

Index

a

acceptor-acceptor-donor (AAD) 267
 acceptor-donor-acceptor systems 202
 acenes 511 ff.
 – edge-to-face arrangements 511
 – face-to-face arrangements 511 ff.
 acetylene dimerization 236
 alkynes 210 f.
 – activation 210
 – fluorescence dyes 212
 – propargyl activation 212
 – Sonogashira coupling 210
 amperometric biosensor 10
 amphiphilic molecules 264
 annelation 549 ff.
 – Diels-Alder 552
 – Friedel-Crafts acylation 552, 560
 – non-racemic intermediates 554
 anthracene 512 ff.
 – alkyne substituents 519
 – disubstituted 517 f.
 – edge-substituted 522 ff.
 – edge-to-face arrangements 513
 – electron-withdrawing substituents 515
 – π -face interactions 513
 – fluorescence quantum yields 513
 – herringbone arrangement 514
 – higher acenes 540 ff.
 – monosubstituted 514 f.
 – self-assembly process 516, 526 f.
 antimicrobial agents 270
 arylethenes 208
 – dumbbell shaped 208
 – one-pot synthesis 208 f.
 – star shaped 208
 arylthiols 354 f.
 – alligator clips 354 f.
 – protecting groups 354 f.
 – thiol end-capped molecules 354 f.
 atom transfer radical polymerization 17

atomic force microscopy 379 f.
 – conducting probe 379 f.
 – substrate-molecule-particle
 junction 379
 azo dyes 181

b

benzenoid compounds 59
 – hoop-shaped 59
 bilayer formation 268
 bimolecular detectors 41
 Bingel reaction 24, 46
 biocidal nanotubes 268
 biological functionalization 34
 – nanomaterials 34
 – nanotube-protein conjugates 34
 biosensors 261
 biphospholes 124
 – α, α' -biphosphole cores 128
 – derivatives 126
 – mixed oligomers 137 f.
 – properties 125 f.
 – synthesis 124
 bistable catenanes 297 ff.
 – molecular machines 297 f.
 – nanoelectromechanical systems 297
 bistable rotaxanes 297 ff.
 – acid-base chemistry 300 f.
 – BIPY²⁺ units 301 f.
 – CBPQT⁴⁺ 304 f.
 – chemical stimuli 299
 – chemically induced switching 299
 – circumrotary motions 298
 – condensed-phase switching 306 f.
 – DB24C8 platform 301 f.
 – electrochemical switching 315 f.
 – microcantilever beams 309
 – properties 298
 – redox switching 315
 – solution-phase switching 305 f.

- switching 300 ff.
- translation movements 298
- bond-order alterations 407 f.
- dipolar chromophores 408
- donor and acceptor strength 408
- bowl-shaped arenes 59
- break junctions 381 f.
- BSA conjugates 14

C

- C₆₀ fullerenes 39, 43, 59
- carbon nanotubes 3 ff., 59
 - atom transfer radical polymerization 17
 - bioconjugates 12 ff.
 - chemical derivatization 7 f.
 - covalent functionalization 4 ff.
 - cycloadditions 21 ff.
 - defect functionalization 10 ff.
 - electrochemical modification 26 f., 47
 - films 9
 - halogenation 5 ff.
 - HiPCO process 9
 - hydrogenation 19
 - multi-walled carbon nanotubes 3, 6
 - oxidative purification 8, 45
 - silylation 18 f.
 - single-walled carbon nanotubes 3 f., 6, 41 f.
 - supramolecular complexes 39
 - thiolation 17 f.
- caltrops 367 f.
- carbodiimide technique 12
- charge transport 83
- chiral conjugated materials 547 ff.
 - angular connectors 547
 - annelation 548 ff.
 - applications 547
 - chiroptical properties 570 ff.
 - π -conjugated polymers 547 f.
 - free energy barriers 568
 - helicenes 548
 - inversion of configuration 569 f.
 - racemization 567 ff.
- chromophores
 - charge transfer 422 f.
 - combinatorial azo coupling 181 f.
 - combinatorial condensation reactions 182 f.
 - combinatorial cross-coupling reactions 186
 - combinatorial synthesis 180 ff.
 - dendronized 416, 426
 - designs 404 ff., 420 f.
 - dipolar chromophores 418 ff.
 - donor-acceptor-donor 422
 - electrooptic applications 404
 - high- β -chromophores 414
 - multicomponent synthesis 199 f.
 - multifunctional chromophores 197
 - nonlinear optical chromophores 416
 - octupolar 410 f.
 - push-pull 210
 - quadrupolar chromophores 426
 - second-order chromophores 404 ff.
 - transition metal chromophores 409
- α -chymotrypsin 34
- Cl-Stetter-Paal-Knorr synthesis 213 f., 217
 - furans 213
 - pyrroles 213
- co-conformation 298
 - ground-state 298
 - metastable-state 298
- condensed-phase switching 306 f.
- π -conjugated oligomers 83 ff.
 - binaphthyl-based oligomers 97 f.
 - bipolar tetramers 90
 - cross-like assemblage 84
 - cruciform 83
 - diaryloxadiazole 89
 - tetrahedral core unit 85 ff.
 - tetrastilbenoid oligomers 86
 - tetrasubstituted benzene core 91 ff.
 - tetrasubstituted biaryl core 95 ff.
 - tetrasubstituted biphenyl unit 102
 - thienyl-based 107 f.
- σ - π conjugated species 127, 129
 - thiophene-phosphole derivatives 127
- π -conjugated systems 120 ff.
 - diphosphene-containing 161 ff.
 - phosphine-containing 147 ff.
 - phosphoalkene-containing 161 ff.
 - phosphorus-derived building blocks 121 ff.
 - tailoring 120
- coordination chemistry 197 ff.
 - combinatorial coordination chemistry 197
 - iridium(III) chromophores 198
 - transition metal complexes 197 f.
- corannulenes 69 f.
 - absorption 70
 - emission 70
 - dibenzo-fused 69, 74
 - synthesis 69, 74
- Corey-Pauling-Kultun model 304
- coumarin dyes 188 ff.

- synthesis 189
- crossed wires 382
- cross-linked polymeric networks 282
- cyanines 182
 - asymmetric cyanines 182 f.
 - rhodacyanines 185, 215
 - solid-phase synthesis 182
- [*n*]cyclacene 59, 61 f.
 - multi-step Diels-Alder 61
- [*n*]cyclophenacenes
 - absorption 70
 - aromaticity 67 f.
 - emission 70
 - nucleus-independent chemical shift 67
 - radialene structures 63
 - regioisomers 65
 - σ -skeleton 68
 - structure 66 ff.
 - synthesis 62, 63 ff.
- cyclopropanation 24

d

- DDA *see* donor-donor-acceptor
- defocusing effects 393
- degenerate four-wave mixing (DFWM) 403
- dendrimers 10, 12
- dendritic benzamides 270
- dendron-modified polymers 285
- diarylethene 329 ff.
 - antiferromagnetic interactions 332 f.
 - dimers 341
 - HOMO 332
 - magnetic interactions 341
 - photochromism 330 f., 333
 - photoswitches 339 f.
 - radical synthesis 333 f.
 - SOMO 332
- dibenzophosphole 143
 - building block 143
- difference frequency generation 393
- diphosphaferrocenes 127
 - electronic properties 127
- dipolar chromophores 408 ff.
 - donor-acceptor character 410
 - ferrocene-based 409
 - host polymers 411 f.
 - inorganic coordination complexes 409
 - organometallic groups 409
 - thermal stability 413
- dipole moment 394 f.
- dipole-dipole interactions 272
- dithienophosphole 143 ff.
 - cyclotriphosphazenes 144
 - hole-transporting capability 144

- HOMO-LUMO band gaps 144
- Lewis basicity 144
- photoluminescence 145
- diversity-oriented synthesis 179 ff, 215
 - diarylethenes 196
- DNA 441 ff.
 - base modifications 452 f.
 - base substitutes 454 f.
 - charge-transfer chemistry 443 f.
 - chromophore functionalization 448 ff.
 - π -conjugated material 442
 - electron transfer studies 456 ff.
 - electron transport 441 f.
 - excess electron transfer 446 f., 461
 - hole hopping 444
 - hole transfer 444
 - oxidative damage 444
 - phosphoramidite chemistry 446
 - reductive electron transfer 446 ff.
 - synthetic nanostructures 460 ff.

domino reactions 179

- donor-acceptor dyads 482
 - acridinium ions 485 ff.
 - back electron transfer 487
 - π -donor-acceptor dyads 485
 - infinite CS lifetime 485 f.
 - long-lived CS states 482, 484
 - organic solar cells 494 f.

donor-donor-acceptor 267

DOS *see* electron density of states

drug delivery 261

e

- electric-field-induced second harmonic generation (EFISH) 398
- electrochemical switching 315 f.
 - neutral rotaxanes 315
- electrochromic device 313
 - TTF/DNP-based 313
- electroluminescence 83
- electroluminescent diodes 84
- electron density of states 25
- electronic devices 261
- electron transfer processes 441 ff.
 - photoinduced 441 f.
- electrooptic (EO) effect 393
- electrooptic switching 394
- electropolymerization 161
- ESR spectra 330, 337
 - biradicals 347
 - weak interactions 330 f.
- ethenylphosphole derivatives 138 f.
- ethynylphosphole derivatives 138 f.
- excitation density 344 f.

f

- Fagan-Nugent method 130, 134, 139
- Fermi energy 369
- field-effect transistors 119, 511
- finite fields 399
- fluorotubes 6
- foldamer formation 105
- four-cylinder bundles 271
- fullerenes 59, 474 ff.
 - bowl-shaped conjugated systems 62
 - charge delocalization 477
 - electron transfer properties 474 f.
 - luminescence quantum yield 71
 - Rehm-Weller behaviour 475
 - 60 π -spherical conjugation 62
 - spherical fullerenes 59
- fullerene peapods 43
- π -functional-systems 465 ff.
 - electron transfer 465 ff.
- furan 214
 - four-component synthesis 214

g

- glucose biosensors 25, 37
- glucose oxidase 10, 25, 35

h

- hairy-rod polymers 286
- Heck reaction 194
 - multi-component reactions 206
 - one-pot reactions 206
 - one-terminal wires 354 f.
 - vinylsilanes 194, 206
- highly-oriented pyrolytic graphite 9
- Hiyama coupling 206
- hoop-shaped molecules 61
- hydrophobicity 264
- hyper-Raleigh scattering 398

i

- imino nitroxide radicals 345
- indium-tin oxide anode 133
- inkjet printing 83, 113
- intramolecular cyclizations 247 f.
- intramolecular excimers 16
- intramolecular magnetic interaction 329 ff.
- intramolecularization 241, 245

k

- kinetic approach 227
 - advantages 254
 - alkyne metathesis 228
 - disadvantages 254

- Stephens-Castro coupling 227
- synthesis of macrocycles 227 f.

l

- Landauer equations 368
- Langmuir-Blodgett monolayers 314, 353
- Langmuir-Blodgett technique 411
- ligand-driven light-induced spin change (LD-LISC) 333
- light-induced excited spin state trapping (LIESST) 333
- light-induced thermal hysteresis (LITH) 333
- linear polarizability 394
- linear polarization 394 f.
- lipase 11
- liquid crystalline network 95, 271 f.
 - nematic 272
 - smectic 271
- liquid crystalline compounds 251
- liquid crystalline materials 261
- low-temperature plasma process 6
- luminophore synthesis 199

m

- Mach-Zehnder interferometer 414
- macroscopic self-assembly 287 f.
 - layer-by-layer 287
 - self-assembled monolayers (SAM) 287, 354, 376
- magnetic interactions 330
- merocyanine dyes 199 ff., 272
 - one-pot synthesis 201
 - retrosynthetic analysis 200
 - textile coloration 200
- metal-catalyzed cross-coupling reactions 187 f.
 - Pd-catalyzed 188
- metallamacrocycles 241
 - reductive elimination 241
- metallothioneins 37
- metal-to-ligand charge-transfer (MLCT) 321
- molecular devices 368 f.
 - classical coherent tunnelling 368
 - electron transport 368
- molecular electronics 261, 353
- molecular elevator 301 ff.
 - pH-driven 301
- molecular junctions 353, 375 f.
 - break junctions 382
 - donor- π -acceptor molecules 377
 - junction types 370 ff.
 - metal-molecule-metal junction 381
 - nanopore junctions 382
 - nanowire junctions 385

- particle junctions 384 f.
 - scanning 375
 - STM junctions 380 f.
 - tunneling-based 375
 - molecular machines 295 ff.
 - assembly 298
 - detection of actuations 296
 - interlocked molecules 297 ff.
 - movements 296
 - stimuli 296
 - molecular magnetism 333
 - molecular motors 295
 - metal ion-based 319
 - MLCT-induced switching 319 f.
 - PET-induced switching 318 f.
 - molecular muscles 295
 - chemically controlled switch 304
 - interlocked molecules 296
 - metal ion exchange 303 f.
 - redox controlled switch 304 f.
 - molecular sensor 160
 - molecular switch 310 ff.
 - benzidine/biphenol-based 310
 - photochemically induced 316 f.
 - photoisomerization 317 f.
 - redox-driven rotaxanes 311
 - rotaxanes 310 f.
 - solution-phase switching 311
 - TTF/DNP-based rotaxanes 311
 - molecular switch tunnel junctions device 314 f.
 - molecular wire compounds 354 f.
 - Co²⁺-bridged 361
 - four-terminal wires 365 f.
 - Horner-Wadsworth-Emmons reactions 355, 359
 - oligophenylene-ethynylene 354, 376
 - oligophenylene-vinylene 354, 376
 - one-terminal wires 355 f.
 - Sonogashira cross-coupling 354 f., 360
 - three-terminal wires 364 f.
 - two-terminal wires 359 f.
 - monodisperse conjugated materials 120
 - monophosphaferrocenes 127
 - MSTJs *see* molecular switch tunnel junctions device
 - multi-component reactions 179 f.
 - condensations 199 f.
 - cross-coupling reactions 204 f.
 - multifunctional ligands 274
 - multifunctional materials 261
 - multiphoton-absorption 393
 - applications 393
 - multiple noncovalent interactions 261 ff.
 - hydrogen-bonding 263
 - hydrophobic interactions 263
 - salt bridges 263
 - multi-walled carbon nanotubes (MWCNT) 3, 6
- n**
- nanocarpet 269
 - nanocomposites 16
 - nanomechanical device 308 f.
 - CBPQT⁴⁺ 308 f.
 - ground state interactions 308
 - solid state 308
 - nanopore junctions 382
 - nanoscale machines 295
 - nanomechanical movements 296
 - nanowire junctions 385
 - naphthacene *see* tetracene
 - negative differential resistance (NDR) 369
 - Newkome-type dendrons 12
 - nitronyl nitroxide radicals 338 f., 341 f.
 - diarylethene-bridged 339
 - NLO-phores 159
 - non-covalent functionalization 32 ff.
 - biomolecules 32
 - charge-transfer complex 33
 - endohedral functionalization 42 f.
 - exohedral functionalization 32 f.
 - mixed micelles 33
 - nanotubes 32 ff.
 - photoconversion 38
 - π -stacking interactions 35 f., 48
 - nonlinear optical (NLO) effects 393 ff.
 - measurement techniques 397 ff.
 - multiphoton-absorption 393
 - second-order effects 395 ff.
 - third-order effects 395 ff.
 - nonlinear optical (NLO) materials 393 f.
 - electrooptic coefficients 398
 - ground-state dipole moment 399
 - non-centrosymmetric assembly 397
 - second-order properties 397 ff.
 - third order effects 399 f.
 - nonlinear optics 138
 - nonlinear polarization 394 f.
- o**
- OFETs *see* organic field effect transistors
 - OLED *see* organic light-emitting diode
 - oligothiophenes 189 ff.
 - combinatorial synthesis 189 f.
 - helical oligothiophenes 559 f.
 - molecular wires 338 f.
 - solid-phase synthesis 192
 - structure-property relationship 191

- OPE molecules 375 f.
 - conductance 387
 - conductance switching 377 f.
 - monolayers 377 f.
 - switching behaviour 377
- optical rectification 396
- optical waveguides 393
- optically transparent electrode 494 ff.
- optoelectronics 192
- organic field effect transistors 84, 107, 109 f.
- organic light-emitting diode 83, 119, 133, 138
 - dopants 133, 135
 - EL quantum yields 133
 - fabrication 133, 160
 - precursors 192
 - single-layer 133
- organic photovoltaic cells 84
- organic semiconductors 83
- organic solar cells 494 f.
 - donor-acceptor dyads 494
 - multi-porphyrin/fullerene assemblies 499 ff.
- OTE *see* optically transparent electrode
- p**
- 2PA *see* two-photon absorption
- PAHs *see* polycyclic aromatic hydrocarbons
- PAM *see* phenylacetylene macrocycle
- particle junctions 384 f.
- P-branched multichromophores 160
- p-conjugated oligomers 119
- PEI *see* poly(ethylenimine)
- pentacenes 534 ff.
 - alkyne 536
 - edge-to-face interactions 534
 - partial fluorination 538 f.
 - π -type semiconductor 534
 - trialkylsilyl derivatives 535
- peptide nucleic acids 15
- peptides 263 f.
 - multifunctionalization 263
 - secondary structures 263 f.
- PET *see* photo-induced electron transfer
- PFO 99 f.
 - films 99
 - synthesis 100
- phase-transfer catalyst 8
- phenylacetylene macrocycle 226
 - isomeric PAMs 230
 - macrocyclizations 231
 - non-symmetrically functionalized 251
 - orthogonal reaction conditions 233
 - synthesis of Moore and Zhang 229
- phenylene-ethynylene macrocycles 225
- p*-phenylenephosphine-based oligomers 147 ff.
 - cyclic voltammetry 149
 - π -delocalization 149
 - synthesis 147 f.
 - UV/VIS spectra 147, 149
- phenylene oligomers 232 ff.
 - orthogonal strategy 233
 - precursor synthesis 232 f.
 - synthesis 232
- phosphaalkyne oligomers 161 ff.
 - fluorescence properties 165 f.
- phosphapericyclines 152
- phosphole 121 ff.
 - aromaticity 122, 136
 - p-conjugated systems 121 ff.
 - copolymers 140
 - endocyclic p-system 122
 - HOMO-LUMO separations 131
 - hyperconjugation 122, 136
 - σ - π interaction 122
 - mixed oligomers 129 ff., 138 f., 143 ff.
 - nucleophilic behaviour 132
 - oligophospholes 123 ff.
 - spectrum 131
 - thermal stability 123
 - topology 136
 - transition metal complexes 123
- phosphole polymers 140 ff.
 - arylphosphino units 155 ff.
 - biphenyl-phosphole derivative 140 f.
 - electropolymerization 141 f.
 - higher generation dendrimers 153
- p*-phenylenephosphine units 147 f.
 - phosphine-ethynyl units 151 ff.
 - properties 142
 - thienyl-capped monomers 141 f.
- photocatalytic oxygenation 491 ff.
 - anthracenes 491
 - anthraquinones 491
 - tetraphenylethylene 492
 - TPE dioxetane 493
- photochromic compounds 331
 - properties 331
- photochromic materials 147
- photochromic states 342 f.
- photoconversion 38
- photoexcitation 38
- photo-induced electron transfer 19, 319, 321, 477 f.
 - chlorophyll-like donor 479

- non-adiabatic intramolecular electron transfer 477
 - photocatalyst 490
 - photosynthetic units 477 f.
 - porphyrin-fullerene dyads 479 ff.
 - photonic devices 261
 - photophysical processes 83
 - photosensitizers 182
 - photoswitching of magnetism 333
 - photoswitching units 329 ff.
 - bis(2-thienyl)ethane 340
 - bis(3-thienyl)ethene 335 f.
 - π -conjugation 340
 - magnetic interaction 335
 - new units 345
 - photochromic molecules 341 f.
 - photoswitching 329 ff.
 - precursors 340
 - reversed 340 f.
 - photosynthetic p-pigments 465 f.
 - photovoltaic cells 119
 - plastic lasers 119
 - PNA *see* peptide nucleic acids
 - polarizable π -systems 394 f.
 - poled-polymer systems 413 ff.
 - dendrimers 416 f.
 - host-guest systems 415
 - nonlinear chromophores 418
 - photochemical stability 414
 - telecommunication applications 414
 - poly(ethylenimine) 9
 - polyanilines 147
 - polycyclic aromatic hydrocarbons 560
 - polyelectrolyte 9
 - polyenes 412 f.
 - non-ring-locked 413
 - ring-locked 413
 - polymer-based self-assembly 275 ff.
 - applications 279
 - main-chain extension 275, 276 f.
 - metal-trpy decomplexation 278
 - orthogonal routes 280 f.
 - reversibility 276
 - side-chain assembly 276, 279 f.
 - tuning 276
 - trpy-based metal coordination 276
 - polymeric OLEDs 192
 - polymers 194
 - poly(arylene-ethynylene) family 194
 - polyphosphacyclopolyynes 152
 - polyphosphazenes 121
 - porphyrin units 365 f., 423, 467 ff.
 - electron transfer 468
 - ESR spectra 469 f.
 - oligomers 501
 - porphyrin-alkanethiolate monolayer 504
 - porphyrin dendrimers 499 f.
 - porphyrin-quinone dyads 483
 - self-assembled systems 503
 - self-exchange electron transfer 472 f.
 - Zn-porphyrins 467 ff., 473
 - potentiometric titration 10
 - pyridylphosphole ligands 135
 - properties 135
 - pyrrole 213 f.
 - four-component synthesis 214
- q**
- quantum dots 9
 - quantum yield 83
 - quaterphospholes 124 f.
 - properties 125 f.
 - synthesis 124 f
 - quinones 466 f.
- r**
- radialene 63, 69
 - recombination efficiency 83
 - rhodacyanines 185 f.
 - structure 185
 - synthesis 186
 - rosettes 268
 - helical rosette nanotubes 267 f.
 - rubrene 532 f.
 - charge-carrier mobility 532
- s**
- second harmonic generation 396
 - second-order chromophores 404 ff.
 - bond-order alterations 407, 419
 - design 404 f.
 - dipolar chromophores 405 f.
 - electrooptic measurements 405
 - excitation 406
 - frequency-doubling phenomena 404
 - ground-state dipole moment 406, 410
 - octupolar organic molecules 410
 - resonance structures 407
 - solvatochromism 406
 - static limit 404
 - sum-over-state approach 404
 - self-assembly 261 ff.
 - bilayer-type 268 f.
 - GC units 267
 - hierarchy 265
 - macroscopic self-assembly 287 ff.

- merocyanine dyes 272 f.
- metal coordination 273, 285
- monofunctional 279
- multifunctional ligands 274
- multi-step self-assembly 262 f.
- polymer-based 275
- receptors 280
- small molecule-based 265
- self-focusing effects 393
- self-sorting 283
- semiconductors 4, 13 f.
- sequential catalysis 204
- SFG *see* sum frequency generation
- shape-persistent macrocycles 225 ff.
 - asymmetric macrocycles 246
 - intermolecular cyclodimerization 234
 - kinetic approach 227
 - persistence length 225
 - side-group orientation 226
 - substituents 234
 - synthetic handicaps 237 f.
- SHG *see* second harmonic generation
- siloles 122
- single-molecule transistors 386 f.
- singlet state 329
- single-walled carbon nanotubes (SWCNT) 3 f., 6, 41 f.
- small-scale electronics 353
- smart materials 262
- solution-phase switching 305 f.
- Sonogashira reaction 194
 - DNA modification 453 f.
 - high-throughput screening 194
- Sonogashira-Hagihara coupling 225, 246
 - quadruple 246, 249
- soybean peroxidase 34
- spin coating 83, 113
- spin coupler 329
 - photochromic 331
- spin crossover phenomena 333
- squaraines 203, 205
- square-tip junctions 383 f.
- stilbazolium salts 182, 184
 - preparation 185
- STM measurements 380 f.
- streptavidin 37
- sum frequency generation 396
- sum-over-states 399
 - calculations 403
- supramolecular building blocks 274
- supramolecular chemistry 261, 322
- supramolecular complexation 4
- supramolecular photovoltaic cells 497
- supramolecular polymers 272, 278

- swivel cruciform 95, 101 ff.
 - binaphthylbased 101
 - extended swivel cruciform 105
 - molecular shape 109
 - synthesis 105 f., 108 ff.
 - terphenyl dimers 103
- symmetric charge transfer 422
- t**
- template-controlled cyclizations 238 ff.
 - acetylene cyclization 242
 - Glaser coupling 238, 249
 - phenylacetylene oligomers 242 f.
 - porphyrins 239 f.
 - ring precursors 245
- tether length dependence 244
- tetracene 528 ff.
 - edge-to-face arrangements 528
 - ethynyltetracenes 530 ff.
 - functionalization 528 f.
 - rubrene 532
 - tetrachalcogenetetracenes 530 f.
 - tetrasubstituted 533 f
- thermodynamic approach 251 ff.
 - alkyne metathesis 253
 - carbazole macrocycles 253 f.
 - imine formation 251 f.
 - phenylene-ethynylene macrocycles 252
- thiol end-capped molecules 353
 - π -conjugated 354
 - flat gold substrate 376
 - junction types 370 ff.
 - self-assembled monolayers 376
 - synthetic procedures 354
- thioxophosphole 133
 - host material 133
- third-order NLO effects 401 ff.
 - nonlinear absorption 402
- topological resonance method 59
- trannulene systems 62
- transferrin 14
- tricyanofuran acceptor 414
- triplet state 329
- twin-wedge complex 270
- twin-wedge monomers 271
- two-photon absorbing chromophores 418
 - essential-state models 418
 - one-photon absorption 419
 - static dipole moment 419
 - transition dipole moment 419
- two-photon absorption 394, 400, 427 f.
 - acrylate polymerization 427 f.
 - chromophores 418 f.
 - cross section δ 401

- dyes 428
 - excited-state absorption 402
 - g-e excitation 421
 - measurement techniques 401
 - spectra 421
- two-photon fluorescence 402
- fluorescence intensity 402
 - quantum yields 402

u

- ubiquinones 483
- Ugi-type reactions 180

v

- vinylsilane 194 f.
- substituted 206

z

- Zerner Intermediate Neglect of Differential
Overlap 399