

## COVER PICTURE

The cover picture shows the X-ray crystal structures of the compounds obtained by the alkylation of a conjugated porphyrinogen precursor at its macrocyclic nitrogen atoms with 2-(methylenenaphthyl) groups. The presence of the *N*-alkyl groups introduces intermolecular  $\pi$ – $\pi$  stacking interactions which culminate in a 1-dimensional stacked array for the fully *N*-substituted derivative. The *N*-alkylation enhances the ability of the compounds to form anion radical and cation radical species and permits “tuning” of the electrochemical properties of the core porphyrinogen. Details are discussed in the article by J. P. Hill et al. on p. 2893 ff.



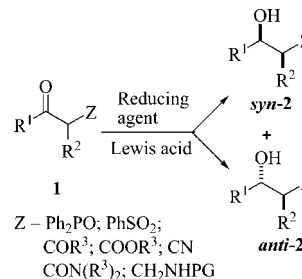
## MICROREVIEW

### Contents

**2867** G. Bartoli, M. Bartolacci, A. Giuliani,  
 E. Marcantoni,\* M. Massaccesi

Diastereoselective Lewis Acid Mediated Reductions of  $\alpha$ -Alkyl- $\beta$ -Functionalized Carbonyl Compounds

**Keywords:** Carbonyl compounds / Chelates / Diastereoselectivity / Lewis acids / Reduction

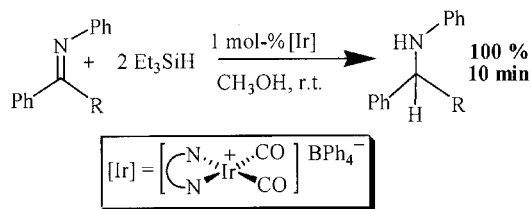


## SHORT COMMUNICATIONS

**2881** L. D. Field, B. A. Messerle,\* S. L. Rumble

Iridium(I)-Catalysed Tandem Hydrosilylation-Protodesilylation of Imines

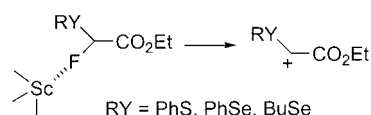
**Keywords:** Hydrosilylation / Imines / Iridium / Solvent effects / Homogeneous catalysis



**2884** M. Yoshimatsu,\* M. Kawamoto, K. Gotoh

First Lewis Acid Catalyzed Generation and Reaction of  $\alpha$ -Organylsulfanyl and  $\alpha$ -Organylselanyl Carbenium Ions Using Ethyl  $\alpha$ -Fluoroacetate Derivatives

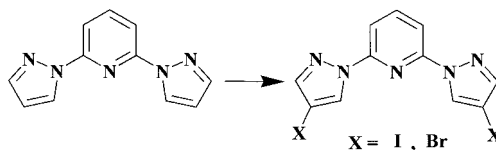
**Keywords:** C–C coupling / Carbocations / Scandium / Catalysis / Lewis acids / Fluorinated compounds



**2888** G. Zoppellaro,\* M. Baumgarten

One-Step Synthesis of Symmetrically Substituted 2,6-Bis(pyrazol-1-yl)pyridine Systems

**Keywords:** Nitrogen heterocycles / Halogenation / Grignard reaction / Synthesis design

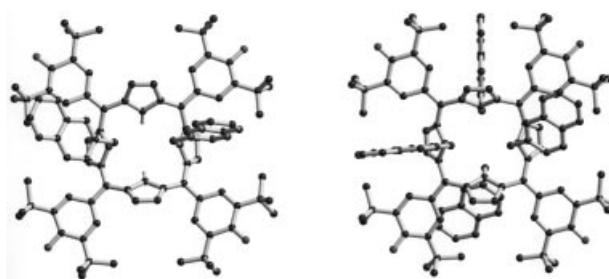


## FULL PAPERS

**2893** J. P. Hill,\* W. Schmitt, A. L. McCarty, K. Ariga, F. D'Souza\*

Structures, Spectral and Electrochemical Properties of *N*-(Naphth-2-ylmethyl)-Appended Porphyrinogens

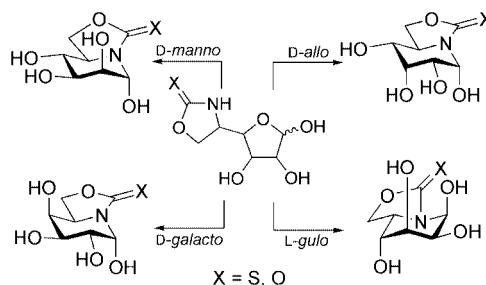
**Keywords:** Porphyrinogen / Redox chemistry / Spectroelectrochemistry / Puckered macrocycles / Quinones



**2903** P. Díaz Pérez, M. I. García-Moreno, C. Ortiz Mellet, J. M. García Fernández\*

Synthesis and Comparative Glycosidase Inhibitory Properties of Reducing Castanospermine Analogues

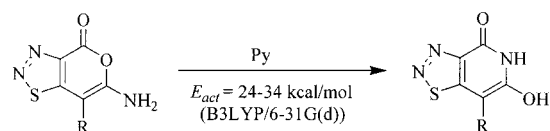
**Keywords:** Carbamates / Castanospermine / Inhibitors / Thiocarbamates / Indolizidines / Enzymes



- 2914** J. O. Subbotina,\* W. M. F. Fabian,\*  
E. V. Tarasov, N. N. Volkova, V. A. Bakulev



Synthetic and Theoretical Aspects of New Dimroth Rearrangement of 6-Aminopyran-2-ones to 6-Hydroxypyridin-2-ones via Carbamoyl Ketenes

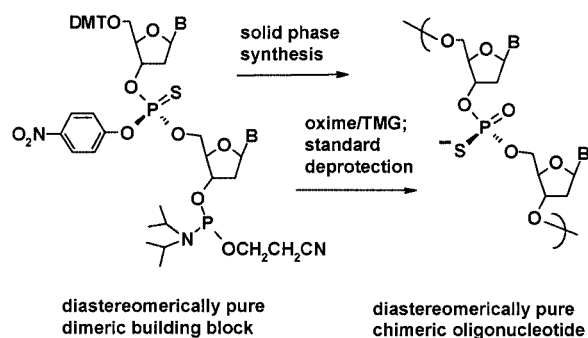


**Keywords:** Rearrangement / Reaction mechanisms / Hydrogen bond / Ketene intermediates / DFT calculations

- 2924** L. A. Wozniak, M. Góra,  
M. Bukowiecka-Matusiak, S. Mourgues,  
G. Pratviel, B. Meunier, W. J. Stec\*



The P-Stereocontrolled Synthesis of PO/PS-Chimeric Oligonucleotides by Incorporation of Dinucleoside Phosphorothioates Bearing an *O*-4-Nitrophenyl Phosphorothioate Protecting Group

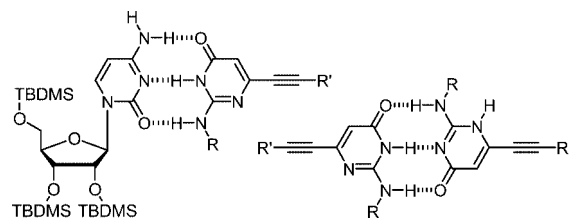


**Keywords:** Antisense agents / Nucleosides / Oligonucleotides / Stereochemistry

- 2931** H. Abe, M. Takase, Y. Doi, S. Matsumoto,  
M. Furusyo, M. Inouye\*



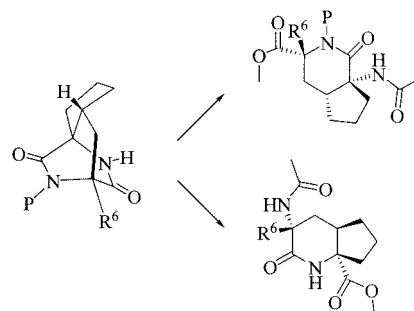
Tautomeric Self-Dimerization and Molecular Recognition Properties of 2-Aminopyrimidinone Derivatives as Triple Hydrogen-Bonding Modules in Molecular Assemblies



**Keywords:** Molecular recognition / Self-assembly / Nucleobases / Hydrogen bonds / Tautomerism

- 2941** B. M. P. Verbist, W. M. De Borggraeve,\*  
S. Toppet, F. Compennolle, G. J. Hoornaert

Development of New Amino(oxo)piperidine-carboxylate Scaffolds and Their Evaluation as  $\beta$ -Turn Mimics



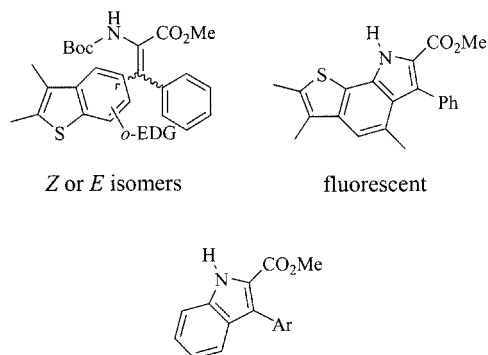
**Keywords:** Intramolecular Diels–Alder reaction / 2(1*H*)-pyrazinones /  $\beta$ -Turn mimic

2951

A. S. Abreu, P. M. T. Ferreira,  
M.-J. R. P. Queiroz,\* I. C. F. R. Ferreira,  
R. C. Calhella, L. M. Estevinho

Synthesis of  $\beta$ -Benzo[*b*]thienyldehydrophenylalanine Derivatives by One-Pot Palladium-Catalyzed Borylation and Suzuki Coupling (BSC) and Metal-Assisted Intramolecular Cyclization – Studies of Fluorescence and Antimicrobial Activity

**Keywords:** Dehydrophenylalanines / Benzothiophenes / Borylation / Suzuki coupling / Cyclization / Indoles / Fluorescence / Antimicrobial activity

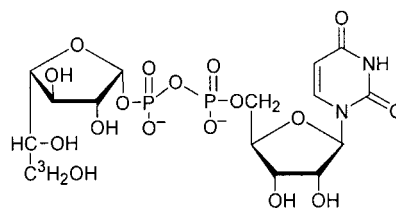


2958

K. Mariño, C. Marino, C. Lima, L. Baldoni,  
R. M. de Lederkremer\*

The First Chemical Synthesis of UDP[6-<sup>3</sup>H]- $\alpha$ -D-galactofuranose

**Keywords:** Carbohydrates / Galactofuranosyltransferase / Isotopic labeling / Nucleotides / UDP-Galf

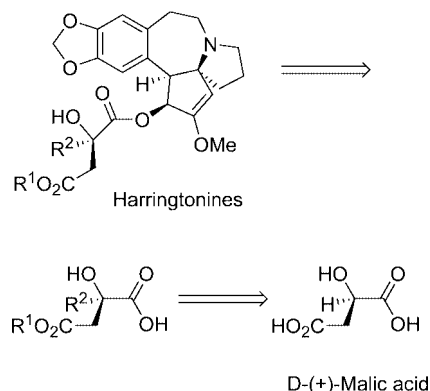


2965

S. A. A. El Bialy, H. Braun, L. F. Tietze\*

Enantioselective Synthesis of  $\alpha$ -Alkylmalates as the Pharmacophoric Group of Several Natural Alkaloids and Glycosides

**Keywords:** Alkaloids / Antitumor agents / Dioxolanones / Enantioselective synthesis / Furans / Glycosides / Malates



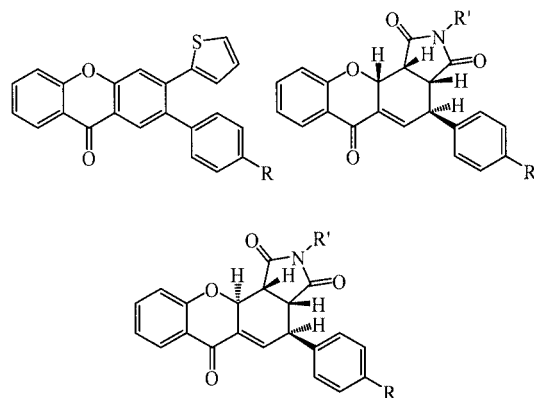
2973

D. G. A. Pinto, A. M. S. Silva,\* C. M. Brito,  
A. Sandulache, J. R. Carrillo, P. Prieto,  
A. Díaz-Ortiz, A. de la Hoz,\*  
J. A. S. Cavaleiro



Reactivity of 3-Styrylchromones as Dienes in Diels–Alder Reactions under Microwave Irradiation: A New Synthesis of Xanthenes

**Keywords:** 3-Styrylchromones / Microwave irradiation / Xanthone-type compounds / Cycloaddition / Solvent-free reactions / Ab initio calculations

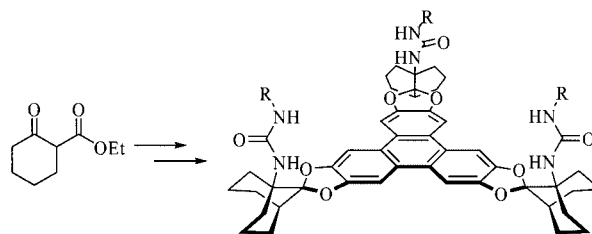


**2987** M. C. Schopohl, A. Faust, D. Mirk,  
R. Fröhlich, O. Kataeva, S. R. Waldvogel\*



Synthesis of Rigid Receptors Based on Triphenylene Ketals

**Keywords:** Receptors / Supramolecular chemistry / Synthetic methods / Oxidative coupling reaction / Triphenylene ketals

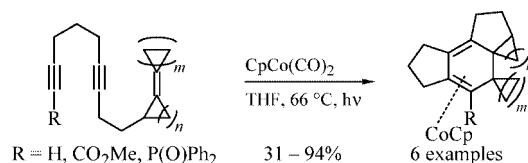


**3000** M. Schelper, O. Buisine, S. Kozhushkov,  
C. Aubert\*, A. de Meijere\*, M. Malacria\*



Cobalt(I)-Mediated Intramolecular [2+2+2] Cocyclizations of (Methylenecyclopropyl)diynes as an Easy Access to Cyclopropanated Oligocycles

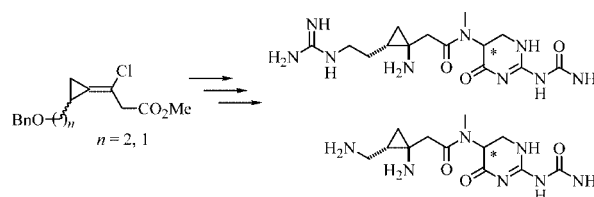
**Keywords:** Cyclopropanes / Enediyne / Cobalt / Cyclization / Metal template synthesis



**3008** M. Kordes, M. Brands, M. Es-Sayed,  
A. de Meijere\*

Preparation of Cyclopropane Analogues of the Natural Antibiotic TAN 1057 A/B

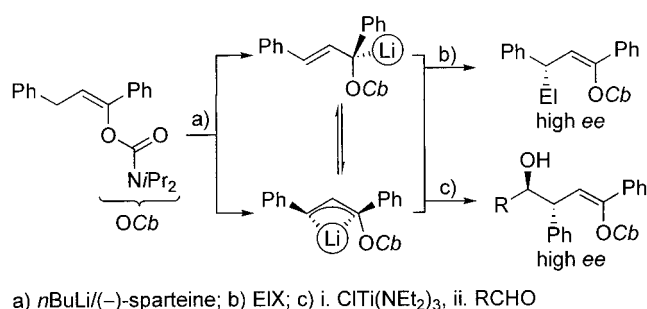
**Keywords:** Amino acids / Antibiotics / Cyclopropanation



**3017** J. Reuber, R. Fröhlich, D. Hoppe\*

Asymmetric  $\gamma$ -Deprotonation and Substitution Reactions of (Z)-1,3-Diphenyl-1-propenyl *N,N*-Diisopropylcarbamate

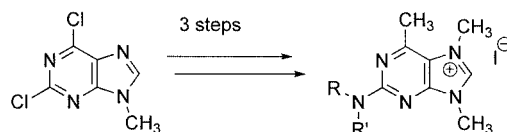
**Keywords:** Asymmetric synthesis / Carbanions / Allylic compounds / Homoaldol addition / (–)-Sparteine



**3026** M. Hocek\*, R. Pohl, I. Císařová

Highly Methylated Purines and Purinium Salts as Analogues of Heteromines

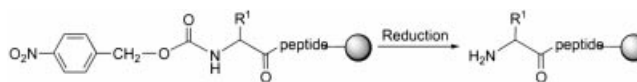
**Keywords:** Purines / Natural products / Cross-coupling / Alkylation /  $^{15}\text{N}$  NMR spectroscopy



**3031** A. Isidro-Llobet, J. Guasch-Camell,  
M. Álvarez, F. Albericio\*



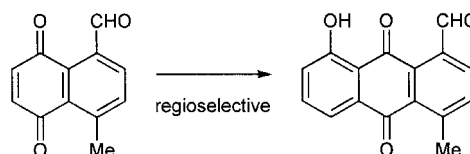
*p*-Nitrobenzyloxycarbonyl (pNZ) as a Temporary *N*<sup>α</sup>-Protecting Group in Orthogonal Solid-Phase Peptide Synthesis – Avoiding Diketo-piperazine and Aspartimide Formation



**Keywords:** Amino protecting group / Nitro reduction /  $\text{SnCl}_2$  reduction / PNZ group in SPPS / Combinatorial chemistry / Side reactions

**3040** G. A. Kraus,\* N. Zhang, J. Q. Wei,  
J. H. Jensen\*

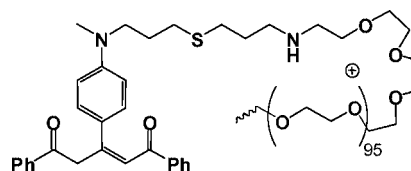
Regiochemical Control by Remote Substituents – A Selective Synthesis of Angularly Fused Ring Systems



**Keywords:** Diels–Alder / Quinones / Regiocontrol / Regioselectivity

**3045** M. Alvaro, C. Aprile, H. García,\* E. Peris

A Soluble and Reusable Colorimetric Sensor Based on the Covalent Attachment of a Triaryl-pentenedione to Poly(ethylene glycol)

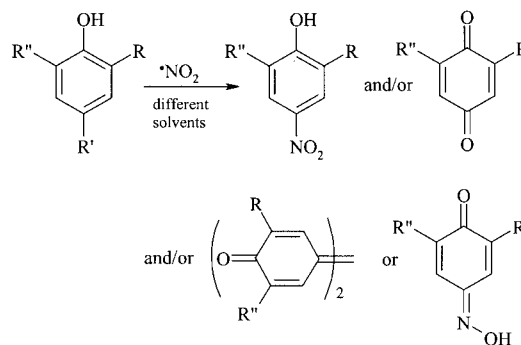


**Keywords:** Sensors / Polymers / Heterocycles / Cyclization / Colorimetry

Soluble and recoverable

**3052** P. Astolfi,\* M. Panagiotaki, L. Greci

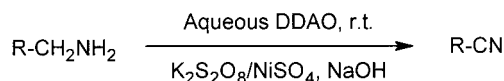
New Insights into the Reactivity of Nitrogen Dioxide with Substituted Phenols: A Solvent Effect



**Keywords:** Substituted phenols / Nitrogen dioxide / Hydrogen transfer / Electron transfer / Solvent effects

**3060** D. Biondini, L. Brinchi, R. Germani,  
L. Goracci, G. Savelli\*

Dehydrogenation of Amines to Nitriles in Aqueous Micelles



**Keywords:** Amines / Oxidation / Nickel / Nitrile / Micelles

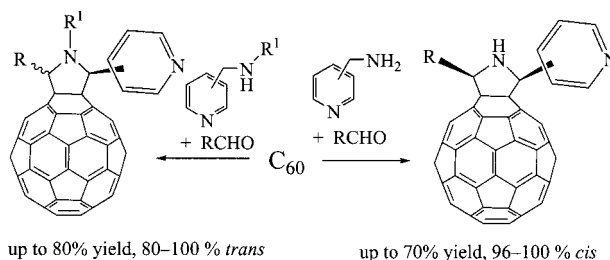
3064

P. A. Troshin,\* A. S. Peregodov,  
D. Mühlbacher, R. N. Lyubovskaya



An Efficient [2+3] Cycloaddition Approach to the Synthesis of Pyridyl-Appended Fullerene Ligands

**Keywords:** Azomethine ylides / Cycloaddition / Fullerenes / N ligands / Picolamines



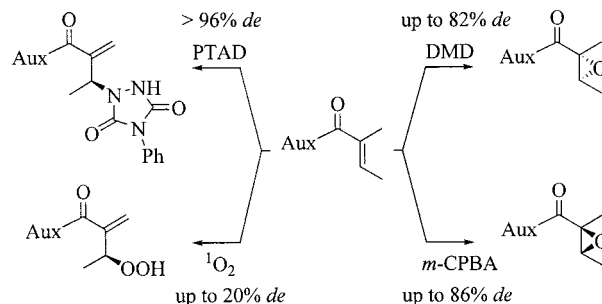
3075

A. Pastor,\* W. Adam, T. Wirth, G. Tóth



Diastereoselective Reactions of the Tiglic Acid Functionality Mediated by Oxazolidine Chiral Auxiliaries: A Mechanistic Comparison of DMD and *m*-CPBA Epoxidations versus Singlet Oxygen and PTAD Ene Reactions

**Keywords:** Ene reaction / Epoxidation / Hydrogen bonding / Singlet oxygen / Stereochemistry

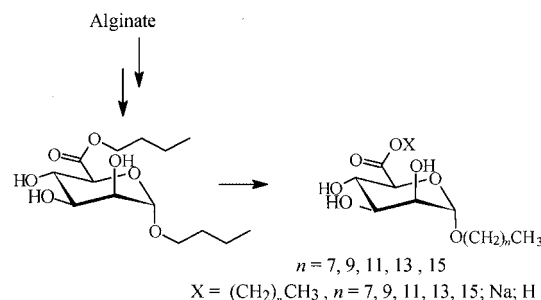


3085

M. Roussel, T. Benvegnu,\* V. Lognoné,  
H. Le Deit, I. Soutrel, I. Laurent,  
D. Plusquellec

Synthesis and Physico-Chemical Properties of Novel Biocompatible Alkyl D-Mannopyranosiduronate Surfactants Derived from Alginate

**Keywords:** Alginate / Bioorganic chemistry / Mannuronic acid / Micelles / Surfactants

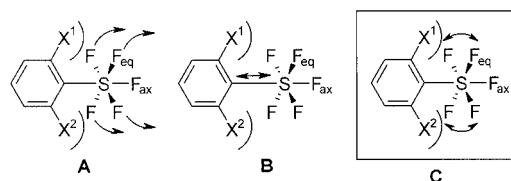


3095

P. Kirsch,\* A. Hahn

Liquid Crystals Based on Hypervalent Sulfur Fluorides: Exploring the Steric Effects of *ortho*-Fluorine Substituents

**Keywords:** Density functional calculations / Fluorination / Liquid crystals / Hypervalent sulfur fluorides / Mesogens / Molecular modelling

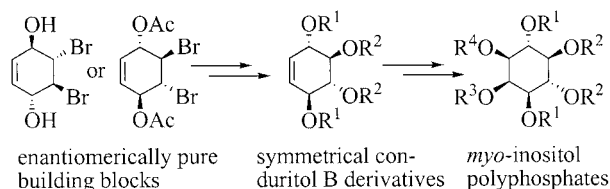


3101

M. A. L. Podeschwa, O. Plettenburg,  
H.-J. Altenbach\*

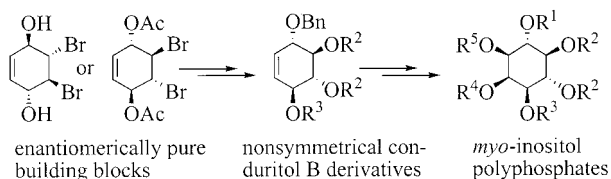
Flexible Stereo- and Regioselective Synthesis of *myo*-Inositol Phosphates (Part 1): Via Symmetrical Conduritol B Derivatives

**Keywords:** Asymmetric synthesis / Biocatalytic resolution / Inositol phosphates / Natural products / Phosphorylation / Protecting groups



**3116** M. A. L. Podeschwa, O. Plettenburg,  
H.-J. Altenbach\*

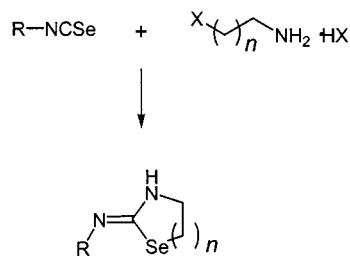
Flexible Stereo- and Regioselective Synthesis of *myo*-Inositol Phosphates (Part 2): Via Nonsymmetrical Conduritol B Derivatives



**Keywords:** Asymmetric synthesis / Biocatalytic resolution / Inositol phosphates / Natural products / Phosphorylation / Protecting groups

**3128** G. L. Sommen, A. Linden, H. Heimgartner\*

Selenium-Containing Heterocycles From Isoselenocyanates: Synthesis of 1,3-Selenazolidine and Perhydro-1,3-selenazine Derivatives



**Keywords:** Cyclizations / Isoselenocyanates / Selenium heterocycles / Sulfur heterocycles / X-ray crystallography