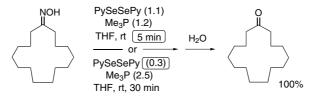


Tetrahedron Letters Vol. 45, No. 29, 2004

Contents

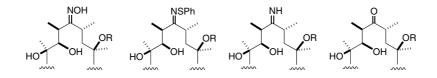
COMMUNICATIONS

Conversion of ketoximes to ketones with trimethylphosphine and 2,2'-dipyridyl diselenide Manuel Martín, Gabriel Martínez, Fèlix Urpí* and Jaume Vilarrasa* pp 5559-5561



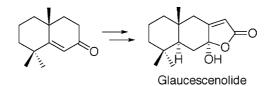
From (*E*)- and (*Z*)-ketoximes to *N*-sulfenylimines, ketimines or ketones at will. Application to erythromycin derivatives Jorge Esteban, Anna M. Costa,* Fèlix Urpí and Jaume Vilarrasa*

pp 5563-5567



The first synthesis and absolute configuration of glaucescenolide Hirosato Takikawa,* Keiko Ueda and Mitsuru Sasaki

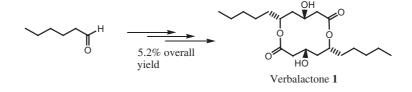
pp 5569-5571



Palladium-catalyzed direct coupling reaction of propargylic alcohols with arylboronic acids Masahiro Yoshida,* Takahiro Gotou and Masataka Ihara*

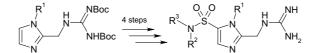
$$\begin{array}{c} \text{HO} \\ \text{R}^1 & \xrightarrow{} \\ \text{R}^2 \end{array} = R^3 \xrightarrow{} \begin{array}{c} \text{ArB(OH)}_2 \\ \text{cat. Pd(0)} \end{array} \xrightarrow{} \begin{array}{c} \text{R}^1 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^1 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^2 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{Ar} \\ \text{R}^3 \end{array} \xrightarrow{} \begin{array}{c} \text{R}^3 \end{array} \xrightarrow{$$

First total synthesis of verbalactone, a macrocyclic dilactone isolated from Verbascum undulatumpp 5577–5579Siddhartha Gogoi, Nabin C. Barua* and Biswajit Kalitapr 5577–5579



A novel synthetic approach towards 2-guanidinomethyl-4(5)-sulfamoylimidazoles

Steve Price,^{*} Richard Bull, Sue Cramp, Sophie Gardan, Marco van den Heuvel, David Neighbour, Susan E. Osbourn, Iwan J. P. de Esch and Christoph L. Buenemann



A library of 2-guanidinomethyl-4(5)-sulfamoylimidazoles was synthesised in a convergent manner by introducing a sulfonyl chloride group via a trianion electrophilic sulfinylation of suitably protected 2-guanidinomethyl imidazoles.

 γ -Selective allylic substitution reaction with Grignard reagents catalyzed by copper *N*-heterocyclic carbene complexes and its application to enantioselective synthesis Satoshi Tominaga, Yukinao Oi, Toshio Kato, Duk Keun An and Sentaro Okamoto*

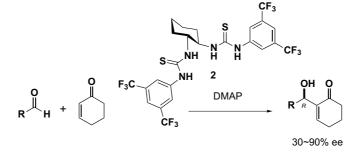
 $R \xrightarrow{X} X \xrightarrow{R'-MgX} R^{*} \xrightarrow{R'-N \bigcirc N-R^{*}}_{cat.} \xrightarrow{CuCl} R^{*} \xrightarrow{R'}_{R'} X \xrightarrow{R'-N \bigcirc N-R^{*}}_{R'} \xrightarrow{R'}_{R'} X \xrightarrow{R'-N \bigcirc N-R^{*}}_{R'} \xrightarrow{S_N 2' selective}$

pp 5585-5588

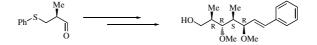
pp 5581-5583

pp 5573-5575

Development of bis-thiourea-type organocatalyst for asymmetric Baylis-Hillman reaction Yoshihiro Sohtome, Aya Tanatani, Yuichi Hashimoto and Kazuo Nagasawa*



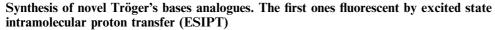
Stereoselective synthesis of the enantiomer of the key fragment of crocacin Sadagopan Raghavan* and S. Ramakrishna Reddy



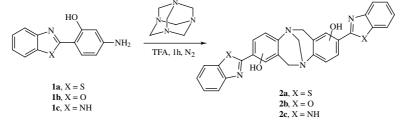
A novel, stereoselective synthesis of the enantiomer of the key fragment of crocacin is disclosed.

A convenient scalable one-pot conversion of esters and Weinreb amides to terminal alkynes Hamilton D. Dickson, Stephon C. Smith and Kevin W. Hinkle*

 $\begin{array}{c} 0 \\ R \\ \end{array} \\ 0 \\ \end{array} \\ \begin{array}{c} R^2 \\ 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^3 \\ R^3 \\ \hline \\ 2 \\ R^4 \\ \end{array} \\ \begin{array}{c} CH_2 CI_2, -78 C \\ \hline \\ 2 \\ 0 \\ \end{array} \\ \begin{array}{c} 0 \\ 0 \\ R^2 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} CH_2 CI_2, -78 C \\ \hline \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^2 \\ R^3 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^3 \\ R^3 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^3 \\ R^3 \\ R^3 \\ R^3 \\ \end{array} \\ \begin{array}{c} 0 \\ R^3 \\ R^3$



Carlos A. M. Abella, Fabiano S. Rodembusch and Valter Stefani*



0

MeOH, K₂CO₃, rt

Novel Tröger's bases derived from 2-(4'-amine-2'-hydroxyphenyl)benzazoles were synthesized. The bases are highly fluorescent with a large Stokes shift.

pp 5597-5599

pp 5601-5604

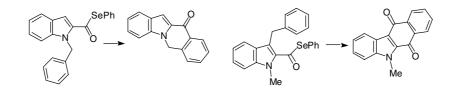
pp 5589-5592

5547

pp 5593-5595

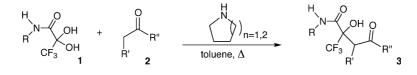
Intramolecular reactions of 2-indolylacyl radicals: cyclisation upon aromatic rings M.-Lluïsa Bennasar,* Tomàs Roca and Francesc Ferrando

pp 5605-5609



New access to fluorinated ketoglycolic acid derivatives from trifluoropyruvamides Thomas Colin, Laurent El Kaïm,* Laetitia Gaultier, Laurence Grimaud, Laurent Gatay and Valérie Michaut

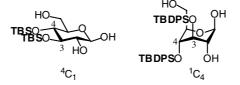
pp 5611-5613



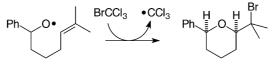
Ring conformations of D-glucose derivatives possessing two bulky silyl protecting groups at thepp3,4-positions; the first observation of a stable full-axial chair conformer without bridge structuresHidetoshi Yamada,* Koki Tanigakiuchi, Kohei Nagao, Kotaro Okajima and Tatsuya MukaeHidetoshi Yamada,* Koki Tanigakiuchi, Kohei Nagao, Kotaro Okajima and Tatsuya Mukae



pp 5619-5621



On the 6-exo-trig ring closure of substituted 5-hexen-1-oxyl radicals Jens Hartung^{*} and Thomas Gottwald



cis : *trans* = 65 : 35

Synthesis of 3,4-di-*O*-acylated glucose-derived furanoid sugar amino acids (Gaa): conformational analysis of a Leu-enkephalin analog containing di-*O*-myristoylated Gaa T. K. Chakraborty,^{*} B. Krishna Mohan, S. Uday Kumar, A. Prabhakar and B. Jagadeesh^{*}

Synthesis of 1-(2'-O-methyl-β-D-ribofuranosyl)-5-nitroindole and its phosphoramidite derivativepp 5629–5632Gilles Gaubert and Jesper Wengel*

Heck reactions of aryl bromides with alk-1-en-3-ol derivatives catalysed by a tetraphosphine/palladium complex

R³ = H, Me

ΗÒ

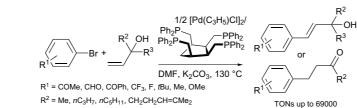
ÓMe

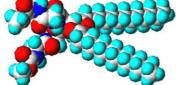
Florian Berthiol, Henri Doucet* and Maurice Santelli*

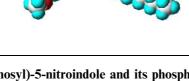
Synthesis of bis[(3,4-ethylenedioxy)thien-2-yl]-substituted benzenes Michael F. Pepitone, Kalya Eaiprasertsak, Stephen S. Hardaker and Richard V. Gregory*

 $\begin{array}{c} & & \\ & &$

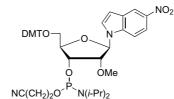
es catalysed by







NO₂



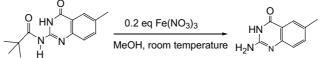
pp 5637–5641

pp 5633-5636

pp 5623-5627

2-Pivalamido-3H-pyrimidin-4-one derivatives: convenient pivalamide hydrolysis using Fe(NO_3)_3 in MeOH

V. Bavetsias,* E. A. Henderson and E. McDonald



1

2

Asymmetric synthesis of cytotoxic sponge metabolites *R*-strongylodiols A and B James E. D. Kirkham, Timothy D. L. Courtney, Victor Lee^{*} and Jack E. Baldwin^{*}

The synthesis of *R*-strongylodiols A 1 and B 2 by asymmetric reduction of ynones are described.

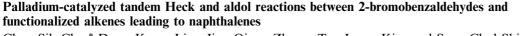
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Novel structure-defined chiral bis(oxazolinyl)thiophenes for Ru-catalyzed asymmetric cyclopropanation

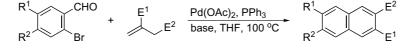
HO

Ming Z. Gao, Deyuan Kong, Abraham Clearfield and Ralph A. Zingaro*



CO₂Et

Chan Sik Cho,* Dong Kwon Lim, Jiao Qiang Zhang, Tae-Jeong Kim and Sang Chul Shim*



Ru-ligand 4a

,

INCO2Et

e>99%

pp 5649–5652

pp 5645-5647

 $(\mathbf{U}^{\mathsf{T}})$



pp 5643-5644

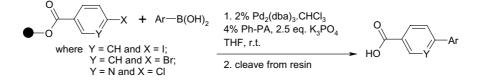
cis-Carbocuperation of acetylenic sulfoxides and corresponding applications in the regio- and stereoselective synthesis of polysubstituted vinyl sulfoxides Qing Xu and Xian Huang*

$$R^{1} \longrightarrow SO p-Tol \xrightarrow{R^{2}Cu} \left[\begin{array}{c} R^{1} & SO p-Tol \\ \hline -78^{\circ}C & R^{2} & Cu \end{array} \right] \xrightarrow{electrophile} -78^{\circ}C \sim r.t. \xrightarrow{R^{1}} R^{2} & E \\ R^{2} & Cu & R^{2} & E \end{array}$$

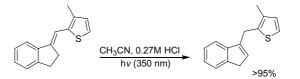
cis-Carbocuperation reaction of monoorganocopper reagent with acetylenic sulfoxides, followed by electrophilic reaction with a variety of electrophiles, provided a regio- and stereoselective method to prepare the versatile polysubstituted vinyl sulfoxides.

Solid-phase Suzuki cross-coupling reactions using a phosphine ligand based on a pp 5661-5663 phospha-adamantane framework

Stephan A. Ohnmacht, Tim Brenstrum, Konrad H. Bleicher, James McNulty and Alfredo Capretta*



New deconjugation reaction of (E)-1-indanylidene methylarene brought by photolysis with protic acid pp 5665-5667 Tong-Ing Ho* and Tai-Chen Li

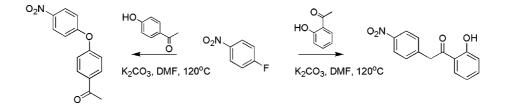


A new photodeconjugation reaction of (E) indanylidene methyl-arenes (1a-d) carried out by photolysis in the presence of protic acid are reported with 80% to >95% yields. The reaction mechanism is through the protonation of the less stable (Z) isomer to form stable indanyl cation followed by deprotonation.

A homologous enolate Truce-Smiles rearrangement

pp 5669-5671

Lorna H. Mitchell* and Nicole C. Barvian



pp 5657-5660

Synthesis of iodinated analogues of all trans retinoic acid (ATRA) for SPECT imaging Haibing Li and Christophe Morin*

H₃C CHa соон

ATRA: $R = R' = CH_3$

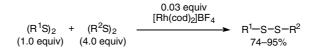
In these iodinated analogues, R or R' = I (iodine replaces a methyl group).

Phosphine-free cationic rhodium(I) complex-catalyzed disulfide exchange reaction: convenient synthesis of unsymmetrical disulfides Ken Tanaka* and Kaori Ajiki

CH₃

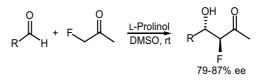
pp 5677-5679

pp 5673-5676

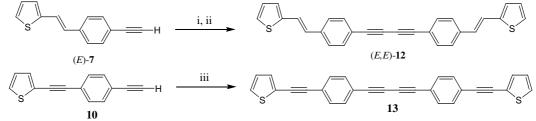


Amino alcohol catalyzed direct asymmetric aldol reactions: enantioselective synthesis of anti-α-fluoro-β-hydroxy ketones

Guofu Zhong,* Junhua Fan and Carlos F. Barbas, III*



Synthesis of conjugated 2-arylethynyl and 2-arylethenyl thiophene structures with optical properties J. Gonzalo Rodríguez,* Antonio Lafuente and Laura Rubio



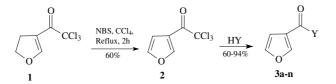
i. KOBr, H2O/THF ii. (E)-7, Et2NH, NH2OH.HCl, Cu2Cl2, MeOH iii. Cu2Cl2/O2, Py

pp 5681-5684

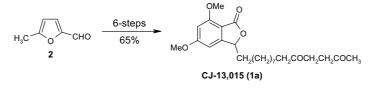
pp 5685-5688

Convenient synthesis of furan-3-carboxylic acid and derivatives

Nilo Zanatta,* Débora Faoro, Simone C. Silva, Helio G. Bonacorso and Marcos A. P. Martins



Synthesis of a new microbial secondary metabolite: anti-*Helicobacter pylori* CJ-13,015 Mukulesh Mondal and Narshinha P. Argade*



An efficient synthesis of β -hydroxyethylpyrazoles from propylene and styrene oxide using Cs₂CO₃ pp 5697–5701 Virginie Duprez and Andreas Heumann^{*}

$$R' \leftarrow N'' + O'' R \xrightarrow{Cs_2CO_3}_{R = Me, Ph} R' \leftarrow N' OH$$

Synthesis and structure of C_2 -symmetric *N*-heterocyclic carbene complexes of palladium Colin Marshall,^{*} Mark F. Ward and William T. A. Harrison^{*}

pp 5703-5706

The synthesis and structural elucidation of the first chiral 9- and 11-membered square planar C_2 -symmetric benzimidazol-2-ylidene palladium(II) complexes are reported.

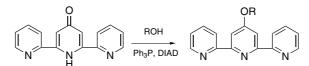
pp 5689-5691

pp 5693-5695

*(***i**)⁺

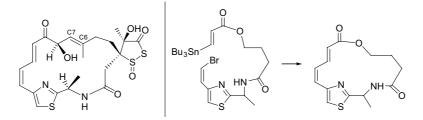
Synthesis of 4'-substituted 2,2':6',2"-terpyridines via a Mitsunobu reaction Jari Hovinen

pp 5707-5709



ROH = appropriately protected ω -substituted primary alcohol or a nucleoside

Synthesis and noncovalent DNA-binding properties of thiazole derivatives related to leinamycin pp 5711–5716 Leonid Breydo, Hong Zang and Kent S. Gates^{*}

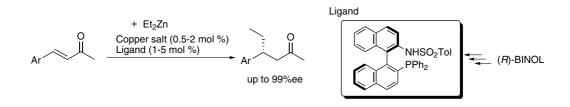


A series of compounds related to the macrocyclic portion of the DNA-damaging antitumor agent leinamycin were prepared as tools to characterize noncovalent DNA binding by this natural product.

A new chiral 2-sulfonylamino-2'-phosphino-1,1'-binaphthyl ligand for highly enantioselective copper-catalyzed conjugate addition of diethylzinc to benzylideneacetones

pp 5717-5722

Toshiaki Morimoto,* Nobuhiro Mochizuki and Masato Suzuki

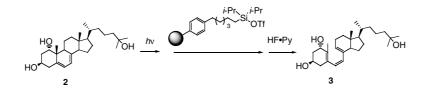


An efficient synthesis of polymer-supported silyl linkers using a di-Grignard reagent Takayuki Doi, Masahito Yoshida, Ichiro Hijikuro and Takashi Takahashi* pp 5723-5726

Sequential coupling of a di-Grignard reagent to benzyl chloride resin and dialkylchlorosilane was achieved.

Selective capture of 1α ,25-(OH)₂-previtamin D₃ utilizing polymer-supported trialkylsilyl triflate in the synthesis of 1α ,25-(OH)₂-vitamin D₃

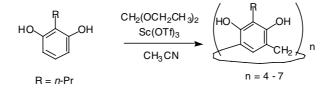
Takayuki Doi, Masahito Yoshida, Ichiro Hijikuro and Takashi Takahashi*



Previtamin D_3 was selectively captured and released from a mixture of photo-isomerization products of provitamin D_3 utilizing polymer-supported diisopropylalkyl triflate.

Sc(OTf)₃-catalyzed cyclocondensation of 2-propylresorcinol with diethoxymethane.pp 5731–5734Formation and fragmentation of resorcin[n]arenes

Osamu Morikawa, Masashi Yanagimoto, Hijiri Sakakibara, Kazuhiro Kobayashi and Hisatoshi Konishi*



Rhodium-catalyzed Reformatsky-type reaction of ethyl bromodifluoroacetate

Kazuyuki Sato, Atsushi Tarui, Tetsuya Kita, Yoshitaka Ishida, Hanae Tamura, Masaaki Omote, Akira Ando and Itsumaro Kumadaki*

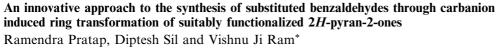
A flexible approach for the synthesis of selectively labelled L-arginine Deborah J. Hamilton and Andrew Sutherland*

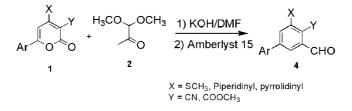
$$HO_{2}C \xrightarrow{CO_{2}H} \xrightarrow{H_{2}N} H_{2}N \xrightarrow{NH} \overset{NH}{\xrightarrow{13}} \overset{CO_{2}H}{\xrightarrow{NH_{2}}}$$

pp 5735-5737

5555

pp 5739-5741





Pd–Cu catalyzed heterocyclization during Sonogashira coupling: synthesis of 3-benzylthiazolo[3,2-*a*]benzimidazole

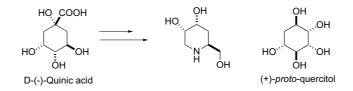
Majid M. Heravi,* Ali Keivanloo, Mohammad Rahimizadeh, Mehdi Bakavoli and Mitra Ghassemzadeh



The reaction of 2-mercaptopropargyl benzimidazole with various iodobenzenes catalyzed by Pd–Cu leads to the formation of 3-benzylthiazolo[3,2-*a*]benzimidazoles.

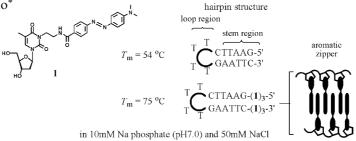
A facile synthesis of a new trihydroxy piperidine derivative and (+)-proto-quercitol from D-(-)-quinic acid

Tzenge-Lien Shih,* Wei-Shen Kuo and Ya-Ling Lin



DNA-based aromatic zipper fastened by an aromatic stacking interaction

Mio Kubota and Akira Ono*



A novel nucleic acid-based structural motif, the aromatic zipper, which fastens via the stacking interactions of aromatic residues that are attached to DNA strands, was created. The aromatic zipper can be used to stabilize structural motifs in nucleic acids and their analogues, such as hairpin structures, by fastening their ends.

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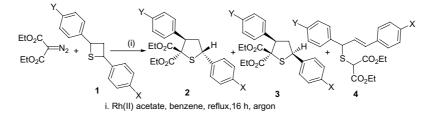
pp 5755–5758

pp 5751-5754

(i)+

The Rh(II) catalyzed reaction of diethyl diazomalonate with thietanes: a facile synthesis of tetrahydrothiophene derivatives via sulfonium ylides

Vijay Nair,* Smitha M. Nair, Sindhu Mathai, Jürgen Liebscher, Burkhard Ziemer and K. Narsimulu



A facile Rh(II) catalyzed reaction of diethyl diazomalonate with thietanes leading to highly substituted tetrahydrothiophenes along with allyl thioethers is described.

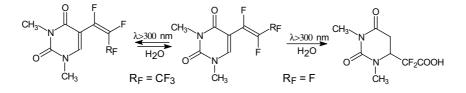
Chain-like assembly of threonine-based cyclophanes through π - π interaction and C-H···O hydrogen bond

Wei Guo, Jiaqi He, Zucheng Li and Jin-Pei Cheng*

In this paper, we described the conversion of tube to chain assembly of threonine-based cyclophanes by variation of the steric demand of molecules. The interesting properties of these cyclophanes in hosting hydroxyl-containing guest molecules through three-centered hydrogen bonding and the C–H \cdots O hydrogen bonds were also reported.

Photochemical behaviour of 5-perfluoroalkenyl uracils

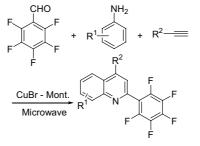
Henryk Koroniak,* Piotr Karwatka and Tomasz Cytlak



Phototransformations of derivatives of 5-fluoroalkenyl uracils depend strongly on fluorinated substituents.

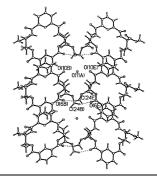
Microwave promoted solvent-free one-pot three-component reaction to 2-pentafluorophenylquinoline derivatives

Jian-ming Zhang,* Wen Yang, Li-ping Song, Xian Cai and Shi-zheng Zhu*



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*Corresponding author ()⁺ Supplementary data available via ScienceDirect



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