

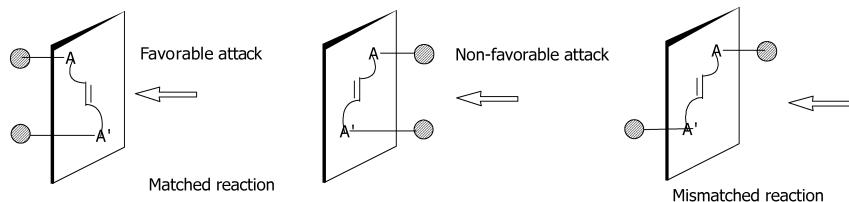
## Graphical abstracts

### Multiple stereoselectivity and its application in organic synthesis

Oleg I. Kolodiazhnyi

Institute of Bioorganic Chemistry, National Academy of Sciences, Murmanskaya Street, 1, Kiev, 02094, Ukraine

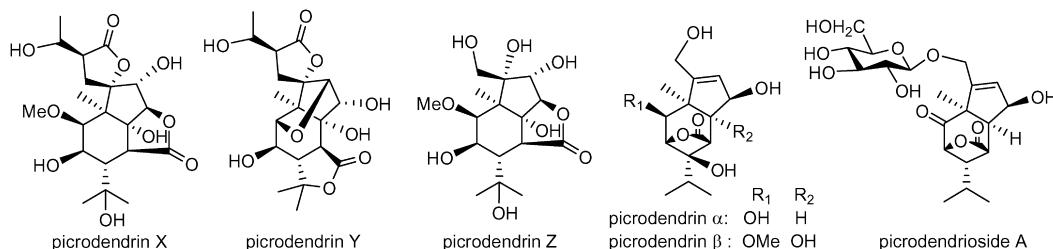
The broad applicability and efficiency of the multiple stereoselectivity is reviewed. The report contains 350 references.



### New picrotoxane terpenoids from *Picromesistus baccatum*

Yumiko Suzuki, Kazuo Koike, Masako Nagahisa and Tamotsu Nikaido\*

Faculty of Pharmaceutical Sciences, Toho University, 2-2-1 Miyama, Funabashi, Chiba 274-8510, Japan



### Structure and isomerization in 4,4'-biimidazoles: a comparison of crystal structures and theoretical calculations of 2,2'-dimethyl-4,4'-biimidazole and 2,2'-dimethyl-4,4'-biimidazolium bis-trifluoroactate

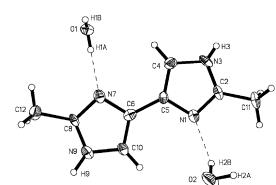
Weidong Zhang,<sup>a</sup> Christopher P. Landee,<sup>b</sup> Roger D. Willett<sup>c</sup> and Mark M. Turnbull<sup>a,d,\*</sup>

<sup>a</sup>Carlson School of Chemistry and Biochemistry, Clark University, 950 Main St., Worcester, MA 01610, USA

<sup>b</sup>Department of Physics, Clark University, 950 Main St., Worcester, MA 01610, USA

<sup>c</sup>Department of Chemistry, Washington State University, Pullman, WA, USA

<sup>d</sup>Department de Química Física, Facultat de Química, Universitat de Barcelona, Av. Diagonal 647, 08028 Barcelona, Spain



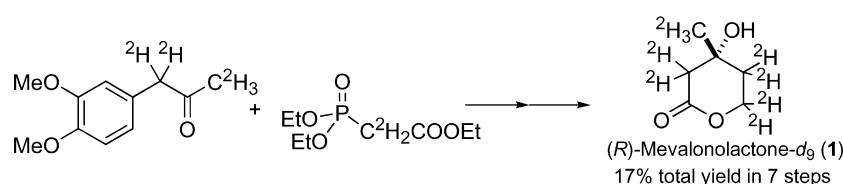
### Practical enantioselective synthesis of fully deuterated (*R*)-mevalonolactone

Tadashi Eguchi,<sup>a,\*</sup> Eriko Watanabe<sup>a</sup> and Katsumi Kakinuma<sup>b</sup>

<sup>a</sup>Department of Chemistry and Materials Science, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo 152-8551, Japan

<sup>b</sup>Department of Chemistry, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo 152-8551, Japan

Practical enantioselective synthetic method of fully deuterated (*R*)-mevalonolactone has been developed based upon Sharpless asymmetric epoxidation. (*R*)-Mevalonolactone-*d*<sub>9</sub> **1** was prepared on multi-gram scale in seven steps in 17% overall yield.

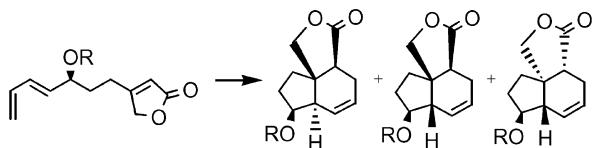


**Intramolecular Diels–Alder reaction leading to tricyclic derivatives as intermediates of natural products synthesis**

Tetrahedron 59 (2003) 6039

Junichi Shiina and Shigeru Nishiyama\*

Department of Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi 3-14-1, Kohoku-ku, Yokohama 223-8522, Japan

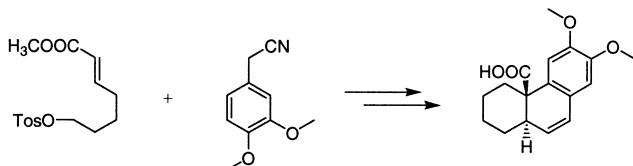


**A facile synthetic approach to the core structure of 6,7-didehydrocarnosic acid type derivatives**

Tetrahedron 59 (2003) 6045

Andreas Luxenburger

Institut für Organische Chemie, Universität des Saarlandes, Im Stadtwald, P.O. Box 151150, D-66041 Saarbrücken, Germany



**General synthesis of *n*-membered cyclic sulfamides**

Tetrahedron 59 (2003) 6051

Zine Régaïnia,<sup>a,b</sup> Jean-Yves Winum,<sup>a</sup> Fatma-Zohra Smaine,<sup>a,b</sup> Loïc Toupet,<sup>c</sup> Nour-Eddine Aouf<sup>b</sup> and Jean-Louis Montero<sup>a,\*</sup>

<sup>a</sup>Laboratoire de Chimie Biomoléculaire, UMR 5032, Université Montpellier II, ENSCM, 8 Rue de l'Ecole Normale, 34296 Montpellier Cedex – France

<sup>b</sup>Laboratoire de Chimie Bioorganique, Université d'Annaba, BP 12 Annaba – Algeria

<sup>c</sup>Groupe Matière Condensée et Matériaux, UMR 6626, Université de Rennes I, Campus de Beaulieu, Avenue du Général Leclerc, 35042 Rennes Cedex – France

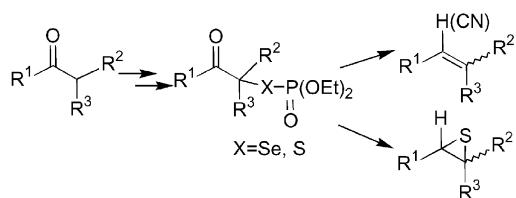
General method for the synthesis of *n*-membered cyclic sulfamides (cyclosulfamides) is described. An application to the synthesis of constrained peptidal cyclic sulfamide is illustrated.

**A general and stereoselective method for synthesis of tri- and tetrasubstituted alkenes**

Tetrahedron 59 (2003) 6057

I. Maciągiewicz, P. Dybowski and A. Skowrońska\*

Centre of Molecular and Macromolecular Studies, Department of Heteroorganic Chemistry, Polish Academy of Sciences, 90-363 Łódź, Sienkiewicza 112, Poland

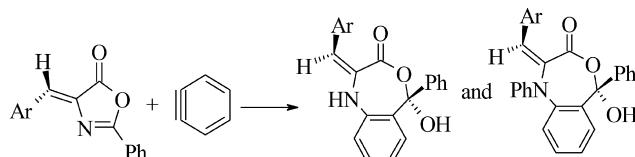


**New cycloaddition reaction between 4-arylidene-2-phenyl-5(4H)-1,3-oxazolones and benzyne; facile synthesis of 1,4(H)-benzoxazepine-2-ones and their N-phenyl derivatives**

Tetrahedron 59 (2003) 6067

Ashraf A. Aly

Department of Chemistry, Faculty of Science, El-Minia University, El-Minia, A. R. Egypt

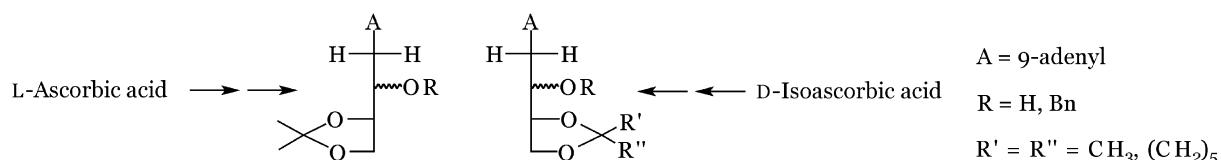


**Synthesis of enantiomeric 9-(2',3',4'-trihydroxybutyl)adenine derivatives from L-ascorbic and D-isoascorbic acids**

Tetrahedron 59 (2003) 6075

Andrzej E. Wróblewski\* and Wiesława Karolczak

Bioorganic Chemistry Laboratory, Faculty of Pharmacy, Institute of Chemistry, Medical University of Łódź, 90-151 Łódź, Muszyńskiego 1, Poland

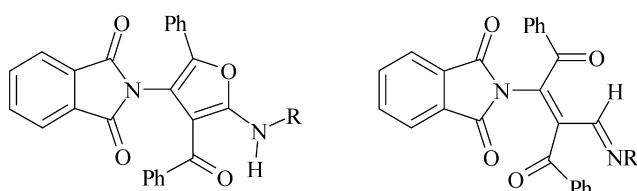


**Reaction between alkyl isocyanides and dibenzoylacetylene in the presence of strong NH-acids: synthesis of highly functionalized aminofurans**

Tetrahedron 59 (2003) 6083

Issa Yavari,\* Abdolali Alizadeh, Mohammad Anary-Abbasinejad and Hamid R. Bijanzadeh

Department of Chemistry, University of Tarbiat Modares, P.O. Box 14115-175, Tehran, Iran



**Synthesis of a phosphotyrosyl analogue having  $\chi_1$ ,  $\chi_2$  and  $\phi$  angles constrained to values observed for an SH2 domain-bound phosphotyrosyl residue**

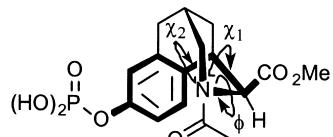
Tetrahedron 59 (2003) 6087

Xiang-Zhu Wang,<sup>a</sup> Zhu-Jun Yao,<sup>a</sup> Hongpeng Liu,<sup>b</sup> Manchao Zhang,<sup>b</sup> Dajun Yang,<sup>b</sup> Clifford George<sup>c</sup> and Terrence R. Burke, Jr.<sup>a,\*</sup>

<sup>a</sup>Laboratory of Medicinal Chemistry, Center for Cancer Research, National Cancer Institute, National Institutes of Health, NCI-Frederick, P.O. Box B, Bldg 376 Boyles St., Frederick, MD 21702-1201, USA

<sup>b</sup>Department of Hematology/Oncology, University of Michigan Medical School, Ann Arbor, MI 48109, USA

<sup>c</sup>Laboratory for the Structure of Matter, Naval Research Laboratory, Washington, DC 20375, USA



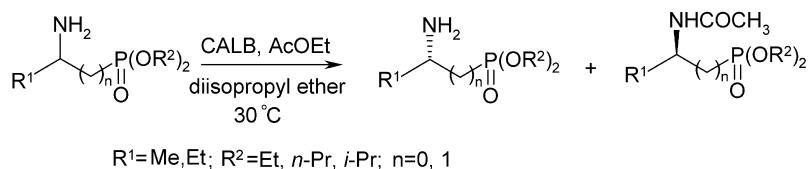
## Enzymatic synthesis of optically active 1- and 2-aminoalkanephosphonates

Tetrahedron 59 (2003) 6095

Chengye Yuan,\* Chengfu Xu and Yonghui Zhang

Shanghai Institute of Organic Chemistry, Chinese Academy of Science 345 Lingling Lu, Shanghai 200032, People's Republic of China

A number of 1- and 2-aminoalkanephosphonates were resolved with high enantioselectivity through *Candida antarctica* lipase B-catalyzed acetylation.



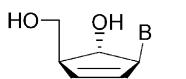
## Stereocontrolled synthesis of novel 6'( $\alpha$ )-hydroxy carbovir analogues

Tetrahedron 59 (2003) 6103

Joon Hee Hong,<sup>a,\*</sup> Chang-Hyun Oh<sup>b</sup> and Jung-Hyuck Cho<sup>b</sup>

<sup>a</sup>College of Pharmacy, Chosun University, Kwangju 501-759, South Korea

<sup>b</sup>Medicinal Chemistry Research Center, Korea Institute of Science and Technology, Seoul 130-650, South Korea



15: B = adenine

16: B = cytosine

## Total chemical synthesis of 2-ethenyl-3,5-dimethylpyrazine and 3-ethenyl-2,5-dimethylpyrazine

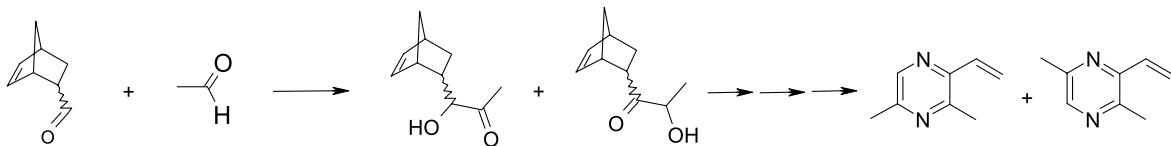
Tetrahedron 59 (2003) 6109

Toshinari H. Kurniadi,<sup>a</sup> Rachid Bel Rhlid,<sup>a</sup> Marcel-A. Juillerat,<sup>a,\*</sup> Thierry Gefflaut,<sup>b</sup> Jean Bolte<sup>b</sup> and Ralf G. Berger<sup>c</sup>

<sup>a</sup>Department of Bioscience, Nestlé Research Center, Vers-chez-les-Blanc, P.O. Box: 44, CH-1000 Lausanne 26, Switzerland

<sup>b</sup>UMR 6504, Université Blaise Pascal, F-63177 Aubière Cedex, France

<sup>c</sup>Universität Hannover, Wunstorfer Str. 14, D-30453 Hannover, Germany



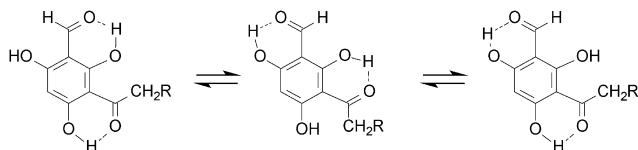
## Hydrogen-bonded rotamers of 2',4',6'-trihydroxy-3'-formyldihydrochalcone, an intermediate in the synthesis of a dihydrochalcone from *Leptospermum recurvum*

Tetrahedron 59 (2003) 6113

Kamarul'Ain Mustafa,<sup>a</sup> Henrik G. Kjaergaard,<sup>a</sup> Nigel B. Perry<sup>b</sup> and Rex T. Weavers<sup>a,\*</sup>

<sup>a</sup>Department of Chemistry, University of Otago, P.O. Box 56, Dunedin 9001, New Zealand

<sup>b</sup>Department of Chemistry, Plant Extracts Research Unit, New Zealand Institute for Crop and Food Research Limited, University of Otago, P.O. Box 56, Dunedin, New Zealand

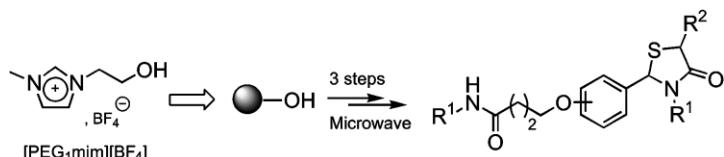


**Efficient combination of task-specific ionic liquid and microwave dielectric heating applied to one-pot three component synthesis of a small library of 4-thiazolidinones**

Tetrahedron 59 (2003) 6121

Joan Fraga-Dubreuil and Jean Pierre Bazureau\*

Institut de Chimie, Synthèse & Electrosynthèse Organiques 3, Université de Rennes 1, UMR 6510, Bât. 10A, Campus de Beaulieu, CS 74205, (F) 35042 Rennes Cedex, France



**Synthesis of meso-furyl porphyrins with N<sub>4</sub>, N<sub>3</sub>S, N<sub>2</sub>S<sub>2</sub> and N<sub>3</sub>O porphyrin cores**

Tetrahedron 59 (2003) 6131

Iti Gupta and Mangalampalli Ravikanth\*

Department of Chemistry, Indian Institute of Technology, Powai, Mumbai 400076, India

Synthesis of a series of meso-furyl porphyrins with N<sub>4</sub>, N<sub>2</sub>S<sub>2</sub>, N<sub>3</sub>S, N<sub>3</sub>O porphyrin cores and the comparison of electronic properties with those of meso-aryl porphyrins are described.

