Enantioselective reduction of heteroaromatic β,γ-unsaturated ketones as an alternative to allylboration of aldehydes. Application: asymmetric synthesis of SIB-1508Y

Tetrahedron 58 (2002) 7381

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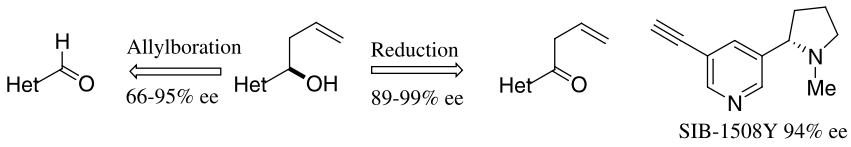


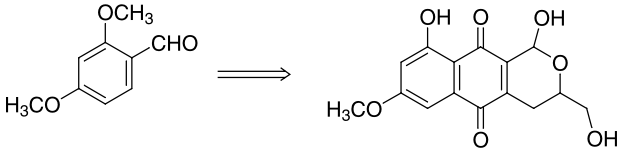
SIB-1508Y 94% ee

A synthesis of a thysanone analog

Tetrahedron 58 (2002) 7391

George A. Kraus* and Herbert Ogutu

Department of Chemistry, Iowa State University, 2759 Gilman Hall, Ames, IA 50011, USA



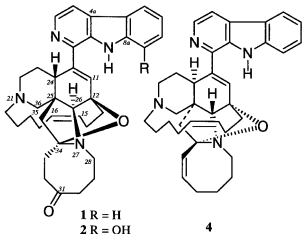
12,34-Oxamanzamines, novel biocatalytic and natural products from manzamine producing Indo-Pacific sponges

Tetrahedron 58 (2002) 7397

Muhammad Yousaf,[a] Khalid A. El Sayed,[a] Karumanchi V. Rao,[a] Chi Won Lim,[a] Jin-Feng Hu,[a] Michelle Kelly,[b] Scott G. Franzblau,[c] Fangqiu Zhang,[c] Olivier Peraud,[d] Russell T. Hill[d] and Mark T. Hamann[a,*]

[a]*Department of Pharmacognosy and National Center for the Development of Natural Products, School of Pharmacy, The University of Mississippi, University, MS 38677, USA*
[b]*National Institute of Water and Atmospheric Research (NIWA) Ltd, Private Bag 109-695, Newmarket, Auckland, New Zealand*
[c]*Institute for Tuberculosis Research, College of Pharmacy, 833 South Wood Street, Chicago, IL 60612-7231, USA*
[d]*Center of Marine Biotechnology, University of Maryland Biotechnology Institute, 701 East Pratt St., Baltimore, MD 21202, USA*

Three novel manzamines **1**, **2** and **4** were isolated from three Indo-Pacific sponges. The biocatalytic transformation of *ent*-8-hydroxymanzamine A to **2**, has been achieved.



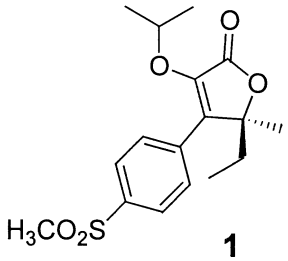
Practical enantioselective synthesis of a COX-2 specific inhibitor

Tetrahedron 58 (2002) 7403

Lushi Tan,[a,*] Cheng-yi Chen,[a] Weirong Chen,[a] Lisa Frey,[a] Anthony O. King,[a] Richard D. Tillyer,[a] Feng Xu,[a] Dalian Zhao,[a] Edward J. J. Grabowski,[a] Paul J. Reider,[a] Paul O'Shea,[b,*] Philippe Dagneau[b] and Xin Wang[b]

[a]*Department of Process Research, Merck and Co. Inc., P.O. Box 2000, Rahway, NJ 07065, USA*
[b]*Department of Process Research, Merck Frosst Centre for Therapeutic Research, P.O./C.P. 1005, Pointe Claire-Dorval, Que., Canada, H9R 4P8*

Two synthetic strategies to the COX-2 specific inhibitor **1** have been described that allowed its preparation in large quantities in 79% overall yield from (*S*)-2-hydroxy-2-methylbutyric acid. These studies have led to the identification of an efficient resolution of (±)-2-hydroxy-2-methylbutyric acid and a novel thionyl chloride aided amide formation from acid.



1

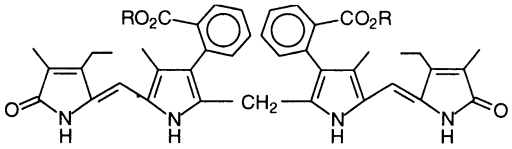
Atropisomerism in linear tetrapyrroles

Tetrahedron 58 (2002) 7411

Stefan E. Boiadjiev and David A. Lightner*

Department of Chemistry, University of Nevada, Reno, NV 89557-0020, USA

Bilirubin analog **1a**, with *o*-carboxyphenyl groups replacing propionic acids, was synthesized and found to adopt a ridge-tile conformation stabilized by intramolecular hydrogen bonding between COOH and dipyrrinone groups. Considering atropisomerism about the pyrrole–phenyl bond, **1a** and **1b** each have three atropisomers: a *d*,*l*-pair, with *anti* COOH groups; and a *meso*, with *syn*.



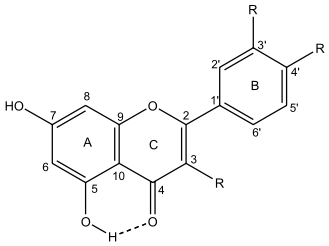
1a: R = H **1b**: R = CH_3

Do strong intramolecular hydrogen bonds persist in aqueous solution? Variable temperature gradient ^1H, $^1H-^{13}C$ GE-HSQC and GE-HMBC NMR studies of flavonols and flavones in organic and aqueous mixtures

Tetrahedron 58 (2002) 7423

Vassiliki Exarchou,[a] Anastasios Troganis,[b] Ioannis P. Gerothanassis,[a,*] Maria Tsimidou[c] and Dimitrios Boskou[c]

[a]*Section of Organic Chemistry and Biochemistry, Department of Chemistry, University of Ioannina, Ioannina GR-451 10, Greece*
[b]*Department of Biological Applications and Technologies, University of Ioannina, Ioannina GR-451 10, Greece*
[c]*Laboratory of Food Chemistry and Technology, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki GR-540 06, Greece*



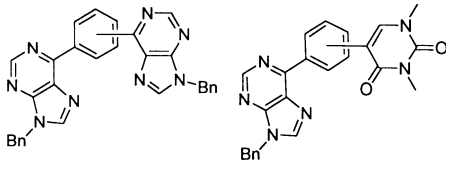
Quercetin: R_3=OH, $R_{3'}$= OH, $R_{4'}$=OH
Kaempferol: R_3=OH, $R_{3'}$= H, $R_{4'}$=OH
Luteolin: R_3=H, $R_{3'}$= OH, $R_{4'}$=OH

Covalent analogues of DNA base-pairs and triplets. Part 3: Synthesis of 1,4- and 1,3-bis(purin-6-yl)benzenes and 1-(1,3-dimethyluracil-5-yl)-3 or 4-(purin-9-yl)benzenes

Tetrahedron 58 (2002) 7431

Martina Havelková,[a] Dalimil Dvořák[a] * and Michal Hocek[b,*]

[a]*Department of Organic Chemistry, Prague Institute of Chemical Technology, CZ-16628 Prague 6, Czech Republic*
[b]*Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, CZ-16610 Prague 6, Czech Republic*



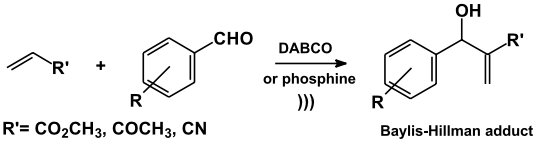
Ultrasound in Baylis–Hillman reactions with aliphatic and aromatic aldehydes: scope and limitations

Tetrahedron 58 (2002) 7437

Fernando Coelho,[a,*] Wanda P. Almeida,[b,*] Demetrius Veronese,[a] Cristiano R. Mateus,[a] Elizandra C. Silva Lopes,[a] Rodrigo C. Rossi,[a] Gabriel P. C. Silveira[a] and César H. Pavam[a]

[a]*Depto. de Química Orgânica, IQ-UNICAMP, P.O. Box 6154, 13083-970 Campinas, SP, Brazil*
[b]*Instituto de Ciências da Saúde, Universidade Paulista, 13043-0045 Campinas, SP, Brazil*

The scope of the utilization of ultrasound radiation in the Baylis–Hillman reaction with several aldehydes (substituted aromatics and aliphatics) is described. For all aldehydes tested, the use of ultrasound sources augmented the reaction rate and the chemical yields. Ultrasound radiation is also compatible with different α,β-unsaturated reactants.



R'= CO_2CH_3, $COCH_3$, CN

Baylis-Hillman adduct

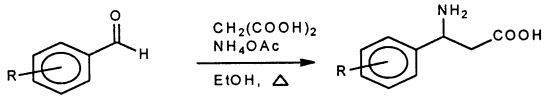
A one-pot synthesis of 3-amino-3-arylpropionic acids

Tetrahedron 58 (2002) 7449

C. Y. K. Tan[a] and D. F. Weaver[a,b,*]

[a]*Department of Chemistry, Queen's University, Kingston, Ont., Canada, K7L 3N6*
[b]*Department of Medicine (Neurology) and Chemistry, Dalhousie University, Halifax, NS, Canada B3H 4J3*

A series of mechanistic studies and the syntheses of 3-amino-3arylpropionic acids are discussed.

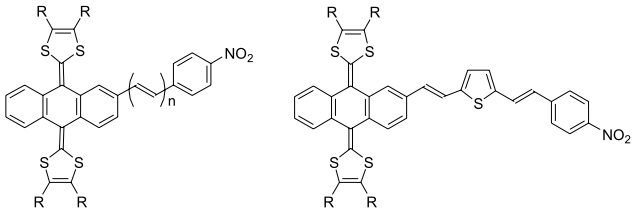


Synthesis and properties of push–pull chromophores for second-order nonlinear optics derived from π-extended tetrathiafulvalenes (TTFs)

Tetrahedron 58 (2002) 7463

Manuel Otero,[a] M[a] Ángeles Herranz,[a] Carlos Seoane,[a] Nazario Martín,[a,*] Javier Garín,[b] Jesús Orduna,[b] Rafael Alcalá[c] and Belén Villacampa[c]

[a]*Departamento de Química Orgánica I, Facultad de Química, Universidad Complutense de Madrid, Avenida Complutense 22, E-28040 Madrid, Spain*
[b]*Departamento de Química Orgánica, ICMA, Universidad de Zaragoza-CSIC, E-50009 Zaragoza, Spain*
[c]*Departamento de Física de la Materia Condensada, ICMA, Universidad de Zaragoza-CSIC, E-50009 Zaragoza, Spain*



14a-c: n = 1
15a-c: n = 2
16a-c: n = 3

a: R =H
b: R = SMe
c: R = $S(CH_2)_2S$

20a-c

Facile synthesis of ethyl 2-arylpropenoates by cross-coupling reaction using electrogenerated highly reactive zinc

Tetrahedron 58 (2002) 7477

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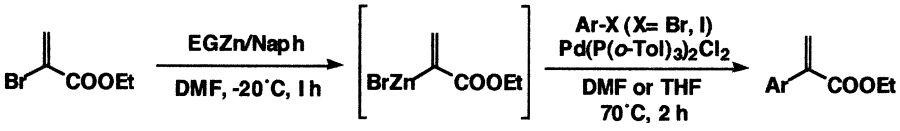
Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo 060-8628, Japan

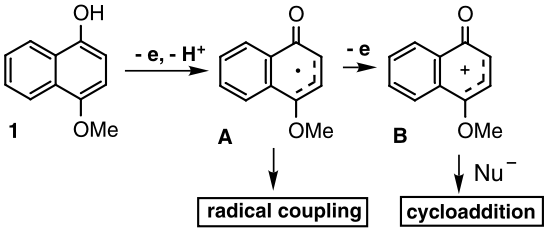


Reactivity of naphthol towards nucleophiles in anodic oxidation

Tetrahedron 58 (2002) 7485

Hesham R. El-Seedi,[a,b] Shosuke Yamamura[a] and Shigeru Nishiyama[a,*]

[a]*Department of Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi 3-14-1, Kohoku-ku, Yokohama 223-8522, Japan*
[b]*Department of Chemistry, Faculty of Science, El-Menoufia University, Shebin El-Kom, El-Menoufia, Egypt*



Synthesis and characterization of porphyrins bearing four redox-active phenylenediamine pendant groups as a dimensionally oriented π-conjugated system

Tetrahedron 58 (2002) 7491

Kaori Saito and Toshikazu Hirao*

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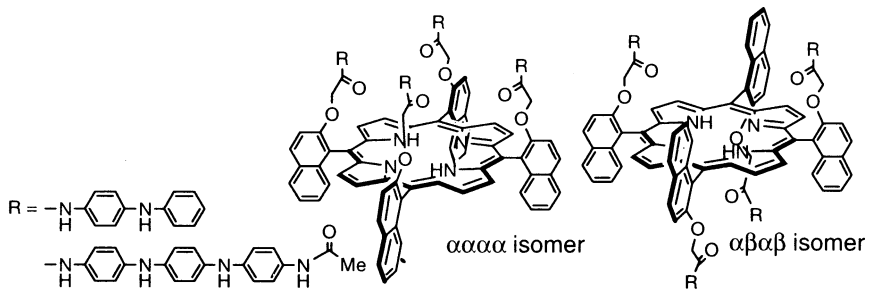

Ruthenium catalyzed ring rearrangement: a rapid entry to substituted aza- and oxacycles

Tetrahedron 58 (2002) 7503

Huib Ovaa,[a] Christian Stapper,[b] Gijs A. van der Marel,[a] Hermen S. Overkleeft,[a] Jacques H. van Boom[a] and Siegfried Blechert[b,*]

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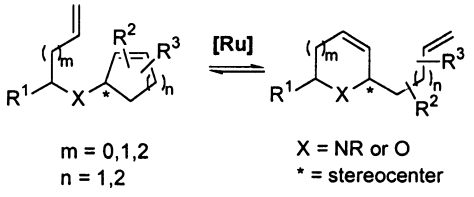
[b]*Institut für Chemie, Technische Universität Berlin, Strasse des 17, Juni 135, D-10623 Berlin, Germany*

Five-, six- and seven-membered heterocycles are easily available by a sequence of ring opening (ROM) and ring-closing metathesis (RCM). Protecting groups and the ring size of the starting material have a significant influence on the equilibrium of this reaction.

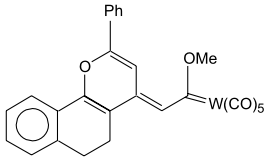


Reactivity of carbanions of Fischer-type carbene complexes with pyrylium salts. Synthesis and characterization of new γ-methylenepyran carbene complexes via an addition–oxidation–deprotonation process

Tetrahedron 58 (2002) 7519

Bertrand Caro,[a,*] Pascal Le Poul,[a] Françoise Robin-Le Guen,[a] Jean-Yves Saillard,[b] Samia Kahlal,[b] Claude Moinet,[c] Nicolas Le Poul[d] and Jacqueline Vaissermann[e]

[a]*Laboratoire de chimie organometallique et biologique, U.M.R. CNRS 6509 Organométalliques et catalyse, I.U.T. Lannion, rue E. Branly, 22300 Lannion, France*
[b]*Laboratoire du solide et inorganique moléculaire, campus de Beaulieu, U.M.R. CNRS 6511, Université de Rennes 1, 35042 Rennes, France*
[c]*Organométalliques et catalyse, campus de Beaulieu, U.M.R. CNRS 6509, Université de Rennes 1, 35042 Rennes, France*
[d]*School of Chemistry, University of Exeter, Stocker Road, Exeter EX4 4QD, UK*
[e]*Laboratoire de chimie des métaux de transition, associé au CNRS, 4, place Jussieu, 75252 Paris Cedex 05, France*



The reactions of 2-(chloroseleno)benzoyl chloride with nucleophiles

Tetrahedron 58 (2002) 7531

Mariusz Osajda and Jacek Młochowski*

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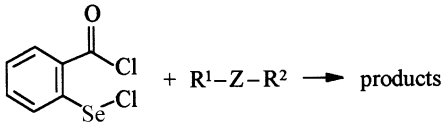


R^1, R^2 = OH, SH, NH_2, CH_3, C_6H_5
Z = $(CH_2)_n$, C_6H_4, C_6H_3N

Stereoselective synthesis of *C*-glycosyl analogues of phenylalanine

Tetrahedron 58 (2002) 7539

Xin Xu, Ghada Fakha and Denis Sinou*

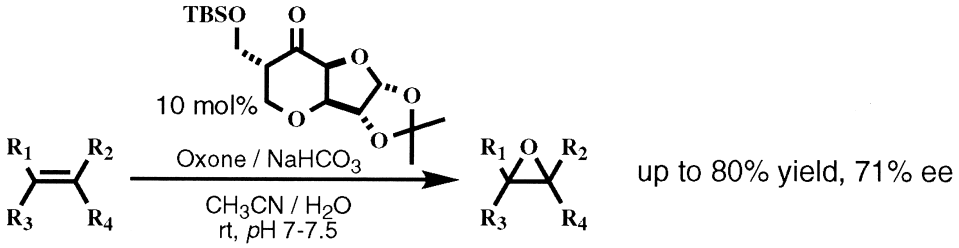
Laboratoire de Synthèse Asymétrique, Associé au CNRS, ESCPE Lyon, Université Claude Bernard Lyon I, 43, Boulevard du 11 Novembre 1918, 69622 Villeurbanne Cédex, France

Asymmetric epoxidation catalyzed by D-glucose-derived uloses

Tetrahedron 58 (2002) 7545

Tony K. M. Shing* and Gulice Y. C. Leung

Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong, People's Republic of China



up to 80% yield, 71% ee