Graphical abstracts

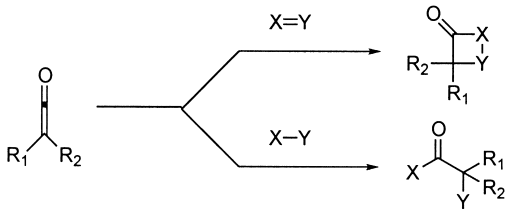
Asymmetric synthesis using ketenes

Tetrahedron 59 (2003) 3545

Robert K. Orr and Michael A. Calter*

Department of Chemistry, University of Rochester, Rochester, NY 14627-0216, USA

Ketenes serve as useful intermediates in the synthesis of natural and unnatural organic compounds. This Report summarizes advances in the preparation and asymmetric reactions of ketenes up to 2002. Particular emphasis is placed on catalyst and auxillary-controlled reactions.



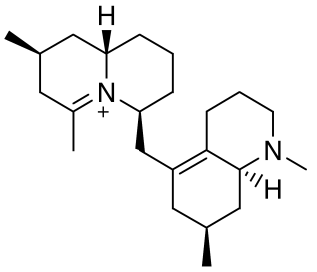
Senepodines B–E, new $C_{22}N_2$ alkaloids from *Lycopodium chinense*

Tetrahedron 59 (2003) 3567

Yusuke Hirasawa, Hiroshi Morita and Jun'ichi Kobayashi*

Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo 060-0812, Japan

Four new $C_{22}N_2$ *Lycopodium* alkaloids, senepodines B–E (**2**–**5**), have been isolated from the club moss *Lycopodium chinense*. The relative and absolute stereochemistry of **2**–**5** were determined by combination of NOESY correlations and chemical transformation, while the absolute configuration of senepodine A (**1**) was assigned by exciton chirality method.



2

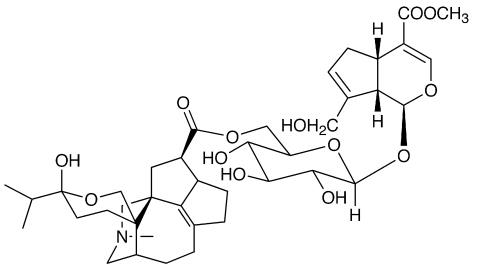
Daphnezomines P, Q, R and S, new alkaloids from *Daphniphyllum humile*

Tetrahedron 59 (2003) 3575

Hiroshi Morita, Hiroshi Takatsu and Jun'ichi Kobayashi*

Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo 060-0812, Japan

Four new alkaloids, daphnezomines P–S (**1**–**4**), have been isolated from the fruits of *Daphniphyllum humile*, and the structures and the stereochemistry were elucidated on the basis of spectroscopic data including 2D NMR and MS/MS spectra, and chemical correlations.



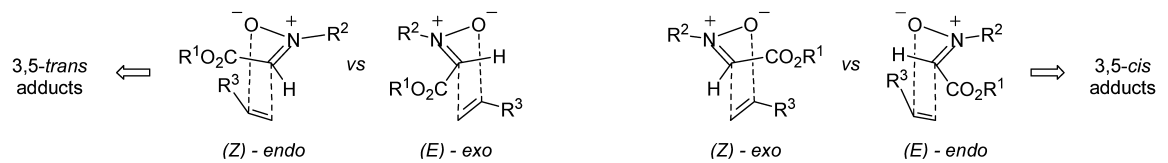
1

A DFT study on the 1,3-dipolar cycloaddition reactions of *C*-(methoxycarbonyl)-*N*-methyl nitrone with methyl acrylate and vinyl acetate

Tetrahedron 59 (2003) 3581

Pedro Merino,[a,*] Julia Revuelta,[a] Tomas Tejero,[a] Ugo Chiacchio,[b] Antonio Rescifina[b,*] and Giovanni Romeo[c]

[a]*Departamento de Quimica Organica, Facultad de Ciencias, ICMA, Universidad de Zaragoza-CSIC, Zaragoza E-50009, Spain*
[b]*Dipartimento di Scienze Chimiche, Università di Catania, Viale Andrea Doria 6, Catania 95125, Italy*
[c]*Dipartimento Farmaco-Chimico, Università di Messina, Viale SS. Annunziata, Messina 98168, Italy*

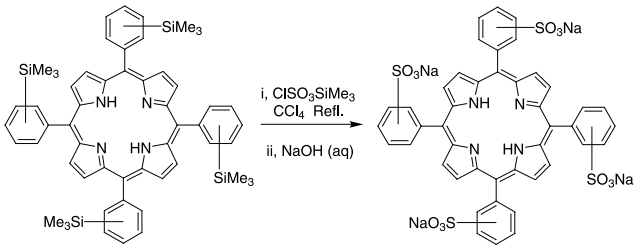


A novel method for the synthesis of regiospecifically sulfonated porphyrin monomers and dimers

Tetrahedron 59 (2003) 3593

Bao-Hui Ye[a,b,*] and Yosinori Naruta[a,*]

[a]*Institute for Fundamental Research of Organic Chemistry, Kyushu University, Higashi-Ku, Fukuoka 812-8581, Japan*
[b]*School of Chemistry and Chemical Engineering, Sun Yat-Sen University, Guangzhou 510275, People's Republic of China*

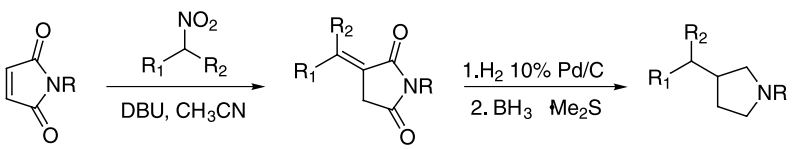


Conjugate addition of nitroalkanes to *N*-substituted maleimides. Synthesis of 3-alkylsuccinimides and pyrrolidines

Tetrahedron 59 (2003) 3603

Roberto Ballini,* Giovanna Bosica, Gianluca Cioci, Dennis Fiorini and Marino Petrini*

Dipartimento di Scienze Chimiche, Università di Camerino, via S. Agostino 1, I-62032 Camerino, Italy



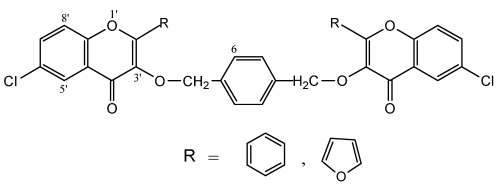
Photolysis of xylylbischromones

Tetrahedron 59 (2003) 3609

Satish C. Gupta,* Mohamad Yusuf, Surinder Arora and Ramesh C. Kamboj

Department of Chemistry, Kurukshetra University, Kurukshetra 136119, India

Photoreorganisation of the title compound is described.

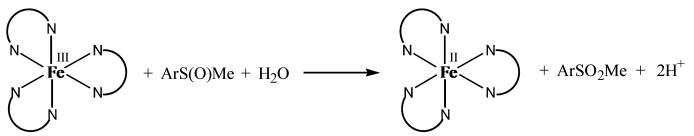


Electron transfer reactions of iron(III)-polypyridyl complexes with organic sulfoxides

Tetrahedron 59 (2003) 3613

Kulandai John Adaikalasamy,[a] Natarajan Sathiyamoorthy Venkataramanan[b] and Seenivasan Rajagopal[b,*]

[a]*Department of Chemistry, The American College, Madurai 625002, India*
[b]*School of Chemistry, Madurai Kamaraj University, Palkalai Nagar, Madurai 625021, India*



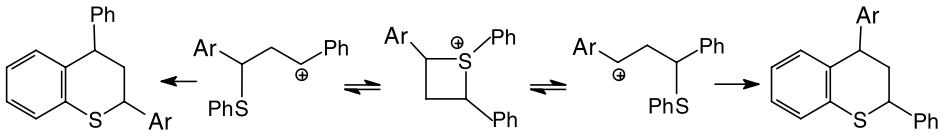
Cyclization of 1,3-diaryl-3-phenylsulfanyl-1-propanols to thiochromans with the participation of [1,3]-PhS shift

Tetrahedron 59 (2003) 3621

Jacek Skarżewski,[a,*] Mariola Zielińska-Błajet,[a] Szczepan Roszak[b] and Ilona Turowska-Tyrk[b]

[a]*Institute of Organic Chemistry, Biochemistry and Biotechnology, Wrocław University of Technology, Wybrzeze S. Wyspianskiego, 50-370 Wrocław, Poland*

[b]*Institute of Physical and Theoretical Chemistry, Wrocław University of Technology, 50-370 Wrocław, Poland*

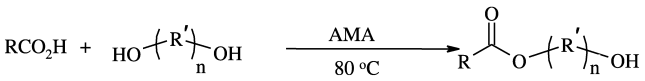


$Al_2O_3/MeSO_3H$ (AMA) as a new reagent with high selective ability for monoesterification of diols

Tetrahedron 59 (2003) 3627

Hashem Sharghi* and Mona Hosseini Sarvari

Department of Chemistry, Faculty of Science, Shiraz University, Shiraz 71454, Iran



$R' = CH_2$, n =2-4, 8

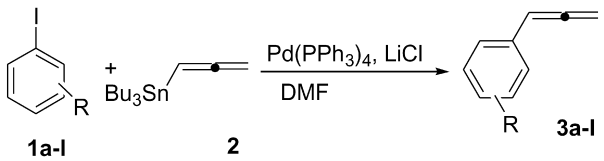
$R' = CH_2CH_2O$, n =1-5

Highly chemoselective coupling of allenylstannanes with organic iodides promoted by $Pd(PPh_3)_4$/LiCl: an efficient method for the synthesis of substituted allenes

Tetrahedron 59 (2003) 3635

Chih-Wei Huang, Muthian Shanmugasundaram, Hao-Ming Chang and Chien-Hong Cheng*

Department of Chemistry, Tsing Hua University, Hsinchu 300, Taiwan, ROC

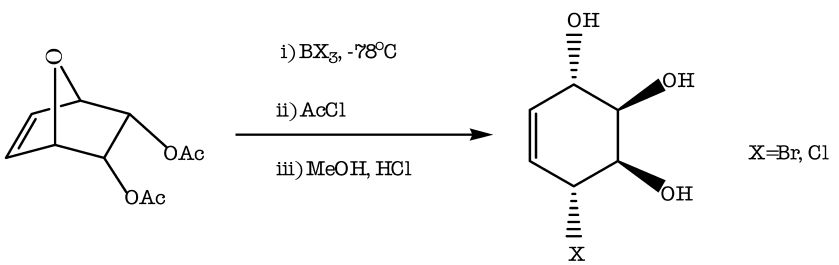


Synthesis of haloconduritols from an *endo*-cycloadduct of furan and vinylene carbonate

Tetrahedron 59 (2003) 3643

Arif Baran, Cavit Kazaz, Hasan Seçen* and Yaşar Sütbeyaz*

Department of Chemistry, Faculty of Arts and Sciences, Atatürk University, 25240 Erzurum, Turkey

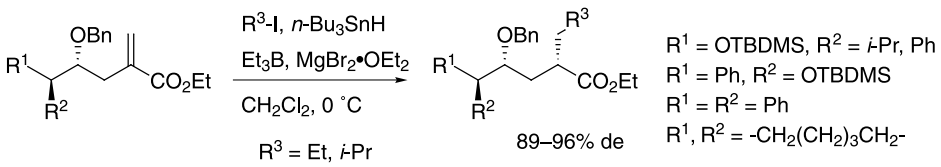


Remote substituent effect favoring the formation of *syn*-adducts in the chelation controlled radical reactions of γ-benzyloxy-α-methylenecarboxylic acid esters

Tetrahedron 59 (2003) 3649

Hajime Nagano,* Hisako Ohkouchi and Tomoko Yajima

Department of Chemistry, Faculty of Science, Ochanomizu University, Otsuka, Bunkyo-ku, Tokyo 112-8610, Japan

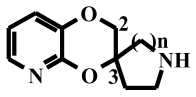


Synthesis of new compounds containing the 2,3-dihydro[1,4]dioxino[2,3-*b*]pyridine heterocyclic system as a substructure

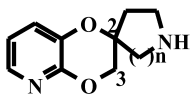
Tetrahedron 59 (2003) 3665

M. Soukri,[a,b] S. Lazar,[b] M. D. Pujol,[c] M. Akssira,[b] J. M. Leger,[d] C. Jarry[d] and G. Guillaumet[a,*]

[a]*Institut de Chimie Organique et Analytique, UMR CNRS 6005, Université d'Orléans, BP 6759, 45067 Orléans Cedex 2, France*
[b]*Laboratoire de Chimie Bioorganique et Analytique, Université Hassan II-Mohammédia, BP 146, 20650 Mohammédia, Maroc*
[c]*Laboratori de Química Farmacèutica, Universitat de Barcelona, Facultat de Farmàcia, 08028 Barcelona, Spain*
[d]*Pharmacochimie, EA 2962, Université Victor Segalen Bordeaux II, 33076 Bordeaux Cedex, France*



8A (n = 1) **9A** (n = 2)



8B (n = 1) **9B** (n = 2)