

## Graphical abstracts

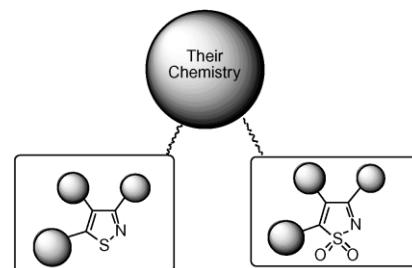
### The chemistry of isothiazoles

Abdel-Sattar S. Hamad Elgazwy

Department of Chemistry, Faculty of Science, University of Ain Shams, Abbassia 11566 Cairo, Egypt

The chemistry of isothiazoles are reviewed. The report contains 105 references.

*Tetrahedron* 59 (2003) 7445

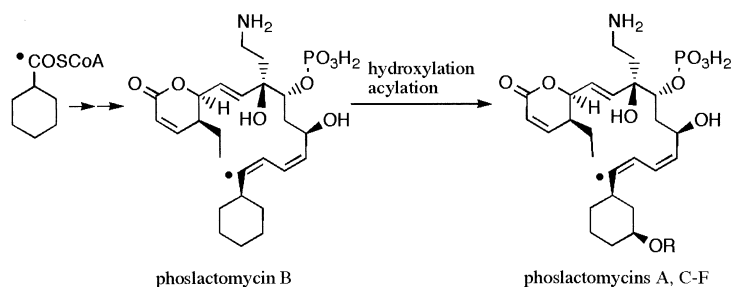


### Biosynthesis of phoslactomycins: cyclohexanecarboxylic acid as the starter unit

Yasuyo Sekiyama,<sup>a</sup> Nadaraj Palaniappan,<sup>b</sup>  
Kevin A. Reynolds<sup>b</sup> and Hiroyuki Osada<sup>a,\*</sup>

<sup>a</sup>Antibiotics Laboratory, Discovery Research Institute, RIKEN, 2-1 Hirosawa, Wako, Saitama 351-0198, Japan

<sup>b</sup>Department of Medicinal Chemistry, Institute for Structural Biology and Drug Discovery, Virginia Commonwealth University, 800 E. Leigh St. Suite 212, Richmond, VA 23219, USA



*Tetrahedron* 59 (2003) 7465

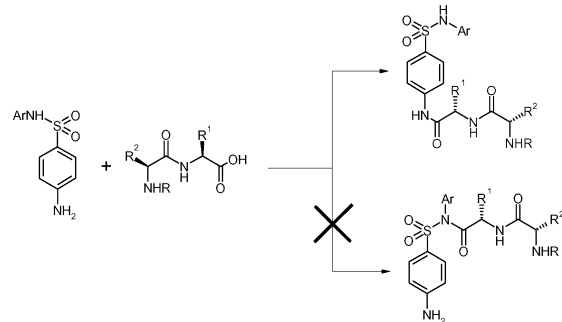
### Amino acids as selective sulfonamide acylating agents

Paula Gomes,<sup>a,\*</sup> José R. B. Gomes,<sup>a</sup> Manuela Rodrigues<sup>a</sup>  
and Rui Moreira<sup>b</sup>

<sup>a</sup>Centro de Investigação em Química da Universidade do Porto, Departamento de Química da Faculdade de Ciências do Porto, Rua do Campo Alegre 687, P-4169-007 Porto, Portugal

<sup>b</sup>Centro de Estudos de Ciências Farmacêuticas, Faculdade de Farmácia da Universidade de Lisboa, Av. Forças Armadas, P-1649-019 Lisboa, Portugal

Coupling of diazine-containing sulfonamides with *N*-protected amino acids was regioselective for the *N*<sup>4</sup> nitrogen atom, whereas a contrasting behavior was detected for isoxazole-based sulfonamide. Computational studies led to a possible explanation for these experimental findings.

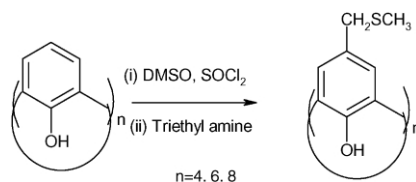


*Tetrahedron* 59 (2003) 7473

### A convenient single step synthesis of *p*-thiomethylmethyl-calixarenes and metal ion extraction studies

Satish Kumar, H. M. Chawla and R. Varadarajan\*

Department of Chemistry, Indian Institute of Technology, Hauz Khas, New Delhi 110016, India



*Tetrahedron* 59 (2003) 7481

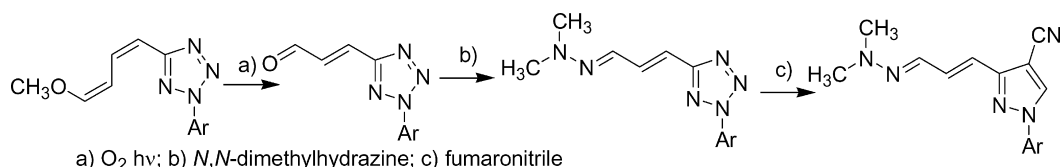
## Synthesis and transformations of tetrazolylacroleins

Tetrahedron 59 (2003) 7485

Ildikó Nagy,<sup>a</sup> Dénes Kónya,<sup>a</sup> Zsuzsanna Riedl,<sup>a</sup> András Kotschy,<sup>b</sup> Géza Timári,<sup>a</sup> András Messmer<sup>a</sup> and György Hajós<sup>a,\*</sup>

<sup>a</sup>Chemical Research Center, Institute of Chemistry, Hungarian Academy of Sciences, P.O. Box 17, Pusztaszeri ut 59, H-1025 Budapest, Hungary

<sup>b</sup>Department of General and Inorganic Chemistry, Eötvös Lóránd University, H-1117 Budapest, Pázmány P. sétány 1, Hungary



## Cross-condensation of derivatives of cyanoacetic acid and carbonyl compounds. Part 1: Single-stage synthesis of

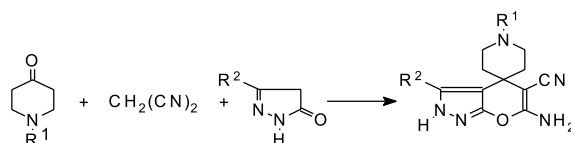
Tetrahedron 59 (2003) 7491

### 1'-substituted 6-amino-spiro-4-(piperidine-4')-2*H*,4*H*-pyrano[2,3-*c*]pyrazole-5-carbonitriles

Anatoliy M. Shestopalov,<sup>a</sup> Yuliya M. Emeliyanova,<sup>a</sup> Aleksandr A. Shestopalov,<sup>a</sup> Lyudmila A. Rodinovskaya,<sup>a</sup> Zukhra I. Niazimbetova<sup>b</sup> and Dennis H. Evans<sup>b,\*</sup>

<sup>a</sup>*N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, 47, Leninsky prosp., 119991 Moscow, Russian Federation*

<sup>b</sup>Department of Chemistry and Biochemistry, University of Delaware, 19716 Newark, DE, USA

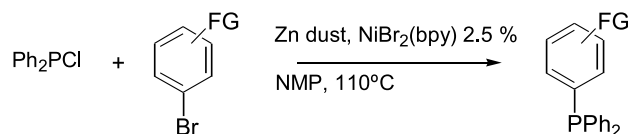


## Nickel-catalyzed reductive coupling of chlorodiphenylphosphine with aryl bromides into functionalized triarylphosphines

Tetrahedron 59 (2003) 7497

Erwan Le Gall,<sup>\*</sup> Michel Troupel and Jean-Yves Nédélec

Laboratoire d'Electrochimie, Catalyse et Synthèse Organique, LECSO, CNRS GLVT, UMR 7582, 2-8 rue Henri Dunant, 94320 Thiais, France



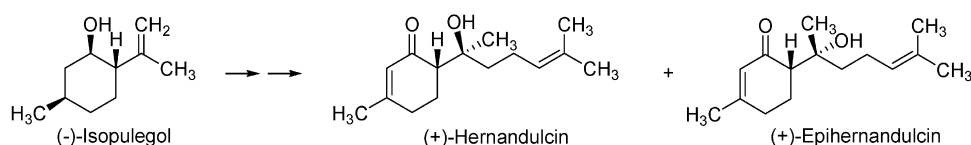
FG = *o*-,*m*-,*p*-CF<sub>3</sub>; *m*-,*p*-CO<sub>2</sub>Et; *m*-CN, *p*-COMe

## A facile synthesis of (6*S*,1'*S*)-(+)-hernandulcin and (6*S*,1'*R*)-(+)-epihernandulcin

Tetrahedron 59 (2003) 7501

Jung Hun Kim, Hyun Jin Lim and Seung Hoon Cheon<sup>\*</sup>

College of Pharmacy and Research Institute of Drug Development, Chonnam National University, 300 Yongbong-Dong, Buk-Gu, Gwangju, 500-757, South Korea



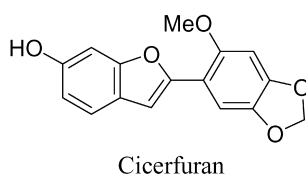
## The first total synthesis of Cicerfuran utilizing a one-pot synthesis of hydroxylated benzofurans

Tetrahedron 59 (2003) 7509

Zoltán Novák, Géza Timári\* and András Kotschy\*

Department of General and Inorganic Chemistry, Eötvös Loránd University, Pázmány Péter s. 1/A, H-1117 Budapest, Hungary

A simple one-pot procedure was elaborated for the preparation of hydroxylated benzofurans and was successfully applied to the first total synthesis of Cicerfuran.



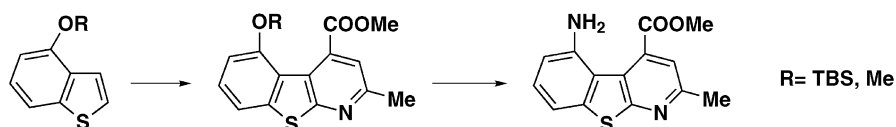
## Smiles rearrangement for the synthesis of 5-amino-substituted [1]benzothieno[2,3-b]pyridine

Tetrahedron 59 (2003) 7515

Carlo Bonini,<sup>a</sup> Maria Funicello,<sup>a,\*</sup> Rosanna Scialpi<sup>b</sup> and Piero Spagnolo<sup>b</sup>

<sup>a</sup>Dipartimento di Chimica, Università della Basilicata, Via N. Sauro 85, 85100 Potenza, Italy

<sup>b</sup>Dipartimento di Chimica Organica 'A. Mangini', Università di Bologna, Viale Risorgimento 4, 40136 Bologna, Italy

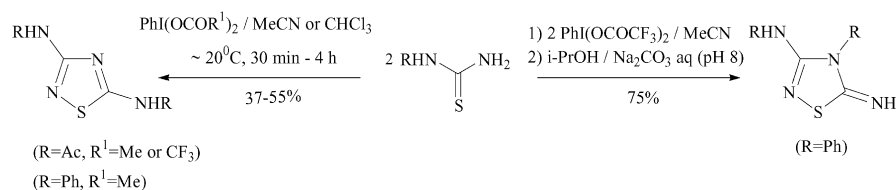


## Oxidative azacyclization of 1-monosubstituted thioureas in reaction with [bis(acyloxy)iodo]arenes to form 1,2,4-thiadiazole derivatives

Tetrahedron 59 (2003) 7521

Elena A. Mamaeva\* and Abdigali A. Bakibaev

Department of Physical and Analytical Chemistry, Tomsk Polytechnic University, 30 Lenin avenue, 634050 Tomsk, Russian Federation

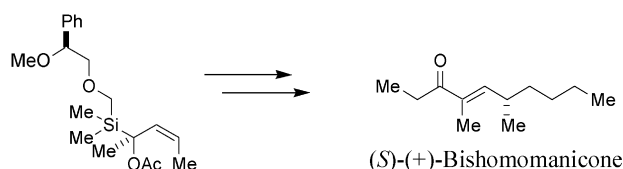


## Stereoconvergent preparation of chiral vinylsilanes by cuprate substitution of $\alpha$ -acetoxyallylsilanes. Application to the synthesis of (*S*)-(+)-bishomomanicone

Tetrahedron 59 (2003) 7527

Boris Guintchin and Stefan Bienz\*

Institute of Organic Chemistry, University of Zurich, Winterthurerstr. 190, CH-8057 Zurich, Switzerland

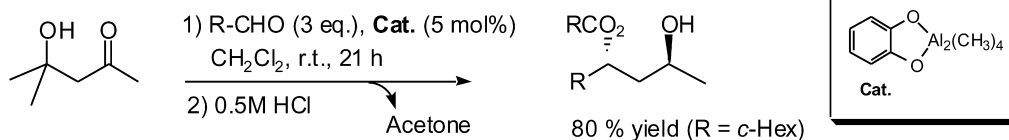


## Aluminum enolates via retroaldol reaction: catalytic tandem aldol-transfer—Tischtschenko reaction of aldehydes with aldol adducts of ketones to ketones

Ilkka Simpura and Vesa Nevalainen\*

Department of Chemistry, Laboratory of Organic Chemistry, University of Helsinki, P.O. Box 55, FIN-00014 Helsinki, Finland

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## Synthesis of fused bicyclic glutarimides

Meng-Yang Chang,<sup>a,\*</sup> Chung-Yi Chen,<sup>b</sup> Shui-Tein Chen<sup>c,\*</sup> and Nein-Chen Chang<sup>b</sup>

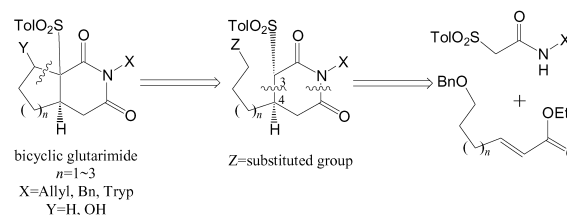
<sup>a</sup>Department of Applied Chemistry, National University of Kaohsiung, Kaohsiung 811, Taiwan, ROC

<sup>b</sup>Department of Chemistry, National Sun Yat-Sen University, Kaohsiung 804, Taiwan, ROC

<sup>c</sup>Institute of Biological Chemistry, Academia Sinica, Nankang, Taipei 115, Taiwan, ROC

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We describe an efficient route towards the synthesis of fused bicyclic glutarimides using facile [3+3] reaction of  $\alpha$ -sulfonylacetamides with different  $\alpha,\beta$ -unsaturated esters as the key step. Intramolecular cyclization of 4-substituted 3-sulfonylglutarimide to form 5,6-, 6,6- or 6,7-fused bicyclic glutarimides was accomplished via alkylation, oxidative cyclization or ring-closing metathesis in modest yield.

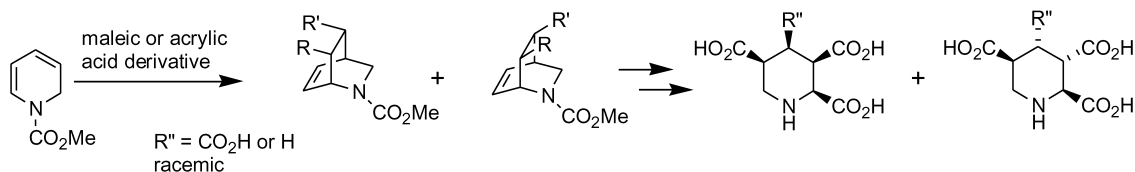


## Stereospecific synthesis of new 2,3,4,5-piperidinetetra-carboxylic acids and 2,3,5-piperidinetricarboxylic acids

Yasushi Arakawa,\* Tomoaki Murakami, Fumiko Ozawa, Yukimi Arakawa and Shigeyuki Yoshifuji

Faculty of Pharmaceutical Sciences, Hokuriku University, Kanagawa-machi Ho-3, Kanazawa 920-1181, Japan

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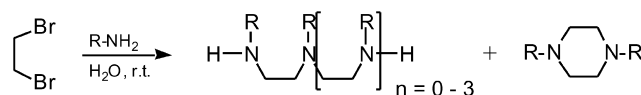
## Reaction of 1,2-dibromoethane with primary amines: formation of $N,N'$ -disubstituted ethylenediamines $\text{RNH}-\text{CH}_2\text{CH}_2-\text{NHR}$ and homologous polyamines $\text{RNH}-[\text{CH}_2\text{CH}_2\text{NR}]_n-\text{H}$

Michael K. Denk,\* Mike J. Krause, Debyani F. Niyogi and Nachhattarpal K. Gill

Department of Chemistry and Biochemistry, University of Guelph, 50 Stone Road, Guelph, Ont. N1G 2W1, Canada

Tetrahedron 59 (2003) 7565

The reaction of primary amines (R=Me, Et, *i*Pr, *t*Bu and Ph) with 1,2-dibromoethane, an inexpensive method for the synthesis of  $N,N'$ -disubstituted ethylenediamines, also yields higher polyethylenediamines, also yields higher polyethylenediamines  $\text{RNH}-[\text{CH}_2\text{CH}_2\text{NR}]_n-\text{H}$  which can be isolated by fractional distillation.

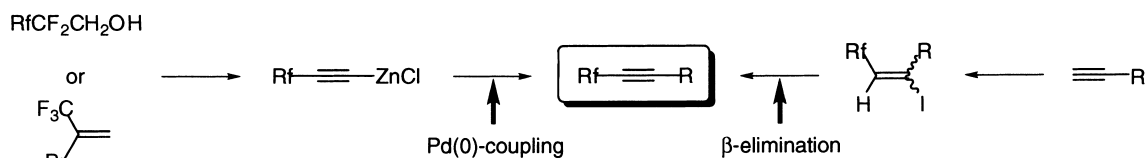


## Facile syntheses of various per- or polyfluoroalkylated internal acetylene derivatives

Tetrahedron 59 (2003) 7571

Tsutomu Konno,\* Jungha Chae, Masashi Kanda, Go Nagai, Kazushige Tamura, Takashi Ishihara and Hiroki Yamanaka

Department of Chemistry and Materials Technology, Kyoto Institute of Technology, Sakyo-ku, Matsugasaki, Kyoto 606-8585, Japan



## Conformational behaviour of tetramethoxythiacalix[4]arenes: solution versus solid-state study

Tetrahedron 59 (2003) 7581

Pavel Lhoták,<sup>a,\*</sup> Michal Himl,<sup>a</sup> Ivan Stibor,<sup>a</sup> Jan Sýkora,<sup>b</sup> Hana Dvořáková,<sup>c</sup> Jan Lang<sup>c</sup> and Hana Petříčková<sup>d</sup>

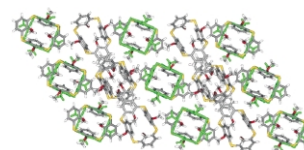
<sup>a</sup>Department of Organic Chemistry, Prague Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic

<sup>b</sup>Institute of Chemical Process Fundamentals, Czech Academy of Sciences, Rozvojova 135, 165 02 Prague 6, Czech Republic

<sup>c</sup>Laboratory of NMR Spectroscopy, Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic

<sup>d</sup>Department of Solid State Chemistry, Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic

Simple tetramethoxy derivative of thiacalix[4]arene possesses an unprecedented solid-state structure, where the cone and 1,3-alternate conformers co-exist in the crystal lattice in a 3:1 ratio. This reflects reasonably distinct conformational preferences as compared with 'classical' calix[4]arenes.

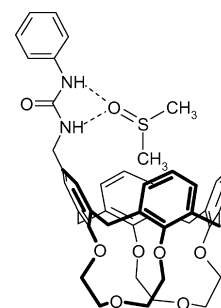


## Recognition of guests bearing donor and acceptor hydrogen bonding groups by heteroditopic calix[4]arene receptors

Tetrahedron 59 (2003) 7587

Arturo Arduini, Elisabetta Brindani, Giovanna Giorgi, Andrea Pochini\* and Andrea Secchi

Dipartimento di Chimica Organica e Industriale dell'Università, Parco area delle Scienze 17/a, 43100 Parma, Italy



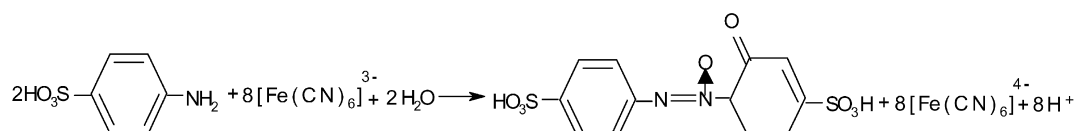
## Kinetic, mechanistic and spectral studies for the oxidation of sulfanilic acid by alkaline hexacyanoferrate(III)

Tetrahedron 59 (2003) 7595

Sairabanu A. Farokhi and Sharanappa T. Nandibewoor\*

P.G. Department of Studies in Chemistry, Karnatak University, Dharwad 580 003, India

The title reaction was studied using spectrometer connected to a rapid kinetic accessory. A mechanism involving the formation of a complex between sulfanilic acid and hexacyanoferrate(III) has been proposed. The product was characterized by IR, H NMR, mass, and elemental analysis.

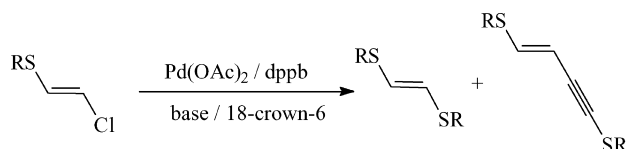


## The role of palladium catalyst and base in stereoselective transformations of (*E*)-2-chlorovinylsulfides

*Tetrahedron* 59 (2003) 7603

Kira Rubina,\* Edgars Abele, Pavel Arsenyan, Mendel Fleisher, Juris Popelis Alexander Gaukhman and Edmunds Lukevics

Laboratory of Catalytical Synthesis, Latvian Institute of Organic Synthesis, 21 Aizkraukles Street, Riga LV-1006, Latvia

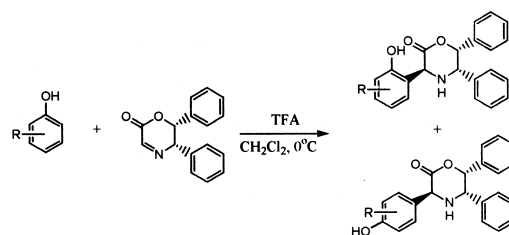


## Highly diastereoselective synthesis of arylglycine derivatives via TFA-promoted Friedel–Crafts reactions of phenols with cyclic glyoxylate imines

*Tetrahedron* 59 (2003) 7609

Yong-Jun Chen,\* Fei Lei, Li Liu and Dong Wang\*

Laboratory of Chemical Biology, Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100080, People's Republic of China



## Efficient synthesis and photochromic properties of 2,3-position hybrid diarylethene derivatives

*Tetrahedron* 59 (2003) 7615

Fan Sun, Fushi Zhang,\* Haobo Guo, Xinhong Zhou, Ruji Wang and Fuqun Zhao

Department of Chemistry, Tsinghua University, Beijing 100084, People's Republic of China

