

Tetrahedron Letters Vol. 48, No. 3, 2007

Contents



A palladium-catalyzed tandem Stille-oxa-electrocyclization reaction has been developed for the convergent preparation of highly substituted polycyclic pyran systems. The strategy presented in this letter is an alternative to the known methods for constructing similar pyran systems. The substrate scope of this diastereoselective transformation is explored.



Diastereoselective Michael additions to α,β-unsaturated α-sulfinyl phosphonates in the thiolane seriespp 351–355Piotr Łyżwa, Aleksandra Jankowiak, Małgorzata Kwiatkowska, Marian Mikołajczyk,
Piotr Kiełbasiński,* Alexander Betz, Paul-Alain Jaffres, Annie-Claude Gaumont and Mihaela Gulea*pp 351–355



NuH = PhSH, 4-TolSH, t-BuSH, n-HexSH, PhNH₂, CH₂(CO₂Et)₂

1,3,8,10-Tetrahydro-2,9-diazadibenzo[*cd,lm*]**perylenes: synthesis of reduced perylene bisimide analogues** pp 357–359 Masaki Takahashi,* Yousuke Suzuki, Yasunori Ichihashi, Mitsuji Yamashita and Hideki Kawai

R-N



Synthesis of cleavable peptides with authentic C-termini: an application for fully automated SPOT synthesis

Bernhard Ay, Rudolf Volkmer and Prisca Boisguerin*



Direct coupling of CDI activated amino acids on cellulose membranes allows the synthesis of cleavable peptides with free C-termini in yields of at least 50 μ g/cm² which are enough for any biological assays.

Synthesis of hindered tertiary amines by a mild reductive amination procedure Dirk Menche,* Stefanie Böhm, Jun Li, Sven Rudolph and Wiebke Zander

 $\begin{array}{c} \begin{array}{c} H \\ R^{1} \\ NH_{2} \end{array} \\ O \\ R^{3} \\ R^{4} \end{array} \\ \begin{array}{c} R^{2} \\ R^{4} \end{array} \\ \begin{array}{c} H \\ H \\ R^{3} \\ R^{4} \end{array} \\ \begin{array}{c} H \\ H_{2} \\ N \\ H_{2} \\ NH_{2} \\ NH_{2} \\ NH_{2} \\ S \\ (0.1 \text{ eq}) \end{array} \\ \begin{array}{c} H \\ C \\ R^{3} \\ R^{4} \\ R^{3} \\ R^{4} \\ R^{4}$

An efficient metal-free procedure for the synthesis of tertiary amines by the reductive amination of carbonyl compounds is reported, which allows a convergent and mild access to amines of the general formulas $NR(R')_2$ and NRR'R''.

 $(\mathbf{i})^{\dagger}$

pp 365-369



pp 361-364

A highly selective Ir-catalyzed borylation of 2-substituted indoles: a new access to 2,7- and 2,4,7-substituted indoles

Wei Fun Lo, Hanns Martin Kaiser, Anke Spannenberg, Matthias Beller and Man Kin Tse*



The iridium-catalyzed borylation of 2-substituted indoles has been investigated. Direct CH-activation is observed highly selective at the 7-position of the indole. The scope and limitation of the mono- and di-borylation reaction are presented.

Highly flexible and efficient synthesis of the GABA_B enhancer 4-(2-hexylsulfanyl-6-methyl-pyrimidin-4ylmethyl)-morpholine pp 377–380

Julien Verron, Paricher Malherbe, Eric Prinssen, Andrew W. Thomas, Nadine Nock and Raffaello Masciadri*



The key step involved a cyclocondensation of a thiuronium salt with an acetylenic ketone harbouring an acetal protected aldehyde function.

Stereoselective formal synthesis of the potent proteasome inhibitor: salinosporamide A

Virginie Caubert, Julien Massé, Pascal Retailleau and Nicole Langlois*



The synthesis and application of novel C_2 -symmetric chiral N, N, O, O bisoxazoline ligands with a ferrocene backbone

pp 385-388

pp 381-384

Genghong Hua, Delong Liu, Fang Xie and Wanbin Zhang*



Novel C_2 -symmetric bisoxazoline ligands 5 with a ferrocene backbone and a hydroxyl group at the substituent of the oxazoline ring were designed and prepared. With these ligands, up to 94% ee was obtained for the alkylation of arylaldehyde with diethylzinc.

pp 371–375

A new method for the preparation of 2-chlorotrityl resin and its application to solid-phase peptide synthesis

Tae-Kyung Lee, Sun-Jong Ryoo and Yoon-Sik Lee*



2-Chlorotritylchloride (CTC) resin was prepared efficiently from 1% DVB-crosslinked polystyrene resin and 1-chloro-2-(dichloro(phenyl)methyl)benzene. This 2-CTC resin showed excellent properties as a support for solid-phase synthesis. Four peptide fragments were obtained in high purity using the resin.

Azobenzene coupled chromogenic receptors for the selective detection of copper(II) and its application pp 393–396 as a chemosensor kit

Soo Jin Lee, Shim Sung Lee, Il Yun Jeong, Jin Yong Lee and Jong Hwa Jung*



Synthesis of N-1 and ribose modified inosine analogues on solid support

Giorgia Oliviero, Jussara Amato, Nicola Borbone, Stefano D'Errico, Gennaro Piccialli* and Luciano Mayol



Isolation and characterization of 2-alkylaminobenzo[*b*]furans. Evidence for competing O-arylation in pp 401–404 Cu-catalyzed intramolecular amidation

Gaofeng Feng, Jinlong Wu and Wei-Min Dai*



pp 389-391

pp 397–400

Solid-phase synthesis of neuroactive spider–wasp hybrid toxin analogues using a backbone amide linker pp 405–408 Christian A. Olsen,* Matthias Witt, Henrik Franzyk and Jerzy W. Jaroszewski



The efficient solid-phase synthesis (SPS) of novel hybrid toxins using a BAL resin is described. This strategy enables bidirectional construction of toxin molecules and has a potential in SPS of chemically diverse libraries of toxin analogues for structure–activity relationship (SAR) studies.

Oxidation of 4-arylphenol trimethylsilyl ethers to *p*-arylquinols using hypervalent iodine(III) reagents pp 409–412 François-Xavier Felpin



Studies toward the total synthesis of irumamycin: stereoselective preparation of the C(15)-C(27) segment via two-directional chain synthesis

Tomoyasu Hirose, Toshiaki Sunazuka, Daisuke Yamamoto, Mutsumi Mouri, Yoshiaki Hagiwara, Takanori Matsumaru, Eisuke Kaji and Satoshi Ōmura*



Evidence for the formation of isothiocyanate during sulfurisation of phosphines and phosphites using pp 417–419 xanthane hydride

Jiří Hanusek, Mark A. Russell, Andrew P. Laws and Michael I. Page*

R: alkyloxy, aryl

pp 413-416







Thermolysis of S,S-diphenyl-N-(2-nitrophenylsulfenyl)- and S,S-diphenyl-N-(2,4-dinitrophenylsulfenyl)-sulfodiimides in the presence of olefins proceeded at 50–80 °C to give the corresponding deiminated S,S-diphenyl-N-tosylsulfimide and N-sulfenylaziridines in very good yields.

Microwave-mediated solvent free Rap–Stoermer reaction for efficient synthesis of benzofurans Maddali L. N. Rao,^{*} Dheeraj K. Awasthi and Debasis Banerjee pp 431-434

 $R^{1} \rightarrow CHO + R^{2}OH + R^{1} \rightarrow R^{1} \rightarrow R^{2}OH + R^{2$

A novel one-pot synthesis of N,6-disubstituted 1,3,5-triazine-4,6-diamines from isothiocyanates and amidines

pp 435-437

Chunjian Liu,* James Lin and Katerina Leftheris



pp 439-441 Solid-phase synthesis of 2-imidazolidinethiones via Mitsunobu reaction of N-(2-hydroxyethyl)thioureas Hyun Suk Jeon, Je Hwa Yoo, Jae Nyoung Kim and Taek Hyeon Kim*



An efficient one-step regiospecific synthesis of novel isoxazolines and isoxazoles of N-substituted saccharin derivatives through solvent-free microwave-assisted [3+2] cycloaddition Mahmoud Mabrour, Khalid Bougrin,* Rachid Benhida, André Loupy and Mohamed Soufiaoui

pp 443-447

pp 449-452



Withaphysanolide A, a novel C-27 norwithanolide skeleton, and other cytotoxic compounds from Physalis divericata

Lei Ma, Mumtaz Ali, Mohammad Arfan, Li-Guang Lou* and Li-Hong Hu*



Sesquiterpenoid with new skeleton from Chloranthus henryi Bin Wu, Shan He and Yuanjiang Pan*



Dayejjiol (1), a novel sesquiterpene with a new carbon skeleton, and a novel labdane-type diterpenoid together with three known compounds were isolated.





Chemistry of xanthorrhizol: synthesis of several bisabolane sesquiterpenoids from xanthorrhizol Hasnah M. Sirat,* Ngai Mun Hong and Muhd Haffiz Jauri

pp 457-460



Synthesis of 3,3-disubstituted oxindoles





Regiospecific solvent-free transfer hydrogenation of α , β -unsaturated carbonyl compounds catalyzed by a pp 465–467 cationic ruthenium(II) compound

Sipra Naskar and Manish Bhattacharjee*



 $[Ru(PPh_3)_2(CH_3CN)_3Cl][BPh_4]$ catalyzes regiospecific transfer hydrogenation of the double bond in α,β -unsaturated carbonyl compounds.

A base-stable dithiomethyl linker for solid-phase synthesis of oligonucleotides Andrey Semenyuk and Marek Kwiatkowski^{*}

A novel linkage, useful for the synthesis of oligonucleotides is described. The linking function is compatible with all conditions used for oligonucleotide synthesis, orthogonal to all other protecting groups, but regenerates 3'-OH rapidly upon mild reduction under aqueous conditions. This method is employed in the removal of depurinated fragments during the synthesis of oligonucleotides.

pp 461-463

pp 469-472

Guoshu Chen, Albert S. C. Chan and Fuk Yee Kwong*



Novel fullerene receptors based on calixarene–porphyrin conjugates Martin Káš, Kamil Lang, Ivan Stibor and Pavel Lhoták^{*}

Novel calix[4]arene–porphyrin conjugates, possessing a pronounced selectivity towards fullerene C_{70} , have been prepared using several different synthetic approaches.

Efficient coupling of low boiling point alkynes and 5-iodonucleosides Stephanos Ghilagaber, William N. Hunter and Rodolfo Marquez*

HO

HÔ



80-98%

Mike Frohn,* Roland W. Bürli, Bobby Riahi and Randall W. Hungate

ÓН



Br

HO

ΗÔ

ЮН

NHR₂

R



pp 487-489

335

pp 477-481

Chemiluminescence in anisotropic microenvironment: splitting of chemiluminescence efficiency for charge-transfer-induced decomposition of optically active bicyclic dioxetanes bearing a 2-hydroxy-1,1'-binaphthyl-4-yl moiety under chiral recognition

Masakatsu Matsumoto,* Hidetoshi Maeda, Naoyuki Hoshiya, Nobuko Watanabe and Hisako K. Ijuin



On the mechanism of stereoselection in direct Mannich reaction catalyzed by BINOL-derived pp 497–500 phosphoric acids

Ilya D. Gridnev,* Mitsuhiro Kouchi, Keiichi Sorimachi and Masahiro Terada*



OTHER CONTENTS

Corrigendum

*Corresponding author ()⁺ Supplementary data available via ScienceDirect





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p 501

pp 491-496