ban: A Total Synthesis of dl-Fendleridine. *Heterocycles*, 1976, **5**, 47-50.
- 111. Takeshi Oishi, Mineo Fukui, Masanori Honda, and Yoshio Ban: Conversion of Caprolactam to Eight-Membered Ene-lactam. *Heterocycles*, 1976, **5**, 281-284.
- Miwako Mori and Yoshio Ban: The Reactions and Syntheses with Orgaometallic Compounds. II. The Deallylation Reaction with Pd(II) and a New Synthesis of Primary Amines. Chem. Pharm. Bull. (Tokyo), 1976, 24, 1992-1999.

- 113. Yasushi Honma and Yoshio Ban: A New Stereoselective Synthesis of dl-Deoxyaspidodispermine. Heterocycles, 1977, 6, 129-135.
- 114. Yasushi Honma and Yoshio Ban: A Stereoselective Synthesis of Oxygenated Catharanthine Derivatives - Possible Precursors for Bisindole Alkaloids. Heterocycles, 1977, 6, 285-290.
- 115. Yasushi Honma and Yoshio Ban: The Modified Polonovski Reaction of Catharanthine Lactone N-Oxide for Coupling with Vindoline. Heterocycles, 1977, 6, 291-296.
- Miwako Mori, Katsumi Chiba, and Yoshio Ban: The Reactions and Syntheses with Organometallic Compounds. V. A New Synthesis of Indole and Isoquinolines by Intramolecular Palladium-Catalyzed Reactions of Aryl Halides with Olefinic Bonds. *Tetrahedron Letters*, 1977, 1037-1040.
- 117. Takeshi Wakamatsu, Kozo Akasaka, and Yoshio Ban: The Synthesis of Oxoalkanolides of the Medium Ring Size. *Tetrahedron Letters*, 1977, 2751-2754.
- 118. Takeshi Wakamatsu, Kozo Akasaka, and Yoshio Ban: The Synthesis of dl-Diplodialide C and dl-Decan-9-olide, the Naturally Occurring 10-Membered Olides. *Tetrahedron Letters*, 1977, 2755-2758.
- 119. Miwako Mori, Katsumi Chiba, and Yoshio Ban: The Reactions and Syntheses with Organometallic Compounds. VIII. The Total Synthesis of Sendaverine by Use of the Palladium Catalyzed Insertion of Carbon Monoxide. Heterocycles, 1977, 6, 1841-1845.
- 120. Takeshi Wakamatsu, Hiromu Hara, and Yoshio Ban: The Fischer Indole Synthesis with Formic Acid. III. The Reaction with 2-Substituted Adipoins. *Heterocycles*, 1977, **8**, 335-338.
- 121. Yasuo Sekine, Takeshi Oishi, and Yoshio Ban: A New Synthetic Route to dl-Vindoline. A Synthesis of the Buchi's Tetracyclic Intermediate. *Tetrahedron Letters*, 1978, 151-154.
- 122. Yasushi Honma and Yoshio Ban: The Coupling of 3-Acetoxycatharanthine Derivatives with Vindoline. A Partial Synthesis of Isovinblastine O-Acetate. *Tetrahedron Letters*, 1978, 155-158.
- Miwako Mori and Yoshio Ban: Reactions and Syntheses with Organometallic Compounds. IX. The Total Synthesis of Iso-6-hydroxy-2'-(2-methylpropyl)-3,3'-spiro-tetrahydropyrrolidino-oxindole via Arylnickel Complex. Heterocycles, 1978, 9, 391-397.
- 124. Masayuki Shimagaki, Hiroshi Tsuchiya, Takeshi Oishi, and Yoshio Ban: Reaction of a Phenoxysulfoxonium Salt with Nucleophiles. *Tetrahedron Letters*, 1978, 3435-3438.
- 125. Miwako Mori, Katsumi Chiba, and Yoshio Ban: Reactions and Syntheses with Organometallic Compounds. 7. Synthesis of Benzolactams by Palladium-Catalyzed Amidation. *J. Org. Chem.*, 1978, 43, 1684-1687.
- 126. Takeshi Wakamatsu, Kazuyuki Hashimoto, Masae Ogura (nee Ueno), and Yoshio Ban: A Convenient Synthesis of 2-Alkylcyclopentenones, Important Prostaglandin Intermediates. Synthetic Communications, 1978, 8, 319-326.
- 127. Miwako Mori, Katsumi Chiba, Nobuo Inotsume, and Yoshio Ban: The Synthesis of Benzolactones by Palladium Catalyzed Carbonylation. *Heterocycles*, 1979, 12, 921-924.

- 128. Takeshi Wakamatsu, Kozo Akasaka, and Yoshio Ban: Naturally Occurring Ten-Membered Lactones: Total Synthesis of dl-Diplodialide A, dl-Diplodialide C, and dl-Decan-9-olide. *J. Org. Chem.*, 1979, 44, 2008-2012.
- 129. Miwako Mori and Yoshio Ban: Reactions and Syntheses with Organometallic Compounds. X. The Intramolecular Cyclization Using Arylpalladium Complexes for Generation of Nitrogen-Heterocycles. Tetrahedron Letters, 1979, 1133-1136.
- Takeshi Wakamatsu, Hiromu Hara, and Yoshio Ban: Synthesis of Sesquiterpene Antitumor Lactone. I. A New Synthesis of the *cis*-Fused δ-Valerolactone as Ring Model Vernolepin and Vernomenin. *Tetrahedron Letters*, 1979, 1227-1230.
- 131. Miwako Mori, Setsuko Kudo, and Yoshio Ban: Reactions and Syntheses with Organometallic Compounds. Part 6. A New Synthesis of Indole, Quinoline, and Benzazepine Derivatives via Arylnickel Complexes. J. Chem. Soc., Perkin I, 1979, 771-774.
- 132. Takeshi Ohnuma, Yasuo Sekine, and Yoshio Ban: Synthetic Studies on Mitomycins-I. A Regiospecific Michael Addition of 2-Methylcyclopentane-1,3-dione to p-Toluquinone-sulfonimides. *Tetrahedron Letters*, 1979, 2533-2536.
- 133. Takeshi Ohnuma, Yasuo Sekine, and Yoshio Ban: Synthetic Studies on Mitomycins-II.
  A Synthesis of 9a-Hydroxy-5,8-dideoxomitosane Skeleton through a Novel Retro-aldol Type of Ring Opening Reaction. *Tetrahedron Letters*, 1979, 2537-2540.
- 134. Miwako Mori, Katsumi Chiba, Makoto Okita, and Yoshio Ban: New Synthesis of β-Lactams. *J. Chem. Soc., Chem. Commun.*, 1979, 698-699.
- 135. Makoto Okita, Takeshi Wakamatsu, and Yoshio Ban: Anodic Oxidation of N-Alkyl-lactams. J. Chem. Soc., Chem. Commun., 1979, 749.
- 136. Miwako Mori, Katsumi Chiba, Nahoko Ohta, and Yoshio Ban: A Novel Synthesis of Cyclic Imides and Quinolone by Use of Palladium Catalyzed Carbonylation. *Heterocycles*, 1979, 13, 329-332.
- 137. Miwako Mori, Yasuko Hashimoto, and Yoshio Ban: Preparation and Synthetic Use of the Zerovalent Nickel Complex by Electrochemical Reduction. *Tetrahedron Letters*, 1980, 21, 631-634.
- 138. Makoto Okita, Takeshi Wakamatsu, Miwako Mori, and Yoshio Ban: A New Synthesis of Bicyclo (1,3)oxazine Derivatives. *Heterocycles*, 1980, 14, 1089-1092.
- 139. Kuniyuki Irie, Makoto Okita, Takeshi Wakamatsu, and Yoshio Ban: The Lactonization of 2-Piperidinone-carboxylic Acids by Anodic Oxidation. A Formal Synthesis of dl-Eburnamonine. Nouveau J. de Chimie, 1980, 4, 275-277.
- 140. Takeshi Wakamatsu, Harumi Inaki, Akemi Ogawa, Masako Watanabe, and Yoshio Ban: The Use of Tetra-N-butylammonium Borohydride for the Reduction of Indoles to Indolenines in Dichloromethane. Heterocycles, 1980, 14, 1441-1444.
- 141. Takeshi Wakamastu, Harumi Inaki, Akemi Ogawa, Masako Watanabe, and Yoshio Ban: An Efficient Reduction of Nitriles and Amides to the Corresponding Amines with Tetra-N-butylammonium Borohydride in Dichloromethane. Heterocycles, 1980, 14, 1437-1440.

- 142. Katsumi Chiba, Miwako Mori, and Yoshio Ban: A Novel Synthesis of dl-3-Aminonocardicinic Acid. J. Chem. Soc., Chem. Commun., 1980, 770-771.
- 143. Kuniyuki Irie and Yoshio Ban: Total Synthesis of dl-Eburnamonine and di-Epieburnamonine. Heterocycles, 1981, 15, 201-206.
- 144. Takeshi Ohnuma, Youichi Kimura, and Yoshio Ban: Synthetic Studies on Oxindole Spiro-Lactones with Thallium(III) Trinitrate: A Formal Total Synthesis of dl-Tryptoquivaline G. Tetrahedron Letters. 1981. 22, 4969-4972.
- 145. Yoshio Ban, Kiyoshi Yoshida, Jiro Goto, and Takeshi Oishi: Novel Photoisomerization of 1-Acylindoles to 3-Acylinolenines: General Entry to the Total Synthesis of Strychnos and Aspidosperma Alkaloids. J. Am. Chem. Soc., 1981, 103, 6990-6992.
- Miwako Mori, Minoru Ishikura, Toshihito Ikeda, and Yoshio Ban: New Synthesis of Diazepinone Skeleton Using Palladium Catalyzed Carbonylation. Heterocycles, 1981, 16, 1491-1494.
- 147. Minoru Ishikura, Miwako Mori, Masanao Terashima, and Yoshio Ban: A New Synthesis of Anthramycin via Palladium-catalyzed Carbonylation. J. Chem. Soc., Chem. Commun., 1982, 741-742.
- 148. Kunihiko Irie and Yoshio Ban: A Formal Total Synthesis of dl-Vincamine. Heterocycles, 1982, 18, 255-258.
- 149. Takeshi Ohnuma, Hitoshi Kasuya, Youichi Kimura, and Yoshio Ban: The Oxidation Reaction of Indoles with Thallium(III) Trinitrate. *Heterocycles*, 1982, 17, 377-380.
- Takeshi Wakamatsu, Satoshi Hobara, and Yoshio Ban: Highly Regioselective 1,4-Addition of 2-Lithio-2-(2,6-dimethylpiperidino)acetonitrile to α,β-Unsaturated Ketones. *Heterocycles*, 1982, 19, 1395-1398.
- 151. Takeshi Wakamatsu, Junichi Kondo, Satoshi Hobara, and Yoshio Ban: 2-(2,6-Dimethylpiperidino)acetonitrile as an Acyl Carbanion Equivalent. Heterocycles, 1982, 19, 481-484.
- 152. Minoru Ishikura, Miwako Mori, Toshihito Ikeda, Masanao Terashima, and Yoshio Ban: New Synthesis of Diazepam and the Related 1,4-Benzodiazepines by Means of Palladium-Catalyzed Carbonylation. *J. Org. Chem.*, 1982, **47**, 2456-2460.
- 153. Takeshi Ohnuma, Noriaki Hata, Hiroyuki Fujiwara, and Yoshio Ban: Phenyl 2-(Trimethylsilyl) ethynyl Sulfone as a New Vinyl Cation Synthon. *J. Org. Chem.*, 1982, 47, 4713-4717.
- 154. Miwako Mori, Izumi Oda, and Yoshio Ban: Cyclization of α-Haloamide with Internal Double Bond by Use of the Low Valent Metal Complex. *Tetrahedron Letters*, 1982, **23**, 5315-5318.
- 155. Tozo Fujii, Masashi Ohba, Osamu Yonemitsu, and Yoshio Ban: Quinolizidines. VII. Structure of O-Methylpsychotrine: The Endocyclic versus the Exocyclic Double Bond Structure in the Dihydroisoquinoline Moiety. Chem. Pharm. Bull. (Tokyo), 1982, 30, 598-609.

- Makoto Okita, Takeshi Wakamatsu, and Yoshio Ban: A New Synthesis of dl-Lupinine, dl-Epilupinine, and the Related Heterocycles by Application of Anodic Oxidation. *Heterocycles*, 1983, 20, 401-404.
- 157. Yoshio Ban, Kiyoshi Yoshida, Jiro Goto, Takeshi Oishi, and Eiko Takeda: A Synthetic Road to the Forest of Strychnos, Aspidosperma, Schizozygane and Eburnamine Alkaloids by Way of the Novel Photoisomerization. *Tetrahedron*, 1983, **39**, 3657-3668. (Invited Paper).
- 158. Miwako Mori, Yumiko Washioka, Takao Urayama, Kagari Yoshiura, Katsumi Chiba, and Yoshio Ban: Palladium-Catalyzed Carbonylation. A New Synthesis of α-Methylene γ-, δ-, ε-Lactams and Lactones Including Bicyclic Lactams of Pyrrolizidine and Indolizidine Skeletons. *J. Org. Chem.*, 1983, 48, 4058-4067.
- 159. Takeshi Ohnuma, Masayasu Tabe, Keiko Shiiya, and Yoshio Ban: A Novel Annulation Method for the Synthesis of Some Nitrogen-Containing Heterocycles: The Synthesis of dl-Heliotridane and dl-Nuphar Indolizidine. *Tetrahedron Letters*, 1983, 24, 4249-4252.
- 160. Takeshi Ohnuma, Masaharu Nagasaki, Masayasu Tabe, and Yoshio Ban: An Efficient Synthesis of Medium-Sized Ketolactams through Controlled Crisscross Annulation: A Synthesis of dl-Dihydrodesoxyotonecine. Tetrahedron Letters, 1983, 24, 4253-4256.
- 161. Kuniyuki Oda, Takeshi Ohnuma, and Yoshio Ban: A Facile Removal of the Arenesulfonyl Group by Electro-Chemical Reduction of Sulfonamides in a New Cooperative System of Anthracene and Ascorbic Acid: The Control of Crisscross Annulation. *J. Org. Chem.*, 1984, **49**, 953-959.
- 162. Miwako Mori, Minoru Ishikura, Toshihito Ikeda, and Yoshio Ban: Total Synthesis of SEN-215 by Use of Palladium Catalyzed Carbonylation. *Heterocycles*, 1984, **22**, 253-256.
- 163. Takeshi Wakamatsu, Takahide Nishi, Takeshi Ohnuma, and Yoshio Ban: A Convenient Synthesis of Juglone *via* Neutral Salcomine Oxidation. *Synthetic Commun.*, 1984, 14, 1167-1173.
- 164. Kuniyuki Oda, Takeshi Ohnuma, Yoshio Ban, and Keiichi Aoe: Isolation and Structural Analyses of Two Conformers of the Eight-membered Lactam on 1-Benzazocinone Derivatives. *J. Am. Chem. Soc.*, 1984, 106, 5378-5379.
- 165. Miwako Mori, Gediminas E. Purvaneckas, Minoru Ishikura, and Yoshio Ban: New Synthesis of Pyrrolo-1,4-benzodiazepines by Use of Palladium Catalyzed Carbonylation. *Chem. Pharm. Bull.* (*Tokyo*), 1984, 32, 3840-3847.
- 166. Hitoshi Kinoshita, Isaburo Hori, Takeshi Oishi, and Yoshio Ban: Two-Carbon Michael Acceptors. Acetyl Cation Equivalents. *Chemistry Letters*, 1984, 1517-1520.
- 167. Miwako Mori, Katsumì Chiba, Makoto Okita, Isoko Kayo, and Yoshio Ban: New Synthesis of β-Lactams. *Tetrahedron*, 1985, **41**, 375-386.
- 168. Katsumi Chiba, Miwako Mori, and Yoshio Ban: A Novel Synthesis of dl-3-Aminonocardicinic Acid. *Tetrahedron*, 1985, **41**, 387-392.
- 169. Takeshi Wakamatsu, Hiromu Hara, and Yoshio Ban: A Formal Total Synthesis of (±)-Vernolepin and (±)-Vernomenin. *J. Org. Chem.*, 1985, **50**, 108-112.

- 170. Takeshi Wakamatsu, Satoshi Yamada, Yoshiko Ozaki, and Yoshio Ban: Synthesis of (±)-Pyrenophorin and (±)-Colletallol. *Tetrahedron Letters*, 1985, **26**, 1989-1992.
- 171. Makoto Okita, Miwako Mori, Takeshi Wakamatsu, and Yoshio Ban: Anodic Oxidation of N-Alkyl-β-Lactams. *Heterocycles*, 1985, **23**, 247-250.
- 172. Miwako Mori and Yoshio Ban: Debenzylation of N-Benzyl-β-Lactams by Use of Anodic Oxidation. *Heterocycles*, 1985, 23, 317-323.
- 173. Miwako Mori, Yukiko Kubo, and Yoshio Ban: Reaction of α-Haloester Having Internal Double Bond with the Low-Valent Metal Complex. *Tetrahedron Letters*, 1985, **26**, 1519-1522.
- 174. Miwako Mori, Nana Kanda, Izumi Oda, and Yoshio Ban: New Synthesis of Heterocycles by Use of Palladium Catalyzed Cyclization of α-Haloamide with Internal Double Bond. *Tetrahedron*, 1985, 41, 5465-5474.
- 175. Miwako Mori, Masaya Kimura, Yasuhiro Uozumi, and Yoshio Ban: A One Step Synthetic of 1,4-Benzodiazepines: Synthesis Studies on Neothramycin. *Tetrahedron Letters*, 1985, 26, 5947-5950.
- 176. Miwako Mori, Hiromi Kobayashi, Masaya Kimura, and Yoshio Ban: One Pot Reactions of Quinazoline Derivatives by Use of Palladium Catalyzed Carbonylation. *Heterocycles*, 1985, 23, 2803-2806.
- 177. Kiyoshi Yoshida, Sumihiro Nomura, and Yoshio Ban: Synthesis of *dl*-Vincadifformine, *dl*-Eburcine and *dl*-3-Epieburcine. Introduction of Methoxycarbonyl Function to C(3)-Position of Aspidosperma Skeleton. *Tetrahedron*, 1985, **41**, 5495-5501.
- 178. Takeshi Wakamatsu, Satoshi Yamada, and Yoshio Ban: Synthesis of *dl*-Vermiculine via Control of Olefin Formation. *Heterocycles*, 1986, **24**, 309-312.
- 179. Hitoshi Kinoshita, Takeshi Ohnuma, Takeshi Oishi, and Yoshio Ban: Application of the New Acylating Agents[PhS(O)-CH=C(OMe)Cl and PhSO<sub>2</sub>CH=C-(OMe)Cl] to the Synthesis of Indole Alkaloids. A Total Synthesis of (±)- Aspidofractinine. *Chemistry Letters*, 1986, 927-930.
- 180. Miwako Mori, Yasuhiro Uozumi, and Yoshio Ban: Structure and Syntheses of SEN-215 and Oxotomaymycin. *Heterocycles*, 1986, **24**, 1257-1260.
- 181. Kiyoshi Yoshida, Sumihiro Nomura, Yoshihiko Nishibata, and Yoshio Ban: Unusual Rearrangement Reaction of Quebrachamine Derivative Catalyzed by Cyanide Anion. Heterocycles, 1986, 24, 2239-2245.
- 182. Takeshi Ohnuma, Noriaki Hata, Nobuhide Miyachi, Takeshi Wakamatsu, and Yoshio Ban: A Synthesis of Novel Nine-Membered Dienones through a Cyclic Acetylenic Oxy-Cope Rearrangement: The Synthesis of dl-Phoracantholide I. Tetrahedron Letters, 1986, 27, 219-222.
- 183. Miwako Mori, Yasuhiro Uozumi, and Yoshio Ban: Total Synthesis of Neothramycin. *J. Chem. Soc.*, *Chem. Commun.*, 1986, 841-842.

- 184. Miwako Mori, Nana Kanda, and Yoshio Ban: An Efficient Synthesis of Bicyclic-Lactams through Palladium Catalyzed Ene-Halogeno-cyclization. J. Chem. Soc., Chem. Commun., 1986, 1375-1376.
- 185. Takeshi Ohnuma, Yasuo Sekine, and Yoshio Ban: Synthetic Studies on Mitomycins: The Synthesis of Mitosene. *Israel J. Chem.*, 1986, 27, 73-79.
- 186. Miwako Mori, Yasuhiro Uozumi, Masaya Kimura, and Yoshio Ban: Total Synthesis of Prothracarcin and Tomaymycin by Use of Palladium Catalyzed Cabonylation. *Tetrahedron*, 1986, 42, 3793-3806.
- 187. Takeshi Wakamatsu, Hideo Nakamura, Eiichi Naka, and Yoshio Ban: Synthetic Studies on Antibiotic Macrodiolide: Synthesis of the A-Segment of Elaiophylin. *Tetrahedron Letters*, 1986, 27, 3895-3898.
- Takeshi Wakamatsu, Hideo Nakamura, Yuji Nishikimi, Kaoru Yoshida, Tomoko Noda, Masato Taniguchi, and Yoshio Ban: The Oxirane Ring Openings of the Dianhydro Sugar with High Regioselectivity and Its Use in Preparation of Two Chiral Segments of 6-Deoxyerythronolide B. *Tetrahedron Letters*, 1986, **27**, 6071-6074.
- Takeshi Wakamatsu, Satoshi Yamada, Hideo Nakamura, and Yoshio Ban: Enantioselective Synthesis of 16-Membered α,β,γ,δ-Unsaturated Diolide: A Model System in Elaiophylin. *Heterocycles*, 1987, **25**, 43-46.
- 190. Takeshi Wakamatsu, Hiromu Hara, Keiko Taira, and Yoshio Ban: Stereoselective Alkylation of Ester Lactone. Synthesis of dl-Geijerone and Formal Synthesis of dl-γ-Elemene. Heterocycles, 1987, 26, 1203-1206.
- 191. Takeshi Wakamatsu, Nobuhide Miyachi, Fumihiro Ozaki, and Yoshio Ban: Synthetic Studies on Eriolanin: 1,2-Carbonyl Transpositions of cis-Bicyclo[4.2.0]-octanone *via* Enol Thioether Formation. *Heterocycles*. 1987. **26**. 1445-1448.
- 192. Takeshi Wakamatsu, Yuji Nishikimi, Hiromi Kikuiri, Hideo Nakamura, and Yoshio Ban: Dialkyl Anhydro Sugars in Organic Synthesis. Synthesis of (-)-Invictolide. Heterocycles, 1987, 26, 1761-1764.
- 193. Kiyoshi Yoshida, Yasuji Sakuma, and Yoshio Ban: Synthetic Studies on Oxygenated Aspidosperma Alkaloids: Facile Syntheses of 1-Acetyl-aspidoablidine and Deoxyaspidodispermine. *Heterocycles*, 1987, **25**, 47-50.
- 194. Kiyoshi Yoshida, Jiro Goto, and Yoshio Ban: Oxidation of Cycloalkan[b]indoles with lodine Petoxide (I<sub>2</sub>O<sub>5</sub>) *Chem. Pharm. Bull.*, 1987, **35**, 4700-4704.
- 195. Takeshi Wakamatsu, Nobuhide Miyachi, Fumihiro Ozaki, Masakatsu Shibasaki, and Yoshio Ban: A Novel Antileukemic Sesquiterpene Lactone. Synthesis of Racemic Eriolanin. *Tetrahedron Letters*, 1988, 29, 3829-3832.
- 196. Kiyoshi Yoshida, Shigekazu Nakajima, Takeshi Wakamatsu, Yoshio Ban, and Masakatsu Shibasaki: A General Procedure for the Catalytic Hydrogenolysis of N-Benzylamines under Extremely Mild Conditions. Heterocycles, 1988, 27, 1167-1168.

- 197. Kiyoshi Yoshida, Shigekaziu Nakajima, Takeshi Ohnuma, Yoshio Ban, Masakatsu Shibasaki, Kelichi Aoe, and Tadamasa Date: Synthetic Approaches toward Mitomycins: Construction of p-Quinone Moiety on 1-Benzazocine Derivatives. J. Org. Chem., 1988, 53, 5355-5359.
- 198. Hideo Nakamura, Kazushi Arata, Takeshi Wakamatsu, Yoshio Ban, and Masakatsu Shibasaki: Alkylated Levoglucosan in Organic Synthesis. A Formal Total Synthesis of Elaiophylin. Chem. Pharm. Bull., 1990, 38, 2435-2441.
- 199. Shigekazu Nakajima, Kiyoshi Yoshida, Miwako Mori, Yoshio Ban, and Masakatsu Shibasaki: Synthetic Approaches toward Mitomycins: Synthesis of the Decarbamoyloxymitomycin Derivative. J. Chem. Soc., Chem. Commun., 1990, 468-470.
- 200. Yoshio Ban, Shigekazu Nakajima, Kiyoshi Yoshida, Miwako Mori, Masakatsu Shibasaki, and Tadamasa Date: Synthetic Approaches toward Mitomycins: Synthesis of the Decarbamoyloxymitomycin Derivative. Heterocycles, 1994, 39, 657-667.

## **REVIEWS**

- Yoshio Ban: Syntheses and Stereochemistries of Indol Alkaloids. Kagaku no Ryoiki, 1964, 18, 277-305
- Yoshio Ban: Syntheses of Alkaloids and Related Compounds. Kagaku no Ryoiki Zoukan, 1966, 74, 131-172.
- 3. Yoshio Ban, Takeshi Ohishi, Masako Nagai, Takeshi Wakamatsu, Takeshi Ohnuma, and Masao Akagi: An Approach to the Total Synthesis of Vincristine. *Kagaku no Ryoiki Zoukan*, 1969, **87**, 1-50.
- Yoshio Ban: Biosynthetic Chemical Conversion of Indole Alkaloid. Kagaku no Ryoiki, 1973, 27, 1065-1082.
- Yoshio Ban: Synthetic Studies of Poly-Heterocyclic Ring System. Hetero Corporation Oreum. Utah. 1975.
- 6. Takeshi Wakamatsu and Yoshio Ban: Biogenetic-type Synthesis and Reactions-mainly on Indole Alkaloids. *Kagaku no Ryoiki Zoukan*, 1976, 113, 79-99.
- Miwako Mori and Yoshio Ban: Synthesis of Heterocycles via Organometallic Complex. Kagaku no Ryoiki Zoukan, 1979, 123, 97-121.
- Yoshio Ban and Miwako Mori: The Insertion of Carbon Monoxide by Use of Pd<sup>II</sup> and PPh<sub>3</sub>.
   J. Synth. Org. Chem., 1979, 37, 430-436.
- 9. Yoshio Ban: Utilization of Nitrogen Saurces. Gakujyutsu Geppou, 1979, 32, 588-598.
- Takeshi Wakamatsu and Yoshio Ban: Application of Acyloin Condensation to the Synthesis of Natural Products. Kagaku no Ryoiki Zoukan, 1980, 128, 149-167.
- 11. Takeshi Ohnuma and Yoshio Ban: Synthesis of Mitomycins and Related Compound. *J. Synth. Org. Chem.*, 1980, **38**, 1053-1062.
- 12. Yoshio Ban: β-Lactam Antibiotics-Penicillin and Related Compounds. *Gendai Kagaku*, 1981, **120**, 14-23.
- 13. Yoshio Ban, Takeshi Wakamatsu, Miwako Mori, and Takeshi Ohnuma: Novel Synthetic Approach to the Biologically Active Heterocycles. *Kodansha/Elsevier*, 1981, 177-199.
- 14. Yoshio Ban: Novel Synthetic Approach to the Biologically Active Heterocycles. *UNESCO Special publication*, 1981, 250-260.
- 15. Takeshi Wakamatsu and Yoshio Ban: Synthesis of Medium-membered Lactones *via* Ring Enlargement Reaction and Its Application to the Synthesis of Diplodialide and Phoracantholide. *Kagakusousetsu*, 1981, 31, 157-168.
- 16. Yoshio Ban: The Synthesis of Heterocycles by Utilization of Electrochemical Reactions. -The Road to Ragio- and Stereo-Selective Synthesis-. *J. Synth. Org. Chem.*, 1982, **40**, 866-879.

- 17. Yoshio Ban: Synthetic Study of Indole Alkaloids. Gakujyutu Geppou, 1984, 37, 388-393.
- Takeshi Ohnuma, Kunihiko Oda, and Yoshio Ban: A Facile Removal of the Arenesulfonyl Group by Electrochemical Reduction in a New Cooperative System. -Synthesis and Structural Analyses of 1-Benzazocinone Derivatives-. J. Synth. Org. Chem., 1985, 43, 603-609.
- 19. Yoshio Ban, Yasuoki Murakami, Yoshio lwasawa, Michihiro Tsuchiya, and Noriko Takano: Indole Alkaloids in Medicine. *Medicinal Research Reviews*, 1988, **8**, 231-308.
- Norio Aimi, Sin-ichiro Sakai, and Yoshio Ban: Alkaloids of Strychnos and Gardneria Species.
   "The Alkaloids, Chemistry and Pharmacology", Vol.36, (ed. by A. Brossi), Academic Press, Inc., 1989, 1-68.
- Yoshio Ban, Tameo Iwasaki, and Hiroshi Ohmizu: Natural Products and Pharmaceuticals.
   "Organic Electrochemistry" 3rd Ed., (ed. by H. Lund and M. M. Baizer), Marcel Dekker, Inc., (New York), 1991, 765-786.
- Yoshio Ban: History of Synthetic Organic Chemistry in the Field of Pharmaceutical Sciences (in Japan for the past 50 years). J. Synth. Org. Chem. Japan., 1992, 50, 1082-1087.
- 23. Yoshio Ban: Total Syntheses of the Natural Products from Alkaloids to Terpenes. J. Synth. Org. Chem. Japan, 1993, 51, 111-127.