

Tetrahedron Letters Vol. 47, No. 11, 2006

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COMMUNICATIONS

Facile synthesis of Fmoc-N-methylated α - and β -amino acids

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Thavendran Govender and Per I. Arvidsson*

A new and highly efficient water-soluble copper complex for the oxidation of secondary 1-heteroaryl alcohols by tert-butyl hydroperoxide

pp 1695-1698

Josée Boudreau, Mike Doucette and Abdelaziz Nait Ajjou*

The water-soluble copper complex generated in situ from CuCl₂ and 2,2'-biquinoline-4,4'-dicarboxylic acid dipotassium salt (BQC), has been revealed as a highly efficient and selective catalyst for the oxidation of secondary 1-heteroaryl alcohols to the corresponding heteroaromatic ketones with aqueous *tert*-butyl hydroperoxide, under mild conditions. The catalytic system is compatible with different heterocycles such as pyridines, pyrroles, indoles, thiophens, furans, thiazoles, and imidazoles.

The Knoevenagel reaction: analysis and recycling of the ionic liquid medium

pp 1699-1703

David C. Forbes,* Amanda M. Law and Doug W. Morrison

Rhodium-catalyzed direct aldol condensation of ketones: a facile synthesis of fused aromatic compounds pp 1705–1708 Hiroki Terai, Hikaru Takaya* and Takeshi Naota*

Efficient generation and trapping of acylbenzynes from hypervalent iodine compounds

Tsugio Kitamura,* Yoshiki Aoki, Shingo Isshiki, Kanako Wasai and Yuzo Fujiwara

pp 1709–1712

$$\begin{array}{c|c} \text{SiMe}_3 & \text{Bu}_4\text{NF} \\ \hline \\ \text{I(Ph)OTf} & \text{CH}_2\text{Cl}_2 \\ \text{r.t.} & \end{array} \qquad \begin{array}{c|c} \text{R} & \text{O} \\ \hline \\ \text{O} & \text{O} \\ \end{array}$$

 $R = Ph, 4-MeC_6H_4$, ^tBu, Me

An efficient electrochemical method for a unique synthesis of new derivatives of 7H-thiazolo[3,2-b]-1,2,4-triazin-7-one

pp 1713–1716

L. Fotouhi,* D. Nematollahi,* M. M. Heravi and E. Tammari

Efficient preparation of chiral diamines via Red-Al reduction of N-Boc-protected amino acid-derived secondary amides

pp 1717-1720

Eric A. Voight,* Matthew S. Bodenstein, Norihiro Ikemoto and Michael H. Kress

Conditions have been developed for the selective reduction of *N*-Boc-protected amino acid-derived secondary amides, avoiding the formation of overreduction and cyclic urea byproducts. The method is showcased by the efficient formal synthesis of NK-1 antagonist LY303870.

New reactive fluorophores in the 1,2,3-triazine series

pp 1721-1724

Richard N. Butler,* Aoife M. Fahy, Anthony Fox, John C. Stephens, P. McArdle, D. Cunningham and Alan G. Ryder

¹H and ¹³C NMR spectroscopic structural elucidation of new decarboxylated betacyanins

pp 1725-1728

Sławomir Wybraniec,* Barbara Nowak-Wydra and Yosef Mizrahi

The first ¹H and ¹³C NMR results for 2-decarboxy-hylocerenin and other 2- and 17-monodecarboxy- as well as 2,17-bidecarboxy-betacyanins are presented.

Regioselective synthesis of 4-(2-alkyl-5-methyl-2*H*-pyrazol-3-yl)-piperidines

pp 1729-1731

Olivier Dirat,* Alex Clipson, Jason M. Elliott, Sasha Garrett, A. Brian Jones, Michael Reader and **Duncan Shaw**

The regioselective, scaleable synthesis of 1, 2 and 3 is discussed.

Epoxide opening with amino acids: improved synthesis of hydroxyethylamine dipeptide isosteres

pp 1733-1735

Andrej Babič, Matej Sova, Stanislav Gobec* and Slavko Pečar*

$$R^{1}$$
 + $H_{2}N$ R^{2} $Ca(OTf)_{2}$ R^{1} OH OH OH

The amino acid opening of epoxides catalyzed by calcium trifluoromethanesulfonate with short reaction times is described. The method can be used in a straightforward route for the preparation of hydroxyethylamine dipeptide isosteres.

Stereoselective synthesis of a thiazolane amide using molecular recognition in the triazolyl-activated ester intermediate

pp 1737-1740

Peter Styring* and Sannie S. F. Chong

Is diazomethane addition to chiral α -keto esters subject to substrate diastereocontrol?

pp 1741-1744

Filip Petronijevic, Amy C. Hart and Leo A. Paquette*

Cyanamide in isocyanide-based MCRs

pp 1745-1747

Alexander Dömling,* Eberhardt Herdtweck and Stefan Heck

Cyanamide, isocyanides, and enamines in methanol react smoothly to give the hitherto unknown scaffold of α -amino-N-cyanoamidines.



Diastereoselective synthesis of β-aminocyclopentene sulfonic acid via hetero Diels–Alder reaction Stefania Fusi, Giovanni Papandrea and Fabio Ponticelli*

pp 1749-1752

Reductive opening of glycal derived highly functionalized 2,3-epoxy-1-iodides with zinc dust: an efficient method for the synthesis of acyclic long chain polyhydroxylated terminal alkenic alcohols

pp 1753-1756

L. Vijaya Raghava Reddy, Ram Sagar and Arun K. Shaw*

$$R^{4}O$$

$$\begin{array}{c}
R^{1} R^{2} \\
\hline
OR^{3}
\end{array}$$

$$\begin{array}{c}
Zn \text{ dust (10-15 equiv.)} \\
\hline
EtoH, \text{ reflux}
\end{array}$$

$$R^{4}O$$

$$\begin{array}{c}
R^{1} R^{2} \\
\hline
OR^{3} OH$$



Oxidations with IBX: benzyl halides to carbonyl compounds, and the one-pot conversion of olefins to 1,2-diketones

pp 1757-1761

Jarugu Narasimha Moorthy,* Nidhi Singhal and Kalyan Senapati

New efficient organocatalytic oxidation of benzylic compounds by molecular oxygen under mild conditions

pp 1763-1766

Xinli Tong, Jie Xu,* Hong Miao and Jin Gao

Efficient aerobic oxidation of benzylic compounds has been achieved under mild conditions without the need for metal catalyst.



Two simple protocols for the preparation of diallylaminoethyl-substituted nucleic bases: a comparison pp 1767–1770 Rania S. Shatila and Kamal H. Bouhadir*

The syntheses of pyrimidine and purine nucleic bases substituted with 2-diallylaminoethyl groups are reported following two different synthetic protocols.

Facile conversion of alcohols into their bromides and iodides by N-bromo and N-iodosaccharins/ triphenylphosphine under neutral conditions

Habib Firouzabadi,* Nasser Iranpoor* and Farzaneh Ebrahimzadeh

ROH
$$\frac{\text{NXSac/PPh}_3}{\text{CH}_2\text{Cl}_2/\text{ r.t.}} \text{RX}$$

$$X = \text{Br,I}$$

N-Bromo and N-iodosaccharins in the presence of triphenylphosphine convert alcohols into the corresponding bromides and iodides in good to excellent yields at room temperature under neutral conditions.

Expedious and practical synthesis of the bioactive alkaloids rutaecarpine, euxylophoricine A, deoxyvasicinone and their heterocyclic homologues

pp 1777-1781

Abdulkareem Hamid, Abdelhakim Elomri and Adam Daïch*

Fused pyrimido-β-carbolines including rutaecarpine, euxylophoricine A, and deoxyvasicinone were synthesized efficiently from cyclic imino-thioethers and aromatic amino acids or the corresponding amino esters in a one-pot procedure.

Synthesis of quinaldines and lepidines by a Doebner-Miller reaction under thermal and microwave irradiation conditions using phosphotungstic acid

pp 1783-1785

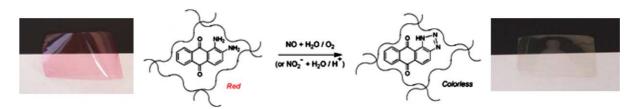
Ganesabaskaran Sivaprasad, Rengasamy Rajesh and Paramasivan T. Perumal*

1a-s
A simple and efficient method has been developed for the synthesis of quinaldines and lepidines by a one-pot reaction of anilines with crotonaldehyde or methyl vinyl ketone using phosphotungstic acid, a Keggins-type heteropoly acid, under both thermal and microwave irradiation conditions.

Cross-linked poly(2-hydroxyethylmethacrylate) films doped with 1,2-diaminoanthraquinone (DAQ) as efficient materials for the colorimetric sensing of nitric oxide and nitrite anion

pp 1787-1791

Miriam Bru, M. Isabel Burguete, Francisco Galindo,* Santiago V. Luis,* María J. Marín and Laura Vigara



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Catalytic etherification of N-protected tris(hydroxymethyl)aminomethane for the synthesis of ligands with C_3 symmetry

pp 1793-1796

Nicolas Weibel, Loïc Charbonnière* and Raymond Ziessel*

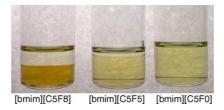
GaCl₃ Promoted one-step α,α-diethynylation and α,α-diethenylation reactions of silyl enol ethers Ryo Amemiya, Yutaka Miyake and Masahiko Yamaguchi*

pp 1797-1800

Preparation of novel hydrophobic fluorine-substituted-alkyl sulfate ionic liquids and application as an efficient reaction medium for lipase-catalyzed reaction

pp 1801-1804

Yasuhiro Tsukada, Kazuhisa Iwamoto, Hiroyuki Furutani, Yuichi Matsushita, Yoshikazu Abe, Kei Matsumoto, Keishi Monda, Shuichi Hayase, Motoi Kawatsura and Toshiyuki Itoh*



Photochemical reductive desulfonylation of β -ketosulfones by ascorbic acid Qiang Liu, Bing Han, Zhengang Liu, Li Yang, Zhong-Li Liu* and Wei Yu*

pp 1805-1807

Ph
$$R^2$$
 H_2A , CH_3CN-H_2O (5:1) R^2 R^2 R^2 R^2 R^2

 H_2A = ascorbic acid

Partial transfer of enantioselective chiralities from α -methylated amino acids, known to be of meteoritic origin, into normal amino acids

pp 1809-1812

Ronald Breslow* and Mindy S. Levine

Simple and efficient cleavage of the N-(1-phenylethyl) unit of carboxamides with methanesulfonic acid pp 1813–1815 Seunguk Paik* and Jun Young Lee

Synthesis of isocorrole and the higher homologues

pp 1817-1820

Jun-ichiro Setsune,* Aki Tsukajima and Junko Watanabe

Practical aziridinations II: electronic modifications to poly(pyrazolyl)borate-copper catalysts

pp 1821-1823

Scott T. Handy,* Anatole Ivanow and Mark Czopp

Activation of carboxylic acids by Burgess reagent: an efficient route to acyl ureas and amides Derek Wodka, Michael Robbins, Ping Lan, Rogelio L. Martinez, John Athanasopoulos and Gergely M. Makara*

pp 1825-1828



pp 1829-1831

Enantioselective allylation of aldehydes promoted by chiral sulfur reagents

Rosanne P. A. Melo, Juliana A. Vale, Gilson Zeni and Paulo H. Menezes*

$$R^{1} = \text{aryl, alkyl}$$

O H

ZnBr

 R^{2}
 p -Tol

 $(0.5 \text{ mol}\%)$
 R^{1}
 $65-87\%$
 $0-42\% \text{ ee}$

Base-catalyzed domino reaction toward 3-benzylidenecyclohexenes: DBU-promoted sequential Michael, aldol, dehydration, and dealkoxycarbonylation

 $R^2 = OMen$, Me, NH₂, 2-PyCH₂, 2-PyNH

pp 1833-1837

Mi Jung Lee, Da Yeon Park, Ka Young Lee and Jae Nyoung Kim*

$\alpha\text{-}Ethynylation\ reaction\ of\ ketones\ using\ catalytic\ amounts\ of\ trialkylgallium\ base$

pp 1839-1843

Yoshio Nishimura, Ryo Amemiya and Masahiko Yamaguchi*

An efficient synthesis of β -amino esters via $Zn(OTf)_2$ -catalyzed Mannich-type reaction

pp 1845-1847

Wang-Ge Shou, Yun-Yun Yang and Yan-Guang Wang*

A $Zn(OTf)_2$ -catalyzed three-component Mannich-type reaction of amine with aldehyde and diethyl malonic ester afforded the corresponding β -amino esters in good yields.

Synthesis of naphtho[b]cyclobutenes from 1,2-bis(3-propynol)benzenes

pp 1849-1852

Shinji Kitagaki,* Yuki Okumura and Chisato Mukai*

[3+2]- Versus [4+2]-cycloaddition reactions of 3-methylsulfanyl-2-arylazo-3-(pyrrolidin-1-yl)-acrylonitriles with N-substituted maleimides involving pyrrolidine-derived azomethine ylides

pp 1853-1855

Tatyana G. Deryabina, Natalia P. Belskaia,* Michail I. Kodess, Wim Dehaen, Suzanne Toppet and Vasiliy A. Bakulev

Matrix isolation and DFT calculations of the TMM radical cation generated via the single electron oxidation of a methylenecyclopropane

pp 1857-1860

Hiroshi Ikeda,* Hayato Namai, Nobuyuki Kato and Teruyo Ikeda

Ph Ph
$$\frac{\gamma - \text{ray} / 77 \text{ K}}{n - \text{BuCl}}$$

TMM radical cation $\lambda_{\text{max}} = 432 \text{ nm}, \ \theta = 44.0^{\circ} \text{ (DFT)}$

(i)

One-step reductive amidation of nitro arenes: application in the synthesis of Acetaminophen[™] Apurba Bhattacharya,* Vikram C. Purohit, Victor Suarez, Ritesh Tichkule, Gaurang Parmer

pp 1861-1864

$$\begin{array}{c} \text{KSCOCH}_3, \, \text{DMF}, \, 130^{\circ}\text{C or} \\ \text{KSCOCH}_3, \, \text{Triton-X 405 (cat), no solvent, } \, 130^{\circ}\text{C} \\ \text{Ar-NO}_2 & & & \text{Ar-NHCOCH}_3 \\ \textbf{1} & & & \textbf{2} \end{array}$$

A novel thioacetate mediated one-step reductive acetamidation of aryl nitro compounds was developed and applied to an efficient synthesis of acetaminophen.

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and Frank Rinaldi

** Supplementary data available via ScienceDirect



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