JOC Recent Reviews

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Reviews are listed in order of appearance in the sources indicated. In multidisciplinary review journals, only those reviews which fall within the scope of this Journal are included. Sources are listed alphabetically in three categories: regularly issued review journals and series volumes, contributed volumes, and other monographs. Titles are numbered serially, and these numbers are used for reference in the index.

Major English-language sources of critical reviews are covered. Encyclopedic treatises, annual surveys such as *Specialist Periodical Reports*, and compilations of symposia proceedings are omitted.

This installment of Recent Reviews covers principally the early part of the 2003 literature. Previous installment: *J. Org. Chem*. **2003**, *68*(7), 2987−96.

Supporting Information Available: A file containing this Recent Review compilation in Microsoft Word and the data in rtf format. This material is available free of charge via the Internet at http://pubs.acs.org.

Regularly Issued Journals and Series Volumes

Accounts of Chemical Research

1. Pamplin, C. B.; Legzdins, P. Thermal Activation of Hydrocarbon C−H Bonds by Cp*M(NO) Complexes of Molybdenum and Tungsten. **2003**, *36*(4), 223−33.

2. Culkin, D. A.; Hartwig, J. F. Palladium-Catalyzed α-Arylation of Carbonyl Compounds and Nitriles. **2003**, *36*(4), 234−45.

3. Blanksby, S. J.; Ellison, G. B. Bond Dissociation Energies of Organic Molecules. **2003**, *36*(4), 255−63.

4. Breit, B. Synthetic Aspects of Stereoselective Hydroformylation. **2003**, *36*(4), 264−75.

5. Tius, M. A. Cationic Cyclopentannelation of Allene Ethers. **2003**, *36*(4), 284−90.

6. Kotha, S. The Building Block Approach to Unusual α-Amino Acid Derivatives and Peptides. **2003**, *36*(5), 342−51.

Advanced Synthesis and Catalysis

7. Seayad, J.; Tillack, A.; Hartung, C. G.; Beller, M. Base-Catalyzed Hydroamination of Olefins: An Environmentally Friendly Route to Amines. **2002**, *344*(8), 795−813.

8. Saluzzo, C.; Lemaire, M. Homogeneous-Supported Catalysts for Enantioselective Hydrogenation and Hydrogen Transfer Reduction. **2002**, *344*(9), 915−28.

9. Gomez, S.; Peters, J. A.; Maschmeyer, T. The Reductive Amination of Aldehydes and Ketones and the Hydrogenation of Nitriles: Mechanistic Aspects and Selectivity Control. **2002**, *344*(10), 1037−57.

10. Nilov, D.; Reiser, O. The Sharpless Asymmetric Aminohydroxylation−Scope and Limitation. **2002**, *344*(10), 1169−73.

Advances in Heterocyclic Chemistry

11. Vasilevsky, S. F.; Tretyakov, E. V.; Elguero, J. Synthesis and Properties of Acetylenic Derivatives of Pyrazoles. **2002**, *82*, 1−99.

12. Somei, M. Recent Advances in the Chemistry of 1-Hydroxyindoles, 1- Hydroxytryptophans, and 1-Hydroxytryptamines. **2002**, *82*, 101−55.

13. Kozhevnikov, D. N.; Rusinov, V. L.; Chupakhin, O. N. 1,2,4-Triazine N-Oxides. **2002**, *82*, 261−305.

Advances in Physical Organic Chemistry

14. Abboud, J.-L. M.; Alkorta, I.; Davalos, J. Z.; Muller, P.; Quintanilla, E. Thermodynamic Stabilities of Carbocations. **2002**, *37*, 57−135.

15. Bernasconi, C. F. The Physical Organic Chemistry of Fischer Carbene Complexes. **2002**, *37*, 137−237.

Angewandte Chemie, International Edition in English

16. Kimball, D. B.; Haley, M. M. Triazenes: A Versatile Tool in Organic Synthesis. **2002**, *41*(18), 3338−51.

17. Mikami, K.; Terada, M.; Matsuzawa, H. "Asymmetric" Catalysis by Lanthanide Complexes. **2002**, *41*(19), 3554−71.

10.1021/jo033582m CCC: $25.00
Published on Web 07/03/2003

18. Goossen, L. J. Asymmetric Hydrovinylation: New Perspectives Through use of Modular Ligand Systems. **2002**, *41*(20), 3775−8.

19. Tzschucke, C. C.; Markert, C.; Bannwarth, W.; Roller, S.; Hebel, A.; Haag, R. Modern Separation Techniques for Efficient Workup in Organic Synthesis. **2002**, *41*(21), 3964−4000.

20. Bodwell, G. J.; Satou, T. "Polyunsaturated" Cyclophanes. **2002**, *41*(21), 4003−6.

21. Littke, A. F.; Fu, G. C. Palladium-Catalyzed Coupling Reactions of Aryl Chlorides. **2002**, *41*(22), 4176−211.

22. Wadepohl, H. Hypoelectronic Dimetallaboranes. **2002**, *41*(22), 4220−3.

23. Bera, J. K.; Dunbar, K. R. Chain Compounds Based on Transition Metal Backbones: New Life for an Old Topic. **2002**, *41*(23), 4453−7.

24. Yeung, K.-S.; Paterson, I. Actin-Binding Marine Macrolides: Total Synthesis and Biological Importance. **2002**, *41*(24), 4632−53.

25. Miller, J. S. Bistable Electrical, Optical, and Magnetic Behavior in a Molecule-Based Material. **2003**, *42*(1), 27−9.

26. Lin, H.; Danishefsky, S. J. Gelsemine: A Thought-Provoking Target for Total Synthesis. **2003**, *42*(1), 36−51.

27. Dzyuba, S. V.; Bartsch, R. A. Recent Advances in Applications of Room-Temperature Ionic Liquid/Supercritical CO_2 Systems. **2003**, *42*(2), 148−50.

28. Coperet, C.; Chabanas, M.; Saint-Arroman, R. P.; Basset, J.-M. Homogeneous and Heterogeneous Catalysis: Bridging the Gap through Surface Organometallic Chemistry. **2003**, *42*(2), 156−81.

Australian Journal of Chemistry

29. Gathergood, N. Asymmetric Organocatalysis: Proline an Essential Amino Acid? **2002**, *55*(9), 615.

30. Bourgeois, J.-P.; Fujita, M. Chemical Transformations within Isolated Nanospaces. **2002**, *55*(10), 619−21.

31. Yasui, Y. $[V_2Cl_3(THF)_6]_2[Zn_2Cl_6]$: Reagent for Highly Selective Pinacol-Coupling Reactions. **2002**, *55*(10), 685.

Chemical Reviews

32. Bordusa, F. Proteases in Organic Synthesis. **2002**, *102*(12), 4817−67.

33. Uma, R.; Crevisy, C.; Gree, R. Transposition of Allylic Alcohols into Carbonyl Compounds Mediated by Transition Metal Complexes. **2003**, *103*(1), 27−51.

34. Rossi, R. A.; Pierini, A. B.; Penenory, A. B. Nucleophilic Substitution Reactions by Electron Transfer. **2003**, *103*(1), 71−167.

35. Fagnou, K.; Lautens, M. Rhodium-Catalyzed Carbon−Carbon Bond Forming Reactions of Organometallic Compounds. **2003**, *103*(1), 169−96.

36. Jagodzinski, T. S. Thioamides as Useful Synthons in the Synthesis of Heterocycles. **2003**, *103*(1), 197−227.

37. Dilman, A. D.; Ioffe, S. L. Carbon−Carbon Bond Forming Reactions Mediated by Silicon Lewis Acids. **2003**, *103*(3), 733−72.

38. Power, P. P. Persistent and Stable Radicals of the Heavier Main Group Elements and Related Species. **2003**, *103*(3), 789−809.

39. Basavaiah, D.; Rao, A. J.; Satyanarayana, T. Recent Advances in the Baylis-Hillman Reaction and Applications. **2003**, *103*(3), 811−91.

40. Horton, D. A.; Bourne, G. T.; Smythe, M. L. The Combinatorial Synthesis of Bicyclic Privileged Structures or Privileged Substructures. **2003**, *103*(3), 893−930.

41. Rademacher, P. Photoelectron Spectra of Cyclopropane and Cyclopropene Compounds. **2003**, *103*(4), 933−75.

42. Pietruszka, J. Synthesis and Properties of Oligocyclopropyl-Containing Natural Products and Model Compounds. **2003**, *103*(4), 1051−70.

43. Dolbier, W. R., Jr.; Battiste, M. A. Structure, Synthesis, and Chemical Reactions of Fluorinated Cyclopropanes and Cyclopropenes. **2003**, *103*(4), 1071−98.

44. Fedorynski, M. Syntheses of gem-Dihalocyclopropanes and Their Use in Organic Synthesis. **2003**, *103*(4), 1099−132.

45. Sydnes, L. K. Allenes from Cyclopropanes and Their Use in Organic Synthesis-Recent Developments. **2003**, *103*(4), 1133−50.

46. Reissig, H.-U.; Zimmer, R. Donor−Acceptor-Substituted Cyclopropane Derivatives and Their Application in Organic Synthesis. **2003**, *103*(4), 1151−96.

47. Baldwin, J. E. Thermal Rearrangements of Vinylcyclopropanes to Cyclopentenes. **2003**, *103*(4), 1197−212.

48. Baird, M. S. Thermally Induced Cyclopropene−Carbene Rearrangements: An Overview. **2003**, *103*(4), 1271−94.

49. Nakamura, M.; Isobe, H.; Nakamura, E. Cyclopropenone Acetals−Synthesis and Reactions. **2003**, *103*(4), 1295−326.

50. Halton, B. Cycloproparenes. **2003**, *103*(4), 1327−69.

51. Sekiguchi, A.; Lee, V. Y. Heavy Cyclopropenes of Si, Ge, and Sn−A New Challenge in the Chemistry of Group 14 Elements. **2003**, *103*(4), 1429−47.

Chemical Society Reviews

52. Sweeney, J. B. Aziridines: Epoxides' Ugly Cousins? **2002**, *31*(5), 247−58.

53. Ansell, J.; Wills, M. Enantioselective Catalysis Using Phosphorus-Donor Ligands Containing Two or Three P−N or P−O Bonds. **2002**, *31*(5), 259−68.

54. Brocklehurst, B. Magnetic Fields and Radical Reactions: Recent Developments and Their Role in Nature. **2002**, *31*(5), 301−11.

55. Perez-Garcia, L.; Amabilino, D. B. Spontaneous Resolution under Supramolecular Control. **2002**, *31*(6), 342−56.

56. Dehli, J. R.; Gotor, V. Parallel Kinetic Resolution of Racemic Mixtures: A New Strategy for the Preparation of Enantiopure Compounds? **2002**, *31*(6), 365−70.

57. Poli, R.; Harvey, J. N. Spin Forbidden Chemical Reactions of Transition Metal Compounds. New Ideas and New Computational Challenges. **2003**, *32*(1), 1−8.

58. Neumueller, B. Organometallic Sesquialkoxides of Aluminium, Gallium and Indium. **2003**, *32*(1), 50−5.

Chemistry − A European Journal

59. Manabe, K.; Kobayashi, S. Catalytic Asymmetric Carbon−Carbon Bond-Forming Reactions in Aqueous Media. **2002**, *8*(18), 4094−101.

60. Hafez, A. M.; Taggi, A. E.; Lectka, T. Sequential Column Asymmetric Catalysis. **2002**, *8*(18), 4114−9.

61. Pohl, M.; Lingen, B.; Muller, M. Thiamin-Diphosphate-Dependent Enzymes: New Aspects of Asymmetric C−C Bond Formation. **2002**, *8*(23), 5288−95.

Chemistry of Heterocyclic Compounds

62. Abramov, A. A.; Anisimov, A. V.; Bobyleva, A. A. Synthesis of Oxathiacrown Compounds by the Reactions of Sulfur Dichloride with Unsaturated Compounds and Their Extraction Characteristics. **2002**, *38*(3), 261−73.

63. Donskaya, O. V.; Dolgushin, G. V.; Lopyrev, V. A. Vicarious Nucleophilic Substitution of Hydrogen in Nitro-Substituted Pyrroles, Azoles, and Benzannelated Systems Based on Them. **2002**, *38*(4), 371−84.

64. Mashkina, A. V. Catalytic Synthesis of Some Sulfur-Containing Heterocyclic Compounds. (Review). **2002**, *38*(5), 503−23.

65. Lukevics, E.; Arsenyan, P.; Belyakov, S.; Pudova, O. Molecular Structure of Thiophene 1,1-Dioxides, Thiophene S-Oxides, and Their Derivatives. **2002**, *38*(6), 632−645.

66. Sliwa, W.; Deska, M. Cavitands. **2002**, *38*(6), 646−67.

67. Lukevics, E.; Arsenyan, P.; Belyakov, S.; Pudova, O. Molecular Structure of Selenophenes and Tellurophenes. **2002**, *38*(7), 763−77.

68. Khilya, V. P.; Ishchenko, V. V. Flavones, Isoflavones, and 2- and 3-Hetarylchromones in Reactions with Hydroxylamine. (Review). **2002**, *38*(8), 883−99.

CHEMTRACTS: Organic Chemistry

69. Seganish, W. M.; Jarvis, B. B. Design and Synthesis of Pyrrolidine-5,5-Trans-Lactams as Novel Mechanism Based Inhibitors of Human Cytomegalovirus Protease. **2002**, *15*(7), 367−72.

70. Brummond, K. M. Synthesis of (±)-Arisugacin A Using a Formal [3+3] Cycloaddition Reaction. **2002**, *15*(7), 373−9.

71. Cauble, D. F., Jr.; Krische, M. J. The First Direct and Enantioselective Cross-Aldol Reaction of Aldehydes. **2002**, *15*(7), 380−3.

72. Sheehan, S. M. Proline-Catalyzed Asymmetric Mannich Reactions: The Highly Enantioselective Synthesis of Amino Acid Derivatives and 1,2-Amino Alcohols. **2002**, *15*(7), 384−90.

73. Bianchini, C.; Giambastiani, G. On the Origin of Opposite Stereoselection in the Asymmetric Hydrogenation of Phenyl- and Tert-Butyl-Substituted Enamides: Asymmetric Hydrogenation of Enamides with Rh-Bisp and Rh-Miniphos Catalysts: Scope, Limitations, and Mechanism. **2002**, *15*(8), 430−7.

74. Bianchini, C.; Giambastiani, G.; Valacchi, M. Palladium-Catalyzed Arylation of Malonates and Cyanoesters Using Sterically Hindered Trialkyl- and Ferrocenyldialkylphosphine Ligands. A General and Mild Copper-Catalyzed Arylation of Diethyl Malonate. **2002**, *15*(8), 438−43.

75. Archer, E. A.; Krische, M. J. Second Generation Light-Driven Molecular Motors: Unidirectional Rotation Controlled by a Single Stereogenic Center with Near-Perfect Photoequilibria and Acceleration of the Speed of Rotation by Structural Modification. **2002**, *15*(9), 465−74.

76. Watson, J. A., Jr.; Jarvis, B. B. Total Synthesis of Nominal Diazonamides. Part 1: Convergent Preparation of the Structure Proposed for (−)-Diazonamide A. Part 2: On the True Structure and Origin of Natural Isolates. **2002**, *15*(9), 481−6.

77. Cossy, J.; Gomez Pardo, D. Synthesis of Substituted Piperidines via Aziridinium Intermediates: Synthetic Applications. **2002**, *15*(11), 579−605.

78. Uffman, E. W.; Gilbertson, S. R. A Novel Peptide-Based Encoding System for "One-Bead One-Compound" Peptidomimetic and Small Molecule Combinatorial Libraries. **2002**, *15*(11), 606−10.

79. Leach, A. G.; Houk, K. N. An Unexpected Bispericyclic Transition Structure Leading to 4 + 2 and 2 + 4 Cycloadducts in the Endo Dimerization of Cyclopentadiene. **2002**, *15*(11), 611−6.

80. Paul, N. M.; Gabriel, C. J.; Parquette, J. R. Developments in Fluorous Mitsunobu Chemistry. **2002**, *15*(11), 617−22.

81. Preston, A. J.; Hofacker, A. L.; Parquette, J. R. Rhodium Catalyzed Ortho-Alkylation of Aromatic Aldimines and Ketimines with Olefins via C−H Bond Activation. **2002**, *15*(11), 623−9.

82. Harned, A. M.; Hanson, P. R.; Flynn, D. L. Natural Product Synthesis Utilizing Solid-Supported Reagents. **2002**, *15*(11), 630−6.

Chirality

83. Nishide, K.; Node, M. Recent Development of Asymmetric Syntheses Based on the Meerwein-Ponndorf-Verley Reduction. **2002**, *14*(10), 759−67.

Coordination Chemistry Reviews

84. Valliant, J. F.; Guenther, K. J.; King, A. S.; Morel, P.; Schaffer, P.; Sogbein, O. O.; Stephenson, K. A. The Medicinal Chemistry of Carboranes. **2002**, *232*(1−2), 173−230.

85. Bunten, K. A.; Chen, L.; Fernandez, A. L.; Poe, A. J. Cone Angles: Tolman's and Plato's. **2002**, *233−4*, 41−51.

86. Brydges, S.; Harrington, L. E.; McGlinchey, M. J. Sterically Hindered Organometallics: Multi-n-Rotor (n = 5, 6 and 7) Molecular Propellers and the Search for Correlated Rotations. **2002**, *233−4*, 75−105.

87. Hoskin, A. J.; Stephan, D. W. Early Transition Metal Hydride Complexes: Synthesis and Reactivity. **2002**, *233−4*, 107−29.

88. Piers, W. E.; Emslie, D. J. H. Non-Cyclopentadienyl Ancillaries in Organogroup 3 Metal Chemistry: A Fine Balance in Ligand Design. **2002**, *233−4*, 131−55.

89. Zargarian, D. Group 10 Metal Indenyl Complexes. **2002**, *233*−*4*, 157−76.

90. Harvey, P. D. Wide-Rim and Outer-Face Functionalizations of Calix[4]arene. **2002**, *233*−*4*, 289−309.

91. Chandrasekhar, V.; Nagendran, S.; Baskar, V. Organotin Assemblies Containing Sn−O Bonds. **2002**, *235*(1−2), 1−52.

92. Hoefelmeyer, J. D.; Schulte, M.; Tschinkl, M.; Gabbai, F. P. Naphthalene Derivatives Peri-Substituted by Group 13 Elements. **2002**, *235*(1−2), 93−103.

Current Organic Chemistry

93. Kotali, A. Reactions of Hydrazones with Lead Tetraacetate in Organic Synthesis. **2002**, *6*(11), 965−85.

94. Trofimov, B. A. Acetylene and its Derivatives in Reactions with Nucleophiles: Recent Advances and Current Trends. **2002**, *6*(13), 1121−62.

95. Kondo, T.; Mitsudo, T.-A. Advances in Ruthenium Catalysis. Novel Catalytic Reactions via η3-Allylruthenium Intermediates. **2002**, *6*(13), 1163−79.

96. Schobert, R.; Gordon, G. J. Bioactive Heterocycles from Domino Wittig-Pericyclic Reactions. **2002**, *6*(13), 1181−96.

97. Rahman, N. A.; Landais, Y. Desymmetrisation of Cyclic Dienes. An Efficient Strategy for Natural Products Synthesis. **2002**, *6*(15), 1369−95.

98. Dugave, C. Study of the Cis−Trans Isomerization of the Amino-Acyl Prolyl Peptide Bond. Application to the Design of Novel Inhibitors of Immunophilins. **2002**, *6*(15), 1397−431.

99. Moreno, I.; Tellitu, I.; Herrero, M. T.; SanMartin, R.; Dominguez, E. New Perspectives for Iodine (III) Reagents in (Hetero)Biaryl Coupling Reactions. **2002**, *6*(15), 1433−52.

100. Engel, R.; Cohen, J. I. Organic Polycationic Salts−Syntheses and Applications. **2002**, *6*(15), 1453−67.

101. Murafuji, T.; Kurotobi, K.; Nakamura, N.; Sugihara, Y. Recent Advances in the Synthesis of Optically Active Compounds Bearing a Chiral Heteroatom Center in the Group 13−16 Elements. **2002**, *6*(15), 1469−94.

102. Jarosz, S.; Zamojski, A. Carbohydrate Derivatives Containing the Carbon−Lithium and Carbon−Tin Bonds. **2003**, *7*(1), 13−33.

103. Demchenko, A. V. 1,2-cis O-Glycosylation: Methods, Strategies, Principles. **2003**, *7*(1), 35−79.

104. Kuroda, C.; Suzuki, H. Synthesis of Odd-Membered Rings by the Reaction of β- Carbonylallylsilane or its Derivative as a Carbon 1,3-Dipole. **2003**, *7*(2), 115−31.

105. Kobayashi, Y. Installation of Carbon Nucleophiles onto Monoacetate of 4-Cyclopentene-1,3-Diol and Synthesis of Cyclopentanoids. **2003**, *7*(2), 133−47.

106. Avendano, C.; Menendez, J. C. Chemistry of Pyrazino[2,1-*b*]quinazoline-3,6-diones. **2003**, *7*(2), 149−73.

107. Koketsu, M.; Ishihara, H. Synthesis of 1,3-Selenazine and 1,3-Selenazole and Their Biological Activities. **2003**, *7*(2), 175−85.

108. Mead, K. T.; Brewer, B. N. Strategies in Spiroketal Synthesis Revisited: Recent Applications and Advances. **2003**, *7*(3), 227−56.

109. Wijnberg, J. B. P. A.; De Groot, A. Induced Ionization in 1,4-Diol Monosulfonate Esters and its Application in the Synthesis of Natural Products. **2003**, *7*(3), 257−74.

110. Sotomayor, N.; Lete, E. Aryl and Heteroaryllithium Compounds by Metal−Halogen Exchange. Synthesis of Carbocyclic and Heterocyclic Systems. **2003**, *7*(3), 275−300.

111. Pena, P. C. A.; Roberts, S. M. The Chemistry of Epoxy Alcohols. **2003**, *7*(6), 555−71.

Heterocycles

112. Sliwa, W.; Matusiak, G.; Deska, M. Cavitands and Related Container Molecules. **2002**, *57*(11), 2179−206.

113. Majumdar, K. C.; Basu, P. K. Formation of Five- and Six-Membered Heterocyclic Rings by Radical Cyclization. **2002**, *57*(12), 2413−39.

114. Cacchi, S.; Fabrizi, G.; Parisi, L. M. Nitrogen-Containing Heterocycles via Palladium-Catalyzed Reaction of Alkynes with Organic Halides or Triflates. **2002**, *58*, 667−82.

115. Sakamoto, M.; Nishio, T. Photochemistry of Nitrogen-Containing Thiocarbonyl Compounds. **2003**, *59*(1), 399−427.

116. Sato, T.; Ikeda, M. A General Route to Bridged Azabicyclic Compounds Using Radical Translocation/Cyclization Reactions. **2003**, *59*(1), 429−40.

Journal of Fluorine Chemistry

117. Pashinnik, V. E. Advances in the Chemistry of Organylfluorosulfurans at the Institute of Organic Chemistry, Kiev, Ukraine. **2002**, *117*(2), 85−98.

Journal of the Chemical Society, Perkin Transactions 1

118. Collins, I. Rapid Analogue Syntheses of Heteroaromatic Compounds. **2002**, (17), 1921−40.

119. van Steenis, J. H.; van der Gen, A. Synthesis of Terminal Monofluoro Olefins. **2002**, (19), 2117−33.

120. King, A. S. H.; Twyman, L. J. Heterogeneous and Solid Supported Dendrimer Catalysts. **2002**, (20), 2209−18.

121. Jensen, K. J. O-Glycosylations Under Neutral or Basic Conditions. **2002**, (20), 2219−33.

122. Elliott, M. C. Saturated Oxygen Heterocycles. **2002**, (21), 2301−23.

123. Carter, N. B.; Nadany, A. E.; Sweeney, J. B. Recent Developments in the Synthesis of Furan-2(5H)-ones. **2002**, (21), 2324−42.

124. Osborn, H. M. I.; Gemmell, N.; Harwood, L. M. 1,3-Dipolar Cycloaddition Reactions of Carbohydrate Derived Nitrones and Oximes. **2002**, (22), 2419−38.

125. Blakemore, P. R. The Modified Julia Olefination: Alkene Synthesis via the Condensation of Metallated Heteroarylalkylsulfones with Carbonyl Compounds. **2002**, (23), 2563−85.

126. Adams, J. P. Nitro and Related Groups. **2002**, (23), 2586−97.

127. Bodkin, J. A.; McLeod, M. D. The Sharpless Asymmetric Aminohydroxylation. **2002**, (24), 2733−46.

128. Bowman, W. R.; Fletcher, A. J.; Potts, G. B. S. Synthesis of Heterocycles by Radical Cyclisation. **2002**, (24), 2747−62.

129. Hartley, R. C.; McKiernan, G. J. Titanium Reagents for the Alkylidenation of Carboxylic Acid and Carbonic Acid Derivatives. **2002**, (24), 2763−93.

Natural Product Reports

130. Moloney, M. G. Excitatory Amino Acids. **2002**, *19*(5), 597−616.

131. Michael, J. P. Indolizidine and Quinolizidine Alkaloids. **2002**, *19*(6), 719−41.

132. Michael, J. P. Quinoline, Quinazoline and Acridone Alkaloids. **2002**, *19*(6), 742−60.

133. Liddell, J. R. Pyrrolizidine Alkaloids. **2002**, *19*(6), 773−81.

Organic Preparations and Procedures International

134. Blanchet, J.; Bonin, M.; Micouin, L. Recent Progress in the Asymmetric Synthesis of α-Substituted Propargylamines. **2002**, *34*(5), 457−82.

135. Kinder, F. R., Jr. Synthetic Approaches Toward the Bengamide Family of Antitumor Marine Natural Products. A Review. **2002**, *34*(6), 559,561−83.

136. Cheng, W.-C.; Kurth, M. J. The Zincke Reaction. A Review. **2002**, *34*(6), 585,587−608.

137. Pellissier, H.; Santelli, M. The Birch Reduction of Steroids. A Review. **2002**, *34*(6), 609,611−42.

Photochemistry

138. Gilbert, A. Photochemistry. Introduction and Review of the Year. **2002**, *33*, 1−10.

139. Harriman, A. Photophysical Processes in Condensed Phases. **2002**, *33*, 13−49.

140. Horspool, W. M. Photolysis of Carbonyl Compounds. **2002**, *33*, 53−73.

141. Horspool, W. M. Enone Cycloadditions and Rearrangements: Photoreactions of Dienones and Quinones. **2002**, *33*, 74−118.

142. Horspool, W. M. Photochemistry of Alkenes, Alkynes and Related Compounds. **2002**, *33*, 119−54.

143. Gilbert, A. Photochemistry of Aromatic Compounds. **2002**, *33*, 155−93.

144. Cox, A. Photo-Reduction and -Oxidation. **2002**, *33*, 194−241.

145. Pratt, A. C. Photoreactions of Compounds Containing Heteroatoms other than Oxygen. **2002**, *33*, 242−306.

146. Dunkin, I. R. Photoelimination. **2002**, *33*, 307−36.

Pure and Applied Chemistry

147. Barluenga, J. Fischer Carbene Complexes. A New Tool for Heterocyclic Synthesis. **2002**, *74*(8), 1317−25.

148. Beletskaya, I. P. Transition Metal-Catalyzed Reactions in Heterocyclic Chemistry. **2002**, *74*(8), 1327−37.

Russian Chemical Reviews

149. Kizhnyaev, V. N.; Vereshchagin, L. I. Vinyltetrazoles: Synthesis and Properties. **2003**, *72*(2), 143−64.

150. Kiryuhin, D. P.; Barkalov, I. M. Chain Chemical Reactions at Low Temperatures. **2003**, *72*(3), 217−31.

151. Shastin, A. V.; Godovikova, T. I.; Korsunskii, B. L. Nitro Derivatives of 1,3,5-Triazine: Synthesis and Properties. **2003**, *72*(3), 279−87.

Russian Journal of Organic Chemistry

152. Furin, G. G. Internal Perfluoroolefins in the Synthesis of Organofluorine Compounds. **2002**, *38*(7), 921−61.

153. Kofman, T. P. 5-Amino-3-nitro-1,2,4-triazole and its Derivatives. **2002**, *38*(9), 1231−43.

154. Beletskaya, I. P.; Kazankova, M. A. Catalytic Methods for Building up Phosphorus−Carbon Bond. **2002**, *38*(10), 1391−430.

Science

155. Marko, I. E.; Sterin, S.; Buisine, O.; Mignani, G.; Branlard, P.; Tinant, B.; Declercq, J.-P. Selective and Efficient Platinum(0)-Carbene Complexes as Hydrosilylation Catalysts. **2002**, *298*(5591), 204−7.

156. Steed, J. W. Molecular "Ghosts". **2002**, *298*(5595), 976−7.

157. Atwood, J. L.; Barbour, L. J.; Jerga, A.; Schottel, B. L. Guest Transport in a Nonporous Organic Solid via Dynamic van der Waals Cooperativity. **2002**, *298*(5595), 1000−2.

158. Movassaghi, M.; Jacobsen, E. N. Perspectives: Chemistry: The Simplest "Enzyme". **2002**, *298*(5600), 1904−5.

159. McMahon, R. J. Chemistry: Chemical Reactions Involving Quantum Tunneling. **2003**, *299*(5608), 833−4.

160. Zuev, P. S.; Sheridan, R. S.; Albu, T. V.; Truhlar, D. G.; Hrovat, D. A.; Borden, W. T. Carbon Tunneling from a Single Quantum State. **2003**, *299*(5608), 867−70.

Synlett

161. Metallinos, C. The N-Cumyl Group for Facile Manipulation of Carboxamides, Sulfonamides and Aryl O-Carbamates. Post-Directed Ortho Metalation. **2002**, (9), 1556−7.

162. Mikami, K.; Aikawa, K.; Yusa, Y.; Jodry, J. J.; Yamanaka, M. Tropos or Atropos? That is the Question! **2002**, (10), 1561−78.

163. Beller, M.; Breindl, C.; Eichberger, M.; Hartung, C. G.; Seayad, J.; Thiel, O. R.; Tillack, A.; Trauthwein, H. Advances and Adventures in Amination Reactions of Olefins and Alkynes. **2002**, (10), 1579−94.

164. Cossy, J.; BouzBouz, S.; Pradaux, F.; Willis, C.; Bellosta, V. Chiral Titanium Complexes. Synthesis of Optically Active Unsaturated Alcohols, Diols, Polypro-

pionates and Their use in the Synthesis of Biologically Active Compounds. **2002**, (10), 1595−606.

165. Raehm, L.; Hamilton, D. G.; Sanders, J. K. M. From Kinetic to Thermodynamic Assembly of Catenanes: Error Checking, Supramolecular Protection and Oligocatenanes. **2002**, (11), 1743−61.

166. Prabhu, K. R.; Devan, N.; Chandrasekaran, S. Chemistry of Tetrathiomolybdate: Applications in Organic Synthesis. **2002**, (11), 1762−78.

167. Tykwinski, R. R.; Zhao, Y. Cross-Conjugated Oligo(enynes). **2002**, (12), 1939−53.

168. Takeuchi, R. Iridium Complex-Catalyzed Highly Selective Organic Synthesis. **2002**, (12), 1954−65.

169. Togo, H.; Sakuratani, K. Polymer-Supported Hypervalent Iodine Reagents. **2002**, (12), 1966−75.

170. Corsi, M. Jacobson's Catalyst. **2002**, (12), 2127−8.

171. Biali, S. E. The Spirodienone Route for the Functionalization of Calixarenes. **2003**, (1), 1−11.

172. Huddleston, R. R.; Krische, M. J. Enones as Latent Enolates in Catalytic Processes: Catalytic Cycloreduction, Cycloaddition and Cycloisomerization. **2003**, (1), 12−21.

173. Hoarau, C.; Pettus, T. R. R. Strategies for the Preparation of Differentially Protected Ortho-Prenylated Phenols. **2003**, (1), 127−37.

174. Tasneem Vilsmeier−Haack Reagent (Halomethyleneiminium Salt). **2003**, (1), 138−9.

175. Minatti, A. Iodosobenzene (PhIO). **2003**, (1), 140−1.

Synthesis−Stuttgart

176. Saljoughian, M. Synthetic Tritium Labeling: Reagents and Methodologies. **2002**, (13), 1781−801.

177. Chambert, S.; Desire, J.; Decout, J.-L. The 2-(Trimethylsilyl)ethyl Sulfur Group in Synthesis. **2002**, (16), 2319−34.

178. Chinkov, N.; Chechik, H.; Majumdar, S.; Liard, A.; Marek, I. New Preparation of sp^2 Organometallic Derivatives. **2002**, (17), 2473−83.

179. Singh, R. P.; Shreeve, J. M. Recent Advances in Nucleophilic Fluorination Reactions of Organic Compounds Using Deoxofluor and DAST. **2002**, (17), 2561−78.

180. Ramig, K. Synthesis and Reactions of Fluoroether Anesthetics. **2002**, (17), 2627−31.

181. Molt, O.; Schrader, T. Asymmetric Synthesis with Chiral Cyclic Phosphorus Auxiliaries. **2002**, (18), 2633−70.

182. Poulsen, C. S.; Madsen, R. Enyne Metathesis Catalyzed by Ruthenium Carbene Complexes. **2003**, (1), 1−18.

Tetrahedron

183. Liu, M.; Sibi, M. P. Recent Advances in the Stereoselective Synthesis of β-Amino Acids. **2002**, *58*(40), 7991−8035.

184. Leonard, N. M.; Wieland, L. C.; Mohan, R. S. Applications of Bismuth(III) Compounds in Organic Synthesis. **2002**, *58*(42), 8373−97.

185. Park, K.-H.; Kurth, M. J. Cyclic Amino Acid Derivatives. **2002**, *58*(43), 8629−59.

186. Reese, C. B. The Chemical Synthesis of Oligo- and Poly-Nucleotides: A Personal Commentary. **2002**, *58*(44), 8893−920.

187. Silva, L. F. Construction of Cyclopentyl Units by Ring Contraction Reactions. **2002**, *58*(45), 9137−61.

188. Blass, B. E. KF/Al_2O_3 Mediated Organic Synthesis. **2002**, *58*(46), 9301−20.

189. Armstrong, A.; Blench, T. J. Recent Synthetic Studies on the Zaragozic Acids (Squalestatins). **2002**, *58*(46), 9321−49.

190. Marek, I. Sp^3 Organozinc Carbenoid Homologation in Organic Synthesis. **2002**, *58*(47), 9463−75.

191. Mehta, G.; Muthusamy, S. Tandem Cyclization-Cycloaddition Reactions of Rhodium Generated Carbenoids from α-Diazo Carbonyl Compounds. **2002**, *58*(47), 9477−504.

192. Kotha, S.; Lahiri, K.; Kashinath, D. Recent Applications of the Suzuki-Miyaura Cross-Coupling Reaction in Organic Synthesis. **2002**, *58*(48), 9633−95.

193. de Koning, C. B.; Rousseau, A. L.; van Otterlo, W. A. L. Modern Methods for the Synthesis of Substituted Naphthalenes. **2002**, *Volume Date 2003*, *59*(1), 7−36.

Contributed Volumes

Amino Acids, Peptides and Proteins. Volume 33. Barrett, G. C., Davies, J. S., Eds., Royal Society of Chemistry: Cambridge, U.K., 2002.

194. Chang, W. C.; Higton, A. Amino Acids.

195. Elmore, D. Peptide Synthesis.

196. Davies, J. S. Analogue and Conformational Studies on Peptides, Hormones and Other Biologically Active Peptides.

197. Davies, J. S. Cyclic, Modified and Conjugated Peptides.

198. Farkas, E.; Sovago, I. Metal Complexes of Amino Acids and Peptides.

199. Barrett, G. C. Proteins.

Organic Synthesis Theory and Applications, Volume 5. Hudlicky, T., Ed., Elsevier Science: Oxford, U.K., 2001.

200. Hansen, T. V.; Stenstrøm, Y. Naturally Occurring Cyclobutanes.

201. Brocksom, T. J.; Brocksom, U. et al. Diels−Alder Reactions in the Synthesis of Higher Terpenes.

202. Natchus, M. G.; Tian, X. The Asymmetric Synthesis of Unnatural Amino Acids as Building Blocks for Complex Molecular Synthesis.

203. Wright, D. L. et al. The Role of Organic Synthesis in the Generation of Molecular Diversity.

Monographs

204. Atta ur, R., Ed. Bioactive Natural Products, Part H. [In: *Stud. Nat. Prod. Chem.*, **2002**; *27*]. Elsevier Science: Amsterdam, Netherlands, 2002.

205. Chu, C. K. Recent Advances in Nucleosides: Chemistry and Chemotherapy. Elsevier Science: Amsterdam, Netherlands, 2002.

206. Gilbert, A. Photochemistry. Introduction and Review of the Year. Royal Society of Chemistry: Cambridge, U.K., 2002.

207. Hanson, J. R. Tutorial Chemistry Texts, 12; Organic Synthetic Methods. Royal Society of Chemistry: Cambridge, U.K., 2002.

208. Hepworth, J. D.; Waring, D. R.; Waring, M. J. Tutorial Chemistry Texts, Volume 13; Aromatic Chemistry. Royal Society of Chemistry: Cambridge, U.K., 2002.

209. Herrmann, W. A., Werner, H., Eds. Selective Reactions of Metal-Activated Molecules. [In: *J. Organomet. Chem.*, **2002**; *661*(1−2)]. Elsevier Science: Amsterdam, Netherlands, 2002.

210. Kadish, K. M., Smith, K. M., Guilard, R., Eds. The Porphyrin Handbook. Academic Press: San Diego, CA, 2000.

211. Kurosawa, H.; Yamamoto, A. Fundamentals of Molecular Catalysis. Elsevier: San Diego, CA, 2003.

212. Loakes, D., Ed. Modified Nucleosides Synthesis and Applications. Research Singpost: Trivandrum, India, 2002.

213. Maas, G., Ed. Science of Synthesis, Volume 9, Houben-Weyl Methods of Molecular Transformations; Hetarenes and Related Ring Systems: Fully Unsaturated Small-Ring Heterocycles and Monocyclic Five-Membered Hetarenes with One Heteroatom. Georg Thieme Verlag: Stuttgart, Germany, 2002.

214. Martin, R. Handbook of Hydroxybenzophenones. Kluwer Academic: Dordrecht, Netherlands, 2000.

215. Nakamura, T., Matsumoto, T., Tada, H., Sugiura, K. I., Eds. Chemistry of Nanomolecular Systems: Towards the Realization of Molecular Devices. [In: *Springer Ser. Chem. Phys.*, **2003**; *70*]. Springer-Verlag: Berlin, Germany, 2003.

216. Negishi, E.-i., Ed. Handbook of Organopalladium Chemistry for Organic Synthesis, Volume 1. John Wiley & Sons: Hoboken, NJ, 2002.

217. Osborn, H. M. I.; Harwood, L. M. Best Synthetic Methods: Carbohydrates. Academic Press: San Diego, CA, 2003.

218. Pyatnitsky, Y. I.; Pavlenko, M. V.; Ilchenko, N. I. Introduction to Non-Linear Kinetics in Heterogeneous Catalysis. Nova Sci Publishers: Huntington, NY, 2000.

219. Schaumann, E., Ed. Houben-Weyl Methods of Molecular Transformations: Hetarenes and Related Ring Systems. (Five-Membered Hetarenes with One Chalcogen and One Additional Heteroatom.) [In: *Sci. Synth.*, **2002**; *11*]. Georg Thieme Verlag: Stuttgart, Germany, 2002.

220. Schweizer, F. M., Ed. Combinatorial Carbohydrates. [In: *Comb. Chem. High Throughput Screening*, **2002**; *5*(5)]. Bentham Science Publishers: Hilversum, Netherlands, 2002.

221. Shuttleworth, S. J., Ed. Development and Applications of Polymer-Supported Reagents and Ion Exchange Resins in Organic Synthesis and Combinatorial Chemistry. [In: *Comb. Chem. High Throughput Screening*, **2002**; *5*(3)] Bentham Science Publishers: Hilversum, Netherlands, 2002.

222. Taylor, P., Ed. The Molecular World: Mechanism and Synthesis. Royal Society of Chemistry: Cambridge, U.K., 2002.

223. Taylor, P., Gagan, M., Eds. The Molecular World: Alkenes and Aromatics. Royal Society of Chemistry: Cambridge, U.K., 2002.

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