

## Subject Index

***Abacopteris aspera***

New Flavanol Glucosides from *Abacopteris aspera* (PRESL.) CHING, 108

***Acanthopanax brachypus***

Stilbenoids and Phenols in *Acanthopanax brachypus*, 1466

***Acanthophyllum laxiusculum***

Two New Triterpene Saponins from *Acanthophyllum laxiusculum*, 611

**Acetalizations**

Synthesis of Benzobis[1,3]oxathiins, 1061

**Acetamide, *N*-(1-phenylethyl)-**

Enantiomeric Enrichments *via* the Self-Disproportionation of Enantiomers (SDE) by Achiral, Gravity-Driven Column Chromatography: a Case Study Using *N*-(1-Phenylethyl)acetamide for Optimizing the Enantiomerically Pure Yield and Magnitude of the SDE, 1147

**Acetate, ethyl 2-cyano-**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**Acetylenecarboxylates**

New Route for the Synthesis of Four-Membered Cyclic Ketene Dithioacetals, 67

**Acetylenedicarboxylate, dimethyl (DMAD)**

Novel 1,2,3,4-Tetrahydroquinazolinones *via* Reaction of 2-Amino-*N*-substituted Benzamides and Dimethyl Acetylenedicarboxylate, 1028

**Acetylenedicarboxylates**

Copper-Catalyzed Synthesis of Pentasubstituted Pyridines from *N*-Sulfonyl Ketenimines, 1,1,3,3-Tetramethylguanidine, and Acetylene Dicarboxylates, 534

Excursion to the World of Heptacyclic Compounds Made of Azulenes and Acetylenedicarboxylates, 913

**Acetylenes**

Base-Catalyzed Formation of Isoxazoles from Dialkyl Acetylenedicarboxylates and 2-Nitroacetophenones, 589

***Achillea millefolium***

Two New Eudesmanolides from the Flowers of *Achillea millefolium*, 973

**Acid metabolites**

The First Synthesis of (4*S*,5*R*,6*R*)-5,6-Dihydroxy-4-(prop-1-en-2-yl)cyclohex-1-ene-1-carboxylic Acid, 1442

**Acridines, decahydrodioxo-**

Novel Cyclic Enaminone Esters and *N*-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Acylation**

Synthesis of Two Natural Furan-Cyclized Diarylheptanoids *via* 2-Furaldehyde, 938

**Aggregates**

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

**Aldol reaction, *L*-proline-catalyzed**

Towards Stereoselective Synthesis of the C(31)–C(39) and C(20)–C(27) Fragments of Phorboxazole A, 386

**Algal endophytes**

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

**Alkaloids**

Further Alkaloids from the Leaves of *Trigonostemon liti*, 72

Steroidal Alkaloids from *Veratrum maackii* REGEL with Genotoxicity on Brain-Cell DNA in Mice, 539

A New Indole Alkaloid from *Cleome droserifolia*, 719

Three New Alkaloids from *Hippophae rhamnoides* LINN. subsp. *sinensis* ROUSTI, 1287

A Novel Alkaloid from *Aspidosperma pyricollum* (Apocynaceae) and Complete <sup>1</sup>H and <sup>13</sup>C Chemical Shift Assignments, 1381

#### **Alkaloids, diketopiperazine-type**

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

#### **Alkylation**

Synthesis of Two Natural Furan-Cyclized Diarylheptanoids *via* 2-Furaldehyde, 938

#### **Alkylation, asymmetric allylic**

Lithium Enolates: ‘Capricious’ Structures – Reliable Reagents for Synthesis, 1

#### **Alkynes**

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

#### **Alkynes, terminal**

Sulfonyl Ketenimines as Key Intermediates in One-Pot Synthesis of *N*-Sulfonyl-2-alkaneimidoyl Selenocyanates, 343

#### **Allylic alkylation**

Enantioselective Allylic Alkylation Catalyzed by Novel C<sub>2</sub>-Symmetric Bisphosphinites, 490

#### **Allylic amination**

Synthesis of Novel, Chiral Bicyclo[3.1.0]hex-2-ene Amino Acid Derivatives as Useful Synthons in Medicinal Chemistry, 1189

#### **Amides**

Modulation of Reactivities of Dienophiles for *Diels–Alder* Reactions *via* Complexation of  $\alpha,\beta$ -Unsaturated Chelating Amides, 287

#### **Amination**

Copper(I)-Catalyzed Amination of Halogenopyridines with Polyamines, 47

#### **Amino acids**

Characterization of Adducts Formed in the Reactions of Methylglyoxal and Malonaldehyde with Lysine and Histidine Derivatives, 842

#### **2-Aminoisobutyric acid (Aib)**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

Synthesis of Cyclopentapeptides with Three to Five Aib Units, 232

#### **Aminopentadienal rearrangement**

The Aminopropenal- and Aminopentadienal Rearrangement, 881

#### **Aminopropenal rearrangement**

The Aminopropenal- and Aminopentadienal Rearrangement, 881

#### **Amino(thio)uracils**

Diastereoselective and Efficient Synthesis of Indeno[2'':1''':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidine-2,4,6(1*H*,3*H*)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1*H*-inden-2-yl)-5,8-dihydropyrido[2,3-*d*]pyrimidine-2,4,7(1*H*,3*H*,6*H*)-trione Derivatives, 1411

#### **$\alpha$ -Aminoxylation**

Stereoselective Synthesis of the Non-Lactonic Portion of (*Z*)-Cryptofolione and Approaches towards Its Conversion to (*Z*)-Cryptofolione, 520

#### **Amisbenzoic acid**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

#### ***Amischotolype hispida***

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

#### **Amisignol**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

#### **Amisnolide**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

#### **Amisphytin**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

**$\alpha$ -Amylase**

Concise Synthesis and Antidiabetic Effect of Three Natural Triterpenoid Saponins Isolated from *Fadogia aencylantha* (Makoni tea), 1254

**Antibacterial activity**

Structure and Absolute Configuration of Aspergilumamide A, a Novel Lumazine Peptide from the Mangrove-Derived Fungus *Aspergillus* sp., 368

Subergane-Type Sesquiterpenes from Gorgonian Coral *Subergorgia suberosa* with Antibacterial Activities, 1202

**Antifungal activity**

Bioactive Trichothecenes Produced by the *Myrothecium* sp. QB-1, 1435

**Anti-HIV-1 activities**

Flavonoids Isolated from Heat-Processed *Epimedium koreanum* and Their Anti-HIV-1 Activities, 1177

**Anti-inflammatory activity**

Two New Flavonoids from *Retama raetam*, 561

**Antimicrobial activity**

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

Diterpene Glycosides from the Dry Fronds of *Conyza japonica*, 986

**Antimycobacterial activity**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

**Anti-NO production activity**

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

**Antioxidant activity**

Synthesis of New Silybin Derivatives and Evaluation of Their Antioxidant Properties, 399

Two New Flavonoids from *Retama raetam*, 561

Antioxidative Cassane Diterpenoids from the Seeds of *Caesalpinia minax*, 1387

**Antiparkinsonian activity**

The First Synthesis of (4*S*,5*R*,6*R*)-5,6-Dihydroxy-4-(prop-1-en-2-yl)cyclohex-1-ene-1-carboxylic Acid, 1442

**Antiplasmodial activity**

Two 2,6-Dioxabicyclo[3.3.1]nonan-3-ones from *Phragmanthera capitata* (SPRENG.) BALLE (Loranthaceae), 945

**Antitumor activity**

Synthesis of a Regioisomer of  $\beta$ -Lapachone and Analogs as Potent Antitumor Agents, 128

**Araliaceae**

Stilbenoids and Phenols in *Acanthopanax brachypus*, 1466

**Aromatic electrophilic substitution**

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**Aryl propanoic acids**

Concise Synthesis of 2-Arylpropanoic Acids and Study of Unprecedented Reduction of 3-Hydroxy-2-arylpropanoic Acid Ethyl Ester to 2-Arylpropanoic Acid Ethyl Ester by  $\text{BH}_3 \cdot \text{THF}$ , 1273

**Arylation**

Palladium-Catalyzed Arylation of Olefins by Triarylphosphines via C–P Bond Cleavage, 116

Direct Arylation of 5-Iodouracil and 5-Iodouridine with Heteroarenes and Benzene via Photochemical Reaction, 953

***Aspergillus***

Structure and Absolute Configuration of Aspergilumamide A, a Novel Lumazine Peptide from the Mangrove-Derived Fungus *Aspergillus* sp., 368

***Aspergillus carneus***

Three New Phenyl Ether Derivatives from *Aspergillus carneus* HQ889708, 819

***Aspergillus versicolor***

Xanthones with  $\alpha$ -Glucosidase Inhibitory Activities from *Aspergillus versicolor*, a Fungal Endophyte of *Huperzia serrata*, 148

***Aspidosperma pyricollum***

A Novel Alkaloid from *Aspidosperma pyricollum* (Apocynaceae) and Complete <sup>1</sup>H and <sup>13</sup>C Chemical Shift Assignments, 1381

***Azadirachta indica***

Two New Degraded Triterpenoids and a Novel *seco*-Norabietane Diterpene from the Root Bark of *Azadirachta indica*, 135

**Aza-Wittig reaction**

One-Pot Synthesis of 3-Acetyl-2-aryl-3,4-dihydroquinazolines from *N*-[2-(Azidomethyl)phenyl]benzamides Utilizing Intramolecular Aza-Wittig Reaction, 184

**Azides**

One-Pot Synthesis of 3-Acetyl-2-aryl-3,4-dihydroquinazolines from *N*-[2-(Azidomethyl)phenyl]benzamides Utilizing Intramolecular Aza-Wittig Reaction, 184

**Azides, sulfonyl**

Sulfonyl Ketenimines as Key Intermediates in One-Pot Synthesis of *N*-Sulfonyl-2-alkaneimidoyl Selenocyanates, 343

**Azido alcohols**

(*R*)-2,3-Cyclohexylidene-glyceraldehyde, a Chiral Pool Synthon for the Synthesis of 2-Azido-1,3-diols, 823

**Azidobutenitriles**

Computational Studies on Intramolecular Cycloadditions of Azidoenynes and Azidobutenitriles to Give 6*H*-Pyrrolo[1,2-*c*][1,2,3]triazoles and 5*H*-Pyrrolo[1,2-*d*]tetrazoles, 1018

**Azidoenynes**

Computational Studies on Intramolecular Cycloadditions of Azidoenynes and Azidobutenitriles to Give 6*H*-Pyrrolo[1,2-*c*][1,2,3]triazoles and 5*H*-Pyrrolo[1,2-*d*]tetrazoles, 1018

**Aziridine**

Enantiospecific Synthesis of (*R*)-3-Amino-4-(2,4,5-trifluorophenyl)butanoic Acid Using (*S*)-Serine as a Chiral Pool, 260

**'Azirine/oxazolone' method**

Synthesis of Cyclopentapeptides with Three to Five Aib Units, 232

**Azodicarboxylate**

Formation of Dialkyl 2-[3-Alkoxy-1-(alkylimino)-1-chloro-3-oxopropan-2-ylidene]hydrazine-1,1-dicarboxylates of  $\alpha$ -(Alkoxy-carbonyl)imidoyl Chlorides from Phosphine-Diazo Ester Zwitterions and *Nef*-Isocyanide Adducts, 374

**Azulenes**

Excursion to the World of Heptacyclic Compounds Made of Azulenes and Acetylenedicarboxylates, 913

**(+)-Balanocarpol**

Absolute Configuration of Resveratrol Oligomers Isolated from *Hopea utilis*, 32

**Band gap energy**

*In situ* UV/VIS Spectroscopy of Electrochemically Synthesized Selenophene-Thiophene Copolymers, 851

**Barbituric acid**

An Efficient Synthesis of Chromeno[2,3-*d*]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

**Basicity**

Computational Studies on Intramolecular Cycloadditions of Azidoenynes and Azidobutenitriles to Give 6*H*-Pyrrolo[1,2-*c*][1,2,3]triazoles and 5*H*-Pyrrolo[1,2-*d*]tetrazoles, 1018

**Benzamides**

Novel 1,2,3,4-Tetrahydroquinazolinones *via* Reaction of 2-Amino-*N*-substituted Benzamides and Dimethyl Acetylenedicarboxylate, 1028

**Benzenemethanols, 2-amino-**

One-Pot Synthesis of 3-Acetyl-2-aryl-3,4-dihydroquinazolines from *N*-[2-(Azidomethyl)phenyl]benzamides Utilizing Intramolecular Aza-Wittig Reaction, 184

**Benzenes, 1,3-diphenyl-**

Synthesis and Characterization of *m*-Terphenyl (1,3-Diphenylbenzene) Compounds Containing Trifluoromethyl Groups, 359

**Benzenes, polysubstituted**

Synthesis of Polysubstituted Benzenes *via* the Vinylogous *Michael* Addition of Alkylidenemalononitriles to 2-(1,3-Dioxo-1*H*-inden-2(3*H*)-ylidene)malononitrile, 569

**Benzoates, 2-(azidomethyl)-**

One-Pot Synthesis of 3-Alkoxy-2,3-dihydro-1*H*-isoindol-1-ones by the Reactions of 2-(Azidomethyl)benzoates with NaH, 604

**Benzyl anion**

One-Pot Synthesis of 3-Alkoxy-2,3-dihydro-1*H*-isoindol-1-ones by the Reactions of 2-(Azidomethyl)benzoates with NaH, 604

**Benzylic oxidation**

Tandem Benzylic Oxidation/Dihydroxylation of  $\alpha$ -Vinyl- and  $\alpha$ -Alkenylbenzyl Alcohols, 92

**Benzyli(triphenyl)phosphonium dichloriodate**

Benzyli(triphenyl)phosphonium Dichloriodate: A New Reagent for Coidination of Alkenes, 1302

**Bicyclo[3.1.0]hex-2-ene amino acid**

Synthesis of Novel, Chiral Bicyclo[3.1.0]hex-2-ene Amino Acid Derivatives as Useful Synthons in Medicinal Chemistry, 1189

**Bicyclic lactones**

Two 2,6-Dioxabicyclo[3.3.1]nonan-3-ones from *Phragmanthera capitata* (SPRENG.) BALLE (Loranthaceae), 945

**Bidesmosidic oleanolic acid saponins**

Concise Synthesis and Antidiabetic Effect of Three Natural Triterpenoid Saponins Isolated from *Fadogia ancyrantha* (Makoni tea), 1254

**Biflavones**

Biflavones and Furanone Glucosides from *Zabelia tyaihyonii*, 1419

**Biflavonoids**

Biflavonoids, Lignans, and Related Compounds from the Roots of *Diplomorpha canescens*, 704

**2,2'-Bifurans**

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**Bile acids**

Design and Synthesis of New Bile Acid–Sterol Conjugates Linked *via* 1,2,3-Triazole Ring, 1337

**Bisabolane sesquiterpenes**

Three New Bisabolane Sesquiterpenes from *Ligularia songarica*, 410

**Bisabolanes**

Synthesis and NMR Spectroscopic Elucidation of Four Diastereoisomers of Oxygenated Bisabolane Side Chain, 1035

**Bisphosphinites, chiral**

Enantioselective Allylic Alkylation Catalyzed by Novel  $C_2$ -Symmetric Bisphosphinites, 490

**Bovidic acid**

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

**Boyd group electronegativity**

Boyd Group Electronegativity Influence on the *Parr* Global Electrophilicity of *Vilsmeier* Reagent-Derived Imidates: New Insights toward Improving *Mitsunobu* Chemistry, 582

**Brine shrimp lethality**

New Phragmalin-Type Limonoid Orthoesters from the Bark of *Chukrasia tabularis* var. *velutina*, 1403

**Bromoacetylation**

The Forgotten Carbonyl Reaction: Chloroacetylation and Bromoacetylation of Carbonyl Compounds, 899

**Brown alga**

10 $\beta$ -Acetoxy-8 $\alpha$ ,9 $\alpha$ -epoxy-14 $\beta$ -hydroxy-7-oxodolastane – A New Diterpene Isolated from the Brazilian Brown Macroalga *Canistrocarpus cervicornis*, 785

**Brown seaweeds**

10 $\beta$ -Acetoxy-8 $\alpha$ ,9 $\alpha$ -epoxy-14 $\beta$ -hydroxy-7-oxodolastane – A New Diterpene Isolated from the Brazilian Brown Macroalga *Canistrocarpus cervicornis*, 785

**Brown's allylation**

Stereoselective Total Synthesis of (3*S*,5*S*)-1,7-Bis(4-hydroxyphenyl)heptane-3,5-diol, (3*S*,5*S*)-Alpinikatin, and Its Diastereoisomers, 1307

**Butanoic acid, (R)-3-amino-4-(2,4,5-trifluorophenyl)-**

Enantiospecific Synthesis of (R)-3-Amino-4-(2,4,5-trifluorophenyl)butanoic Acid Using (S)-Serine as a Chiral Pool, 260

**(2Z)-But-2-ene-1,4-diol**

A Stereoselective Total Synthesis of Xyloide, a Natural Bioactive Nonenolide, 674

**Butyllithium**

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

**γ-Butyrolactone, 5-hexyl-4-methyl-**

Facile Synthesis of 5-Hexyl-4-methyl-γ-butyrolactone *via Nef* Reaction as a Key Step, 795

**Butyrolactones**

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

**Caesaljaponins A and B**

Caesaljaponins A and B: New Cassane-Type Furanoditerpenoids from the Seeds of *Caesalpinia decapetala* var. *japonica*, 336

**Caesalpinia decapetala**

Caesaljaponins A and B: New Cassane-Type Furanoditerpenoids from the Seeds of *Caesalpinia decapetala* var. *japonica*, 336

**Caesalpinia minax**

Antioxidative Cassane Diterpenoids from the Seeds of *Caesalpinia minax*, 1387

**Calixarenes**

New Calix[4]arene-Cored Peripherally Functionalized Dendrimers: Synthesis and Conformational Characteristics, 593

**Callicarpa longissima**

Two New Phenylethanoid Glycosides from *Callicarpa longissima*, 482

**Camellia oleifera**

New Triterpenoid Glycosides from the Roots of *Camellia oleifera* ABEL, 496

**Camphor**

Synthesis of Terpene Diamines Based on Camphor-Derived Dinitriles, 447

**Canistrocarpus cervicornis**

10β-Acetoxy-8α,9α-epoxy-14β-hydroxy-7-oxodolastane – A New Diterpene Isolated from the Brazilian Brown Macroalga *Canistrocarpus cervicornis*, 785

**Carbenes**

Reactions of (1*E*)-Buta-1,3-dien-1-yl Acetate with Diazocarbonyl Compounds, 1245

**Carbenoids**

Reactions of (1*E*)-Buta-1,3-dien-1-yl Acetate with Diazocarbonyl Compounds, 1245  
Atom-Economical Synthesis of Complex Heterocycles with N–O Moiety, 1315

**β-Carboline alkaloids**

Further Alkaloids from the Leaves of *Trigonostemon lii*, 72

**Carbon disulfide**

New Route for the Synthesis of Four-Membered Cyclic Ketene Dithioacetals, 67

**Carbon nanotubes**

DNA-Mediated Copper Nanoparticle Formation on Dispersed Single-Walled Carbon Nanotubes, 1141

**Carbonyl compounds**

The Forgotten Carbonyl Reaction: Chloroacetylation and Bromoacetylation of Carbonyl Compounds, 899

**Casbane diterpenoids**

New Casbane Diterpenoids from the Hainan Soft Coral *Sinularia* Species, 834

**Cassane diterpenoids**

Caesaljaponins A and B: New Cassane-Type Furanoditerpenoids from the Seeds of *Caesalpinia decapetala* var. *japonica*, 336

Antioxidative Cassane Diterpenoids from the Seeds of *Caesalpinia minax*, 1387

**Catalpa ovata**

Two New Iridoids from the Stem of *Catalpa ovata*, 381

**C,C-Bond coupling**

Synthesis and Characterization of *m*-Terphenyl (1,3-Diphenylbenzene) Compounds Containing Trifluoromethyl Groups, 359

**Centella asiatica**

New Pentacyclic Triterpenoids from *Centella asiatica*, 683

**Centellasaponins**

New Pentacyclic Triterpenoids from *Centella asiatica*, 683

**C–H Activation**

Atom-Economical Synthesis of Complex Heterocycles with N–O Moiety, 1315

**Chalcones**

Synthesis of 3,5-Diarylcyclohex-2-enones by NH<sub>4</sub>Cl/HCl-Catalyzed Cyclization and Deacetylation of 4-Acetylhexane-1,5-diones, 253

**Chelates**

Modulation of Reactivities of Dienophiles for *Diels–Alder* Reactions via Complexation of  $\alpha,\beta$ -Unsaturated Chelating Amides, 287

**Chiral epoxide**

An Efficient Enantioselective Synthesis of Natural Gingerols, the Active Principles of Ginger, 1009

**Chloroacetylation**

The Forgotten Carbonyl Reaction: Chloroacetylation and Bromoacetylation of Carbonyl Compounds, 899

**2H-Chromenes**

An Efficient and Chemoselective *Knoevenagel*/Hemiketalization Process for the Synthesis of New 2H-Chromenes in a One-Pot Three-Component Reaction, 978

**Chromeno[2,3-*d*]pyrimidine-2,4-diones**

An Efficient Synthesis of Chromeno[2,3-*d*]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

**Chukrasia tabularis**

New Phragmalin-Type Limonoid Orthoesters from the Bark of *Chukrasia tabularis* var. *velutina*, 1403

**Ciliatasides A–C**

New Furostanol Glycosides from the Roots of *Digitalis ciliata* TRAUTV., 224

**Cleome droserifolia**

A New Indole Alkaloid from *Cleome droserifolia*, 719

**Click chemistry**

New Convenient Five-Component One-Pot Synthesis of 3-Alkyl-6-amino-1,4-dihydro-4-[(1,2,3-triazol-4-yl)methoxy]phenyl]pyrano[2,3-*c*]pyrazole-5-carbonitrile Derivatives, 633

Design and Synthesis of New Bile Acid–Sterol Conjugates Linked via 1,2,3-Triazole Ring, 1337

**‘Click’ reaction**

Copper/Graphene/Clay Nanohybrid: A Highly Efficient Heterogeneous Nanocatalyst for the Synthesis of Novel 1,2,3-Triazolyl Carboacyclic Nucleosides via ‘Click’ *Huisgen* 1,3-Dipolar Cycloaddition, 1210

**Coidination**

Benzyl(triphenyl)phosphonium Dichloroiodate: A New Reagent for Coidination of Alkenes, 1302

**Column chromatography**

Enantiomeric Enrichments via the Self-Disproportionation of Enantiomers (SDE) by Achiral, Gravity-Driven Column Chromatography: a Case Study Using *N*-(1-Phenylethyl)acetamide for Optimizing the Enantiomerically Pure Yield and Magnitude of the SDE, 1147

**Computational studies**

Lithium Enolates: ‘Capricious’ Structures – Reliable Reagents for Synthesis, 1

**Condensation reactions**

Corrin Syntheses. Part II. Synthesis of Corrin Complexes via A→B Ring Closure. Preparation of Hemicorrinoid *B/C*-Components, and Model Studies on Enamides and Imido Ester C,C Condensations, 1601

**Condensed heterocycles**

Synthesis of Benzobis[1,3]oxathiins, 1061

**Conducting copolymers**

*In situ* UV/VIS Spectroscopy of Electrochemically Synthesized Selenophene–Thiophene Copolymers, 851

**Cone conformation**

New Calix[4]arene-Cored Peripherally Functionalized Dendrimers: Synthesis and Conformational Characteristics, 593

***Conyza japonica***

Diterpene Glycosides from the Dry Fronds of *Conyza japonica*, 986

**Copper**

Synthesis of a Novel Benzocyclotrimer with One Rigid and One Flexible Electron-Rich Cavity, 1067

**Copper(I) bromide**

Synthesis of 6-Aminoindolo[2,1-*a*]isoquinoline-5-carbonitriles by the Cu-Catalyzed Reaction of 2-(2-Bromophenyl)-1*H*-indoles with CH<sub>2</sub>(CN)<sub>2</sub>, 179

**Copper catalysis**

Copper(I)-Catalyzed Amination of Halogenopyridines with Polyamines, 47

**Copper(I) iodide**

Sulfonyl Ketenimines as Key Intermediates in One-Pot Synthesis of *N*-Sulfonyl-2-alkaneimidoyl Selenocyanates, 343

Copper-Catalyzed Synthesis of Pentasubstituted Pyridines from *N*-Sulfonyl Ketenimines, 1,1,3,3-Tetramethylguanidine, and Acetylene Dicarboxylates, 534

**Copper nanoparticles**

DNA-Mediated Copper Nanoparticle Formation on Dispersed Single-Walled Carbon Nanotubes, 1141

**Copper-exchanged tungstophosphoric acid (Cu-TPA)**

Copper-Exchanged Tungstophosphoric Acid: An Efficient and Reusable Heteropoly Acid for the Synthesis of 2,3,4,5-Tetrahydro-4-methylidene-furan Derivatives, 557

**Corey–Bakshi–Shibata reduction**

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

**Corrin synthesis**

Corrin Syntheses. Part VI. Corrin Synthesis *via A* → *D* Ring Closure. The Construction of *A/D*-Secocorrin Chromophore Systems by the ‘Sulfide Contraction’ Method and the Photochemical *A/B*-Secocorrin → Corrin Cycloisomerization, 1921

**Corrinoids**

Corrin Syntheses. Part I. Introduction and Overview, 1483

**Corrins**

Corrin Syntheses. Part II. Synthesis of Corrin Complexes *via A* → *B* Ring Closure. Preparation of Hemicorrinoid *B/C*-Components, and Model Studies on Enamides and Imido Ester *C,C* Condensations, 1601

Corrin Syntheses. Part III. Synthesis of Corrin Complexes *via A* → *B* Ring Closure. Preparation of *A/D* Components, 1683

Corrin Syntheses. Part IV. Synthesis of Corrin Complexes *via A* → *B* Ring Closure. Coupling of Hemicorrinoid *A/D* and *B/C* Components to Corrin by Imido-ester–Enamine Condensations, 1755

Corrin Syntheses. Part V. Preparation of Metal-Free Corrin Derivatives *via A* → *B* Ring Closure. Complexation of the Corrin Chromophore with Metal Ions, and Some Properties of the Ligands in Corrin Complexes, 1845

**Cottoquinazolines E and F**

Cottoquinazolines E and F from *Neosartorya fischeri* NRRL 181, 552

**Crassalactone A**

Stereoselective Total Synthesis of Crassalactone A, a Natural Cytotoxic Styryl Lactone, 509

**Crimmins aldol reaction**

Towards Stereoselective Synthesis of the C(31)–C(39) and C(20)–C(27) Fragments of Phorboxazole A, 386

**Cross metathesis**

Stereoselective Synthesis of the Non-Lactonic Portion of (*Z*)-Cryptofolione and Approaches towards Its Conversion to (*Z*)-Cryptofolione, 520

***Cryptococcus neoformans***

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618



**(Z)-Cryptofolione**

Stereoselective Synthesis of the Non-Lactonic Portion of (Z)-Cryptofolione and Approaches towards Its Conversion to (Z)-Cryptofolione, 520

**Cucurbitane triterpenoids**

Two New Cucurbitane Triterpenoids from Immature Fruits of *Momordica charantia*, 1456

***Cunninghamia konishii***

Two New Labdane-Type Diterpene Acids from the Wood of *Cunninghamia konishii*, 123

**Cup-shaped molecules**

Synthesis of a Novel Benzocyclootrimer with One Rigid and One Flexible Electron-Rich Cavity, 1067

***Curcuma aromatica***

Curcumaromins A, B, and C, Three Novel Curcuminoids from *Curcuma aromatica*, 1325

**Curcumaromins A – C**

Curcumaromins A, B, and C, Three Novel Curcuminoids from *Curcuma aromatica*, 1325

**Curcuminoids**

Curcumaromins A, B, and C, Three Novel Curcuminoids from *Curcuma aromatica*, 1325

**Cyclic voltammetry**

A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

**Cyclization reactions**

Synthesis of 3,5-Diarylcyclohex-2-enones by  $\text{NH}_4\text{Cl}/\text{HCl}$ -Catalyzed Cyclization and Deacetylation of 4-Acetylhexane-1,5-diones, 253

Computational Studies on Intramolecular Cycloadditions of Azidoenynes and Azidobutenenitriles to Give 6*H*-Pyrrolo[1,2-*e*][1,2,3]triazoles and 5*H*-Pyrrolo[1,2-*d*]tetrazoles, 1018

**Cycloadditions**

1,3-Dipolar Cycloadditions of  $\alpha$ -Diazo Ketones Derived from *N*-Protected (*S*)-Proline with Aromatic and Cycloaliphatic Thioketones, 190

Modulation of Reactivities of Dienophiles for *Diels–Alder* Reactions via Complexation of  $\alpha,\beta$ -Unsaturated Chelating Amides, 287

Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

Base-Catalyzed Formation of Isoxazoles from Dialkyl Acetylenedicarboxylates and 2-Nitroacetophenones, 589

Novel Cyclic Enaminone Esters and *N*-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Cyclohexenones**

Synthesis of 3,5-Diarylcyclohex-2-enones by  $\text{NH}_4\text{Cl}/\text{HCl}$ -Catalyzed Cyclization and Deacetylation of 4-Acetylhexane-1,5-diones, 253

**Cycloisomerization**

Corrin Syntheses. Part I. Introduction and Overview, 1483

Corrin Syntheses. Part VI. Corrin Synthesis via *A* → *D* Ring Closure. The Construction of *A/D*-Secocorrin Chromophore Systems by the ‘Sulfide Contraction’ Method and the Photochemical *A/B*-Secocorrin → Corrin Cycloisomerization, 1921

**Cyclopamine 3-*O*- $\beta$ -*D*-glucopyranoside, 23-methoxy-**

Steroidal Alkaloids from *Veratrum maackii* REGEL with Genotoxicity on Brain-Cell DNA in Mice, 539

**Cyclopentanepyrone A**

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

**Cyclopentapeptides**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

Synthesis of Cyclopentapeptides with Three to Five Aib Units, 232

**Cyclopropanes**

Reactions of (1*E*)-Buta-1,3-dien-1-yl Acetate with Diazocarbonyl Compounds, 1245

**Cyclopropyl carbenoids**

Low-Temperature Olefin Syntheses in View of Parent Fulvenes and Fulvalenes, 731

**Cyclopropyl triterpenoid**

A New Cyclopropyl-Triterpenoid from *Ochradenus arabicus*, 1240

**Cyclotrimerization**

Synthesis of a Novel Benzocyclotrimer with One Rigid and One Flexible Electron-Rich Cavity, 1067

**Cyperus rotundus**

Sesquiterpenes from Rhizomes of *Cyperus rotundus* with Cytotoxic Activities on Human Cancer Cells *in vitro*, 1372

**Cytotoxic activity**

Two New Triterpenoid Saponins from *Stauntonia obovatifoliola* HAYATA ssp. *intermedia*, 245

Structure and Absolute Configuration of Aspergilumamide A, a Novel Lumazine Peptide from the Mangrove-Derived Fungus *Aspergillus* sp., 368

Towards Stereoselective Synthesis of the C(31)–C(39) and C(20)–C(27) Fragments of Phorboxazole A, 386

Three New Bisabolane Sesquiterpenes from *Ligularia songarica*, 410

New Triterpenoid Glycosides from the Roots of *Camellia oleifera* ABEL, 496

Polyketides and Meroterpenoids from *Neosartorya glabra*, 515

A Hydroxylated Lupeol-Based Triterpenoid Ester Isolated from the *Scurrula parasitica* Parasitic on *Nerium indicum*, 627

Terpenoids from the Stems of *Drypetes congestiflora*, 724

New Casbane Diterpenoids from the Hainan Soft Coral *Simularia* Species, 834

Diterpene Glycosides from the Dry Fronds of *Conyza japonica*, 986

Three New Lignan Derivatives from *Lindera glauca* (SIEBOLD et ZUCC.) BLUME, 1087

Sesquiterpenes from Rhizomes of *Cyperus rotundus* with Cytotoxic Activities on Human Cancer Cells *in vitro*, 1372

Stilbenoids and Phenols in *Acanthopanax brachypus*, 1466

**Daphnodorin J, 14''-O-methyl-**

Biflavonoids, Lignans, and Related Compounds from the Roots of *Diplomorpha canescens*, 704

**Deacetylation**

Synthesis of 3,5-Diarylcyclohex-2-enones by NH<sub>4</sub>Cl/HCl-Catalyzed Cyclization and Deacetylation of 4-Acetylhexane-1,5-diones, 253

**Debenzylation**

Reaction of 3-Hydroxyquinoline-2,4-diones with Inorganic Thiocyanates in the Presence of Ammonium or Alkylammonium Ions: the Unexpected Replacement of a Hydroxy Group by an Amino Group, 318

**Decytospolides A and B**

Stereoselective Total Synthesis of Decytospolides A and B Starting from D-Mannitol, 267

**Dendrimers**

New Calix[4]arene-Cored Peripherally Functionalized Dendrimers: Synthesis and Conformational Characteristics, 593

**Denitrogenation**

One-Pot Synthesis of 3-Alkoxy-2,3-dihydro-1H-isoindol-1-ones by the Reactions of 2-(Azidomethyl)benzoates with NaH, 604

**Density-functional theory**

Boyd Group Electronegativity Influence on the Parr Global Electrophilicity of Vilsmeier Reagent-Derived Imidates: New Insights toward Improving Mitsunobu Chemistry, 582

**Dialkyl acetylenedicarboxylates**

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**Diamines**

An Efficient Synthesis of Chromeno[2,3-d]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

**Diarylheptanoids**

Stereoselective Total Synthesis of (3S,5S)-1,7-Bis(4-hydroxyphenyl)heptane-3,5-diol, (3S,5S)-Alpinikatin, and Its Diastereoisomers, 1307

**Diastereoselective synthesis**

Diastereoselective and Efficient Synthesis of Indeno[2'',1'':4',5']furo[3',2':5,6]pyrido[2,3-d]pyrimidine-2,4,6(1H,3H)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1H-inden-2-yl)-5,8-dihydropyrido[2,3-d]pyrimidine-2,4,7(1H,3H,6H)-trione Derivatives, 1411

**Diazo compounds**

Reactions of (1*E*)-Buta-1,3-dien-1-yl Acetate with Diazocarbonyl Compounds, 1245

**1,5-Dicarbonyl compounds**

Synthesis of 3,5-Diarylcyclohex-2-enones by NH<sub>4</sub>Cl/HCl-Catalyzed Cyclization and Deacetylation of 4-Acetylhexane-1,5-diones, 253

 **$\beta$ -Dicarbonyl compounds**

Reaction of 3-Hydroxyquinoline-2,4-diones with Inorganic Thiocyanates in the Presence of Ammonium or Alkylammonium Ions: the Unexpected Replacement of a Hydroxy Group by an Amino Group, 318

 **$\alpha,\alpha$ -Dicyanoolefin**

Synthesis of Phenanthrene Derivatives through the Reaction of an  $\alpha,\alpha$ -Dicyanoolefin with  $\alpha,\beta$ -Unsaturated Carbonyl Compounds, 1426

**Diels–Alder reaction**

Modulation of Reactivities of Dienophiles for *Diels–Alder* Reactions via Complexation of  $\alpha,\beta$ -Unsaturated Chelating Amides, 287

Synthesis of New Pyrano[2',3':5,6]chromeno[4,3-*b*]quinolin-4-ones via *Aza-Diels–Alder* Reaction, 417

**retro-Diels–Alder reactions**

Low-Temperature Olefin Syntheses in View of Parent Fulvenes and Fulvalenes, 731

***Digitalis ciliata***

New Furostanol Glycosides from the Roots of *Digitalis ciliata* TRAUTV., 224

**Dihydroborane intermediate**

Concise Synthesis of 2-Arylpropanoic Acids and Study of Unprecedented Reduction of 3-Hydroxy-2-arylpropanoic Acid Ethyl Ester to 2-Arylpropenoic Acid Ethyl Ester by BH<sub>3</sub>·THF, 1273

**Dihydrodaphnodorin B, 14''-O-methyl-**

Biflavonoids, Lignans, and Related Compounds from the Roots of *Diplomorpha canescens*, 704

**1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates**

Synthesis of 1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates via Intramolecular Cyclization of 2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates Followed by Oxidation, 1364

**Dihydroxylation**

Tandem Benzylic Oxidation/Dihydroxylation of  $\alpha$ -Vinyl- and  $\alpha$ -Alkenylbenzyl Alcohols, 92

**(–)-Diisopropyl D-tartrate**

Stereoselective Total Synthesis of Crassalactone A, a Natural Cytotoxic Styryl Lactone, 509

**Dimeric ecdysteroids**

Reductive Amination of  $\omega$ -Oxoecdysteroids in the Synthesis of Dimeric Ecdysteroids, 1292

**Dimerization**

Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

**2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates**

Synthesis of 1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates via Intramolecular Cyclization of 2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates Followed by Oxidation, 1364

**[2-(Dimethoxymethyl)phenyl]lithiums**

Synthesis of 1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates via Intramolecular Cyclization of 2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates Followed by Oxidation, 1364

**Dimethyl phosphate**

One-Pot Three-Component Synthesis of *Hantzsch* 1,4-Dihydropyridines Promoted by Dimethyl Phosphate Ionic Liquids, 1095

**2D-INADEQUATE**

A New *p*-Terphenyl Derivative from the Mushroom *Thelephora vialis*, 1075

**Diols**

(*R*)-2,3-Cyclohexylidenglyceraldehyde, a Chiral Pool Synthon for the Synthesis of 2-Azido-1,3-diols, 823

**2,6-Dioxabicyclo[3.3.1]nonan-3-ones**

Two 2,6-Dioxabicyclo[3.3.1]nonan-3-ones from *Phragmanthera capitata* (SPRENG.) BALLE (Loranthaceae), 945

***Diplomorpha canescens***

Biflavonoids, Lignans, and Related Compounds from the Roots of *Diplomorpha canescens*, 704

**Diterpenes**

Diterpene Glycosides from the Dry Fronds of *Conyza japonica*, 986

**Diterpenoids**

- Two New Labdane-Type Diterpene Acids from the Wood of *Cunninghamia konishii*, 123  
Caesaljaponins A and B: New Cassane-Type Furanoditerpenoids from the Seeds of *Caesalpinia decapetala* var. *japonica*, 336  
New Phenolic Tricyclic Diterpenoids from Rhizomes of *Isodon hispida* (BENTH.) HARA, 527  
Paecilomycines A and B, Novel Diterpenoids, Isolated from Insect-Pathogenic Fungi *Paecilomyces* sp. ACCC 37762, 642  
10 $\beta$ -Acetoxy-8 $\alpha$ ,9 $\alpha$ -epoxy-14 $\beta$ -hydroxy-7-oxodolastane – A New Diterpene Isolated from the Brazilian Brown Macroalga *Canistrocarpus cervicornis*, 785

**Dithiadiseleno heterocycles, twelve-membered**

- Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

**1,3-Dithiolanes**

- Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

**1,3-Dithiolanes, 4,4,5,5-tetrasubstituted**

- Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

**DNA-Directed dispersion**

- DNA-Mediated Copper Nanoparticle Formation on Dispersed Single-Walled Carbon Nanotubes, 1141

**Dolastane diterpene**

- 10 $\beta$ -Acetoxy-8 $\alpha$ ,9 $\alpha$ -epoxy-14 $\beta$ -hydroxy-7-oxodolastane – A New Diterpene Isolated from the Brazilian Brown Macroalga *Canistrocarpus cervicornis*, 785

**DPPH Assay**

- Synthesis of New Silybin Derivatives and Evaluation of Their Antioxidant Properties, 399

**DPPH Scavenging activity**

- A New Tricyclic Alkaloid from *Portulaca oleracea* L., 961

**Drimiopsins G – I**

- Three New Xanthenes from the Fungus *Penicillium* sp. NH-7-1, 699

***Drypetes congestiflora***

- Terpenoids from the Stems of *Drypetes congestiflora*, 724

**ECEC Mechanism**

- A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

**Electrocyclization**

- 1,3-Dipolar Cycloadditions of  $\alpha$ -Diazo Ketones Derived from *N*-Protected (*S*)-Proline with Aromatic and Cycloaliphatic Thioketones, 190

**Electro-oxidation**

- A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

**Enamides**

- Corrin Syntheses. Part II. Synthesis of Corrin Complexes via A  $\rightarrow$  B Ring Closure. Preparation of Hemicorrinoid *B/C*-Components, and Model Studies on Enamides and Imido Ester C,C Condensations, 1601

**Enamino nitriles**

- Synthesis of 6-Aminoindolo[2,1-*a*]isoquinoline-5-carbonitriles by the Cu-Catalyzed Reaction of 2-(2-Bromophenyl)-1*H*-indoles with CH<sub>2</sub>(CN)<sub>2</sub>, 179

**Enaminones**

- Novel Cyclic Enaminone Esters and N-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Enantiomeric enrichment**

- Enantiomeric Enrichments via the Self-Disproportionation of Enantiomers (SDE) by Achiral, Gravity-Driven Column Chromatography: a Case Study Using *N*-(1-Phenylethyl)acetamide for Optimizing the Enantiomerically Pure Yield and Magnitude of the SDE, 1147

**Enantioselective catalysis**

- Phenylalanine-Derived Imidazolines Bearing Heteroaromatic Pendants: Synthesis, Characterization, and Application in the Asymmetric *Henry* Reaction, 1351

**Endophytes**

Xanthones with  $\alpha$ -Glucosidase Inhibitory Activities from *Aspergillus versicolor*, a Fungal Endophyte of *Huperzia serrata*, 148

**Enolate configuration**

Lithium Enolates: 'Capricious' Structures – Reliable Reagents for Synthesis, 1

***Epimedium koreanum***

Flavonoids Isolated from Heat-Processed *Epimedium koreanum* and Their Anti-HIV-1 Activities, 1177

**Epoxybergorgic acid**

Subergane-Type Sesquiterpenes from Gorgonian Coral *Subergorgia suberosa* with Antibacterial Activities, 1202

**Ethanamine, N-sulfonyl-**

Copper-Catalyzed Synthesis of Pentasubstituted Pyridines from N-Sulfonyl Ketenimines, 1,1,3,3-Tetramethylguanidine, and Acetylene Dicarboxylates, 534

**Ethanones, 1-aryl-2-nitro-**

Base-Catalyzed Formation of Isoxazoles from Dialkyl Acetylenedicarboxylates and 2-Nitroacetophenones, 589

**Ethene, 1,1-bis(methylsulfonyl)-2-nitro-**

An Efficient Synthesis of Chromeno[2,3-*d*]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

**Et<sub>2</sub>Zn-mediated alkynylation**

Stereoselective Total Synthesis of (3*S*,5*S*)-1,7-Bis(4-hydroxyphenyl)heptane-3,5-diol, (3*S*,5*S*)-Alpinikatin, and Its Diastereoisomers, 1307

**Eudesmanolides**

Two New Eudesmanolides from the Flowers of *Achillea millefolium*, 973

***Exophiala pisciphila***

First Stereoselective Synthesis of the Cytotoxic Polyketide (4*R*)-1-(3,5-Dihydroxyphenyl)-4-hydroxypentan-2-one, 143

**Exopolysaccharides**

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618

**Ferns**

New Flavanol Glucosides from *Abacopteris aspera* (PRESL) CHING, 108

**Flavanol glucosides**

New Flavanol Glucosides from *Abacopteris aspera* (PRESL) CHING, 108

**Flavonolignans**

Synthesis of New Silybin Derivatives and Evaluation of Their Antioxidant Properties, 399

**Fluorescence**

Synthesis and Spectral Characteristics of Novel Fluorescent Dyes Based on Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine, 474

**Formates, chloro-**

Synthesis of 2,3,3a,9a-Tetrahydro-1*H*-cyclopenta[*b*]quinoxaline-1,3,4,9-tetracarboxylate by Cyclization of 1,5-Bis[(trimethylsilyl)oxy]penta-1,4-dienes with Quinoxalines, 308

**Fsp<sup>3</sup>-Rich building blocks**

Synthesis of Novel, Chiral Bicyclo[3.1.0]hex-2-ene Amino Acid Derivatives as Useful Synthons in Medicinal Chemistry, 1189

**Fulvalenes**

Low-Temperature Olefin Syntheses in View of Parent Fulvenes and Fulvalenes, 731

**Fulvenes**

Low-Temperature Olefin Syntheses in View of Parent Fulvenes and Fulvalenes, 731

**Fumiquinazolines**

Cottoquinazolines E and F from *Neosartorya fischeri* NRRL 181, 552

**Fungi**

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

**Furan, 2,3,4,5-tetrahydro-4-methylidene-**

Copper-Exchanged Tungstophosphoric Acid: An Efficient and Reusable Heteropoly Acid for the Synthesis of 2,3,4,5-Tetrahydro-4-methylidene-furan Derivatives, 557

**'Furan-cyclized' diarylheptanoids**

Synthesis of Two Natural Furan-Cyclized Diarylheptanoids *via* 2-Furaldehyde, 938

**Furanoflavonoids**

Two New Flavonoids from *Retama raetam*, 561

**Furanone glucosides**

Biflavones and Furanone Glucosides from *Zabelia tyaihyonii*, 1419

**Furostanol glycosides**

New Furostanol Glycosides from the Roots of *Digitalis ciliata* TRAUTV., 224

**G<sub>2</sub> Checkpoint inhibitor**

Stereoselective Synthesis of the Non-Lactonic Portion of (*Z*)-Cryptofolione and Approaches towards Its Conversion to (*Z*)-Cryptofolione, 520

**Gardenia jasminoides**

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

**Gardeterpenone A**

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

**Genotoxicity**

Steroidal Alkaloids from *Veratrum dahuricum* (TURCZ.) LOES. f. with Genotoxicity on Brain Cell DNA in Mice, 85

Steroidal Alkaloids from *Veratrum maackii* REGEL with Genotoxicity on Brain-Cell DNA in Mice, 539

**Gentiana rhodantha**

Two Rare  $\alpha$ -Pyrone (= 2*H*-Pyran-2-one) Derivatives from *Gentiana rhodantha* FRANCHET, 657

**Gewald/cyclocondensation reactions**

One-Pot Four-Component Synthesis of Thieno[2,3-*d*]pyrimidin-4-amines *via* Sequential *Gewald*/Cyclocondensation Reactions, 1079

**Gingerols**

An Efficient Enantioselective Synthesis of Natural Gingerols, the Active Principles of Ginger, 1009

**Glaberide**

Identification of Five New Minor Constituents from the Whole Plant of *Amischotolype hispida*, 347

 **$\alpha$ -Glucosidase**

Xanthones with  $\alpha$ -Glucosidase Inhibitory Activities from *Aspergillus versicolor*, a Fungal Endophyte of *Huperzia serrata*, 148

Concise Synthesis and Antidiabetic Effect of Three Natural Triterpenoid Saponins Isolated from *Fadogia ancylantha* (Makoni tea), 1254

**Glucosides**

Absolute Configuration of Resveratrol Oligomers Isolated from *Hopea utilis*, 32

New Flavanol Glucosides from *Abacopteris aspera* (PRESL) CHING, 108

**Glucouronic acid**

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618

**D-Glyceraldehyde, 2,3-O-cyclohexylidene-**

(*R*)-2,3-Cyclohexylideneglyceraldehyde, a Chiral Pool Synthon for the Synthesis of 2-Azido-1,3-diols, 823

**D-Glyceraldehyde, 2,3-O-isopropylidene-**

Novel and Stereospecific Synthesis of (2*S*)-3-(2,4,5-Trifluorophenyl)propane-1,2-diol from D-Mannitol, 1127

**Glycines, (2-Carboxycyclopropyl)-**

Synthesis of Novel, Chiral Bicyclo[3.1.0]hex-2-ene Amino Acid Derivatives as Useful Synthons in Medicinal Chemistry, 1189

**Glycopentosides D–F**

Glycopentosides D–F, Three New Phenolic Glycosides from *Glycosmis pentaphylla*, 1160

**Glycosides**

New Furostanol Glycosides from the Roots of *Digitalis ciliata* TRAUTV., 224

Two New Phenylethanoid Glycosides from *Callicarpa longissima*, 482

Two New Triterpene Saponins from *Acanthophyllum laxiusculum*, 611  
A New Dimeric Secoiridoid Glycoside from the Leaves of *Olea ferruginea* ROYLE, 668

**Glycosmis pentaphylla**

Glycopentosides D–F, Three New Phenolic Glycosides from *Glycosmis pentaphylla*, 1160

**Glycosylation**

Concise Synthesis and Antidiabetic Effect of Three Natural Triterpenoid Saponins Isolated from *Fadogia ayncylantha* (Makoni tea), 1254

**Gorgonian coral**

Subergane-Type Sesquiterpenes from Gorgonian Coral *Subergorgia suberosa* with Antibacterial Activities, 1202

**Grignard reaction**

First Stereoselective Synthesis of the Cytotoxic Polyketide (4*R*)-1-(3,5-Dihydroxyphenyl)-4-hydroxypentan-2-one, 143

Stereoselective Total Synthesis of Crassalactone A, a Natural Cytotoxic Styryl Lactone, 509

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

(*R*)-2,3-Cyclohexyleneglyceraldehyde, a Chiral Pool Synthone for the Synthesis of 2-Azido-1,3-diols, 823

An Efficient Enantioselective Synthesis of Natural Gingerols, the Active Principles of Ginger, 1009

**Grubbs catalyst**

Synthesis of Terpene Diamines Based on Camphor-Derived Dinitriles, 447

**Guaiane lactones**

Menverins H–L, New Highly Oxygenated Guaiane Lactones from the Gorgonian Coral *Menella kanisa*, 710

**Guaiane sesquiterpenes**

Sesquiterpenes from Rhizomes of *Cyperus rotundus* with Cytotoxic Activities on Human Cancer Cells *in vitro*, 1372

**Guanidine, 1,1,3,3-tetramethyl-**

Copper-Catalyzed Synthesis of Pentasubstituted Pyridines from *N*-Sulfonyl Ketenimines, 1,1,3,3-Tetramethylguanidine, and Acetylene Dicarboxylates, 534

**Haloalkyl acetates**

The Forgotten Carbonyl Reaction: Chloroacetylation and Bromoacetylation of Carbonyl Compounds, 899

**Halohydrins**

Benzyl(triphenyl)phosphonium Dichloroiodate: A New Reagent for Coiodination of Alkenes, 1302

**Hantzsch 1,4-dihydropyridines**

One-Pot Three-Component Synthesis of *Hantzsch* 1,4-Dihydropyridines Promoted by Dimethyl Phosphate Ionic Liquids, 1095

**Henry reaction**

Phenylalanine-Derived Imidazolines Bearing Heteroaromatic Pendants: Synthesis, Characterization, and Application in the Asymmetric *Henry* Reaction, 1351

**Heptafulvenes**

Substituent Effects on  $\pi$ -Bond Delocalization of Fulvenes and Fulvalenes. Are Fulvenes Aromatic?, 763

**Heterocycles**

Atom-Economical Synthesis of Complex Heterocycles with N–O Moiety, 1315

**Heterocyclization**

Synthesis and Spectral Characteristics of Novel Fluorescent Dyes Based on Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine, 474

**Hetero-Diels–Alder reactions**

Synthesis of Benzobis[1,3]oxathiins, 1061

**Heterogeneous catalysis**

Palladium Supported on Zinc Oxide Nanoparticles as Efficient Heterogeneous Catalyst for *Suzuki–Miyaura* and *Hiyama* Reactions under Normal Laboratory Conditions, 805

**Heterogeneous catalysts**

Copper/Graphene/Clay Nanohybrid: A Highly Efficient Heterogeneous Nanocatalyst for the Synthesis of Novel 1,2,3-Triazolyl Carboacyclic Nucleosides *via* ‘Click’ *Huisgen* 1,3-Dipolar Cycloaddition, 1210

**Heteropoly acid**

Copper-Exchanged Tungstophosphoric Acid: An Efficient and Reusable Heteropoly Acid for the Synthesis of 2,3,4,5-Tetrahydro-4-methylidene-furan Derivatives, 557

**Hexane-1,6-diol**

Stereoselective Total Synthesis of the Natural Oxylinin (6*R*,7*E*,9*R*,10*S*)-6,9,10-Trihydroxyoctadec-7-enoic Acid, 78

**Hexanortriterpenoids**

Two New Degraded Triterpenoids and a Novel *seco*-Norabietane Diterpene from the Root Bark of *Azadirachta indica*, 135

**Hippophae rhamnoides**

Two New Triterpene Saponins from the Seed Residue of *Hippophae rhamnoides* L., 60

Three New Alkaloids from *Hippophae rhamnoides* LINN. subsp. *sinensis* ROUSI, 1287

**Hippophamide**

Three New Alkaloids from *Hippophae rhamnoides* LINN. subsp. *sinensis* ROUSI, 1287

**Hippophosides E and F**

Two New Triterpene Saponins from the Seed Residue of *Hippophae rhamnoides* L., 60

**Hispidanols A and B**

New Phenolic Tricyclic Diterpenoids from Rhizomes of *Isodon hispida* (BENTH.) HARA, 527

**Histidine modifications**

Characterization of Adducts Formed in the Reactions of Methylglyoxal and Malonaldehyde with Lysine and Histidine Derivatives, 842

**Hiyama cross coupling**

Palladium Supported on Zinc Oxide Nanoparticles as Efficient Heterogeneous Catalyst for *Suzuki–Miyaura* and *Hiyama* Reactions under Normal Laboratory Conditions, 805

**Hopea utilis**

Absolute Configuration of Resveratrol Oligomers Isolated from *Hopea utilis*, 32

**Hopeasides E and F**

Absolute Configuration of Resveratrol Oligomers Isolated from *Hopea utilis*, 32

**Horner–Wadsworth–Emmons olefination**

Stereoselective Total Synthesis of Stagonolide E, 650

**Host–guest compounds**

New Calix[4]arene-Cored Peripherally Functionalized Dendrimers: Synthesis and Conformational Characteristics, 593

**Huisgen cycloaddition**

Copper/Graphene/Clay Nanohybrid: A Highly Efficient Heterogeneous Nanocatalyst for the Synthesis of Novel 1,2,3-Triazolyl Carboacyclic Nucleosides via ‘Click’ *Huisgen* 1,3-Dipolar Cycloaddition, 1210

**Huperzia serrata**

Xanthones with  $\alpha$ -Glucosidase Inhibitory Activities from *Aspergillus versicolor*, a Fungal Endophyte of *Huperzia serrata*, 148

**Hybrid materials**

DNA-Mediated Copper Nanoparticle Formation on Dispersed Single-Walled Carbon Nanotubes, 1141

**Hydrazine-1,1-dicarboxylates**

Formation of Dialkyl 2-[3-Alkoxy-1-(alkylimino)-1-chloro-3-oxopropan-2-ylidene]hydrazine-1,1-dicarboxylates of  $\alpha$ -(Alkoxy-carbonyl)imidoyl Chlorides from Phosphine–Diazo Ester Zwitterions and *Nef*-Isocyanide Adducts, 374

**Hydrogenation**

Synthesis of Terpene Diamines Based on Camphor-Derived Dinitriles, 447

 **$\beta$ -Hydroxy acids**

Novel and Stereospecific Synthesis of (2*S*)-3-(2,4,5-Trifluorophenyl)propane-1,2-diol from D-Mannitol, 1127

**(4*R*,5*R*)-5-Hydroxy-4-decanolide**

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

**6-(2-Hydroxy-1,3-dioxinden-2-yl)pyrido[2,3-*d*]pyrimidinones**

Diastereoselective and Efficient Synthesis of Indeno[2'',1'':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidine-2,4,6(1*H*,3*H*)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1*H*-inden-2-yl)-5,8-dihydropyrido[2,3-*d*]pyrimidine-2,4,7(1*H*,3*H*,6*H*)-trione Derivatives, 1411



**20-Hydroxyecdysone**

Reductive Amination of  $\omega$ -Oxoecdysteroids in the Synthesis of Dimeric Ecdysteroids, 1292

**Hypoillexidol**

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

**Hypoxylon**

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

**Hypoxyphenone**

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

***Ilex formosana***

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

**Imidates**

Boyd Group Electronegativity Influence on the Parr Global Electrophilicity of Vilsmeier Reagent-Derived Imidates: New Insights toward Improving Mitsunobu Chemistry, 582

**Imidazolines**

Phenylalanine-Derived Imidazolines Bearing Heteroaromatic Pendants: Synthesis, Characterization, and Application in the Asymmetric Henry Reaction, 1351

**Imido esters**

Corrin Syntheses. Part II. Synthesis of Corrin Complexes via A  $\rightarrow$  B Ring Closure. Preparation of Hemicorrinoid B/C-Components, and Model Studies on Enamides and Imido Ester C,C Condensations, 1601

**Imidoyl chloride**

Formation of Dialkyl 2-[3-Alkoxy-1-(alkylimino)-1-chloro-3-oxopropan-2-ylidene]hydrazine-1,1-dicarboxylates of  $\alpha$ -(Alkoxy-carbonyl)imidoyl Chlorides from Phosphine-Diazo Ester Zwitterions and *Nef*-Isocyanide Adducts, 374

**Iminium salts**

Synthesis of 2,3,3a,9a-Tetrahydro-1*H*-cyclopenta[*b*]quinoxaline-1,3,4,9-tetracarboxylate by Cyclization of 1,5-Bis[(trimethylsilyl)oxy]penta-1,4-dienes with Quinoxalines, 308

**Indane-1,3-dione, 2,2-dihydroxy-**

Synthesis of Polysubstituted Benzenes via the Vinylogous Michael Addition of Alkylidenemalononitriles to 2-(1,3-Dioxo-1*H*-inden-2(3*H*)-ylidene)malononitrile, 569

**Indeno[2'',1'':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidinones**

Diastereoselective and Efficient Synthesis of Indeno[2'',1'':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidine-2,4,6(1*H*,3*H*)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1*H*-inden-2-yl)-5,8-dihydropyrido[2,3-*d*]pyrimidine-2,4,7(1*H*,3*H*,6*H*)-trione Derivatives, 1411

**Indole alkaloids**

Further Alkaloids from the Leaves of *Trigonostemon lii*, 72

A New Indole Alkaloid from *Cleome droserifolia*, 719

**1*H*-Indoles, 2-(2-bromophenyl)-**

Synthesis of 6-Aminoindolo[2,1-*a*]isoquinoline-5-carbonitriles by the Cu-Catalyzed Reaction of 2-(2-Bromophenyl)-1*H*-indoles with CH<sub>2</sub>(CN)<sub>2</sub>, 179

**Indolo[2,1-*a*]isoquinoline-5-carbonitriles**

Synthesis of 6-Aminoindolo[2,1-*a*]isoquinoline-5-carbonitriles by the Cu-Catalyzed Reaction of 2-(2-Bromophenyl)-1*H*-indoles with CH<sub>2</sub>(CN)<sub>2</sub>, 179

**Insect-pathogenic fungi**

Paecilomycines A and B, Novel Diterpenoids, Isolated from Insect-Pathogenic Fungi *Paecilomyces* sp. ACCC 37762, 642

**Intramolecular H-bonding**

Novel Cyclic Enaminone Esters and N-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Iodoalkoxylation**

Benzyl(triphenyl)phosphonium Dichloroiodate: A New Reagent for Coiodination of Alkenes, 1302

**Iodohydroxylation**

Benzyl(triphenyl)phosphonium Dichloroiodate: A New Reagent for Coiodination of Alkenes, 1302

**Ionic liquids**

One-Pot Three-Component Synthesis of *Hantzsch* 1,4-Dihydropyridines Promoted by Dimethyl Phosphate Ionic Liquids, 1095

**Iridoid ester**

Two New Iridoid Esters from the Root and Rhizome of *Valeriana jatamansi* JONES, 1225

**Iridoids**

Two New Iridoids from the Stem of *Catalpa ovata*, 381

Isolation and Characterization of Secondary Metabolites from *Rhododendron microphyton*, 1132

**Isatin**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**Isocladospolide B**

Stereoselective Total Synthesis of Iso-Cladospolide B and the 12 Membered-Macrolactone (6*S*,12*R*)-6-Hydroxy-12-methyloxacyclododecane-2,5-dione, 1115

**Isocyanides**

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**Isodon hispida**

New Phenolic Tricyclic Diterpenoids from Rhizomes of *Isodon hispida* (BENTH.) HARA, 527

**Isoeptalbine**

Steroidal Alkaloids from *Veratrum maackii* REGEL with Genotoxicity on Brain-Cell DNA in Mice, 539

**1*H*-Isoindoles, 3-alkoxy-**

A Facile Synthesis of 1-Substituted 3-Alkoxy-1*H*-isoindoles Based on the Reaction of 2-(Dialkoxymethyl)phenyllithiums with Nitriles, Followed by Acid-Catalyzed Cyclization, 279

**Isoindolinones, 3-alkoxy-**

One-Pot Synthesis of 3-Alkoxy-2,3-dihydro-1*H*-isoindol-1-ones by the Reactions of 2-(Azidomethyl)benzoates with NaH, 604

**1*H*-Isoindol-1-ones, 3-alkoxy-2,3-dihydro-**

One-Pot Synthesis of 3-Alkoxy-2,3-dihydro-1*H*-isoindol-1-ones by the Reactions of 2-(Azidomethyl)benzoates with NaH, 604

**Isomerization**

The First Synthesis of (4*S*,5*R*,6*R*)-5,6-Dihydroxy-4-(prop-1-en-2-yl)cyclohex-1-ene-1-carboxylic Acid, 1442

**Isotope effects**

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

**Isoxazole**

Base-Catalyzed Formation of Isoxazoles from Dialkyl Acetylenedicarboxylates and 2-Nitroacetophenones, 589

**Jacobsen's hydrolytic kinetic resolution**

Stereoselective Total Synthesis of Iso-Cladospolide B and the 12 Membered-Macrolactone (6*S*,12*R*)-6-Hydroxy-12-methyloxacyclododecane-2,5-dione, 1115

**Jacobsen's hydrolytic kinetic resolution (HKR)**

First Stereoselective Synthesis of the Cytotoxic Polyketide (4*R*)-1-(3,5-Dihydroxyphenyl)-4-hydroxypentan-2-one, 143

**Jasminoside V**

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

**Ketene dithioacetals**

New Route for the Synthesis of Four-Membered Cyclic Ketene Dithioacetals, 67

**$\beta$ -Keto esters**

An Efficient and Chemoselective *Knoevenagel*/Hemiketalization Process for the Synthesis of New 2*H*-Chromenes in a One-Pot Three-Component Reaction, 978

**Koreanosides A – E**

Flavonoids Isolated from Heat-Processed *Epimedium koreanum* and Their Anti-HIV-1 Activities, 1177

**Kuguacin X**

Two New Cucurbitane Triterpenoids from Immature Fruits of *Momordica charantia*, 1456

**Kuguaglycoside I**

Two New Cucurbitane Triterpenoids from Immature Fruits of *Momordica charantia*, 1456

**Labdanes**

Two New Labdane-Type Diterpene Acids from the Wood of *Cunninghamia konishii*, 123

**Lactones**

Facile Synthesis of 5-Hexyl-4-methyl- $\gamma$ -butyrolactone *via Nef* Reaction as a Key Step, 795

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

 **$\beta$ -Lapachone**

Synthesis of a Regioisomer of  $\beta$ -Lapachone and Analogs as Potent Antitumor Agents, 128

**Lignans**

Phenolic Derivatives from the Root Bark of *Oplonanax horridus*, 201

Biflavonoids, Lignans, and Related Compounds from the Roots of *Diplomorpha canescens*, 704

Three New Lignan Derivatives from *Lindera glauca* (SIEBOLD et ZUCC.) BLUME, 1087

**Ligstroside**

A New Dimeric Secoiridoid Glycoside from the Leaves of *Olea ferruginea* ROYLE, 668

***Ligularia songarica***

Three New Bisabolane Sesquiterpenes from *Ligularia songarica*, 410

**Limonoids**

New Limonoids from the Seeds of *Xylocarpus granatum*, 691

New Phragmalin-Type Limonoid Orthoesters from the Bark of *Chukrasia tabularis* var. *velutina*, 1403

***Lindera glauca***

Three New Lignan Derivatives from *Lindera glauca* (SIEBOLD et ZUCC.) BLUME, 1087

**Linderanosides A and B**

Three New Lignan Derivatives from *Lindera glauca* (SIEBOLD et ZUCC.) BLUME, 1087

**Lipase**

Concise Synthesis and Antidiabetic Effect of Three Natural Triterpenoid Saponins Isolated from *Fadogia ancyllantha* (Makoni tea), 1254

**Lithium bromide**

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

**Longissimosides A and B**

Two New Phenylethanoid Glycosides from *Callicarpa longissima*, 482

**Low-temperature syntheses**

Low-Temperature Olefin Syntheses in View of Parent Fulvenes and Fulvalenes, 731

**Lumazine peptide**

Structure and Absolute Configuration of Aspergilumamide A, a Novel Lumazine Peptide from the Mangrove-Derived Fungus *Aspergillus* sp., 368

**Lupeol-based triterpenoid ester**

A Hydroxylated Lupeol-Based Triterpenoid Ester Isolated from the *Scurrula parasitica* Parasitic on *Nerium indicum*, 627

**Lysine adducts**

Characterization of Adducts Formed in the Reactions of Methylglyoxal and Malonaldehyde with Lysine and Histidine Derivatives, 842

**Machine learning**

Exploration of Quantitative Structure–Reactivity Relationships for the Estimation of *Mayr* Nucleophilicity, 863

**MacMillan asymmetric epoxidation**

Stereoselective Total Synthesis of Mangiferaelactone using D-Mannose as a Chiral Pool, 1395

**MacMillan  $\alpha$ -hydroxylation**

Stereoselective Total Synthesis of Stagonolide E, 650

**Malononitrile**

Synthesis of 6-Aminoindolo[2,1-*a*]isoquinoline-5-carbonitriles by the Cu-Catalyzed Reaction of 2-(2-Bromophenyl)-1*H*-indoles with CH<sub>2</sub>(CN)<sub>2</sub>, 179

Synthesis of Polysubstituted Benzenes *via* the Vinylogous *Michael* Addition of Alkylidenemalononitriles to 2-(1,3-Dioxo-1*H*-inden-2(3*H*)-ylidene)malononitrile, 569

One-Pot 'On-solvent' Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

**D-Mannitol**

Stereoselective Total Synthesis of Decytospolides A and B Starting from D-Mannitol, 267

Towards Stereoselective Synthesis of the C(31)–C(39) and C(20)–C(27) Fragments of Phorboxazole A, 386

A Stereoselective Total Synthesis of Xyolide, a Natural Bioactive Nonenolide, 674

**Mannose**

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618

**Marfey's method**

Structure and Absolute Configuration of Aspergilumamide A, a Novel Lumazine Peptide from the Mangrove-Derived Fungus *Aspergillus* sp., 368

**Maruoka asymmetric allylation**

Stereoselective Synthesis of the Non-Lactonic Portion of (*Z*)-Cryptofolione and Approaches towards Its Conversion to (*Z*)-Cryptofolione, 520

**Mayr nucleophilicity**

Exploration of Quantitative Structure–Reactivity Relationships for the Estimation of *Mayr* Nucleophilicity, 863

**Meldrum's acid**

New Route for the Synthesis of Four-Membered Cyclic Ketene Dithioacetals, 67

**10-Membered macrolides**

Stereoselective Total Synthesis of Mangiferaelactone using D-Mannose as a Chiral Pool, 1395

**Menella kanisa**

Menverins H–L, New Highly Oxygenated Guaiane Lactones from the Gorgonian Coral *Menella kanisa*, 710

**Menverins H–L**

Menverins H–L, New Highly Oxygenated Guaiane Lactones from the Gorgonian Coral *Menella kanisa*, 710

**Meroterpenoids**

Polyketides and Meroterpenoids from *Neosartorya glabra*, 515

**Methane, nitro-**

Stereoselective Total Synthesis of Crassalactone A, a Natural Cytotoxic Styryl Lactone, 509

**S-Methanides**

Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

**S-Methanides, thiocarbonyl**

Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

**Methyl 2-(2-hydroxy-1,3-dioxinden-2-yl)acrylate**

Diastereoselective and Efficient Synthesis of Indeno[2',1'':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidine-2,4,6(1*H*,3*H*)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1*H*-inden-2-yl)-5,8-dihydropyrido[2,3-*d*]pyrimidine-2,4,7(1*H*,3*H*,6*H*)-trione Derivatives, 1411

**Methylglyoxal**

Characterization of Adducts Formed in the Reactions of Methylglyoxal and Malonaldehyde with Lysine and Histidine Derivatives, 842

**2-Methylphenylalanine (Phe(2Me))**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

**Michael addition**

A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

Synthesis of Polysubstituted Benzenes *via* the Vinylogous *Michael* Addition of Alkylidenemalononitriles to 2-(1,3-Dioxo-1*H*-inden-2(3*H*)-ylidene)malononitrile, 569

**Michael–Michael reaction**

Novel Cyclic Enaminone Esters and N-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Microwave-assisted reactions**

Novel Cyclic Enaminone Esters and N-Heterocycles by Divergent Chemical Behavior through Amine-Mediated Reactions, 994

**Mitsunobu azidation**

(*R*)-2,3-Cyclohexylidene-glyceraldehyde, a Chiral Pool Synthon for the Synthesis of 2-Azido-1,3-diols, 823

**Mitsunobu chemistry**

Boyd Group Electronegativity Influence on the *Parr* Global Electrophilicity of *Vilsmeier* Reagent-Derived Imidates: New Insights toward Improving *Mitsunobu* Chemistry, 582

**Mitsunobu reaction**

Atom-Economical Synthesis of Complex Heterocycles with N–O Moiety, 1315

**Molecular rearrangement**

Reaction of 3-Hydroxyquinoline-2,4-diones with Inorganic Thiocyanates in the Presence of Ammonium or Alkylammonium Ions: the Unexpected Replacement of a Hydroxy Group by an Amino Group, 318

**Momordica charantia**

Two New Cucurbitane Triterpenoids from Immature Fruits of *Momordica charantia*, 1456

**Monoterpenoids**

Isolation and Characterization of Secondary Metabolites from *Rhododendron microphyton*, 1132

New Monoterpenoids from Fruits of *Gardenia jasminoides* var. *radicans*, 1267

The First Synthesis of (4*S*,5*R*,6*R*)-5,6-Dihydroxy-4-(prop-1-en-2-yl)cyclohex-1-ene-1-carboxylic Acid, 1442

**Multicomponent reactions (MCRs)**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

New Convenient Five-Component One-Pot Synthesis of 3-Alkyl-6-amino-1,4-dihydro-4-[(1,2,3-triazol-4-yl)methoxy]phenyl]pyrano[2,3-*c*]pyrazole-5-carbonitrile Derivatives, 633

One-Pot Four-Component Synthesis of Thieno[2,3-*d*]pyrimidin-4-amines *via* Sequential *Gewald*/Cyclocondensation Reactions, 1079

One-Pot ‘On-solvent’ Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**(–)-Muricatacin**

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

**Myrothecium roridum**

Bioactive Trichothecenes Produced by the *Myrothecium* sp. QB-1, 1435

**Myrrh**

Two New Sesquiterpenes from Myrrh, 1332

**Nanohybrids**

Copper/Graphene/Clay Nanohybrid: A Highly Efficient Heterogeneous Nanocatalyst for the Synthesis of Novel 1,2,3-Triazolyl Carboacyclic Nucleosides *via* ‘Click’ *Huisgen* 1,3-Dipolar Cycloaddition, 1210

**Nanoparticles**

Synthesis of New Pyrano[2',3':5,6]chromeno[4,3-*b*]quinolin-4-ones *via* *Aza-Diels–Alder* Reaction, 417

Palladium Supported on Zinc Oxide Nanoparticles as Efficient Heterogeneous Catalyst for *Suzuki–Miyaura* and *Hiyama* Reactions under Normal Laboratory Conditions, 805

**Naphthoquinones**

Synthesis of a Regioisomer of  $\beta$ -Lapachone and Analogs as Potent Antitumor Agents, 128

**Nef reaction**

Facile Synthesis of 5-Hexyl-4-methyl- $\gamma$ -butyrolactone *via* *Nef* Reaction as a Key Step, 795

**Nef-Isocyanide adduct**

Formation of Dialkyl 2-[3-Alkoxy-1-(alkylimino)-1-chloro-3-oxopropan-2-ylidene]hydrazine-1,1-dicarboxylates of  $\alpha$ -(Alkoxy-carbonyl)imidoyl Chlorides from Phosphine-Diazo Ester Zwitterions and Nef-Isocyanide Adducts, 374

**Neosarphenols A and B**

Polyketides and Meroterpenoids from *Neosartorya glabra*, 515

***Neosartorya fischeri***

Cottoquinazolines E and F from *Neosartorya fischeri* NRRL 181, 552

***Neosartorya glabra***

Polyketides and Meroterpenoids from *Neosartorya glabra*, 515

**Ninhydrin**

Synthesis of Polysubstituted Benzenes via the Vinylogous Michael Addition of Alkylidenemalononitriles to 2-(1,3-Dioxo-1*H*-inden-2(3*H*)-ylidene)malononitrile, 569

**NMR Spectroscopy**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

Substituent Effects on  $\pi$ -Bond Delocalization of Fulvenes and Fulvalenes. Are Fulvenes Aromatic?, 763  
Synthesis and NMR Spectroscopic Elucidation of Four Diastereoisomers of Oxygenated Bisabolane Side Chain, 1035

**N–O Moiety**

Atom-Economical Synthesis of Complex Heterocycles with N–O Moiety, 1315

**Nonafulvenes**

Substituent Effects on  $\pi$ -Bond Delocalization of Fulvenes and Fulvalenes. Are Fulvenes Aromatic?, 763

**Nonanal**

Stereoselective Total Synthesis of the Natural Oxylinin (6*R*,7*E*,9*R*,10*S*)-6,9,10-Trihydroxyoctadec-7-enoic Acid, 78

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

**Nonenolide**

A Stereoselective Total Synthesis of Xyolide, a Natural Bioactive Nonenolide, 674

**Norabietanes**

Two New Degraded Triterpenoids and a Novel *seco*-Norabietane Diterpene from the Root Bark of *Azadirachta indica*, 135

**Nordammarane triterpenoids**

Nordammarane Triterpenoids from *Sanguisorba officinalis*, 273

**Norditerpenoids**

New Phenolic Tricyclic Diterpenoids from Rhizomes of *Isodon hispida* (BENTH.) HARA, 527

***Ochradenus arabicus***

A New Cyclopropyl-Triterpenoid from *Ochradenus arabicus*, 1240

**Octadec-7-enoic acid, (6*R*,7*E*,9*R*,10*S*)-6,9,10-trihydroxy-**

Stereoselective Total Synthesis of the Natural Oxylinin (6*R*,7*E*,9*R*,10*S*)-6,9,10-Trihydroxyoctadec-7-enoic Acid, 78

***Olea ferruginea***

A New Dimeric Secoiridoid Glycoside from the Leaves of *Olea ferruginea* ROYLE, 668

**Oleiferosides I–M**

New Triterpenoid Glycosides from the Roots of *Camellia oleifera* ABEL, 496

**One-pot four-component reaction**

An Efficient Synthesis of Chromeno[2,3-*d*]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

**'On-solvent' process**

One-Pot 'On-solvent' Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

***Oplopanax horridus***

Phenolic Derivatives from the Root Bark of *Oplopanax horridus*, 201

**ORAC-FL**

Antioxidative Cassane Diterpenoids from the Seeds of *Caesalpinia minax*, 1387

**Orthoesters**

New Phragmalin-Type Limonoid Orthoesters from the Bark of *Chukrasia tabularis* var. *velutina*, 1403

**Osmium catalysis**

Tandem Benzylic Oxidation/Dihydroxylation of  $\alpha$ -Vinyl- and  $\alpha$ -Alkenylbenzyl Alcohols, 92

**(6S,12R)-Oxacyclododecane-2,5-dione, 6-hydroxy-12-methyl-**

Stereoselective Total Synthesis of Iso-Cladospolide B and the 12 Membered-Macrolactone (6S,12R)-6-Hydroxy-12-methyloxacyclododecane-2,5-dione, 1115

**Oxa-Michael reaction**

Stereoselective Total Synthesis of Decytopolides A and B Starting from D-Mannitol, 267

**1,3-Oxathiins**

Synthesis of Benzobis[1,3]oxathiins, 1061

**1,3-Oxathioles**

1,3-Dipolar Cycloadditions of  $\alpha$ -Diazo Ketones Derived from *N*-Protected (*S*)-Proline with Aromatic and Cycloaliphatic Thioketones, 190

**Oxidation**

The First Synthesis of (4*S*,5*R*,6*R*)-5,6-Dihydroxy-4-(prop-1-en-2-yl)cyclohex-1-ene-1-carboxylic Acid, 1442

**Oxindole**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**(–)-(3*S*)-Oxindole, 3-hydroxy-3-methyl-**

Chemical Constituents of the Endophytic Fungus *Hypoxyton* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

 **$\alpha$ -Oxoaldehydes**

Characterization of Adducts Formed in the Reactions of Methylglyoxal and Malonaldehyde with Lysine and Histidine Derivatives, 842

**3-Oxobutenylindene-1,3-dione**

Diastereoselective and Efficient Synthesis of Indeno[2'',1'':4',5']furo[3',2':5,6]pyrido[2,3-*d*]pyrimidine-2,4,6(1*H*,3*H*)-trione and 6-(2,3-Dihydro-2-hydroxy-1,3-dioxo-1*H*-inden-2-yl)-5,8-dihydropyrido[2,3-*d*]pyrimidine-2,4,7(1*H*,3*H*,6*H*)-trione Derivatives, 1411

 **$\omega$ -Oxoecdysteroids**

Reductive Amination of  $\omega$ -Oxoecdysteroids in the Synthesis of Dimeric Ecdysteroids, 1292

**Oxylipin**

Stereoselective Total Synthesis of the Natural Oxylipin (6*R*,7*E*,9*R*,10*S*)-6,9,10-Trihydroxyoctadec-7-enoic Acid, 78

**Ozone**

Facile Synthesis of 5-Hexyl-4-methyl- $\gamma$ -butyrolactone *via Nef* Reaction as a Key Step, 795

***Paecilomyces***

Paecilomycines A and B, Novel Diterpenoids, Isolated from Insect-Pathogenic Fungi *Paecilomyces* sp. ACCC 37762, 642

***Paecilomyces variotii***

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

**Paecilomycines A and B**

Paecilomycines A and B, Novel Diterpenoids, Isolated from Insect-Pathogenic Fungi *Paecilomyces* sp. ACCC 37762, 642

**Palladium catalyst**

Lithium Enolates: 'Capricious' Structures – Reliable Reagents for Synthesis, 1

Palladium-Catalyzed Arylation of Olefins by Triarylphosphines *via* C–P Bond Cleavage, 116

Synthesis and Characterization of *m*-Terphenyl (1,3-Diphenylbenzene) Compounds Containing Trifluoromethyl Groups, 359

Palladium Supported on Zinc Oxide Nanoparticles as Efficient Heterogeneous Catalyst for *Suzuki–Miyaura* and *Hiyama* Reactions under Normal Laboratory Conditions, 805

**Palladium complexes**

Enantioselective Allylic Alkylation Catalyzed by Novel C<sub>2</sub>-Symmetric Bisphosphinites, 490

**Parr global electrophilicity**

Boyd Group Electronegativity Influence on the Parr Global Electrophilicity of Vilsmeier Reagent-Derived Imidates: New Insights toward Improving Mitsunobu Chemistry, 582

**Patchoulane sesquiterpenes**

Sesquiterpenes from Rhizomes of *Cyperus rotundus* with Cytotoxic Activities on Human Cancer Cells *in vitro*, 1372

**Penicillium**

Three New Xanthenes from the Fungus *Penicillium* sp. NH-7-1, 699

**Penta-1,4-dienes, 1,5-bis[(trimethylsilyl)oxy]-**

Synthesis of 2,3,3a,9a-Tetrahydro-1*H*-cyclopenta[*b*]quinoxaline-1,3,4,9-tetracarboxylate by Cyclization of 1,5-Bis[(trimethylsilyl)oxy]penta-1,4-dienes with Quinoxalines, 308

**Pentafulvenes**

Substituent Effects on  $\pi$ -Bond Delocalization of Fulvenes and Fulvalenes. Are Fulvenes Aromatic?, 763

**Pentasaccharide**

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618

**Peptide reagents**

The Aminopropenal- and Aminopentadienal Rearrangement, 881

**Peptides**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

Synthesis of Cyclopentapeptides with Three to Five Aib Units, 232

**Phenanthrene**

Synthesis of Phenanthrene Derivatives through the Reaction of an  $\alpha,\alpha$ -Dicyanoolefin with  $\alpha,\beta$ -Unsaturated Carbonyl Compounds, 1426

**Phenols**

Stilbenoids and Phenols in *Acanthopanax brachypus*, 1466

**Phenones,  $\alpha,\beta$ -dihydroxy-**

Tandem Benzylic Oxidation/Dihydroxylation of  $\alpha$ -Vinyl- and  $\alpha$ -Alkenylbenzyl Alcohols, 92

**Phenyl ether derivatives**

Three New Phenyl Ether Derivatives from *Aspergillus carneus* HQ889708, 819

**L-Phenylalanine**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

Phenylalanine-Derived Imidazolines Bearing Heteroaromatic Pendants: Synthesis, Characterization, and Application in the Asymmetric Henry Reaction, 1351

**Phenylethanoid glycosides**

Two New Phenylethanoid Glycosides from *Callicarpa longissima*, 482

**Phenyllithium**

The Aggregation Behavior of Butyllithium in Diethyl Ether in the Presence of LiBr, LiClO<sub>4</sub>, and Phenyllithium: A Deuterium-Induced Secondary <sup>6</sup>Li-NMR Isotope-Effect Study, 427

**Phenyllithium, 2-(dialkoxymethyl)-**

A Facile Synthesis of 1-Substituted 3-Alkoxy-1*H*-isoindoles Based on the Reaction of 2-(Dialkoxymethyl)-phenyllithiums with Nitriles, Followed by Acid-Catalyzed Cyclization, 279

**Phenylpropanoids**

Phenolic Derivatives from the Root Bark of *Oplopanax horridus*, 201

**Phorboxazole A**

Towards Stereoselective Synthesis of the C(31)–C(39) and C(20)–C(27) Fragments of Phorboxazole A, 386

**Phosphines, triaryl**

Palladium-Catalyzed Arylation of Olefins by Triarylphosphines *via* C–P Bond Cleavage, 116

**Photochemical reaction**

Direct Arylation of 5-Iodouracil and 5-Iodouridine with Heteroarenes and Benzene *via* Photochemical Reaction, 953

**Photochemistry**

Corrin Syntheses. Part I. Introduction and Overview, 1483



Corrin Syntheses. Part VI. Corrin Synthesis *via A* → *D* Ring Closure. The Construction of *A/D*-Secocorrin Chromophore Systems by the ‘Sulfide Contraction’ Method and the Photochemical *A/B*-Secocorrin → Corrin Cycloisomerization, 1921

**Phragmanthera capitata**

Two 2,6-Dioxabicyclo[3.3.1]nonan-3-ones from *Phragmanthera capitata* (SPRENG.) BALLE (Loranthaceae), 945

**Phthalides**

Synthesis of 1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates *via* Intramolecular Cyclization of 2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates Followed by Oxidation, 1364

**Polyamines**

Copper(I)-Catalyzed Amination of Halogenopyridines with Polyamines, 47

**Polyketides**

First Stereoselective Synthesis of the Cytotoxic Polyketide (4*R*)-1-(3,5-Dihydroxyphenyl)-4-hydroxypentan-2-one, 143

Polyketides and Meroterpenoids from *Neosartorya glabra*, 515

**Polyselenophene**

*In situ* UV/VIS Spectroscopy of Electrochemically Synthesized Selenophene–Thiophene Copolymers, 851

**Polythiophene**

*In situ* UV/VIS Spectroscopy of Electrochemically Synthesized Selenophene–Thiophene Copolymers, 851

**Portulaca oleracea**

A New Tricyclic Alkaloid from *Portulaca oleracea* L., 961

**Portulacatone**

A New Tricyclic Alkaloid from *Portulaca oleracea* L., 961

**Potassium selenocyanate**

Sulfonyl Ketenimines as Key Intermediates in One-Pot Synthesis of *N*-Sulfonyl-2-alkaneimidoyl Selenocyanates, 343

**Prenyl-flavonol glycosides**

Flavonoids Isolated from Heat-Processed *Epimedium koreanum* and Their Anti-HIV-1 Activities, 1177

**Profens**

Concise Synthesis of 2-Arylpropanoic Acids and Study of Unprecedented Reduction of 3-Hydroxy-2-arylpropanoic Acid Ethyl Ester to 2-Arylpropanoic Acid Ethyl Ester by  $\text{BH}_3 \cdot \text{THF}$ , 1273

**L-Proline**

1,3-Dipolar Cycloadditions of  $\alpha$ -Diazo Ketones Derived from *N*-Protected (*S*)-Proline with Aromatic and Cycloaliphatic Thioketones, 190

An Efficient and Chemoselective *Knoevenagel*/Hemiketalization Process for the Synthesis of New 2*H*-Chromenes in a One-Pot Three-Component Reaction, 978

**Propane-1,2-diol, 3-phenyl-**

Novel and Stereospecific Synthesis of (2*S*)-3-(2,4,5-Trifluorophenyl)propane-1,2-diol from D-Mannitol, 1127

**‘Push-pull’-acetylenes**

The Aminopropenal- and Aminopentadienal Rearrangement, 881

**‘Push-pull’-enynes**

The Aminopropenal- and Aminopentadienal Rearrangement, 881

**2*H*-Pyran-2-ones**

Two Rare  $\alpha$ -Pyrone (= 2*H*-Pyran-2-one) Derivatives from *Gentiana rhodantha* FRANCHET, 657

**Pyrano[2,3-*c*]pyrazoles**

New Convenient Five-Component One-Pot Synthesis of 3-Alkyl-6-amino-1,4-dihydro-4-[(1,2,3-triazol-4-yl)methoxy]phenyl]pyrano[2,3-*c*]pyrazole-5-carbonitrile Derivatives, 633

**Pyrano[4,3-*b*]quinoline**

Synthesis of New Pyrano[2',3':5,6]chromeno[4,3-*b*]quinolin-4-ones *via* *Aza-Diels–Alder* Reaction, 417

**4*H*-Pyrano[3,2-*c*]quinolines**

One-Pot ‘On-solvent’ Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

**Pyridines, halogeno-**

Copper(I)-Catalyzed Amination of Halogenopyridines with Polyamines, 47

**Pyridines, penta-substituted**

Copper-Catalyzed Synthesis of Pentasubstituted Pyridines from *N*-Sulfonyl Ketenimines, 1,1,3,3-Tetramethylguanidine, and Acetylene Dicarboxylates, 534

**Pyridinium chlorochromate oxidation**

Synthesis of 1,3-Dihydro-3-oxo-2-benzofuran-1-carboxylates *via* Intramolecular Cyclization of 2-[2-(Dimethoxymethyl)phenyl]-2-hydroxyalkanoates Followed by Oxidation, 1364

**Pyrido[1,2-*a*]pyrimidine**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**Pyrimidine, hexahydro-2-(nitromethylidene)-**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine**

Synthesis and Spectral Characteristics of Novel Fluorescent Dyes Based on Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine, 474

**Pyripyropene A**

Cottoquinazolines E and F from *Neosartorya fischeri* NRRL 181, 552

**Quantum yield**

Synthesis and Spectral Characteristics of Novel Fluorescent Dyes Based on Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine, 474

**Quinazolines, 3,4-dihydro-**

One-Pot Synthesis of 3-Acetyl-2-aryl-3,4-dihydroquinazolines from *N*-[2-(Azidomethyl)phenyl]benzamides Utilizing Intramolecular *Aza-Wittig* Reaction, 184

**Quinazolinones**

Novel 1,2,3,4-Tetrahydroquinazolinones *via* Reaction of 2-Amino-*N*-substituted Benzamides and Dimethyl Acetylenedicarboxylate, 1028

**Quinoline-2,4-diones, 3-amino-**

Reaction of 3-Hydroxyquinoline-2,4-diones with Inorganic Thiocyanates in the Presence of Ammonium or Alkylammonium Ions: the Unexpected Replacement of a Hydroxy Group by an Amino Group, 318

**Quinolin-2(1*H*)-one, 4-hydroxy-1-methyl-**

One-Pot 'On-solvent' Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

**Quinones**

A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

**Quinoxalines**

Synthesis of 2,3,3a,9a-Tetrahydro-1*H*-cyclopenta[*b*]quinoxaline-1,3,4,9-tetracarboxylate by Cyclization of 1,5-Bis[(trimethylsilyl)oxy]penta-1,4-dienes with Quinoxalines, 308

**Raney nickel**

Synthesis of Terpene Diamines Based on Camphor-Derived Dinitriles, 447

**Raphanus sativus**

Bioactive Trichothecenes Produced by the *Myrothecium* sp. QB-1, 1435

**Reactivity**

Exploration of Quantitative Structure–Reactivity Relationships for the Estimation of *Mayr* Nucleophilicity, 863

**Recrystallization**

Enantiomeric Enrichments *via* the Self-Disproportionation of Enantiomers (SDE) by Achiral, Gravity-Driven Column Chromatography: a Case Study Using *N*-(1-Phenylethyl)acetamide for Optimizing the Enantiomerically Pure Yield and Magnitude of the SDE, 1147

**Reductive amination**

Reductive Amination of  $\omega$ -Oxoecdysteroids in the Synthesis of Dimeric Ecdysteroids, 1292

**rel-Pyricolluminol**

A Novel Alkaloid from *Aspidosperma pyricollum* (Apocynaceae) and Complete  $^1\text{H}$  and  $^{13}\text{C}$  Chemical Shift Assignments, 1381

**Resveratrol oligomers**

Absolute Configuration of Resveratrol Oligomers Isolated from *Hopea utilis*, 32

**Retama raetam**

Two New Flavonoids from *Retama raetam*, 561

**Retamasins A and B**

Two New Flavonoids from *Retama raetam*, 561

**Rhodanthpyrones A and B**

Two Rare  $\alpha$ -Pyrone (=2*H*-Pyran-2-one) Derivatives from *Gentiana rhodantha* FRANCHET, 657

**Rhododendron microphyton**

Isolation and Characterization of Secondary Metabolites from *Rhododendron microphyton*, 1132

**Ring opening**

Reactions of (1*E*)-Buta-1,3-dien-1-yl Acetate with Diazocarbonyl Compounds, 1245

**Ring-closing metathesis**

Stereoselective Total Synthesis of Mangiferaelactone using D-Mannose as a Chiral Pool, 1395

**Ring-closure reactions**

Corrin Syntheses. Part III. Synthesis of Corrin Complexes via  $A \rightarrow B$  Ring Closure. Preparation of *A/D* Components, 1683

Corrin Syntheses. Part IV. Synthesis of Corrin Complexes via  $A \rightarrow B$  Ring Closure. Coupling of Hemicorrinoid *A/D* und *B/C* Components to Corrin by Imido-ester–Enamine Condensations, 1755

Corrin Syntheses. Part V. Preparation of Metal-Free Corrin Derivatives via  $A \rightarrow B$  Ring Closure. Complexation of the Corrin Chromophore with Metal Ions, and Some Properties of the Ligands in Corrin Complexes, 1845

**Salicylaldehydes**

An Efficient Synthesis of Chromeno[2,3-*d*]pyrimidine-2,4-diones with a Nitroketene-Aminal Moiety at C(5) by a One-Pot Four-Component Reaction, 663

An Efficient and Chemoselective *Knoevenagel*/Hemiketalization Process for the Synthesis of New 2*H*-Chromenes in a One-Pot Three-Component Reaction, 978

One-Pot ‘On-solvent’ Multicomponent Protocol for the Synthesis of Medicinally Relevant 4*H*-Pyrano[3,2-*c*]quinoline Scaffold, 1104

**Sanguisorba officinalis**

Nordammarane Triterpenoids from *Sanguisorba officinalis*, 273

**Saponins**

Two New Triterpene Saponins from the Seed Residue of *Hippophae rhamnoides* L., 60

Two New Triterpenoid Saponins from *Stauntonia obovatifoliola* HAYATA ssp. *intermedia*, 245

Two New Triterpene Saponins from *Acanthophyllum laxiusculum*, 611

**Scurrula parasitica**

A Hydroxylated Lupeol-Based Triterpenoid Ester Isolated from the *Scurrula parasitica* Parasitic on *Nerium indicum*, 627

***A/D*-Secocorrin  $\rightarrow$  Corrin cycloisomerization**

Corrin Syntheses. Part I. Introduction and Overview, 1483

Corrin Syntheses. Part VI. Corrin Synthesis via  $A \rightarrow D$  Ring Closure. The Construction of *A/D*-Secocorrin Chromophore Systems by the ‘Sulfide Contraction’ Method and the Photochemical *A/B*-Secocorrin  $\rightarrow$  Corrin Cycloisomerization, 1921

**Secoiridoids**

A New Dimeric Secoiridoid Glycoside from the Leaves of *Olea ferruginea* ROYLE, 668

**Selenocyanates**

Sulfonyl Ketenimines as Key Intermediates in One-Pot Synthesis of *N*-Sulfonyl-2-alkaneimido-yl Selenocyanates, 343

**Self-disproportion of enantiomers (SDE)**

Enantiomeric Enrichments via the Self-Disproportionation of Enantiomers (SDE) by Achiral, Gravity-Driven Column Chromatography: a Case Study Using *N*-(1-Phenylethyl)acetamide for Optimizing the Enantiomerically Pure Yield and Magnitude of the SDE, 1147

**(*S*)-Serine**

Enantiospecific Synthesis of (*R*)-3-Amino-4-(2,4,5-trifluorophenyl)butanoic Acid Using (*S*)-Serine as a Chiral Pool, 260

**Sesquiterpenes**

Three New Bisabolane Sesquiterpenes from *Ligularia songarica*, 410

Two New Sesquiterpenes from Myrrh, 1332

**Sesquiterpenoids**

Terpenoids from the Stems of *Drypetes congestiflora*, 724

Two New Sesquiterpenes from the Resin of *Toxicodendron vernicifluum*, 1004

Synthesis and NMR Spectroscopic Elucidation of Four Diastereoisomers of Oxygenated Bisabolane Side Chain, 1035

A New Irregular Trihydroxy Sesquiterpene from *Teucrium mascatense*, 1462

**Sharpless asymmetric dihydroxylation**

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

An Efficient Enantioselective Synthesis of Natural Gingerols, the Active Principles of Ginger, 1009

Stereoselective Total Synthesis of Iso-Cladospolide B and the 12 Membered-Macrolactone (6*S*,12*R*)-6-

Hydroxy-12-methyloxacyclododecane-2,5-dione, 1115

**Silibinin**

Synthesis of New Silybin Derivatives and Evaluation of Their Antioxidant Properties, 399

**Silybins A and B**

Synthesis of New Silybin Derivatives and Evaluation of Their Antioxidant Properties, 399

**Silyl enol ethers**

Synthesis of 2,3,3a,9a-Tetrahydro-1*H*-cyclopenta[*b*]quinoxaline-1,3,4,9-tetracarboxylate by Cyclization of 1,5-Bis[(trimethylsilyl)oxy]penta-1,4-dienes with Quinoxalines, 308

**Sinularia**

New Casbane Diterpenoids from the Hainan Soft Coral *Sinularia* Species, 834

**Sitagliptin**

Enantiospecific Synthesis of (*R*)-3-Amino-4-(2,4,5-trifluorophenyl)butanoic Acid Using (*S*)-Serine as a Chiral Pool, 260

**Solid fermentation**

Three New Phenyl Ether Derivatives from *Aspergillus carneus* HQ889708, 819

**Solvent-free synthesis**

One-Pot Four-Component Synthesis of Thieno[2,3-*d*]pyrimidin-4-amines *via* Sequential *Gewald*/Cyclocondensation Reactions, 1079

**Songaricalarins F–H**

Three New Bisabolane Sesquiterpenes from *Ligularia songarica*, 410

**Sonogashira coupling**

Alkyne-Mediated Approach to the Synthesis of (4*R*,5*R*)-5-Hydroxy-4-decanolide and (–)-Muricatacin, 967

**Spiro-oxindole**

An Efficient Synthesis of Spiro-oxindole Derivatives by Three-Component Reactions in Water, 546

**Stagonolide E**

Stereoselective Total Synthesis of Stagonolide E, 650

**Staudinger reaction**

One-Pot Synthesis of 3-Acetyl-2-aryl-3,4-dihydroquinazolines from *N*-[2-(Azidomethyl)phenyl]benzamides Utilizing Intramolecular *Aza-Wittig* Reaction, 184

**Staunosides G and H**

Two New Triterpenoid Saponins from *Stauntonia obovatifoliola* HAYATA ssp. *intermedia*, 245

**Stauntonia obovatifoliola**

Two New Triterpenoid Saponins from *Stauntonia obovatifoliola* HAYATA ssp. *intermedia*, 245

**Stereochemistry**

Synthesis and NMR Spectroscopic Elucidation of Four Diastereoisomers of Oxygenated Bisabolane Side Chain, 1035

**Stereoselective synthesis**

Lithium Enolates: ‘Capricious’ Structures – Reliable Reagents for Synthesis, 1

A Concise Total Synthesis of (+)-(6*S*,9*R*,10*R*)-Bovidic Acid, 575

A Stereoselective Total Synthesis of Xyolide, a Natural Bioactive Nonenolide, 674

An Efficient Enantioselective Synthesis of Natural Gingerols, the Active Principles of Ginger, 1009

**Steroid conjugates**

Design and Synthesis of New Bile Acid–Sterol Conjugates Linked *via* 1,2,3-Triazole Ring, 1337

**Sterols**

Design and Synthesis of New Bile Acid–Sterol Conjugates Linked *via* 1,2,3-Triazole Ring, 1337

**Stilbenoids**

Stilbenoids and Phenols in *Acanthopanax brachypus*, 1466

**Still–Gennari olefination**

Stereoselective Total Synthesis of Stagonolide E, 650

**Structure–reactivity relationships**

Exploration of Quantitative Structure–Reactivity Relationships for the Estimation of *Mayr* Nucleophilicity, 863

**Subergorgia suberosa**

Subergane-Type Sesquiterpenes from Gorgonian Coral *Subergorgia suberosa* with Antibacterial Activities, 1202

**Substituent effects**

Substituent Effects on  $\pi$ -Bond Delocalization of Fulvenes and Fulvalenes. Are Fulvenes Aromatic?, 763

**Sulfide contraction**

Corrin Syntheses. Part I. Introduction and Overview, 1483

Corrin Syntheses. Part VI. Corrin Synthesis *via* *A*  $\rightarrow$  *D* Ring Closure. The Construction of *A/D*-Secocorrin Chromophore Systems by the ‘Sulfide Contraction’ Method and the Photochemical *A/B*-Secocorrin  $\rightarrow$  Corrin Cycloisomerization, 1921

**Sulforhodamine B (SRB) bioassay**

Three New Lignan Derivatives from *Lindera glauca* (SIEBOLD et ZUCC.) BLUME, 1087

**Supramolecular chemistry**

New Calix[4]arene-Cored Peripherally Functionalized Dendrimers: Synthesis and Conformational Characteristics, 593

Synthesis of a Novel Benzocyclotrimer with One Rigid and One Flexible Electron-Rich Cavity, 1067

**Suzuki–Miyaura cross coupling**

Palladium Supported on Zinc Oxide Nanoparticles as Efficient Heterogeneous Catalyst for *Suzuki–Miyaura* and *Hiyama* Reactions under Normal Laboratory Conditions, 805

**Tandem reactions**

Tandem Benzylic Oxidation/Dihydroxylation of  $\alpha$ -Vinyl- and  $\alpha$ -Alkenylbenzyl Alcohols, 92

**Tautomerization**

Computational Studies on Intramolecular Cycloadditions of Azidoenynes and Azidobutenenitriles to Give 6*H*-Pyrrolo[1,2-*c*][1,2,3]triazoles and 5*H*-Pyrrolo[1,2-*d*]tetrazoles, 1018

**Terpenoids**

Terpenoids from the Stems of *Drypetes congestiflora*, 724

***p*-Terphenyl compounds**

A New *p*-Terphenyl Derivative from the Mushroom *Thelephora vialis*, 1075

***m*-Terphenyl ligands**

Synthesis and Characterization of *m*-Terphenyl (1,3-Diphenylbenzene) Compounds Containing Trifluoromethyl Groups, 359

**Tetranortriterpenoids**

Two New Degraded Triterpenoids and a Novel *seco*-Norabietane Diterpene from the Root Bark of *Azadirachta indica*, 135

***Teucrium mascatense***

A New Irregular Trihydroxy Sesquiterpene from *Teucrium mascatense*, 1462

***Thelephora vialis***

A New *p*-Terphenyl Derivative from the Mushroom *Thelephora vialis*, 1075

**Thiazole derivatives**

A Facile and Efficient One-Pot Electrochemical Synthesis of Thiazole Derivatives in Aqueous Solution, 210

**Thieno[2,3-*d*]pyrimidin-4-amines**

One-Pot Four-Component Synthesis of Thieno[2,3-*d*]pyrimidin-4-amines *via* Sequential *Gewald*/Cyclocondensation Reactions, 1079

**Thioamides**

Reaction of 3-Hydroxyquinoline-2,4-diones with Inorganic Thiocyanates in the Presence of Ammonium or Alkylammonium Ions: the Unexpected Replacement of a Hydroxy Group by an Amino Group, 318

**Thiocarbonyl ylides**

Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

**Thioketones**

1,3-Dipolar Cycloadditions of  $\alpha$ -Diazo Ketones Derived from *N*-Protected (*S*)-Proline with Aromatic and Cycloaliphatic Thioketones, 190

**Thioketones, dihetaryl**

Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

**2-(Thiophen-2-yl)furans**

Reaction between Furan- or Thiophene-2-carbonyl Chloride, Isocyanides, and Dialkyl Acetylenedicarboxylates: Multicomponent Synthesis of 2,2'-Bifurans and 2-(Thiophen-2-yl)furans, 1231

**Three-component reactions**

One-Pot Three-Component Synthesis of *Hantzsch* 1,4-Dihydropyridines Promoted by Dimethyl Phosphate Ionic Liquids, 1095

**Tomatillidine 3-*O*- $\beta$ -*D*-glucopyranoside**

Steroidal Alkaloids from *Veratrum dahuricum* (TURCZ.) LOES. f. with Genotoxicity on Brain Cell DNA in Mice, 85

**Totara-8,11,13-triene-13  $\rightarrow$  16-hemiacetal**

New Phenolic Tricyclic Diterpenoids from Rhizomes of *Isodon hispida* (BENTH.) HARA, 527

**Toxicodenanes D and E**

Two New Sesquiterpenes from the Resin of *Toxicodendron vernicifluum*, 1004

***Toxicodendron vernicifluum***

Two New Sesquiterpenes from the Resin of *Toxicodendron vernicifluum*, 1004

**Triazenes**

Synthesis and Characterization of *m*-Terphenyl (1,3-Diphenylbenzene) Compounds Containing Trifluoromethyl Groups, 359

**1,2,3-Triazole ring**

Design and Synthesis of New Bile Acid–Sterol Conjugates Linked via 1,2,3-Triazole Ring, 1337

**1,2,3-Triazoles**

New Convenient Five-Component One-Pot Synthesis of 3-Alkyl-6-amino-1,4-dihydro-4-[(1,2,3-triazol-4-yl)methoxy]phenyl]pyrano[2,3-*c*]pyrazole-5-carbonitrile Derivatives, 633

**1*H*-1,2,3-Triazolyl carboacyclic nucleosides**

Copper/Graphene/Clay Nanohybrid: A Highly Efficient Heterogeneous Nanocatalyst for the Synthesis of Novel 1,2,3-Triazolyl Carboacyclic Nucleosides via 'Click' *Huisgen* 1,3-Dipolar Cycloaddition, 1210

**Trichothecenes**

Bioactive Trichothecenes Produced by the *Myrothecium* sp. QB-1, 1435

**Tricyclic alkaloid**

A New Tricyclic Alkaloid from *Portulaca oleracea* L., 961

**Trifluorophenylmagnesium bromide**

Novel and Stereospecific Synthesis of (2*S*)-3-(2,4,5-Trifluorophenyl)propane-1,2-diol from *D*-Mannitol, 1127

**Trigonoliimines D – G**

Further Alkaloids from the Leaves of *Trigonostemon lii*, 72

***Trigonostemon lii***

Further Alkaloids from the Leaves of *Trigonostemon lii*, 72

**Triterpene saponins**

Two New Triterpene Saponins from the Seed Residue of *Hippophae rhamnoides* L., 60

**Triterpenes**

Two New Triterpene Saponins from *Acanthophyllum laxiusculum*, 611

**Triterpenoid saponins**

Two New Triterpenoid Saponins from *Stauntonia obovatifoliola* HAYATA ssp. *intermedia*, 245

New Triterpenoid Glycosides from the Roots of *Camellia oleifera* ABEL, 496

New Pentacyclic Triterpenoids from *Centella asiatica*, 683

**Triterpenoids**

Two New Degraded Triterpenoids and a Novel *seco*-Norabietane Diterpene from the Root Bark of *Azadirachta indica*, 135

Nordammarane Triterpenoids from *Sanguisorba officinalis*, 273

A Hydroxylated Lupeol-Based Triterpenoid Ester Isolated from the *Scurrula parasitica* Parasitic on *Nerium indicum*, 627

 **$\alpha,\beta$ -Unsaturated carbonyl compounds**

Synthesis of Phenanthrene Derivatives through the Reaction of an  $\alpha,\alpha$ -Dicyanoolefin with  $\alpha,\beta$ -Unsaturated Carbonyl Compounds, 1426

**Uracil, 5-iodo-**

Direct Arylation of 5-Iodouracil and 5-Iodouridine with Heteroarenes and Benzene *via* Photochemical Reaction, 953

**Uridine, 5-iodo-**

Direct Arylation of 5-Iodouracil and 5-Iodouridine with Heteroarenes and Benzene *via* Photochemical Reaction, 953

**UV/VIS Spectroscopy**

Synthesis and Spectral Characteristics of Novel Fluorescent Dyes Based on Pyrimido[4,5-*d*][1,2,4]triazolo[4,3-*a*]pyrimidine, 474

*In situ* UV/VIS Spectroscopy of Electrochemically Synthesized Selenophene–Thiophene Copolymers, 851

**Valence isomerizations**

Synthesis of Benzobis[1,3]oxathiins, 1061

***Valeriana jatamansi***

Two New Iridoid Esters from the Root and Rhizome of *Valeriana jatamansi* JONES, 1225

**Valerjatadoids A and B**

Two New Iridoid Esters from the Root and Rhizome of *Valeriana jatamansi* JONES, 1225

**Varioloids A and B**

Oxepine-Containing Diketopiperazine Alkaloids from the Algal-Derived Endophytic Fungus *Paecilomyces variotii* EN-291, 800

***Veratrum dahuricum***

Steroidal Alkaloids from *Veratrum dahuricum* (TURCZ.) LOES. f. with Genotoxicity on Brain Cell DNA in Mice, 85

***Veratrum maackii***

Steroidal Alkaloids from *Veratrum maackii* REGEL with Genotoxicity on Brain-Cell DNA in Mice, 539

**Verdine, 2 $\beta$ -hydroxy-**

Steroidal Alkaloids from *Veratrum dahuricum* (TURCZ.) LOES. f. with Genotoxicity on Brain Cell DNA in Mice, 85

**(+)-Vermelone**

Chemical Constituents of the Endophytic Fungus *Hypoxylon* sp. 12F0687 Isolated from Taiwanese *Ilex formosana*, 1167

**Vialisyl A**

A New *p*-Terphenyl Derivative from the Mushroom *Thelephora vialis*, 1075

**Vinylogous addition**

Synthesis of Phenanthrene Derivatives through the Reaction of an  $\alpha,\alpha$ -Dicyanoolefin with  $\alpha,\beta$ -Unsaturated Carbonyl Compounds, 1426

**Vitamin B<sub>12</sub>**

Corrin Syntheses. Part I. Introduction and Overview, 1483

Corrin Syntheses. Part II. Synthesis of Corrin Complexes *via* A  $\rightarrow$  B Ring Closure. Preparation of Hemicorrinoid B/C-Components, and Model Studies on Enamides and Imido Ester C,C Condensations, 1601

Corrin Syntheses. Part III. Synthesis of Corrin Complexes *via* A  $\rightarrow$  B Ring Closure. Preparation of A/D Components, 1683

Corrin Syntheses. Part IV. Synthesis of Corrin Complexes *via* A  $\rightarrow$  B Ring Closure. Coupling of Hemicorrinoid A/D und B/C Components to Corrin by Imido-ester–Enamine Condensations, 1755

Corrin Syntheses. Part V. Preparation of Metal-Free Corrin Derivatives via  $A \rightarrow B$  Ring Closure. Complexation of the Corrin Chromophore with Metal Ions, and Some Properties of the Ligands in Corrin Complexes, 1845

**Water-mediated reaction**

Novel 1,2,3,4-Tetrahydroquinazolinones via Reaction of 2-Amino-*N*-substituted Benzamides and Dimethyl Acetylenedicarboxylate, 1028

**Weinreb amide formation**

Stereoselective Total Synthesis of Decytospolides A and B Starting from D-Mannitol, 267

**Wetland**

Three New Xanthonones from the Fungus *Penicillium* sp. NH-7-1, 699

**Wittig reaction**

Synthesis of Phenanthrene Derivatives through the Reaction of an  $\alpha,\alpha$ -Dicyanoolefin with  $\alpha,\beta$ -Unsaturated Carbonyl Compounds, 1426

**Xanthonones**

Xanthonones with  $\alpha$ -Glucosidase Inhibitory Activities from *Aspergillus versicolor*, a Fungal Endophyte of *Huperzia serrata*, 148

Three New Xanthonones from the Fungus *Penicillium* sp. NH-7-1, 699

**X-Ray crystallography**

Synthesis of Aib- and Phe(2Me)-Containing Cyclopentapeptides, 155

Synthesis of Cyclopentapeptides with Three to Five Aib Units, 232

**X-Ray diffraction**

New Phragmalin-Type Limonoid Orthoesters from the Bark of *Chukrasia tabularis* var. *velutina*, 1403

**Xylocarpus granatum**

New Limonoids from the Seeds of *Xylocarpus granatum*, 691

**Xylose**

Facile Synthesis of the Pentasaccharide Repeating Unit of the Exopolysaccharide from *Cryptococcus neoformans* Serotype D, 618

**Xyolide**

A Stereoselective Total Synthesis of Xyolide, a Natural Bioactive Nonenolide, 674

**Yamaguchi lactonization**

Stereoselective Total Synthesis of Stagonolide E, 650

**Yamaguchi macrolactonization**

Stereoselective Total Synthesis of Iso-Cladospolide B and the 12 Membered-Macrolactone (6*S*,12*R*)-6-Hydroxy-12-methyloxacyclododecane-2,5-dione, 1115

**Ylides**

Studies on the Reactions of Thiocarbonyl *S*-Methanides with Hetaryl Thioketones, 462

**Ylides, thiocarbonyl**

Selenophen-2-yl-Substituted Thiocarbonyl Ylides – at the Borderline of Dipolar and Biradical Reactivity, 453

**Zabelia tyaihyonii**

Biflavones and Furanone Glucosides from *Zabelia tyaihyonii*, 1419