

Graphical abstracts

Dioxygenase enzymes: catalytic mechanisms and chemical models

Timothy D. H. Bugg

Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK

The chemistry of dioxygenase enzyme-catalysed reactions, and biomimetic chemistry for these processes, is reviewed. The report contains 172 references.

Tetrahedron 59 (2003) 7075

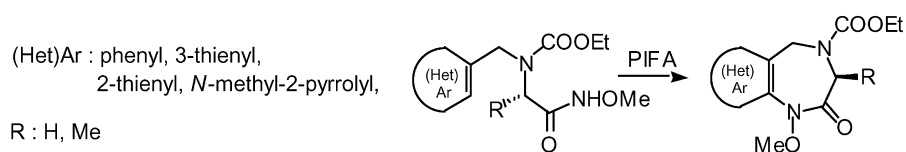


An alternative approach towards novel heterocycle-fused 1,4-diazepin-2-ones by an aromatic amidation protocol

Arkaitz Correa, M. Teresa Herrero, Imanol Tellitu,* Esther Domínguez,* Isabel Moreno and Raúl SanMartin

Departamento de Química Orgánica II, Facultad de Ciencias, Universidad del País Vasco-Euskal Herriko Unibertsitatea (UPV/EHU) Apdo. 644-48080 Bilbao, Spain.

Tetrahedron 59 (2003) 7103

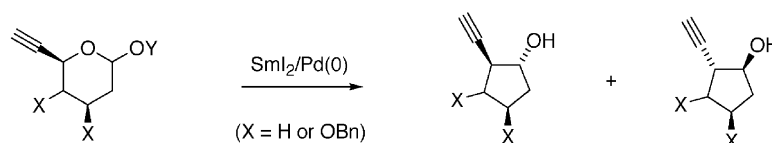


Substituent effects on the SmI₂/Pd(0)-promoted carbohydrate ring-contraction of 5-alkynylpyranosides

José M. Aurecochea* Jesús H. Gil and Beatriz López

Departamento de Química Orgánica II, Facultad de Ciencias, Universidad del País Vasco, Apartado 644, 48080 Bilbao, Spain

Tetrahedron 59 (2003) 7111

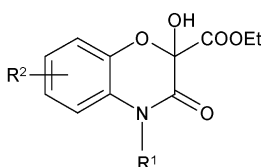


Synthesis of alkyl 4-alkyl-2-hydroxy-3-oxo-3,4-dihydro-2H-1,4-benzoxazine-2-carboxylates as peptidomimetic building blocks

Petra Štefanič, Katja Turnšek and Danijel Kikelj*

Faculty of Pharmacy, University of Ljubljana, Aškerčeva 7, 1000 Ljubljana, Slovenia

Tetrahedron 59 (2003) 7123



Isolation, characterisation and synthesis of an insecticidal tetramethyltetrahydrochromenedione-spiro-bicyclo[3.1.1]cycloheptane from two species of Myrtaceae

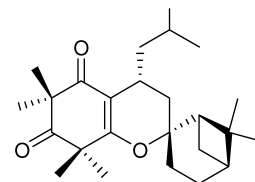
Tetrahedron 59 (2003) 7131

Bhupinder P. S. Khambay,^{a,*} David G. Beddie,^a Antony M. Hooper^a and Monique S. J. Simmonds^b

^aBiological Chemistry Division, Rothamsted Research, West Common, Harpenden AL5 2JQ, Hertfordshire, UK

^bRoyal Botanic Gardens, Kew, Richmond TW9 3AB, Surrey, England, UK

Two Australasian species of Myrtaceae contain a novel compound (**1**), which has insecticidal activity. Its structure, including absolute stereochemistry, was confirmed by NMR analysis and syntheses.



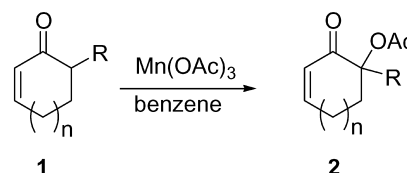
Manganese(III) acetate based oxidation of substituted α' -position on cyclic α,β -unsaturated ketones

Tetrahedron 59 (2003) 7135

Cihangir Tanyeli* and Çigdem Iyigün

Department of Chemistry, Middle East Technical University, 06531 Ankara, Turkey

Mn(OAc)₃ based regioselective oxidation of α' -substituted α,β -unsaturated cyclic ketones in benzene afforded the corresponding tertiary α' -acetoxy oxidation products in good yields.



1
n=0 or 1

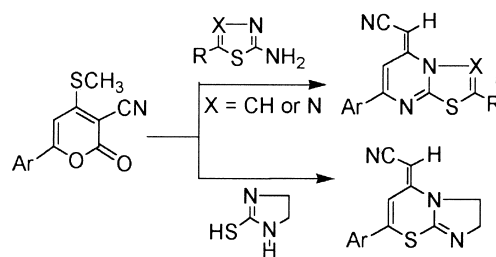
R: -CH₃, -CH₂CH₃, -CH₂Ph

Synthesis of bridgedhead azolo[3,2-a]pyrimidines and imidazo[2,1-b]thiazines through ring transformation of 2H-pyran-2-ones

Tetrahedron 59 (2003) 7141

Vishnu Ji Ram,* Pratibha Srivastava and Atul Goel

Division of Medicinal Chemistry, Central Drug Research Institute, Lucknow 226001, India



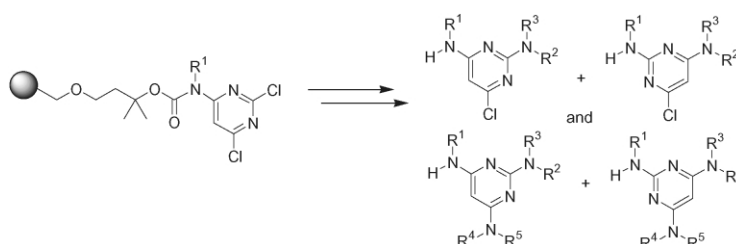
Traceless solid-phase synthesis of 2,4,6-chlorodiamino and triaminopyrimidines

Tetrahedron 59 (2003) 7147

Dario Montebugnoli,^a Pierfrancesco Bravo,^{a,b} Elisabetta Brenna,^a Charles Mioskowski,^c Walter Panzeri,^b Fiorenza Viani,^b Alessandro Volonterio,^a Alain Wagner^c and Matteo Zanda^{b,*}

^aDipartimento di Chimica, Materiali ed Ingegneria Chimica "G. Natta" del Politecnico di Milano, via Mancinelli 7, I-20131 Milano, Italy

^bC.N.R.-Istituto di Chimica del Riconoscimento Molecolare, sezione "A. Quilico", via Mancinelli 7, I-20131 Milano, Italy
^cLaboratoire de Synthèse Bioorganique, Faculté de Pharmacie, Université Louis Pasteur de Strasbourg, UMR 7514 du CNRS, 74 Route du Rhin, 67401 Illkirch-Graffenstaden, France.

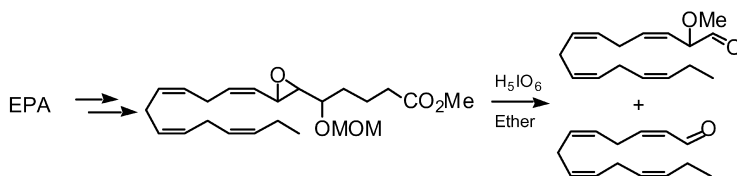


Oxidative degradation of eicosapentaenoic acid into polyunsaturated aldehydes

Anne Kristin Holmeide and Lars Skattebøl*

Department of Chemistry, University of Oslo, P.O. Box 1033 Blindern, 0315 Oslo, Norway

Tetrahedron 59 (2003) 7157



Improving resins for solid phase synthesis: incorporation of 1-[2-(2-methoxyethoxy)ethoxy]-4-vinyl-benzene

Sonia M. Alesso,^a Zhanru Yu,^a David Pears,^b Paul A. Worthington,^c Richard W. A. Luke^d and Mark Bradley^{a,*}

^aDepartment of Chemistry, University of Southampton, Highfield, Southampton SO17 1BJ, UK

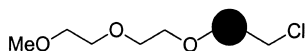
^bAvecia, P.O. Box 42, Hexagon House, Blackley, Manchester M9 8ZS, UK

^cSyngenta, Jealott's Hill Research Station, Bracknell, Berkshire RG42 6EY, UK

^dAstraZeneca Pharmaceuticals, Alderley Park, Macclesfield, Cheshire SK10 4TG, UK

Tetrahedron 59 (2003) 7163

A series of new, non-grafted polystyrene (PS) resins containing a styrenic methoxypoly(ethylene glycol) (MPEG) derivative were prepared to balance swelling and solvation with improved handling characteristics. The synthetic performance of the novel resins compared very favourably to those of TentaGel™, ArgoGel™ and aminomethyl PS.

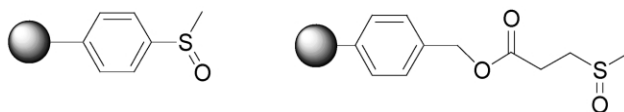


Soluble polystyrene-based sulfoxide reagents for Swern oxidation reactions

Matthew Kwok Wai Choi and Patrick H. Toy*

Department of Chemistry, The University of Hong Kong, Pokfulam Road, Hong Kong, People's Republic of China

Tetrahedron 59 (2003) 7171

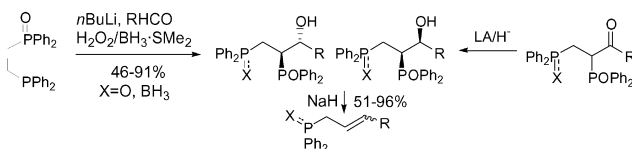


Synthesis of allyl phosphine oxides/boranes via Horner reaction of bis(diphenylphosphine)ethane monoxide reagent with an aldehyde

Salvacion T. Cacatian and Philip L. Fuchs*

Department of Chemistry, Purdue University, 560 Oval Dr., W. Lafayette, IN 47907, USA

Tetrahedron 59 (2003) 7177



On the reaction of 3-bromo-2-nitrobenzo[*b*]thiophene with some *ortho*-substituted anilines: an analysis of the products of reaction and of their NMR and MS properties

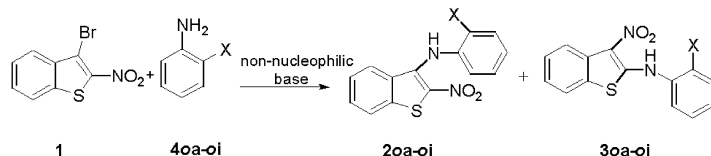
Tetrahedron 59 (2003) 7189

Barbara Cosimelli,^a Liliana Lamartina,^b Camilla Zaira Lanza,^c Domenico Spinelli,^{c,*} Raffaella Spisani^c and Federica Vegna^b

^aDipartimento di Chimica Farmaceutica e Tossicologica, Università degli Studi Federico II, Via D. Montesano 49, I-80131 Napoli, Italy

^bDipartimento di Chimica e Tecnologie Farmaceutiche, Università di Palermo, Via Archirafi 32, I-90123 Palermo, Italy

^cDipartimento di Chimica Organica A. Mangini, Università di Bologna, Via S. Donato 15, I-40127 Bologna, Italy



a: X = OH; b: X = NH₂; c: X = OMe; d: X = Me; e: X = Et; f: X = H; g: X = F; h: X = Cl; i: X = Br

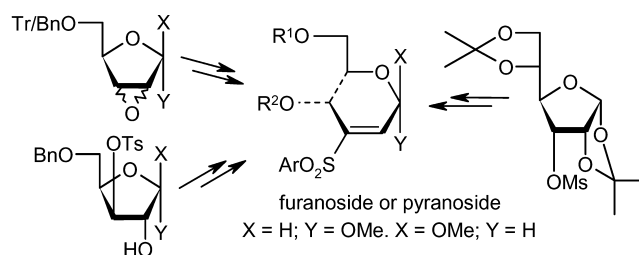
Synthesis of anomerically pure vinyl sulfone-modified pent-2-enofuranosides and hex-2-enopyranosides: a group of highly reactive Michael acceptors for accessing carbohydrate based synthons

Tetrahedron 59 (2003) 7203

Aditya Kumar Sanki^a and Tanmaya Pathak^{b,*}

^aOrganic Chemistry Division (Synthesis), National Chemical Laboratory, Pune 411 008, India

^bDepartment of Chemistry, Indian Institute of Technology, Kharagpur 721 302, India



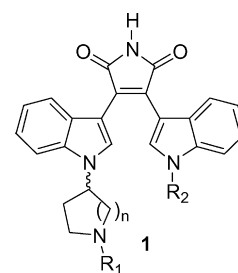
Strategies for the synthesis of *N*-(azacycloalkyl)bisindolylmaleimides: selective inhibitors of PKC β

Tetrahedron 59 (2003) 7215

Margaret M. Faul,^{*} John L. Grutsch, Michael E. Kobierski, Michael E. Kopach, Christine A. Krumrich, Michael A. Staszak, Uko Udodong, Jeffrey T. Vicenzi and Kevin A. Sullivan

Global Chemical Process Research and Development, Lilly Corporate Center, Eli Lilly and Company, Indianapolis, IN 46285-4813, USA

Synthetic approaches to *N*-(azacycloalkyl)bisindolylmaleimides **1** are described.



Heck-mediated synthesis and photochemically induced cyclization of [2-(2-styrylphenyl)ethyl]carbamic acid ethyl esters and 2-styryl-benzoic acid methyl esters: total synthesis of naphtho[2,1*f*]isoquinolines (2-azachrysenes)

Tetrahedron 59 (2003) 7231

M. Carme Pampín,^a Juan C. Estévez,^a Ramón J. Estévez,^{a,*} Miguel Maestro^b and Luis Castedo^a

^aDepartamento de Química Orgánica, Universidade de Santiago, 15782 Santiago de Compostela, Spain

^bServicios Xerais de Apoio á Investigación, Universidade de A Coruña, 15071 A Coruña, Spain

