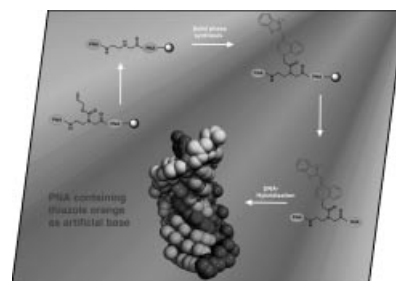


COVER PICTURE

The cover picture shows the divergent synthesis of peptide nucleic acid based probes in which the DNA intercalator dye thiazole orange serves as a base surrogate. The so-called FIT (Forced Intercalation of Thiazole orange) PNA probes can provide information about the hybridization to complementary DNA by enhancement of fluorescence. The graphical representation depicted in the bottom left corner gives an idea of the structure of FIT PNA complexed by DNA. In this model, FIT PNA has been hybridized to DNA that contains an abasic site opposite to thiazole orange. The article by O. Seitz et al. on p. 3187ff. describes the details of linear and divergent solid-phase syntheses of FIT PNAs. Both methods provide very rapid access and should be applicable to the synthesis of any type of base-modified PNA molecule.



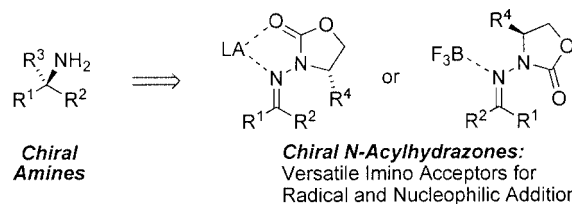
MICROREVIEW

Contents

3157 G. K. Friestad*

Chiral *N*-Acylhydrazones: Versatile Imino Acceptors for Asymmetric Amine Synthesis

Keywords: Hydrazones / Amines / Radical reactions / Nucleophilic addition / Asymmetric synthesis

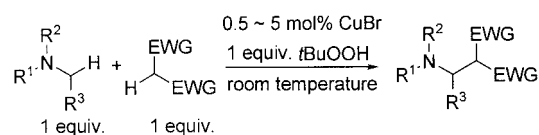


SHORT COMMUNICATIONS

3173 Z. Li, C.-J. Li*



Highly Efficient CuBr-Catalyzed Cross-Dehydrogenative Coupling (CDC) between Tetrahydroisoquinolines and Activated Methylene Compounds



Keywords: Amine / Cross coupling / C–H activation / C–CN bond cleavage / Copper catalyst

3177 C.-H. Cho, H. Park, M.-A. Park,
T.-Y. Ryoo, Y.-S. Lee, K. Park*



Solid-Phase Synthesis of Biphenyls and Terphenyls by the Traceless Multifunctional Cleavage of Polymer-Bound Arenesulfonates

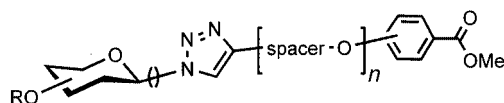


Keywords: Biaryls / Cross-coupling / Solid-phase synthesis / Sulfonate / Traceless multifunctional cleavage

3182 J. A. F. Joosten, N. T. H. Tholen,
F. Ait El Maate, A. J. Brouwer,
G. W. van Esse, D. T. S. Rijkers,
R. M. J. Liskamp,* R. J. Pieters*



High-Yielding Microwave-Assisted Synthesis of Triazole-Linked Glycodendrimers by Copper-Catalyzed [3+2] Cycloaddition



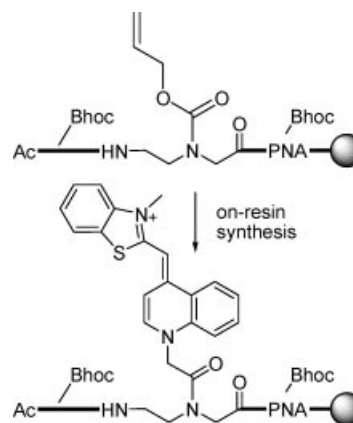
Keywords: Carbohydrates / Glycosides / Dendrimers / Cycloaddition / Microwave activation

FULL PAPERS

3187 D. V. Jarikote, O. Köhler, E. Socher,
O. Seitz*

Divergent and Linear Solid-Phase Synthesis of PNA Containing Thiazole Orange as Artificial Base

Keywords: Cyanine dyes / DNA / Fluorescent probes / Peptide nucleic acids / Peptide coupling / Protecting groups

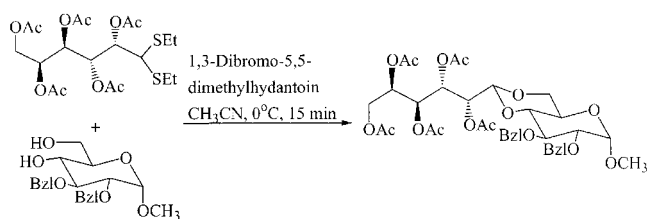


3196

S. K. Madhusudan, A. K. Misra*

Synthesis of a New Type of Glycosidic Linkage: Acetal-Linked Disaccharides and Trisaccharides of Acyclic and Cyclic Sugars

Keywords: Glycosylation / Chemoselectivity / Synthetic methods / Antigens / *Proteus*

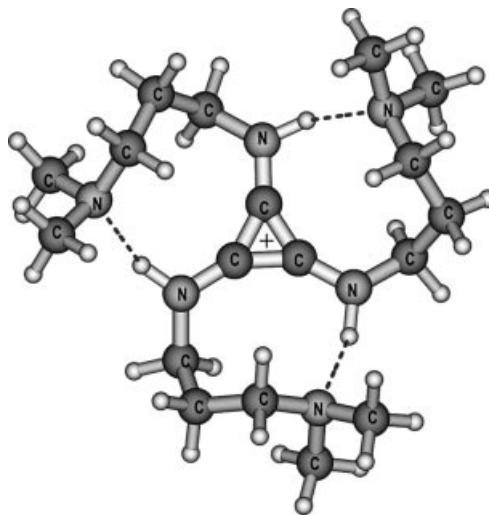


3206

Z. Gattin, B. Kovačević, Z. B. Maksić*

Cooperative Intramolecular Hydrogen Bonding Effect and Basicity – An Ab Initio and DFT Study of the Superbasic Properties of *N*-[(Dimethylamino)alkyl]-2,3-diaminocycloprop-2-ene-1-imines

Keywords: Neutral organic superbases / Superbasicity / Proton affinities / Hydrogen bonding / Aromaticity / Cationic resonance effect

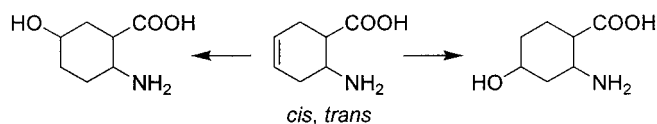


3214

F. Fülöp,* M. Palkó, E. Forró, M. Dervarics, T. A. Martinek, R. Sillanpää

Facile Regio- and Diastereoselective Syntheses of Hydroxylated 2-Aminocyclohexanecarboxylic Acids

Keywords: Amino acids / Heterocycles / Diastereoselectivity / Structure elucidation

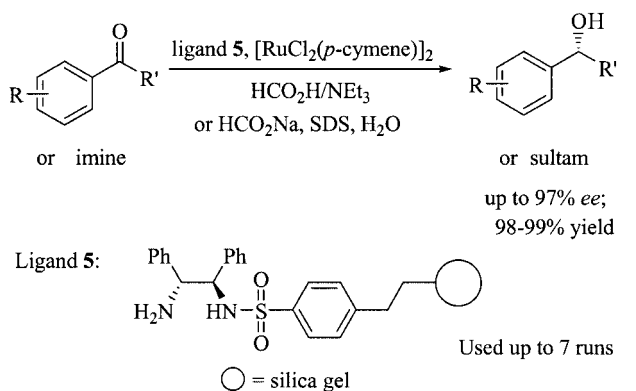


3221

P.-N. Liu, P.-M. Gu, J.-G. Deng, Y.-Q. Tu,* Y.-P. Ma

Efficient Heterogeneous Asymmetric Transfer Hydrogenation Catalyzed by Recyclable Silica-Supported Ruthenium Complexes

Keywords: Asymmetric catalysis / Heterogeneous catalysis / Hydrogenation / Immobilization

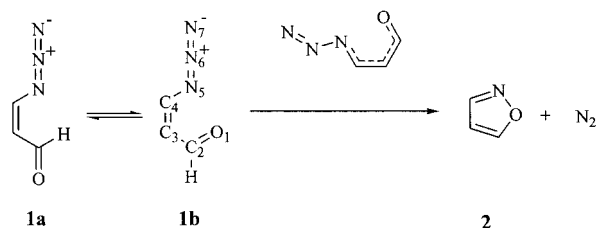


3228 A. Peña-Gallego, J. Rodríguez-Otero,*
E. M. Cabaleiro-Lago



A DFT Study of the Concerted Cyclisation of 3-Azidopropenal to Isoxazole: Is it a Pseudopericyclic Reaction According to Its Magnetic Properties?

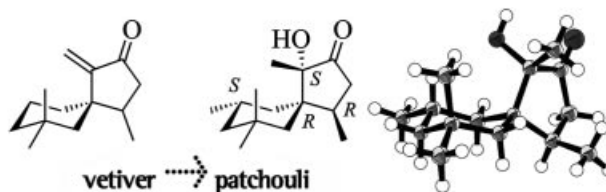
Keywords: Ab initio calculations / Aromaticity / Magnetic properties / Pericyclic/pseudopericyclic reactions / Coarctate/pseudocoarctate reactions



3233 P. Kraft,* W. Eichenberger, D. Frech

From Vetiver to Patchouli: Discovery of a New High-Impact Spirocyclic Patchouli Odorant

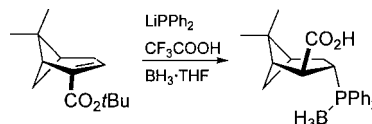
Keywords: Fragrances / Olfactory properties / Patchouli / Spiro compounds / Structure–activity relationships



3246 B. Wiese, G. Knühl, D. Flubacher,
J. W. Priëß, B. Ulriksen (nee Laursen),
K. Brödner, G. Helmchen*

Syntheses of New Chiral Phosphane Ligands by Diastereoselective Conjugate Addition of Phosphides to Enantiomerically Pure Acceptor-Substituted Olefins from the Chiral Pool

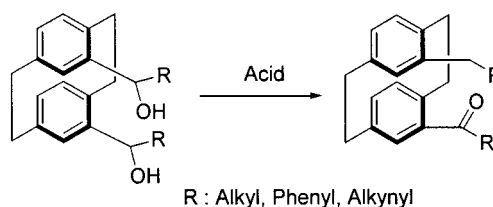
Keywords: Asymmetric synthesis / Phosphanes / Diastereoselectivity / Michael addition / Terpenoids



3263 M. L. Birsa, P. G. Jones, H. Hopf*

Transannular Hydride Migration in *Pseudo-Geminally* Substituted [2.2]Paracyclophanes: A Vinylogous Pinacol Rearrangement

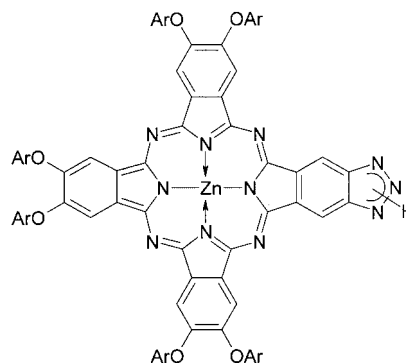
Keywords: [2.2]Paracyclophanes / Pinacol rearrangement / Hydride transfer



3271 S. Vagin,* A. Frickenschmidt, B. Kammerer,
M. Hanack

Synthesis and Properties of an Unsymmetrical Triazole-Functionalized (Phthalocyaninato)zinc Complex

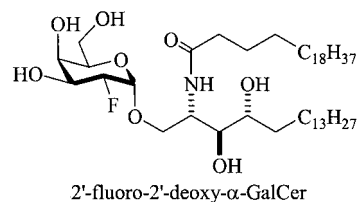
Keywords: Phthalocyanines / Metal complexes / Unsymmetrical derivatization / Triazole / Spectroscopic properties / Zinc



- 3279 L. Barbieri, V. Costantino,* E. Fattorusso,
A. Mangoni, N. Basilico, M. Mondani,
D. Taramelli



Immunomodulatory α -Galactoglycosphingo-
lipids: Synthesis of 2'-Fluoro-2'-deoxy- α -galac-
tosylceramide and an Evaluation of Its Immuno-
stimulating Properties

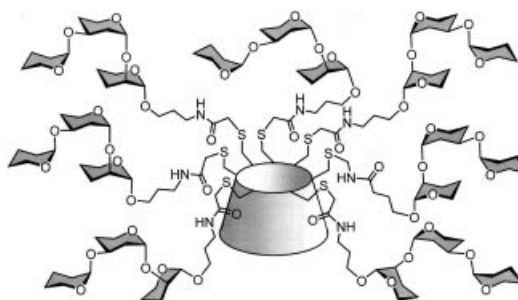


Keywords: Fluorine / Glycolipids / Glycosidation /
Immunomodulatory activity / Mukaiyama
reaction

- 3286 C. Carpenter, S. A. Nepogodiev*



Synthesis of a α Man(1 $\rightarrow$ 3) α Man(1 $\rightarrow$ 2) α Man
Glycocluster Presented on a β -Cyclodextrin
Scaffold

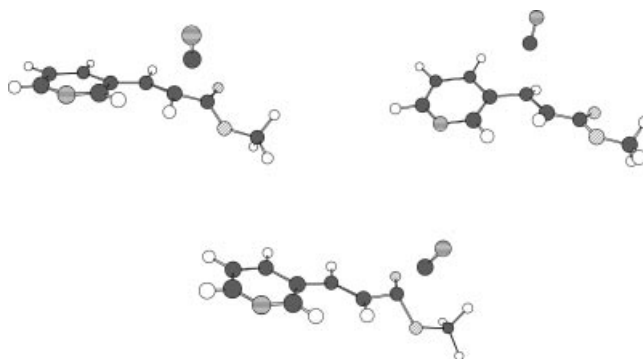


Keywords: Carbohydrates / Cyclodextrins / Glycocon-
jugates / Oligosaccharides / Yeast mannans

- 3297 E. Lewandowska,* D. C. Chatfield*



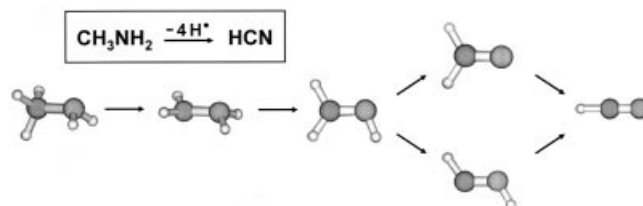
Regioselectivity of Michael Additions to 3-(Pyri-
din-3-yl or Pyrimidin-2-yl)propenoates and
Their *N*-Oxides – Experimental and Theoreti-
cal Studies



Keywords: Michael addition / Regioselectivity / Sub-
stituent effects / Density functional calcu-
lations

- 3304 J. Roithová, D. Schröder,* H. Schwarz

Unimolecular Fragmentation of CH_3NH_2 :
Towards a Mechanistic Description of HCN
Formation

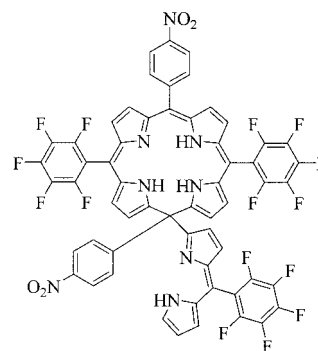


Keywords: Density functional calculations / Dehydro-
genation / Mass spectrometry / Methyl-
amine

3314 D. T. Gryko,* B. Koszarna

Isolation of Phlorin-Dipyrin Conjugates from the Acid-Catalyzed Condensation of Dipyrromethanes and Aldehydes

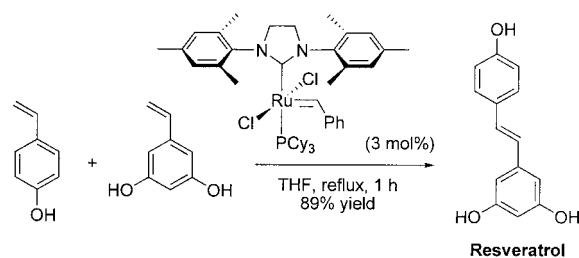
Keywords: Porphyrinoids / Oxidation / Nitrogen heterocycles / Aromatic substitution / Phlorins



3319 K. Ferré-Filmon, L. Delaude, A. Demonceau, A. F. Noels*

Stereoselective Synthesis of (*E*)-Hydroxystilbenoids by Ruthenium-Catalyzed Cross-Metathesis

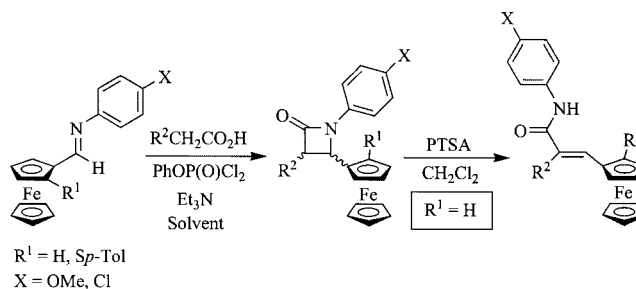
Keywords: Alkenes / Homogeneous catalysis / Natural products / Resveratrol / Ruthenium



3326 L. Bernardi, B. F. Bonini,* M. Comes-Franchini, G. Dessole, M. Fochi, A. Ricci

One-Pot Synthesis of Novel Enantiomerically Pure and Racemic 4-Ferrocenyl- β -lactams and Their Reactivity in Acidic Media

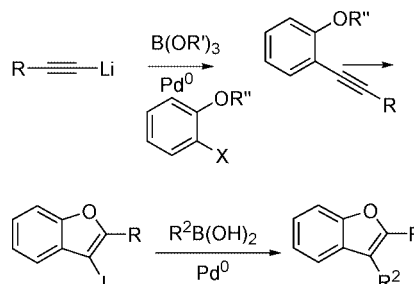
Keywords: Lactams / Ferrocene / Chirality / Carbocations



3334 F. Colobert,* A.-S. Castanet, O. Abillard

Palladium-Catalyzed Suzuki Coupling with Terminal Alkynes – Application to the Synthesis of 2,3-Disubstituted Benzo[*b*]furans

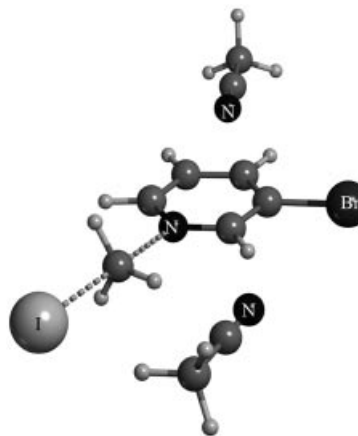
Keywords: Suzuki reaction / Alkynes / Iodocyclisation / Benzofuran / Palladium



3342 C. Canepa,* M. Mosso, A. Maranzana,
G. Tonachini

Entropy of Activation for Reactions in the Condensed Phase: A Theoretical Study of the S_N2 Alkylation of Amines

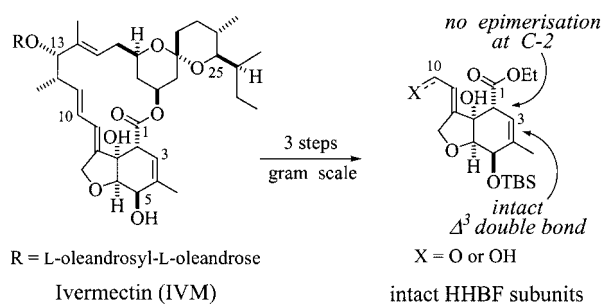
Keywords: Alkylation / Amines / Entropy of activation / Eyring equation / Solvation



3348 A. Rouge dos Santos, M. L. Garcia Ferreira,
C. R. Kaiser, J.-P. F  rezou*

Preparation of Intact Hexahydrobenzofuran Subunits of Ivermectin by Selective Ozonolysis of the $\Delta^{3,4}$ -Intermediate Secoester

Keywords: Antibiotics / Chemoselectivity / Natural products / Ozonolysis / Transesterification



3360 B. Bonnaud, P. Funes, N. Jubault,
B. Vacher*



Preparation of Conformationally Constrained α_2 Antagonists: The Bicyclo[3.1.0]hexane Approach

Keywords: Adrenergic antagonists / Cycloaddition / Carbenoids / Diazo compounds / Strained molecules

