

SUBJECT INDEX : VOLUME 23 (2002)

- 118.2 nm, 179
- A**
- AAS, 545
 $\text{A}\beta$ aggregation, 1773
Ab initio, 215, 337, 929, 1053
Ab initio calculation, 241
Ab initio study of enzyme reactivity, 837
 Absolute stereochemistry, 1429
 Absorbance detection, 295
 Absorption, 518
 Absorption spectroscopy, 399
 ABTS, 385
 Acetamidomandelic acids, 1363
 Acetanilide, 1359
 S-Acetate, 1674
 Acetate ion, 1409
 Acetohydroxy acid synthase, 765
 Acetonitrile, 953
 Acetophenone, 1647
 Acetylenic, 437
 Acrylic acid, 1343
 Activated methylenes, 937
 Active methylene compounds, 787
 Activity, 1199
 Acyl migration, 9
 Acyl transfer, 1674
 Acylation, 1187
 α -Acylation, 21
N-Acyliminium ion cyclization, 1623
N-Acylisatins, 1651
N-Acylsalicylhydrazide, 708
 Addition reactions, 157
 α_2 -Adrenoceptor, 1623
 Adsorption, 395, 861
 Advanced oxidation process, 990
Aiolocaria hexaspilota, 497
 $\gamma\text{-Al}_2\text{O}_3$, 1103
 $\theta\text{-Al}_2\text{O}_3$, 793, 1166
 Alcohol, 539, 811
 Alcohols, 367, 1331
 Alcoholysis, 824
 Aldehyde, 23, 509
 Aldehyde complex, 1157
 Aldehydes, 1697
 Aldehydes synthesis, 1340
 Aldol reaction, 736, 749
 Alkali metal, 59, 503
 Alkaloid, 163
 Alkanes, 459
n-Alkanes, 1595
 Alkene insertion, 86
 Alkenes, 157
 β -Alkoxymethacrylates, 1189
 Alkyl ammonium ions, 891
 Alkyl aromatics oxidation, 503
 Alkylamines, 549
 Alkylation, 749, 769
- β -Alkylation, 1375
 4-Alkylfuran-2-acetic acid, 1333
 α -Alkyl- α -phenylglycines, 931
 4-Alkylthiophene-2-acetic acid, 1333
 Alkynols, 112
 Allyl stannane, 1333
 Allylic alkylation, 1487
 Allylic substitution, 789
 AIN four-membered-ring, 241
 The α -effect, 1263
 1,3-Alternate, 891
 1,3-Alternate conformation, 640
 Alzheimers disease, 497
 AM1, 555
 Amberlite XAD 16 resin, 693
 Amidochlorination, 1325
 Amine, 132
 Amine-*N*-oxides, 797
 α -Amino acids, 931, 1291
 Amino alcohols, 11
 β -Amino alcohols, 1195
 2-Amino-3-chloro-1,4-naphthoquinone, 1845
 3-Aminohydantoins, 1836
 3-Aminohydantoinyl-1,2-benzothiazines, 1836
 Aminolysis, 381
 Aminolysis of *S*-phenyl substituted-acetate series, 201
 Amlodipine, 143
 Ammonium ion, 363, 995
 Amphidinolide O, 1173
 Amylose tris(3,5-dimethylphenylcarbamate), 1014
 Anatase, 477
 Anion binding, 119
 Anion exchange, 1106
 Anion exchange resin, 1819
 Anion receptor, 145
 Anionic cyclosphoraooses, 899
 Anisotropy, 865
 Anodic aluminum oxide, 1519
 Anomalous behaviors of the ethyl group, 201
 Anthracene polymer, 1351
 Anti-angiogenic, 1481
 Antibacterial activity, 511
 Anticonvulsant activity, 917
 Antiferromagnetic super-exchange, 1321
 Antifungal, 1197
 Antioxidants, 1773
 Anti-secretory, 454
 Anti-tumor drug, 391
 Apoptosis, 1003
 Application, 571
 Aqueous acetonitrile, 65
 Aqueous fluorinated alcohol, 1089
 Aqueous media, 1285
 Arenes, 773
 Aromatic carbonyl compound, 1218
 Ar-CO₂, 245
 Aromatic nitriles, 1697
- Aromatic polyesters, 1201
 Aromatization, 1505
 Aryl cyclobutanecarboxylates, 715
 Aryl halides, 112
 N -Arylamides, 1359
 5-Arylamidouracils, 374
 Arylation, 1823
 8-Aryl-3,9-dimethylxanthines, 374
 2-Arylidene-4-oxoalkanoates, 657
 5-Arylidineamino-, 374
 5-Arylpent-4-enoates, 1361
 L-Ascorbic acid, 1193
 Aspartase, 1057
 Association energy, 1023
 Asymmetric catalysis, 1487
 Asymmetric cyclopropanation, 1702
 Asymmetric dihydroxylation, 507, 1197
 Asymmetric reduction, 1693
 Asymmetric synthesis, 931
 Atomic bromide, 189
 Aurivillius phase, 1463
 Avicennone-B, 1477
 Aza Diels-Alder reaction, 143
 6-Azaindole, 535
 Azide, 437
 Azides, 655
 4-*O*-Azidoformyl-D-pseudoglycals, 1325
 Azimuth, 1749
 Azobenzene, 957
- B**
- B3LYP and CBS-4 methods, 103
 Background concentration, 301
 Bactericidal polymer, 1833
 Barrier, 1733
 Barrier height, 71
 Basicity, 1263
 Baylis-Hillman acetate, 1055
 Baylis-Hillman acetates, 657, 787, 789, 1361
 Baylis-Hillman adducts, 659, 939, 1493
 Baylis-Hillman reaction, 659, 1363, 1651
 Benomyl, 432
 Benzene, 286, 441, 447
 Benzene tricarboxylate, 619
 Benzene trisphosphate derivatives, 515
 Benzimidazole, 1055
 Benzoate, 1160
 1,5-Benzodiazepine, 1055
 Benzoin, 1229
 Benzophenone, 861
 Benzopyrans, 1658
 Benzo(a)pyrene, 1097
 Benzothiazole sulfenamide, 320
 2-Benzothiazolyl dithiobenzoate, 1029
 Benzothiophene, 990
 Benzoxazole, 17
N-Benzoyl-2-phenylimidazole, 151
 Benzyl, 337, 1229

- Benzyl alcohol, 1647
 Benzylic alcohol, 1667
 Berberine, 391
 Berberrubine, 391
 β -Turn, 1369
 Biaryls, 1021
 Bicyclic acetal, 154
 Bicyclic heterocycles, 537
 Bifunctional receptor, 640
 Binary cure system, 320
 Binding energies, 262
 Binding energy, 1297
 Binding sites, 1073
 1,3-Binucleophilic reagent, 1017
 Biological, 437, 1699
 Biological studies, 1806
 Biosensor, 385
 Biosynthesis, 1035, 1473
 3,3'4,4'-Biphenyltetracarboxylic dianhydride (s-BPDA), 933
 Bipyridine, 619
 Bipyridine analogs, 1744
 2,2'-Bipyridine-4,4'-dicarboxylic acid, 948
 Bipyridines, 1106
 BIRD-pulse, 727
 Bis(azide), 1177
 Biscrown, 1379
 Bis(germyl)palladium, 845
 β,β -Bis(4'-methoxy)phenyl- α -phenylvinylithium, 769
 β,β -Bis(4'-methoxy)phenyl- α -phenylvinylstannane, 769
 Bis-2-oxo amide triacylglycerol, 351
 Bisphenol-A, 518
 Bis(2-pyridyl)pyrazine, 629
 1,3-Bis(3-pyridyl)tetraphenylsiloxane, 1839
 1,4-Bis(thiophene)buta-1,3-diyne, 518
 Bis(trichloromethyl) carbonate, 521
 Bistrifluron, 1545
 Bisulfate, 1671
 Black inlay, 1531
 Blackening, 369
 Bola-form diester, 776
 Boron, 1541
 Boron triisopropoxide, 1051, 1377
 Boronic acid, 663
 Brain delivery, 761
 Brass, 861
 Brass formation, 1765
 Brassinosteroids, 941, 1035, 1473
 Bridged anions, 1744
 Bridging complex, 1023
 Bromination, 773
 Bromodehydroxymethylation, 1667
 Bromophos, 1399
 Brønsted equation, 1263
 Built-in mesogen, 1201
 t -Butyl peroxide, 103
 Butylammonium ions, 48
- C**
- ^{13}C solid-state NMR, 1729
- CF₃I, 291
 CHBrCl₂, 291
 CH₃I, 291
 CH₄, 1166
 CO₂, 1166
 C₇H₇⁺, 337
 C₁₆TAB, 1816
 C₃₀DME, 776
 C₆₀, 1191
 C₆₀⁻, 1827
 C-H insertion, 779
 CO adsorption, 1765
 Caco-2 cells, 1373
 Cadmium, 1121
 Cadmium sulfide, 1519
 Calcination, 1304
 Calcium, 1451
 Calcium antagonist, 143
 Calixarene, 363, 640, 995, 1111, 1154
 Calix[5]arene, 48
 Calix[6]arene, 1085, 1379
 Calixarenes, 1585
 Calix[4]-bis-thiacrown, 879
 Calix[4]crown-6-ether, 891
 Calixquinone, 145
 Calix[4]thiacrown ether, 879
 Campestanol, 1035
 Capillary electrophoresis, 295
 Carbacyclin, 86
 Carbendazim, 432
 Carbohydrate, 1187
 Carbohydrates, 15
 Carbon cluster, 1163
 Carbon deposition, 1149
 Carbon dioxide, 811, 1149, 1027
 Carbonate anion, 1420
 Carbonyl compounds, 1503
 Carbonyl group, 65
 Carborane, 1257
 σ -Carboranylphosphino ligand, 845
 Carbosilane, 637
 Carboxybenzyl bromides, 1680
 Carboxylic acid, 539
 Carboxylic acids, 1340
 Carboxypeptidase A, 593
 Caspase 3, 1003
 Castasterone, 941
 Catalase, 1664
 Catalysis, 647, 667
 Catalyst, 23, 1611
 Catalyst concentration, 503
 Catechol, 1297
 Cathode materials, 679
 Ceramic composite particle, 1127
 Ceric ammonium nitrate, 1477
Cerrena unicolor, 985
 Cesium, 1121
 CeO₂, 799
 Cesium selective receptor, 1379
 Ce-ZrO₂, 793
 Chain length of ethylene oxide, 683
 Chalcone, 469
 Chalcone-epoxy, 587
- Charge transfer compounds, 1754
 Chelating resin, 1067
 Chemical modification, 1057
 Chemical shift, 1241, 1729
 Chemiluminescence imaging method, 291
 Chemoselective ligation, 15
 Chestnut blossom, 1647
 Chiral crown ether, 543
 Chiral 1,2-diol monotosylates, 1693
 Chiral drug, 1328
 Chiral ferrocenes, 721
 Chiral β -hydroxy nitriles, 1693
 Chiral ligand, 903, 907
 Chiral recognition, 543
 Chiral stationary phase, 1014, 1291, 1677
 Chiral thiazolidine, 509
 Chitosan, 914
 Chlorocarbon, 1343
 Chlorodithioformate, 1445
 σ -Chlorophenylfluorone, 943
 Chloroxidation, 1425
 Chlorpyrifos, 481
 Cholesterol, 93
 Cr(CO)_x, 184
 CrO, 184
 Chromium reagent, 367
 CID, 1097
 Cinnamoyl group, 1031
 Class-specific determination, 1116
 Classical trajectory, 1737
 Cluster, 195, 1297
 Clusters, 309
 Coating ligand, 1413
 Cobalt, 1039, 1519
 Cobalt(III) complex, 500, 851, 903
 Coccinellid beetles, 497
 Coil effect, 633
 Cold vapor atomic absorption spectrometry, 1719
 Cole-Cole, 413
 Colon cancer, 1373
 Column method, 1067
 Combinatorial, 1658
 Combinatorial chemistry, 1277
 Combinatorial library, 1509
 Comparative Molecular Field Analysis (CoMFA), 417
 Comparative Molecular Similarity Indices Analysis (CoMSIA), 417
 Complex of dysprosium, 1507
 Complex with divalent metal ions, 688
 Complexation, 879, 1585
 Compound II, 1664
 Compound III, 1664
 Conducting polymer, 1144
 Conductometric biosensor, 1169
 Configuration, 903
 Configuration interaction theory, 971
 Conformation, 1585, 1629
 Conformation analysis, 330
 Conformational analysis, 1199
 Conformational change, 776
 Conformations, 555

- β -Conjugate addition, 365
 Conjugated linoleic acid, 1373
 Conjugation length, 330
 Contact angle, 745
 Controlled pore glass, 1337
 Coomasie brilliant blue, 1511
 Cooperativity, 647
 Coordination, 1790
 Coordination mode, 629
 Coordination polymer, 948
 Coordination polymers, 1106, 1744
 Coozonolyses, 423
 Copper, 861, 943, 1394
 Copper(II), 404
 Copper-catalysis, 1702
 Copper catalyst, 157, 721
 Copper coordination polymer, 619
 Copper nanoparticles in cellulose acetate polymer, 563
 Cu^{2+} -selective ionophore, 160
 Cu/ZnO , 1765
 Copper/zinc oxide catalyst, 1513
 COR, 817
 Core-shell type nanoparticles, 872
 Cotinine, 1496
 Counterpoise correction, 1267
 Coupling reaction, 769, 1049
 Cram's chelate model, 665
 Cross-coupling, 663, 1823
 Cross-interaction constant, 201, 221, 715, 1459
 Crown ether, 160, 637
 Crystal structure, 81, 98, 613, 921, 1160, 1527, 1629, 1839
 Crystal structures, 1062
 Crystallization, 580
 Crystallography, 1042
 Cucurbituril, 1347
 Curcumin, 1773
 CVD, 21
 Cyanide, 1490
 Cyanoethyl pendant arms, 81
 Cyanophos, 605
 Cyano triphenylphosphorane, 351
 Cyclic compound, 1053
 Cyclic dialkyldiaminoaluminum hydrides, 1340
 Cyclic ethers, 537
 Cyclic iminocarbonate rearrangement, 11
 Cyclic ketone reduction, 1695
 Cyclic oligosaccharides, 899
 Cyclic performance, 75
 Cyclitol, 1467
 Cycloaddition, 437, 829
 Cycloalkenones, 659
 α -Cyclodextrin, 427
 Cyclodienes, 423
 Cyclo(1,10-docandiamino-11,20-docanedioic) amide, 1527
 Cyclohexa-2,4-dienone, 829
 Cyclohexyl, 1235
 Cyclopropanation, 721
 L-Cysteine complex, 500
 L-Cysteine ester, 509
 Cytotoxic macrolide, 1173
 Cytotoxicity, 163, 497, 872, 1467
- D**
- DABCO, 789
 DBTH, 320
 p,p' -DDE, 935
 DDT, 1413
 Deactivation, 1135
 Decaborane, 791
 Decarbethoxylation, 1361
 Decarboxylation, 1643
 Degradation, 985
 Degree of branching, 1201
 Degree of deacetylation, 914
 Dehydration, 803
 Dendrimer, 637, 647
 (R) -Denopamine, 1328
 Density functional method, 215
 Deoxygenation, 797
 Depletion kinetics, 184
 Deprotection, 367, 791, 1674
 Derivatives, 1806
 Detection limit, 488
 Determination of anionic detergent (AD), 29
 Deuteration, 727
 Diacetate, 154
 N,N-Dialkylthiocarbamate, 1699
 3,9-Dialkylxanthines, 374
 Dialysis, 1579
 Diamine, 1611
 Diamines, 655
 Dianion reaction, 911
 Diarylethene, 1309, 1685
 Diastereoselective *anti*-aldol reaction, 1173
 Diastereoselectivity, 665
 Diazacrown ethers, 688
 1,12-Diazacyclodocosane-2,11-dione, 1527
 1,2-Diazepino[3,4-*b*]quinoxalines, 511
 Diazotization, 567
 3,5-Dibromo-2-pyrone, 1021
 1,3-Dicarbonyls, 1477
 3,3'-Dichlorobenzidine, 1785
 (R) -Dichloroisoproterenol, 1328
 6,7-Dichloro-5,8-phthalazinedione, 1425
 Dicyanopyrazine, 1049
 Dicyanovinyl group, 1643
 Dielectric constant, 1463
 Dielectric relaxation, 413
 Diels-Alder cycloaddition, 1021
 Diels-Alder reaction, 829
 Diethylzinc, 509
 Diffraction efficiency, 571
 Diffusion coefficient, 1595
 1,2-Difluoroethane, 1267
 Difluoriodomethylcyclohexyl ketone, 157
 1,4-Dihydropyridine, 143
 1,4-Dihydropyridines, 1505
syn-2,3-Dihydroxy esters, 507
 α -Diimine, 13
 Diimines, 721
 β -Diketonate, 921
 β -Diketone, 21
- Dilithium tetrachlorocuprate (Kochi's catalyst), 1333
 2-Dimensional gel electrophoresis, 1511
 1,2-Dimethoxyethane, 1267
 Dimethyl ether, 803, 1103
 (3-Dimethylamino)phenol (DMAP), 1833
N,O-Dimethylhydroxylamine hydrochloride, 521
 α,ω -13,16-Dimethyloctacosanedioate dimethyl ester (DME C30), 1778
 1,3-Dioxanes, 665
 Dioxovanadate(V) complex, 1661
 Diazonides, 423
 Diphenylalanine, 1677
 Diphenylanthracene, 17
 1,5-Diphenylcarbazone, 1719
 1,3-Dipolar cycloaddition reaction, 511
 Di-protonated species, 151
 Dispersion, 123
 Dissociation, 286
 Diterpenoid, 617
 DMAP, 659, 1361
 DNA, 1337
 DNA bases, 1023
 DNA nucleosides, 1790
 Donor ability, 13
 N-Donor ligand, 1839
 Dopant, 1304
 Double-Suzuki, 663
 dppe, 1177
 DPPH, 661
 Dry reforming, 1149
 Dual substituent parameter, 1241
 Dye-sensitized solar cell, 140
 Dye-surfactant interaction, 1816
- E**
- Eckart, 1733
 Effective carbon number, 459
 Efficient synthetic route, 1425
 Electrocatalysis, 1842
 Electrocatalyst, 25
 Electrochemical current, 71
 Electrochemical property, 613
 Electrochemiluminescence, 13
 Electrode, 1394
 Electroluminescence, 528, 807, 1235, 1470
 Electromicrogravimetry, 1671
 Electron injection, 17
 Electron tunneling, 71
 Electronic properties, 330
 Electro-optic polymers, 964
 Electropolymerization, 399
 Electrostatic contribution, 1073
 ELISA, 481, 599, 605, 1116, 1399
 Ellipticity, 1749
 Elucidation, 896
 Enantiomer-labeled guest method, 543
 Enantiomer separation, 1677
 Enantioselective addition, 509
 Enantioseparation, 1291
 ENDOR, 1769

Energy transfer, 1111
 Enhancement, 623, 1456
 Enyne, 663
 Enzymatic transformation, 1035
 Enzyme inhibition, 593
 Enzyme-linked immunosorbent assay, 599, 605, 1116
 Epoxidation, 1039
 Epoxide, 1611
 Epoxide ring-opening, 1377
 Epoxy carbonyl compound, 1333
 Epoxyphosphonate, 1848
 Equilibrium constant, 132
 ESI-MS, 899
 ESR, 1827
 Esterification, 539
 Ethanol, 1640
 Ethyl chloroformate, 1548
 Ethyl β -2-fluoro-2-deoxy-lactoside, 177
 Ethyl 4-O- β -D-galactosyl- β -D-mannopyranoside, 177
 ETS monitoring, 1496
 Eu³⁺, 623, 1456
 Evodone, 1477
 Excess acidity, 758
 Excess molar volumes, 953
 Exfoliated graphite (EG), 1801
 Expansion dynamics, 1163
 Extended path length, 295
 Extraction, 935

F

FAB-MS, 543
 Facile synthesis, 1548
 Failure mode, 75
 Feist's acid, 907
 Ferric chloride, 154
 Ferrocenediyazaphosphinines, 1702
 Ferrocyanide, 253
 Ferroelectric property, 1463
 Flame atomic absorption spectrophotometry, 861
 Flash photolysis, 271
 Flotation technique, 1381
 Fluorescein isothiocyanate (FITC), 29
 Fluorescence, 195, 518, 623, 995, 1309, 1456, 1585, 1685
 Fluorescence sensor, 363
 Fluorescence spectra, 1315
 1-Fluorosilatrane, 215
 (*Z*)- β -Fluoro- β -trifluoromethyl- α -phenylvinylstannane, 1823
 Folding, 1369
 Formamide, 149
 Formanilide, 1359
 Formic acid, 149
 N-Formylation, 149
 Fosfomycin analog, 1848
 Four-center cyclic transition state, 1459
 Friedel-Crafts alkylation, 1213
 Frontal polymerization, 325
 FT-ICR, 267

FT-IR, 1729
 Functional pendant arms, 824
 Fungicidal MOA, 1199
 Furo[3,2-*h*]quinoline, 454
 Fused acetal, 779

G

GABA-AT, 917
 GAC, 817
 Gagamine, 9
L-Galactose, 1193
 β -Galactosidase, 177
 Gallium isopropoxide, 225
 Gallium oxide, 225
 Gas/liquid partition coefficients, 459
 Gastric H⁺/K⁺-ATPase inhibitors, 454
 GC-MS, 488, 1496
 Gel precursor, 1304
 Geometrical isomer, 1053
 Gif oxidations, 937, 1331
 Glassy carbon disk electrode, 399
 Globin, 1073
 Glow discharge lamp, 525
 Glucose, 665
 Glycerol, 315
 Glycine, 623
 Glycolaldehyde dimer, 1277
 Glycopeptides, 15
 Glycosylations, 15
 GoAgg^v, 937
 Gold nanoparticles, 1790
 Graphite, 309, 315, 1737
 Graphite intercalation compound (GIC), 1801
 Grunwald-Winstein correlation, 123
 Grunwald-Winstein equation, 1680
 Gynecological cancer, 1139

H

H-ZSM-5, 1103
Hafnia alvei, 1057
N-(*o*-Halobenzyl)acetamide, 1208
 Halohydrin, 1611
N-(*o*-Halophenyl)acetamide, 1208
 Hammett equation, 381
Harmonia axyridis, 497
 Harmonic, 355
 HC₂N, 1553
 HC₆₀, 1827
 Heat of adsorption, 1765
 Heat-treatment, 25
 Heavy metal ions, 1169
 Helix, 629
 Heme protein, 865
 Hemoglobin, 1073
 Herbicide, 1042
 Hetero Diels-Alder reactions, 537
 Heteroannulation, 535
 Heterocycle, 1017
 Heterocycles, 567
N-Heterocyclic carbene, 1160
 Heterocyclic nucleophiles, 789

Heterocycl-5,6-benzocoumarins, 610
 Heterogeneous catalyst, 626
 Hexadentates Schiff's base, 1394
 Hexanuclear metallamacrocycle, 708
 High-spin Fe(III), 1769
 His-tagged protein, 1724
 HIV protease inhibitor, 1729
 HIV-1 protease, 27
 HMPAO, 555

Hologram Quantitative Structure Activity Relationship (HQ SAR), 417

Holography, 571
 HOMO-LUMO gap, 330
 Homogeneity, 1304
 Homooxacalix[4]arene, 1629
 HPLC, 1014
 4-HPR, 1806
 Hsp104, 1773
 Human ovarian cancer cell, 417
 Hydrazones, 1683
 Hydrogen, 205, 1737
 Hydrogen bond, 1297, 1321
 Hydrogen bonding, 593, 633, 1157
 Hydrogen permselectivity, 674
 Hydrogenation, 1785
 Hydrolysis, 647, 824, 1616
 Hydrophilic property, 745
 Hydrophobicity, 1073
 Hydroquinone-tethered SAM, 1671
 Hydrosilation, 637
 Hydrothermal, 948
 Hydroxamic acid, 160
 Hydroxy radical, 990

Hydroxy-alkoxylation, 1658
 β -Hydroxyalkylation, 1375
 β -Hydroxyester, 1218, 1272
N-(2-Hydroxyethyl)-*N'*-phenylthioureas, 19
 Hydroxyl group, 65
 Hydroxynitrile lyase, 1490
 2-Hydroxypyridine, 277
 Hyperbranched LCPs, 1201
 Hyperconjugation, 1241
 Hypervalent iodine, 1503, 1505

I

ICP-MS, 1389, 1541
 IDA electrode, 1169
 IDMS, 935, 1590
 Imidazolylidene, 921
 Imination catalysts, 1157
 Imine, 1490
 Immobilization, 385
 Immunoassay, 481, 605, 1399
 Immunoreaction, 1413
 Indium, 797, 1272, 1285
 Indium(III) chloride, 998
 Inorganic-Organic hybrid, 884, 1191
 Inositol 1,4,5-trisphosphate 3-kinase inhibitors, 515
 Insecticide, 481, 599, 605, 1399
 Intercalation, 1191
 Interchange reaction, 404

Intermolecular interaction, 633
 Internal alkyne, 535
 Interstellar, 1553, 1737
 Intramolecular BSSE, 1267
 Intramolecular photosubstitution, 1208
 Iodohydrin, 1185
 Iodonium ylide, 779
 Iodotoluene, 267
 Ion-pair formation, 1381
 Ion-selective electrode, 1409, 1420
 Ion trap mass spectrometry, 1097
 Ionic conductivity, 683
 Ionic liquid, 667, 1027, 1367
 Ionization, 277
 Ionizing power, 1445
 Iron, 943, 1359
 Iron(II) chloride, 1325
 FeOCl, 1191
 Iron pentacarbonyl, 175
 Iron phthalocyanine, 25, 1842
 Iron porphyrin, 119
 Isatins, 1363, 1651
 Isocyanides, 1177
Isodon japonica, 617
 Isofenphos, 599
 Isomerization, 35
 Isomers, 555
 Isonicotinate, 1062
 Isoquinoline, 1830
 Isoquinoline derivatives, 1003
 Isothiocyanates, 11
 Isotope dilution, 1541

K

α -Keto amide, 351
 Ketones, 937
 Δ^5 -3-Ketosteroid isomerase, 837
 Kinetic isotope effect, 221, 1459
 Kinetic product, 1347
 Kinetics, 765
 Knoevenagel condensation, 515
 Korean traditional ceramics, 1531
 Koryo inlaid celadon, 1531
 Kramers-Henneberger transformation, 357

L

Laccase, 385, 985
 β -Lactam, 749
 Lamellarin, 163
 Langmuir aggregation, 29
 Langmuir-Blodgett film, 575
 Lansoprazole, 626
 Lanthanide triflates, 667, 1367
 Laser ablation, 309, 1163
 The late C6-Oxidation pathway, 1473
 Layered manganese, 679
 LC, 432
 LC-APCI-MS, 1590
 LC/MS-TOF, 432
 LCST, 549
 LDH, 35

Lead, 545
 Lead acid battery, 75
 Less stable alcohol isomer, 1695
 Lewis acid, 154
 Lewis acid catalyst, 791
 Ligand, 21
 Ligand oxidation, 851
 Light-emitting diode, 17
 Lignin, 985
 Linear siloxane, 1839
 Lineolon, 9
 Lipase inhibitors, 351
 Liquid chromatography, 1291
 Liquid crystal, 633
 Liquid crystal alignment, 587
 Lithium battery, 1144
 Li^+ complex, 1023
 Lithium di(3-methyl-2-butyl)alkoxyborohydrides, 1695
 Lithium dimethylethylenediaminoaluminum hydride, 1697
 Li salt doping, 1144
 Lithium secondary batteries, 679
 Li Thx'BuOBH₂, 856
 Liverwort, 941, 1473
 Long-circulating liposome, 93
 Luminescence, 1111, 1154
 Lysophosphatidic acid, 1139

M

Macrocycle, 1062
 Macroyclic complexes, 824
 Macroyclic compounds, 81
 Macroyclic diamide, 53
 Macrocytic receptor, 1655
 Macrocytic ring, 708
 Magnetic moment, 613
 Magnetite/chromia catalyst, 1513
 MALDI, 315
 Manganese(IV) complex, 613
 Manganese metallamacrocycles, 708
 Mn(OAc)_3 , 736
 Manganese precipitation, 369
 Mn(Schiff base) complex, 1365
 Mannich, 1367
 Mannich reaction, 137
 D-Mannitol, 749
Marchantia polymorpha, 941, 1473
 Marine ascidian, 163
 Marine sponge, 1467
 MAS NMR, 776
 Mass-analyzed, 277
 Mass-analyzed threshold ionization, 1247
 Matrix effect, 1389
 MD simulation, 107
 Meat, 1590
 Mechanism, 381
 Membrane, 1085
 Menadione, 1371
 3-Mercaptoproline, 1674
 Mercury, 1719
 Hg_2^{2+} ions, 346

Metal organic chemical vapor deposition, 225
 Metal organic framework, 907
 Metallocene, 1343
 Methane, 669, 793, 799, 1149
 Methane ignition, 175
 Methanol, 803
 Methanol dehydrogenation, 1135
N-Methoxy-*N*-methylamide, 521
N-Methoxy-*N*-methylcarbamoyl chloride, 521
 Methoxy-poly(ethylene glycol) (MPEG), 549
 Methylation, 1011
 Methylbenzoxazoles, 1208
 α -Methylbenzyl alcohol, 1647
 Methylene violet, 1816
 2-Methylene-4-oxoalkanoates, 657
 Methylmercury, 1719
 Metmyoglobin, 1769
 Mevalonolactone, 537
 Micellar effect, 1263
 Microelectrostatic attraction, 29
 Microstructure, 1078, 1531
 Microwave, 667, 1503
 Mims ENDOR, 1769
 Mini-proinsulin, 1369
 Mirtazapine, 1623
 Mitochondria, 1640
 Mitsunobu reaction, 19
 Mixed complexes, 705
 Mixed hard-soft ligand, 613
 Mixed micelle, 93
 Mixed SAM, 1671
 Model, 807
 Modified glassy carbon electrode, 346
 Molecular dynamics simulation, 441, 447, 1595
 Molecular geometries and energetics, 107
 Molecular modeling, 48, 929, 1545
 Molecular modelling study, 9
 Molecular recognition, 48, 891, 1483, 1655
 Molecular selectivity, 699
 Molybdenum, 395, 1257
 Monoclonal antibodies, 1116
 Monolayer, 575
 Monte Carlo simulation, 811
 MP2 calculations, 1267
 MPASC technique, 29
 MPV reduction, 1051
 MPV type reaction, 1377
 MQDT, 971, 1560
 MS/MS, 1097
 Muconates, 35
 Multicomponent reactions, 1277
 Multiple reaction monitoring, 1139
 Mutagen X, 929
 Mutagenicity, 929
 Myxobacterium, 1197

N

¹⁴N hyperfine, 1769
 NADH, 1640
 Nanoelectrode arrays, 699
 Nano-morphology, 580
 Nanoparticles, 1579

Nanoporous, 699
 Nanowire, 1519
 Naphthalene, 1011, 1111
 2,6-Naphthalenedicarboxylic acid, 948
 Naphthalenes, 787
 Naphth[2',3':4,5]imidazo[1,2-*a*]pyridine-6,11-diones, 1845
 2-Naphthoic acid, 1381
 (-)- β -Narcotine, 1548
 Natural bond orbital (NBO) analysis, 201
 Natural bond orbital calculation, 221
 Natural products, 163
 NBS, 1845
 Negative ionization, 1139
 Neonirtetralin, 896
 Network, 575
 Neutral ionophore, 1409
 Ni, 793, 1166
 Nickel aluminate, 1149
 Nickel(II) and copper(II) complexes, 1062
 Nickel-coated glass slides, 1724
 Nickel(II) complexes, 81
 Ni/SiO₂, 669
 (*R*)-Nifenalol, 1328
 Ninhydrin, 1651
 Nitric oxide, 1664
 Nitrite reduction, 25
 Nitroarenes, 541, 1359
 2-Nitrobenzaldehydes, 939, 1493
 Nitrobenzene, 953
o-Nitrochlorobenzene, 1785
 Nitroethane, 953
 Nitrous oxide, 179
 NMR, 391
 NMR Spectroscopy, 896, 1545
 NO vibrational energy distribution, 179
 8-*epi*-Nonactate, 1189
 Nonlinear optical crystal, 98
 Nonlinear optical polymers, 964
 Nonlinear optics, 1253
 Nonpeptidic inhibitor, 1003
 Norbornene, 112
 Normal mode, 253
 NpT ensemble, 447
 Nucleophilic addition reaction, 221, 1459
 Nucleophilicity, 1263, 1445
 Nucleoside epoxyphosphonate, 1848

O

O(¹D), 229
 O(³P), 291
 Octahydroanthracene, 1213
 Δ^1 -3-Octalone, 736
 Octatetraene, 195
 Octupole, 1253
 Oil sorption, 1801
 Oleamide, 1373
 Olefin, 132
 Olefin oxidation, 1365
 Oligomer, 518
 Oligosaccharide, 914
 One-dimensional, 619

Optical anisotropy, 469, 587
 Optical emission spectrometry, 525
 Optically thick sample, 865
 Optimized calculation, 107
 Organic compounds, 856
 Organic electroluminescence device, 528
 Organic synthesis, 86
 Organometallic precursor, 241
 Organophosphorus, 481
 Organophosphorus pesticides, 1116
 Organosilicon, 1213
 Organosoluble, 933
 Oscillator, 355
 OSS2 potential, 107
 Overall mobility, 705
 Oxadiazole, 1715
 Oxalate, 1456
 Oxazinones, 931
 Oxazolidin-2-one, 749
 Oxazolidinones, 655
 Oxazolopyrimidine-6-one, 374
 Oxidation, 367, 1667
 Oxidative decarbonylation, 1257
 Oximes, 1683
 Oxone®, 773
 Oxyanion, 404
 Oxygen-enriched gas, 369
 Oxygenation, 1365
 Oxynitrilase, 1490

P

PAHs, 1097
 Palladium, 86, 535, 663, 1754
 Palladium-catalyst, 112
 Pd/C catalyst, 1785
 Pd complex, 1487
 Pd-Composite membrane, 674
 Paper electrophoresis, 705
 Partial cone, 891
 Partial oxidation, 799
 Passivation, 1842
 PCBs, 817
 Pendant, 528
 Pentacoordinate organosilicon, 845
 L-Pentahomoserine, 1277
 Peptide-binding, 1483, 1655
 Peptide nucleic acid, 1337
 Peptidomimetic, 1481
 Perfluoroalkyl group, 1017
 Perfluorocarbons, 301
 Perfluorodimethylcyclohexane, 301
 Perfluoromethylcyclohexane, 301
 Perfluoro-2-methyl-2-pentene, 1017
 Periodic acid, 1331
 Peroxynitrite, 661
 PET-ionomer, 580
 Phase renormalization, 1560
Phaseolus vulgaris, 1035
 2-Phenethyl alcohol, 1647
 Phenolic side arms, 688
 Phenols, 427
 Phenylalanine, 93

Phosphatase, 1371
 Phosphinoxazolidine, 1487
 Phosphoglycolipids, 1778
 Phospholipase D, 1451
 Phosphoniosilylation, 365, 1375
 Phosphors, 1435
 Photoacoustic spectroscopy, 1513
 Photoactive polyester, 1031
 Photoaddition reaction, 1218
 Photocatalyst, 477, 745
 Photochemistry, 1229
 Photochromic, 957
 Photo-crosslinking, 1031, 1351
 Photocurrent, 140
 Photodimerization, 469, 587
 Photodynamic therapy, 281
 Photoelectron spectroscopy, 189
 Photofragmentation cross-section, 1560
 Photoisomerization, 957, 1309, 1685
 Photoluminescence, 1470
 Photolysis, 184
 Photophysics, 281
 Photopolymerization, 587
 Photoreactions, 35
 Photoreduction, 1208
 Photorefractive polymer, 571
 Photoresist, 1351
 Phthalazine, 1425
Phyllanthus niruri Linn, 896, 1527
 π - π interaction, 1321
 Picrate extraction, 879
 Pipecolic acid, 761
 Piperazin-2-one, 1481
 pKa shift, 27
 Platinum, 132, 1177
 Pt(100), 395
 Pt(111), 395
 Poisson-Boltzmann method, 27
 Polyacetylene, 1404
 Polyaniline, 1144
 Poly(aryl ether), 17
 Polyclonal antibody, 1413
 Poly(enamino-enaryloxynitrile), 1643
 Poly(ethylene glycol), 93
 Polyethylene glycol dimethacrylate, 683
 Poly-[Fe(3-Br-phen)₃]²⁺, 399
 Polyimide, 469, 933
 Poly(DL-lactide-*co*-glycolide), 1579
 Polymer containing QAS, 1833
 Polymer electrode, 1144
 Polymer inclusion membrane, 1085
 Polymer LED, 1470
 Polymer-supported catalysis, 563
 Polymeric membrane, 1409
 Polymerizable surfactant, 1616
 Polymerization, 35, 1343
 Polymethacrylate, 469
 Polynorbornene, 957
 Polyoxotungstate, 1039
 Poly(*p*-phenylenevinylene), 1235
 Poly(ST-*co*-VBC)-DMAP, 1833
 Polyurethane, 528
 POM, 669

Porous materials, 477
 Porphyrin-Mn(III), 1635
 Positional isomers, 65
 Post-column, 295
 Potassium monopersulfate, 1039
 Potential energy curve, 330
 Potential energy diagram, 1053
 Potentiometry, 53, 1394, 1635
 PPD, 385
 PPV derivative, 1470
 Precipitation, 1541
 Preconcentration, 693
 Predissociation, 245
 Product-resolved photodissociation, 267
 (*R*)-Pronethalol, 1328
 Propagating front, 325
 Propane dehydrogenation, 674
 Propylene carbonate, 1027
 Propylenediaminetetraacetate, 1661
 Prostacyclin, 86
 Protein chip, 1724
 Proteolytic mechanism, 27
 Proteomics, 1511
 Proton-coupled relaxation, 727
 Proton-dionizable ionophore, 137
 Protonation, 151, 758
 (Pseudo)rotaxanes, 1347
 Psoralen derivatives, 1315
 Pulse reaction, 669, 1135
 Purification, 985
 PVC-membrane, 53, 1635
 Pyranocoumarins, 998
 Pyranophenalenones, 998
 Pyranoquinolinones, 998
 Pyranothienopyridazines, 1715
 Pyrazoline, 1715
 Pyrazolotriazin-7-ones, 911
 Pyribenzoxim, 1042
 Pyridazine[3,4-*b*]quinoxalines, 511
 Pyridine derivatives, 1845
 Pyridinedicarboxylic acid, 1830
 Pyrido[2,3-*b*]azepine, 1623
 Pyrimidines, 1709
 Pyrimidothienoquinoxalines, 567
 PZT Powder, 1078

Q

Quantitative analysis, 1507
 Quantum, 807
 Quinoline, 1830
 Quinoline chromophores, 964
 Quinolines, 541
 2(1*H*)-Quinolinone, 1493
 Quinolinones, 939

R

Radical, 795
 Radical cyclization, 736, 1189
 Radical reaction, 1187
 Radiotracer, 1439
 Raman, 633, 1078

Raman spectroscopy, 1404
 Rate constants, 229
 Rate-determining step, 381
 Reaction, 1553
 Reactive desorption, 205
 Real time fluorescence measurement, 1509
 Rearrangement, 789
 Recovery yield, 935
 Rectangular barrier, 357
 Recycling, 667
 Redox-switchable ligand, 145
 Reduction, 541, 665, 856, 1229, 1340, 1377
 Reduction of carbonyl compounds with B(OR)₃, 1051
 Reductive amination, 23
 Reformatsky reaction, 1272
 Reforming, 669, 793, 1166
 Regioselection, 507
 Regioselectivity, 1185
 Relative stability, 1053
 REMPI, 189
 Residual carbon, 525
 Residual nitrogen, 525
 Resonance, 971, 1560
 Retinoid, 1806
 Rhenium, 1439
Rhizobium meliloti 2011, 899
 Rhodium(II)-Catalyzed reaction, 779
 Ring cleavage, 1548
 Ring transformation, 511
 RIOS, 229
 ROESY, 391
 Rubber compound, 320
 Rubidium, 1121
 Ruthenium, 23, 541, 1819
 Ru(II) complexes, 13
 Ruthenium tetroxide, 1830

S

Safety valve, 75
 SALDI, 315
 Saliva, 1496
 Samarium complexes, 1185
 SAR, 929
Sarcotragus, 1467
 Screen printed electrode, 427
 Seawater, 693
 Seeding effect, 1078
 Selective competition coordination determination, 943
 Selective reduction, 1697
 Self-assembled monolayers, 699
 Self-assembly, 708, 1347
 Semicarbazones, 1683
 Semiempirical MO, 829
 Sensor, 1394
 Series-connected capacitor model, 741
 Serotonin, 1439
 SERS, 1790
 Serum, 1389
 Shift reagent, 1507
 Shifting factor, 413

Shock tube, 175
 Side chain, 1806
 Silatranyl cation, 215
 Silicon, 205
 SiO₂-PEG hybrid, 884
 Siloxane, 637
 Silver, 921, 1160, 1759
 Silver complex, 629
 Silver(I) complexes, 1106, 1744
 Ag⁺-selective electrode, 53
 Silver sol, 1604
 Silyl ketene acetals, 1218
 Silylation, 769
 Simulation, 807
 Simultaneous reduction-allylation, 1285
 Single electron transfer photochemistry, 1218
 Single precursor, 225
 Single resin bead kinetics, 1509
 Single-step process, 1459
 Single substituent parameter, 1241
 Singlet oxygen, 281
 Skeletonization, 1616
 Slipping mechanism, 1347
 NaC₆₀, 1827
²³Na-NMR, 1507
 Sodium bromate, 1667
 Sodium bromide, 773
 Sodium dioctadecyl sulfate, 575
 Sodium hydrogensulfite, 1667
 Sol-gel, 884, 1078, 1724
 Sol-gel method, 679
 Sol-gel silicate, 1169
 Solid-acid catalyst, 803
 Solid phase extraction, 545
 Solid phase labeling reagent, 1509
 Solid-phase microextraction (SPME), 488
 Solid-phase synthesis, 1658
 Solute structure, 459
 Solution NMR, 1729
 Solvent diffusion, 1579
 Solvent effect, 1685
 Solvent effects, 1315
 Solvent extraction, 1381
 Solvent sublation, 1381
 Solvolysis, 123, 1089, 1445, 1680
 Sonochemical reaction, 1272
 Sonogel, 884
 Soraphen A, 1197
 Sorption behavior, 1067
 (-)-Sparteine, 404
 SPE, 1590
 Specific interaction, 65
 SPECT, 1439
 Spectral correction technique, 943
 Spectroscopy, 195, 277, 795
 D-*erythro*-Sphingosine, 1195
 D-*ribo*-Sphingosine, 1195
 Sphingosine, 1451
 Spin coating method, 346
 Spin modes, 325
 Spiropyran, 1049
 Stability constants, 705
 Steel, 1541

Step-reaction polymerization, 1031
 Stepwise mechanism, 715
 Stereoselective cleavage of epoxides, 1185
 Stereoselective reduction, 1695
 Stereoselective synthesis, 1173
 Stereoselectivity, 903
 Stereospecific, 1823
 Steric hindrance, 593
 STM, 71
 Strands, 1106
Strobilurin A, 1199
 Strong hydrogen bond, 1811
 Structural analyses, 1778
 Structure, 896, 1121, 1553, 1759
 Substituent effect, 262, 1309
1-N-Substituted imidazoquinoline-4,9-dione derivative, 417
5-Substituted-2-furaldehydes, 758
L-Sugars, 1193
 Sulfamide, 167
 α -Sulfamidoalkylation reaction, 167
 Sulfonamides, 1590
 Sulfonate, 1503
 Sulfonyl group, 787
 Sulfonyl oxime ether, 1187
 Sulfoxidation, 626
 Sulfur, 1257
 SO_2 oxidation, 1842
 Superconducting ceramics, 1304
 Surface-enhanced Raman scattering, 1604
 Surface sol-gel process, 741
 Surfactant-free, 1579
 Surfactants, 1816
Syn addition, 1325
 Syn-gas, 1103
 Syntheses, 610
 Synthesis, 567, 1017

T

Taibajaponicain E, 617
 Tandem mass spectrometry, 1139
 Tandem reaction, 1481
 TDB, 661
 Technetium, 1439, 1819
 Tedlar bag, 488
 Temperature-frequency superposition, 413
 Template, 575, 1519
 Terbium, 948
 Terephthalic acid, 59, 369, 503
 Terminal acetylene, 1049
2,2':6':2"-Terpyridine, 346
 Tertiary amine, 23
 Tetraalkylammonium bromides, 541
 Tetrabromocobaltate(II), 1321
7,7,8,8-Tetracyanoquinodimethane (TCNQ), 1754
 Tetrathiafulvalene (TTF), 1754
 Tetrin B, 1429
 Thallium, 1759
Thenoyltrifluoroacetone (TTA), 1456
 Theory of viscosity, 1524
 Thermally stable polymers, 1643

Thermoanaerobacter ethanolicus, 1778
 Thermophile, 1778
 Thermosensitive poly(organophosphazenes), 549
1,3,4-Thiadiazole, 41
 Thianthren cation radical, 103
2-(2-Thiazolylazo)-5-dimethylaminophenol, 1067
 Thickness-dependent dielectric constant, 741
Thienopyridazines, 1715
Thienopyridines, 1709
 Thioamides, 1029
O-Thiobenzoates, 1029
 Thiobenzoylation, 1029
4-Thiocarbohydrazide, 41
 Thiolated β -cyclodextrin, 699
 Thiophene, 1253, 1685
 Thiram, 1604
THP ethers, 791
 Three-component reaction, 112
 Threshold, 277
 Thymocytes, 1451
 Time-dependent, 355, 357, 1733
 Time-of-flight mass spectrometry, 309
 Time-resolved fluorescence emission decay, 1315
 Time-resolved IR spectroscopy, 865
 Time-resolved photodissociation, 267
 Time-space, 355
 Tin(II) chloride, 539, 1493
 Titania toughened alumina (TTA), 1127
 Titanium, 797
 TiO_2 , 140, 1229
 TiO_2 -pillared titanate, 477
 TiO_2 sol, 745
 TMHD, 21
TMP-HNO₃, 1811
 Tobacco, 765
 Toluene, 441, 447, 953
 Tolyl, 337
 Tolyl cation, 267
 Torsional energy, 1199
 Tracer release experiments, 301
 Transannular bond, 215
 Transformation, 355
 Translational energy, 286
 Transport, 160
 Transport experiment, 1085
 TRH, 761
 Triazines, 1709
1,3,4-Triazole, 41
Triazole, 437, 1699
 Triblock copolymer, 872
2,3,6-Tribromo-4,5-dihydroxybenzyl methyl ether, 661
 Triethylamine, 914
 Trifluoroacetophenone, 1420
 Triiodide ion-selective electrode, 1635
 Triplet state, 271, 281
 Tripodal ionophores, 1420
 Trisubstituted, 535
1,3,5-Trisubstituted pyrazoles, 911
Trithiasapphyrins, 281

Tropylium, 337
 TS-2, 140
TsCl/NaOH, 19
TTA(thenoyltrifluoroacetone), 623
 Two-phase extraction, 137
 Two-point binding, 1157
 Tyrosine, 1643

U

Ugi reaction, 1277
 Ultrasonic irradiation, 884, 990
 Ultrasonic spray pyrolysis (USP), 1127
n-Undecane, 727
 Unidirectional crystal growth, 98
 α,β -Unsaturated lactones and esters, 365, 1375
 Urea derivative, 145
 Urea-functionalized porphyrin, 1409
 Urease inhibition, 1169
 Urine, 1389
 UV irradiation, 1031
 UV spectra, 1315

V

Valence control, 1819
 Vanadium(V) complex, 1661
 Vesicle, 1616
 Vibration, 1737
 Vibrational analysis, 253
 Vibrational state distributions, 229
 Vibrational structure, 245
 Vibronic transition, 795
 Vigabatrin, 917
 Vilsmeier reaction, 41
 Vinylchlorosilanes, 1213
5-Vinyl-2-pyrrolidin-2-ones, 917
 Vinyl sulfides, 1477
 Viscosity at the critical point, 1524
 Viscosity of fluids, 1524
 Visible, 315
 VOCs, 488
 Voltammetric techniques, 346
 Voltammetry, 395, 427
 VUV photolysis, 179

W

Waste water treatment, 817
 Wastewater, 693
 Water concentration, 59
 Water gas shift reaction, 1513
 White inlay, 1531
 White LED, 1435
 WLF relation, 413

X

XAES, 25
 X-Ray crystal structure, 399
 X-Ray crystallography, 1545, 1661
 X-Ray scattering, 580
 X-Ray structure, 824

- p*-Xylene, 441, 447
p-Xylene oxidation, 59, 369, 503
- Z**
- Zeolite, 1011
Zeolite-X, 1121
- Zeolite X, 1759
Zeolites, 1827
Zinc, 939
Zinc complex, 555
ZnO reduction, 1135
Zn(II)porphyrin array, 271
Zirconia, 1014
- Zirconia-titania toughened alumina (ZTTA), 1127
Zirconia toughened alumina (ZTA), 1127
ZrTiO₄ film, 741
Zwitterionic tetrahedral intermediate, 715
-