



Subject Index

- (1*S*,2*R*)-ephedrine, 75
p-*tert*-butyl-tetrakis(3-diethoxyphosphorylpropoxy)calyx[4]arene, 57
1,1'-binaphthyl compounds, 91
1,3,5-triazine, 61
1,4,8,11-tetraazacyclotetradecane-1,8-bis(methylphosphonic acid), 11
2,2'-bipyridine, 61
3-21G(*), 17
4'-R-dibenzo-18-crown-6, 145
ab initio study, 101
absorption spectra, 249
acyclic complexes, 115
 Ag^+/Ag electrode, 231
alkali and alkaline earth cations, 231
alkali metal cations, 85, 91
alkali metal salts, 267
alkaline metal ion binding ability, 127
americium, 47
anion binding, 33
association constants, 225
azocrown ether, 173
azo-phane, 181
azothiacrown, 167
azoxathiacrown, 167
- β -cyclodextrin, 225
benzophanes, 97
benzophenone-3, 273
benzoylated tetraazaannulene, 107
bilayer lipid membrane, 139
bile acids, 127
boron, 75
- Ca^{2+} -selective membrane electrode, 57
cadmium(II), 115
calixarene, 211
cation binding, 153
cation carrier, 167
cavitands, 61
 Cd^{2+} -crown, 101
 $^{113}\text{Cd-NMR}$, 101
charge transfer complex CTC, 267
chiral macrocyclic diamides, 85
 CO/O_2 discrimination, 37
cobalt, 21
competitive potentiometry, 231
complex formation constants, 167
complex of 15-crown-5 with sodium cation, 303
complex stability constants, 57
complexation, 85, 91, 97, 153, 181, 219
complexes, 21
conductometry, 219
coordination, 27
critical micelle concentration CMC, 267
cross-polarisation, 211
crown compounds, 133
crown ether 18-crown-6, 267
crown ether, 139, 163
crown ethers, 153
crown-containing aromatic compounds, 283
crystal structure, 107
cyclam derivative, 11
cyclam, 17
cyclen derivatives, 21
cyclen, 21
cyclic voltammetry, 97
cyclodextrin complexation, 259
cyclodextrin, 273, 291
cyclodextrins, 193, 283
cyclotriphosphazene, 61
- DFT, 17
dibenzopyridino-18-crown-6, 231
dibenzosulfo, 163
dibenzosulfoxo, 163
dichloroethane solvent DCE, 267
diclofenac, 225
- distance dependence, 27
dynamic combinatorial library, 81
dynamic self-assembly, 133
- electrochemical and spectral properties, 107
electron transfer, 27
electron-pair repulsion, 37
electrospray mass spectrometry, 127
emission spectra, 249
enthalpy of solution, 303
entropy-enthalpy relationship, 303
ESI-MS, 85
europium, 47
extraction, 47
- FAB-MS, 17
fluorescence, 283
FTIR spectroscopy, 291
- gold cluster, 173
gold surface, 187
- $^1\text{H NMR}$ spectroscopy, 27, 145
heteronuclear complexes, 3
Horner-Emmons olefination, 153
host-guest complex, 193
hydrogen bonding, 33
- ibuprofen, 187
imine formation, 81
inclusion complexes, 283, 291
inclusion compounds, 225
inclusion, 203
inhibition, 193
inverse gas chromatography, 69
ionic channel, 139
Iron-porphyrin complex, 37
- lanthanide ion, 203
lanthanides, 121
lanthanides, 61
lead(II), 115
ligand, 21
liquid membranes, 133
lutetium, 121
- macrocyclic crown ligands, 249
macrocycles, 81, 181
macrocyclic carrier, 133
macrocyclic complexes, 115
macrocyclic compounds, 219
macrocyclic diamide, 163
macrocyclic diamides, 91
macrocyclic ligand, 11
macrocyclic ligands, 121
Mannich reaction, 75
 $\mu\text{-}\eta^2\text{: }\eta^2\text{-peroxo complex}$, 121
membrane electrodes, 167
mercury(II), 115
metal complex, 33
metal complexes, 249
metalloporphyrin, 27
microscale copper(II) determination, 11
molecular recognition, 27
molecular structure, 17
monolayer, 173
monolayers, 181
- n*-alkylamines, 241
naphthalene derivatives, 291
NBO, 17
N-confused porphyrin, 33
nitration, 145
NMR spectroscopy, 225
N,N-dimethylacetamide-water mixture, 303

- oxybenzone, 273
 oxygen fixation, 37
 phosphinoxides, 61
 phosphonate complexes, 11
 phosphorylated calix[4]arenes, 47
 photoluminescence, 61
 picric acid, 267
 polarizing molecular mechanics, 37
 polyphosphoric acid, 145
 polytopic ligands, 3
 potentiometry, 3, 219
 pyridine, 61
 pyridinophanes, 97
 quantum yield, 61
 radioactive wastes, 47
 regioselectivity, 145
 resorcinarene, 75
 resorcinarenes, 69
 rofecoxib, 259
 scanning tunneling microscopy, 173
 Schiff base complexes, 115, 121
 segmented sandwich membranes, 167
 selectivity coefficients, 57
 selectivity, 167
 self-assembly, 187, 203
 silver, 17
 skin penetration, 273
 solid-state NMR, 211
 solvation of complex, 303
 sorption, 241
 spectrophotometry, 3
 stability constant, 231
 stability, 101
 steroid dimers, 127
 stoichiometry, 101
 stoichiometry, 225
 substituent effect, 145
 sulfobutylether 7- β -cyclodextrin, 259
 sunscreen, 273
 surface potential, 181
 surfactants, 219
 synthesis, 3, 57, 91
 template synthesis, 115
 template, 81
 thermodynamic control, 81
 thermodynamic functions of complex formation, 303
 thermodynamic parameters, 69
 thiophene derivative, 173
 triton X-100, 267
 tyrosine phenol-lyase, 193
 uranyl ions, 115
 UV/VIS spectrophometric end-point detection, 11
 UV-Vis spectra, 153
 UV-VIS, 97
 UV-Visible spectra, 267
 vinylogs, 153
 voltammetry, 173, 187
 water soluble calix[4]resorcinarene, 203
 X-ray analysis, 75
 zinc phosphates, 241