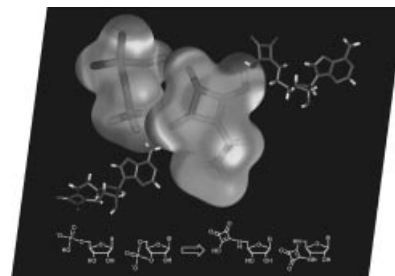




The editorial staff and the publishers thank all readers, authors, referees, and advertisers for their interest and support over the past year and wish them all a happy new year.

COVER PICTURE

The cover picture shows the electrostatic potential maps of methyl phosphate and *N*-methylsquaramide. Various analogs of nucleotides and cyclic nucleotides were synthesized by use of the squaramide moiety as an isoelectronic mimic of the phosphate group. Details are discussed in the article by M. Sekine et al. on p. 5163ff.



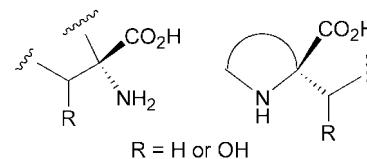
MICROREVIEWS

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5127 Y. Ohfuné,* T. Shinada

Enantio- and Diastereoselective Construction of α,α -Disubstituted α -Amino Acids for the Synthesis of Biologically Active Compounds

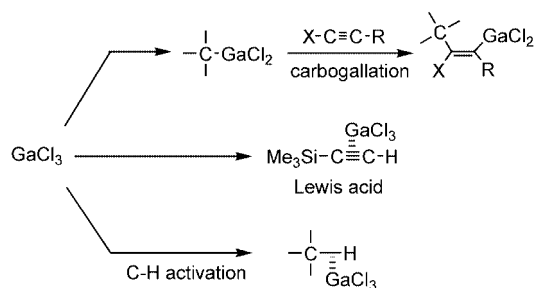
Keywords: Aldol reaction / Amino acids / Asymmetric synthesis / Biological activity / Natural products



5145 R. Amemiya, M. Yamaguchi*

GaCl₃ in Organic Synthesis

Keywords: C–H activation / Gallium / Halides / Lewis acids / Vinylation

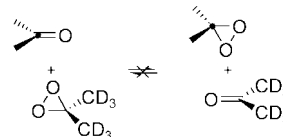


SHORT COMMUNICATIONS

5151 K.-P. Zeller,* M. Kowallik, P. Schuler

Dimethyldioxirane and Acetone Are Not in Equilibrium

Keywords: Dimethyldioxirane / D-labelling / ¹³C-labelling / Oxygen transfer

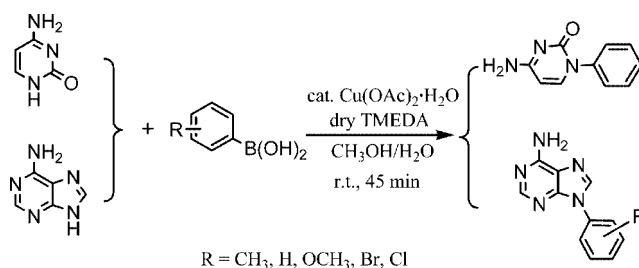


5154 Y. Yue, Z.-G. Zheng, B. Wu, C.-Q. Xia, X.-Q. Yu*



Copper-Catalyzed Cross-Coupling Reactions of Nucleobases with Arylboronic Acids: An Efficient Access to *N*-Arylnucleobases

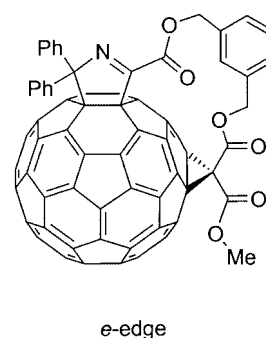
Keywords: *N*-arylation / Cytosine / Adenine / Boronic acid / Copper / Cross-coupling



5158 L. Chaker, G. E. Ball, J. R. Williams, G. A. Burley, B. C. Hawkins, P. A. Keller,* S. G. Pyne*

Regioselective Synthesis of Novel *e*-Edge-[60]-fullerenylmethanodihydropyrroles and 1,2-Dihydromethano[60]fullerenes

Keywords: Fullerenes / NMR spectroscopy / Regioselectivity

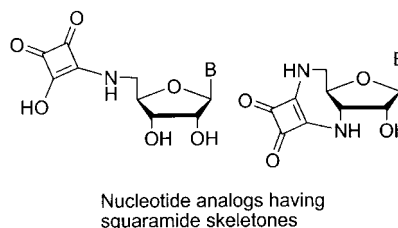


FULL PAPERS

5163 K. Seio, T. Miyashita, K. Sato, M. Sekine*

Synthesis and Properties of New Nucleotide Analogues Possessing Squaramide Moieties as New Phosphate Isosters

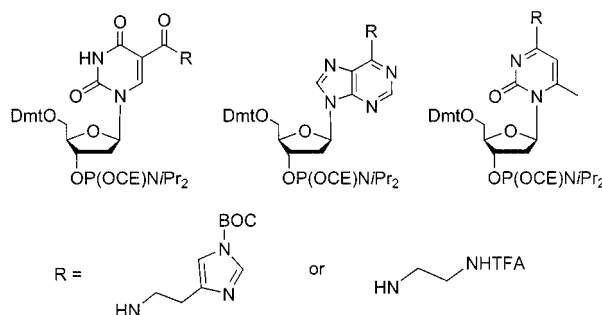
Keywords: Squaric acid / Acidity / Nucleotide analogues / Cyclic nucleotide analogues



5171 S. C. Holmes, M. J. Gait*

Syntheses and Oligonucleotide Incorporation of Nucleoside Analogues Containing Pendant Imidazolyl or Amino Functionalities – The Search for Sequence-Specific Artificial Ribonucleases

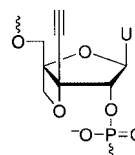
Keywords: Oligonucleotides / Nucleosides / Modified nucleosides / Artificial ribonuclease



5184 P. J. Hrdlicka, T. S. Kumar, J. Wengel*

Synthesis and Thermal Denaturation Studies of Conformationally Restricted 3'-C-Ethynyl-3'-O,4'-C-methylenribonucleotides

Keywords: Oligonucleotides / 2,5-Linked nucleic acids / Conformationally restricted nucleic acids / RNA recognition / EURd



5189 L. A. Wozniak,* M. Janicka,
M. Bukowiecka-Matusiak



Consequences of *P*-Chirality in Chimeric 2'-*O*-Methyloligoribonucleotides with Stereoregular Methylphosphonothioate Linkages

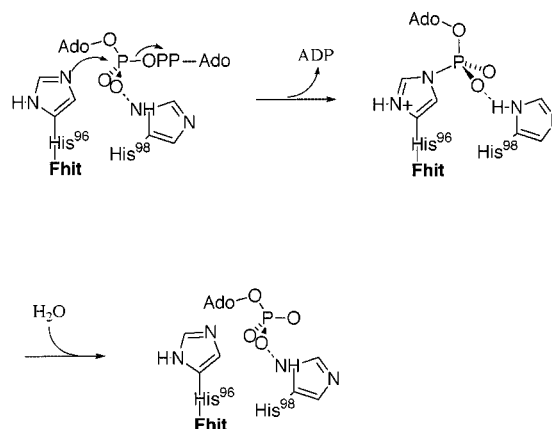
Keywords: Chimeric oligonucleotides / Chirality / Conformational analysis / Circular dichroism / Nucleic acids / Thermodynamic stability



5198 K. Huang, A. Arabshahi, P. A. Frey*

pH-Dependence in the Hydrolytic Action of the Human Fragile Histidine Triad

Keywords: Enzymes / Hydrolases / Enzyme catalysis / Hydrolysis / Kinetics

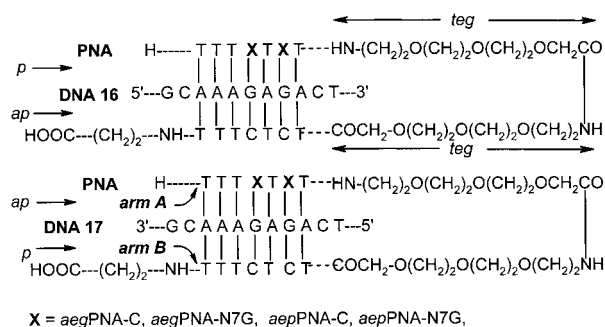


5207 P. S. Shirude, V. A. Kumar,* K. N. Ganesh*



BisPNA Targeting to DNA: Effect of Neutral Loop on DNA Duplex Strand Invasion by *aep*PNA-N7G/*aep*PNA-C Substituted Peptide Nucleic Acids

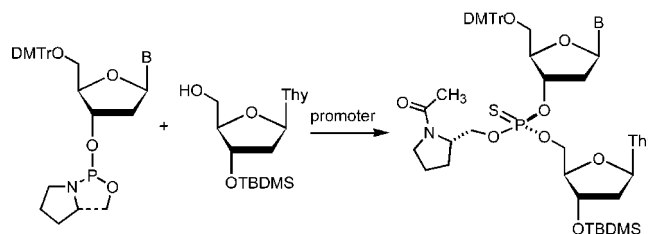
Keywords: Peptide Nucleic Acid (PNA) / Hairpin bisPNA-DNA triplex / Strand invasion / *aep*PNA / N7G PNA



5216 M. Hyodo, H. Ando, H. Nishitani, A. Hattori, H. Hayakawa, M. Kataoka, Y. Hayakawa*

Utility of Azolium Triflates as Promoters for the Condensation of a Nucleoside Phosphoramidite and a Nucleoside in the Agrawal's Stereoselective Synthesis of Nucleoside Phosphorothioates

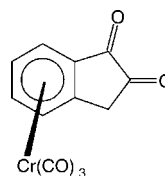
Keywords: Oligonucleotides / Nitrogen heterocycles / Phosphoramidite / Solid-phase synthesis / Chirality



5224 D. Leinweber, I. Weidner, R. Wilhelm, R. Wartchow, H. Butenschön*

Synthesis of Enantiopure Tricarbonyl(indan-1,2-dione)chromium

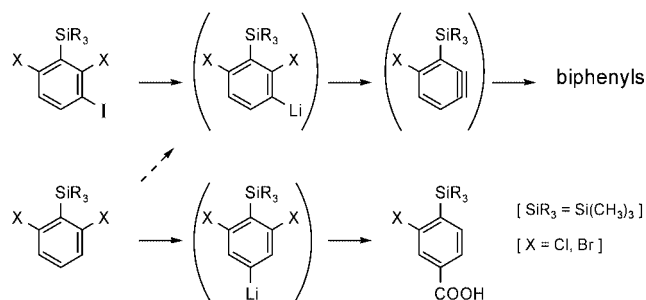
Keywords: Indan-1,2-dione / Chromium complexes / Planar chirality / Arene ligands / Enantioselectivity



5236 C. Heiss, F. Cottet, M. Schlosser*

meta- Rather than *ortho*-Directed Metalations: Buttressing Effects Prejudicing the Proton Abstraction from (2,6-Dihalophenyl)silanes

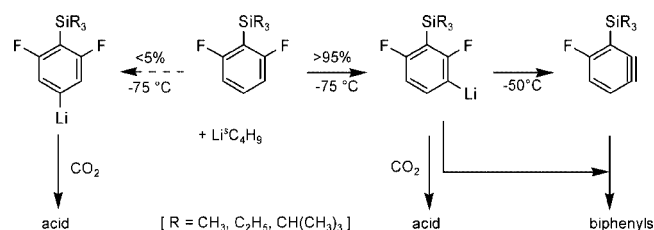
Keywords: Aryl-aryl coupling / Arynes / Buttressing effects / Nucleophilic addition / Regioselectivity / Trialkylsilyl groups



5242 C. Heiss, F. Leroux, M. Schlosser*

Fluorine-Flanked Congested Sites: Minimal, Though Perceptible Buttressing Effects on the Proton Mobility of Arenes

Keywords: Arynes / Biphenyls / Buttressing effects / Fluoroarenes / Metalation / Regioselectivity

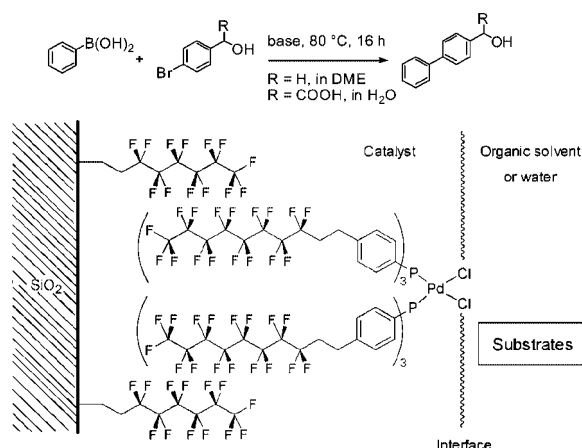


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C. C. Tzschucke, V. Andrushko,
W. Bannwarth*

Assessment of the Reusability of Pd Complexes Supported on Fluorous Silica Gel as Catalysts for Suzuki Couplings

Keywords: C–C coupling / Palladium / Recycling / Solvent effects / Supported catalysts / Fluorous silica gel

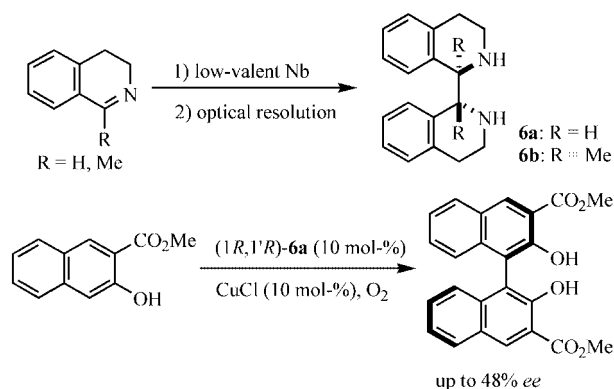


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S. Arai,* S. Takita, A. Nishida*

A Facile Synthesis of Vicinal Diamines Promoted by Low-Valent Niobium: Preparation of Chiral Octahydrobiisoquinolines and Their Application to Catalytic Asymmetric Synthesis

Keywords: Amines / Asymmetric catalysis / Asymmetric synthesis / Imine coupling / Niobium

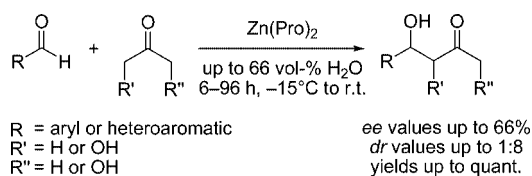


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R. Fernandez-Lopez, J. Kofoed,
M. Machuqueiro, T. Darbre*

A Selective Direct Aldol Reaction in Aqueous Media Catalyzed by Zinc–Proline

Keywords: Aldol reactions / Green chemistry / Aqueous catalysis / Proline / Zinc

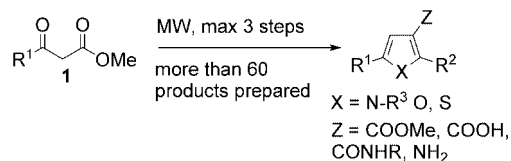


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Microwave-Assisted Paal–Knorr Reaction – Three-Step Regiocontrolled Synthesis of Poly-substituted Furans, Pyrroles and Thiophenes

Keywords: Pyrroles / Microwaves / Cyclocondensation / Peptidomimetics

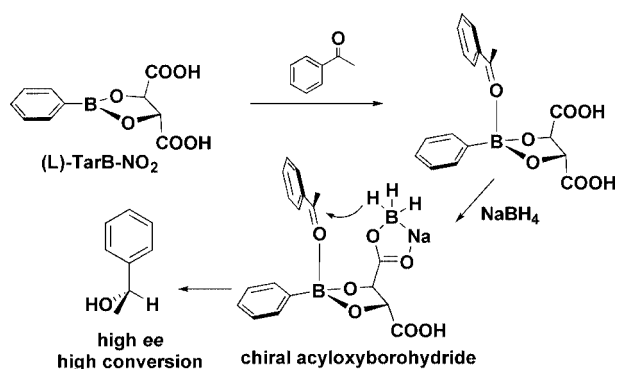


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D. B. Cordes, T. M. Nguyen, T. J. Kwong,
J. T. Suri, R. T. Luibrand, B. Singaram*

Asymmetric Reduction of Ketones Under Mild Conditions Using NaBH₄ and TarB-NO₂: An Efficient and Unusual Chiral Acyloxyborohydride Reducing System

Keywords: Asymmetric synthesis / Boron / Lewis acids / Acyloxyborohydride / Sodium borohydride

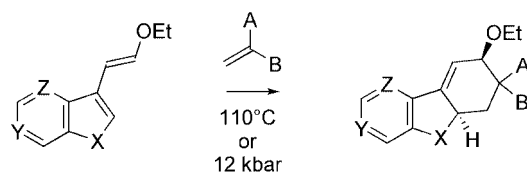


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F. Le Strat, H. Vallette, L. Toupet,
J. Maddaluno*

Access to Tri- and Tetracyclic Structures by Thermally Promoted and High-Pressure-Promoted [4+2] Cycloadditions of 2-, 3- or 4-Vinyl-Substituted Binuclear Heterocycles

Keywords: Cycloadditions / High-pressure chemistry / Diastereoselectivity / Oxygen heterocycles / Nitrogen heterocycles

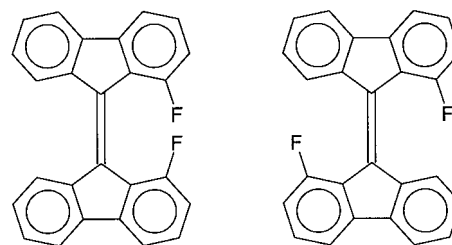


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P. G. Jones, K. Ibrom, L. Ernst*

Spin-Spin Interactions Across the "Cove" in the (Z) and (E) Isomers of 1,1'-Difluoro-9,9'-bifluorenylidene

Keywords: Through-space F,F spin-spin coupling / NMR spectroscopy / X-ray diffraction / Density functional calculations / Strained molecules / Configuration determination / Compliance constants

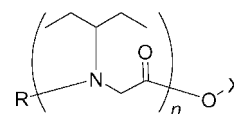


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S. Komba,* M. Kitaoka, T. Kasumi

A New Method of Carbohydrate Synthesis in Both Solution and Solid Phases Using a Special Hydroxy Protecting Group

Keywords: Hydroxy protecting group / UCP / Solid-phase carbohydrate synthesis / Solution-phase carbohydrate synthesis



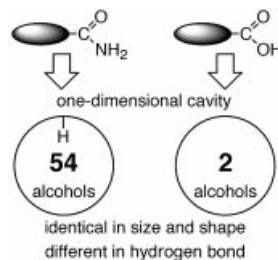
R: Fmoc or Boc
X: carbohydrate
 $n \geq 1$

5330 N. Yoswathananont, K. Sada, K. Nakano, K. Aburaya, M. Shigesato, Y. Hishikawa, K. Tani, N. Tohnai, M. Miyata*



The Effect of a Host–Guest Hydrogen Bond on the Inclusion of Alcoholic Guests in the Host Cavities of Cholamide

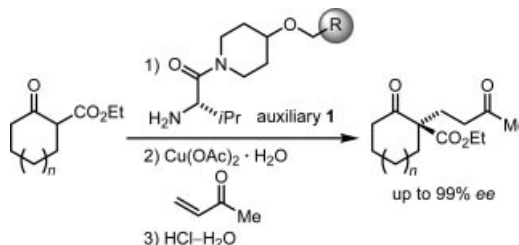
Keywords: Alcohols / Amides / Host–guest systems / Hydrogen bonds / Inclusion compounds



5339 B. Kreidler, A. Baro, J. Christoffers*

Asymmetric Michael Reactions on Polymeric Support: Auxiliary Immobilization and Stereoselective Construction of Quaternary Stereocenters

Keywords: Chiral auxiliary / Michael reaction / Solid support / Transesterification / Quaternary stereocenters

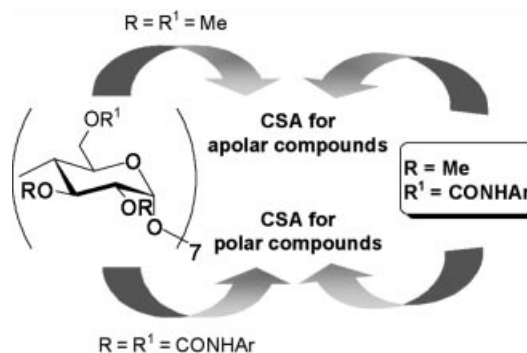


5349 G. Uccello-Barretta, F. Balzano, G. Sicoli, A. Scarselli, P. Salvadori*



NMR Enantiodiscrimination of Polar and Apolar Substrates by Multifunctional Cyclodextrins

Keywords: Cyclodextrins / Chiral auxiliaries / NMR spectroscopy / Enantiodiscrimination / Polar and apolar chiral compounds



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