

Index

a

4'-[4-(2-acryloyloxyethoxy)phenyl]-2,2':6',2''-terpyridine 243
 actin filament (F-actin) 451
 Ag^I complex
 – dinuclear 467
 alcohol cross-coupling 470
 aldol-type condensation 468ff.
 allylation reaction 460ff.
 allylic substitution reaction 463
 amidation
 – intramolecular 466
 aminolysis
 – asymmetric 472
 4'-(4-aminophenyl)-2,2':6',2''-terpyridine 410
 antitumor agent 341ff.
 4'-aryl-2,2':6',2''-terpyridine 38ff.
 atom-transfer radical polymerization (ATRP) 244ff., 282
 – Cu^I-catalyzed 475
 Au nanoparticle 421f.
 – terpyridine ligand 422
 Au surface 402ff.
 – terpyridine-modified 408f.
 Au^{III} mono(terpyridine) complex 333, 349, 386
 4'-azido-2,2':6',2''-terpyridine 25f.
 aziridination 466f.
 azurin 380

b

para-benzoquinone 477
 BINOL (1,1'-binaphth-2-ol) 107
 – BINOL-type bis(terpyridine) 220
 biolabeling 376
 biomolecule
 – covalent binding to small-molecule 338
 – labeling 388
 biotin moiety 381

BIP (2,6-bis(1-methyl-1*H*-benzo[*d*]imidazol-2-yl)pyridine) 205
 – 4-ethynyl functionalized 52
 – ditopic 52, 205, 268
 – metallopolymer 224
 – polydisperse 224
 2,2'-bipyrazine (bpz) ligand 491
 2,2'-bipyridine (bpy) 2, 282, 475
 – *cis*-[(bpy)₂(py)Ru(H₂O)]²⁺ 476
 – *cis*-[(bpy)₂(py)RuO]²⁺ 477
 bipyridine-cyclodextrin 186
 2,2'-bipyrimidine (bpm) 491
 6,6''-bis(aminomethyl)-4'-phenyl-2,2':6',2''-terpyridine chelating unit 387
 2,6-bis(benzimidazol-2-yl)pyridine (bzimpy) 366
 1,4-bis[2,6-bis(1-butyl-1*H*-1,2,3-triazol-4-yl)pyridin-4-yl]benzene (BTP-type) 219
 bis-cyclometalating tridentate ligand 113
 1,4-bis[2,6-di(1*H*-pyrazol-1-yl)pyridin-4-yl]benzene (BPP-type) 219
 2,6-bis(5,6-dihydro-4*H*-1,3-oxazin-2-yl)pyridine 463
 2,6-bis(4,5-dihydrooxazol-2-yl)pyridine 463
 5,5''-bis(hydroxymethyl)-2,2':6',2''-terpyridine 256
 bis-intercalator 334
 2,6-bis(1-methyl-1*H*-benzo[*d*]imidazol-2-yl)pyridin-4-ol (BIP-OH) 51
 2,6-bis(1-methyl-1*H*-benzo[*d*]imidazol-2-yl)pyridine, *see* BIP
 bis(phenanthroline) 150ff.
 3,6-bis(pyridin-2-yl)pyridazine ligand 158
 2,6-bis(pyridin-2-yl)-4-pyridone 284
 1,5-bis(pyridin-2-yl)triazine 83
 bis-rotaxane 179
 1,2-bis(2,2':6',2''-terpyridin-4'-yl)acetylene 32
 bis(2,2':6',2''-terpyridin-4-yl)amine 25

- 1,4-bis(2,2':6',2''-terpyridin-4'-yl)benzene 42
- (*E*)-1,2-bis(terpyridin-4-yl)diazene 25
- 1,4-bis[(2,2':6',2''-terpyridin-5-yl)methylsulfanyl]butane 130
- 1,3-bis[(2,2':6',2''-terpyridin-5-yl)methylsulfanyl]propane 130
- bis(terpyridine) 42ff., 149f., 182, 289
 - alkene-functionalized angular 141
 - amine-bridged 25
 - angular 136ff.
 - BINOL-type 220
 - boron-dipyrromethane (BODIPY)-bridged 48f.
 - dithiol-bridged 130
 - electron-acceptor-type π -conjugated spacer 48
 - motif 206
 - oligophenylene-bridged 212
 - oligoyne-bridged 33
 - photophysical property 35, 47
 - π -conjugated 47, 204, 309
 - piperazine-functionalized 412
 - soluble 34
 - step-wise self-assembly 404
 - *trans*-stilbene-bridged 44
 - telechelic 270
 - thieno[3,4-*b*]pyrazine-bridged 47
 - viologen-type 133, 220
 - X-shaped 37
- bis(terpyridine) complex
 - dinuclear 89
 - heteroleptic 185
 - self-assembly 147
- bis(terpyridine) ligand 32
 - angular 137
 - heteroleptic 68
 - homoleptic 68
 - multifunctional 131
 - telechelic 224
 - thiophene-containing 98
- 1,1'''-bis(2,2':6',2''-terpyridin-4-yl)-1,1'-biferrocene 100
- 3,6-bis(2,2':6',2''-terpyridin-4'-yl)-9-alkyl-carbazole 136
- 1,4-bis(2,2':6',2''-terpyridin-4'-yl)benzene 309
- 4,4'-bis(2,2':6',2''-terpyridin-4'-yl)triphenylamine 136
- 2,6-bis(1*H*-1,2,3-triazol-4-yl)pyridine (BTP-type) 52
- bis(U-terpyridine) 50f.
- black dye 66, 432ff.
- bleomycin
 - iron-containing glycopeptide 372
- block copolymer
 - A-[M]-(B-[M]-)_nB-[M]-A type 308
 - dinuclear A-[M]-B-[M]-A 309
 - oligonuclear metallo-supramolecular 308
- blue dimer 489ff.
- BODIPY (boron-dipyrromethene) 209
- boron neutron capture therapy (BNCT) 330
- Borromean links (Borromean rings) 157, 181ff.
- bpy, *see* 2,2'-bipyridine
- 4'-(4-bromomethylphenyl)-2,2':6',2''-terpyridine 450
- 4'-(4-bromophenyl)-2,2':6',2''-terpyridine 233
- BTB (bipyridine-terpyridine-bipyridine) 173
 - BTP-based ligand 52
 - BTB-type ligand 219
- n*-butyl acrylate ("BA") 283f.
- 1-butyl-3-methylimidazolium hexafluorophosphate (bmim-PF₆) 423
- c*
- C₆₀tpy@Pd 426
- C[^]N[^]N (mono-cyclometalating tridentate ligand) 445
- [(C[^]N[^]N)Ru(N[^]N[^]N)]⁺ 445
- cadmium 174
 - Cd^{II} 292, 365
 - Cd^{II} coordination polymer 208
 - Cd^{II} mono(terpyridine) complex 425
 - [Cd(tpy)F₂] 467f.
- cage-like structure 172
- calix[4]arene
 - derivative 186
 - functionalized with four terpyridine ligands 188
- ϵ -caprolactone 279
- 2-(*N*-carbazolyl)ethyl methacrylate (CzMA) 256
- carbene-insertion 467
- catalyst in organic reaction
 - asymmetric 460
- catenane 177, 181
 - reversible molecular motion 181
- CCAAC (Cu^I-catalyzed alkyne-azide [2+3]-cycloaddition) reaction ("click" reaction) 25, 52f., 406, 472
- chain-transfer agent (CTA) 283
 - telechelic 284
- chemotherapeutic agent 342
- 4'-chloro-2,2':6',2''-terpyridine 264ff.
- chromium
 - Cr^{III} bis(terpyridine) complex 375
- circular dichroism (CD) effect 320
- co-dimerization
 - linear 471

- cobaloxime complex 486
- cobalt
- Co^{II} bis(terpyridine) complex 71, 185, 374, 412ff.
 - Co^{III} bis(terpyridine) complex 374
 - Co^{II} ion 244, 267, 292, 374, 403
 - Co^{III} ion 374
 - Co^{II} mono(terpyridine) complex 413
 - [Co(btp)₃](ClO₄)₂ (btp: 4,4'-di(*tert*-butyl)-2,2'-bipyridine) 234
 - [Co(tpy)₂]²⁺ 479
 - [Co(tpy-vinyl)₂]²⁺ 479
 - Co^{II}-containing grid 159
 - grid 163ff.
 - homoleptic (alkyl)thiol-functionalized Co^{II} bis(terpyridine) complex 415
 - infinite 2D grid-like structure 164
 - thiol-functionalized Co^{II} bis(terpyridine) complex 412
- competitive fluorescence spectroscopy (CFS) 324
- container transportation system 451
- coordination polymer 203
- terpyridine-based 215
- copper 174f.
- CCAAC 25, 52f., 406, 472
 - Cu^{II} bis(terpyridine) complex 367ff.
 - Cu^{II} complex 366
 - Cu^I ion 178ff.
 - Cu^{II} ion 177ff., 244, 292, 366ff., 380
 - Cu^{II} mono(terpyridine) 367ff.
 - [Cu(bpy)(H₂O)]²⁺ 369
 - [Cu(bpy)(tpy)]²⁺ 172
 - [Cu(BTB)Fe(BTB)Cu]⁴⁺ 173
 - [Cu(bzimpy)]⁺ 367
 - [Cu(bzimpy)Cl]⁺ 367
 - [Cu(pty)Cl]Cl 367
 - [Cu(tpy)(H₂O)]²⁺ 369
 - polymer-bound Cu^I mono(terpyridine) complex 472
- cross-coupling procedures 18ff
- CRP (controlled radical polymerization) 244, 281
- current imaging tunnelling spectroscopy (CITS) 168
- cyclodextrin 182ff.
- cyclodextrin-complex
- homoleptic 182
- cyclometalation 113
- cyclopropanation
- asymmetric 461
- cyclosexipyridine 143
- cytochrome *c* protein 384
- cytotoxicity 341f., 361, 373
- d**
- dendrimer
- first-generation 105
- dendritic terpyridine architecture 24
- deoxycholic acid (DCA) 436
- deoxycytidiny-(3',5')-deoxyguanosine (deoxy-CpG) 328
- dextran
- terpyridine-functionalized 450
- di(hexadecyl)phosphate (DHP) 216
- 2,6-di(quinolin-8-yl)pyridine 54
- dialkyl 2,2':6',2''-terpyridine-4'-phosphonate 27
- diazo-bis(terpyridine) 104
- diblock copolymer 286f., 303
- A-[M]-A 294
 - A-[M]-B 272, 294ff.
 - B-*b*-A-tpy 286
 - B-[M]-B 294
 - PEG-[Ru]-PS 297
- dihydride mechanism 468f.
- 1,4-dihydropyridine (DHP) 487
- 6,6''-dimethyl-2,2':6',2''-terpyridine 15, 28
- 5,5''-dinitro-2,2':6',2''-terpyridine 16
- dinuclear complex 94ff.
- bicyclo[2.2.2]octane bridge 97
 - *N*-heteroaromatic groups in the spacer 99
 - heterometallic 91
 - strapped biphenyl 97
- dinuclear rack 157
- 2,9-diphenyl-1,10-phenanthroline (dpp) 379
- 1,1-diphenylethylene 463
- 2,9-diphenylphenanthroline 177
- 4'-(diphenylphosphino)-2,2':6',2''-terpyridine 27
- dipyrido[3,2-*a*:2',3'-*c*]phenazine (dppz) 335
- 4'-(2,3-disubstituted 2*H*-azirin-2-yl)-2,2':6',2''-terpyridine 25
- dithienylethene (DTE) 43
- photochromic 43
- DNA
- A-[Fe]-B' (A/A', and B/B' represent complementary strands) 378
 - A-[Ru]-A 378
 - B-[Fe]-C' (B/B', and C/C' represent complementary strands) 378
 - B-[Ru]-B 378
 - C-[Fe]-A' (A/A', and C/C' represent complementary strands) 378
 - damage 350f.
 - double helix 327ff.
 - double-strand break (DSB) 350
 - G-quadruplex 331f.
 - ODN × DNA duplex 377

- DNA (*continued*)
- oxidative cleavage 350f., 375
 - single-strand break (SSB) 350
 - topology 327
 - DNA binding 350ff.
 - DNA diblock copolymer 378
 - DNA intercalation 320ff.
 - Pt^{II} mono(terpyridine) complex 321ff.
 - DNA intercalator 320ff.
 - dodecahydro-19,20,21,22,23,24-hexaazakekulene 144
 - donor–[Ir(tpy)₂]-acceptor array 112
 - double-cross-shaped structure 170
 - dye-sensitized solar cell (DSSC) 233f., 431ff., 497
 - dysprosium
 - Dy^{III} ion 252
- e*
- electron hopping mechanism 409
 - electron/proton-transfer (EPT) 488
 - electroreduction 480
 - CO₂ 480
 - oxygen 480
 - energy and charge transfer 143
 - epoxidation 464f.
 - asymmetric epoxidation of styrene derivative 465
 - meso*-epoxide 472
 - ethidium bromide (EthBr) 324
 - 4'-ethynyl-2,2':6',2''-terpyridine 31f., 135
 - europium
 - Eu^{III} 269
 - Eu^{III} chelate 387f.
 - Eu^{III} ion 182, 251f.
 - excited-state energy relaxation diagram 143
- f*
- Fe
- A-[Fe]-B' (A/A', and B/B' represent complementary DNA strands) 378
 - B-[Fe]-C' (B/B', and C/C' represent complementary DNA strands) 378
 - bio-inspired [FeFe]-hydrogenase moiety 484
 - C-[Fe]-A' (A/A', and C/C' represent complementary DNA strands) 378
 - dinuclear Fe^{II} complex 464
 - Fe^{II} catalyst 469
 - Fe^{II} complex 373, 464
 - Fe^{II} ion 181f., 220, 244, 267ff., 292, 378, 403
 - Fe^{II} bis(terpyridine) complex 180f., 380, 423, 464f.
 - Fe^{II} bis(terpyridine) unit 278
 - Fe^{II} bis(terpyridine)-PEtOx complex 278
 - Fe^{II} mono(terpyridine) complex 468
 - Fe^{III} mono(terpyridine) complex 472ff.
 - Fe^{II} tris(bipyridine) complex 244, 279
 - [Fe(tpy)₂](FeCl₄)₂ 475
 - Fe₃O₄@Au-tpy nanoparticle 425
 - grid 163ff.
 - homoleptic Fe^{II} bis(terpyridine) complex 464
 - metallopolymer 222, 265
 - polymer-bound Fe^{III} mono(terpyridine) complex 472
 - ferrocene
 - functionalized 370
 - ferrocenium cation 370
 - ferrocifen 369
 - flanking region (FL) 353
 - Fremy's salt (FS, potassium nitrosodisulfonate) 212ff.
 - FTO (fluorine-doped tin oxide) 443, 497
 - 4'-(furan-2-yl)-2,2':6',2''-terpyridine 40
 - fused terpyridines 155
- g*
- gel (metallo-supramolecular) 248
 - giant amphiphiles 381
 - β-1,3-glucan 451
 - glutathione (GSH, Glu-Cys-Gly tripeptide) 339ff.
 - gold, *see* Au
 - graft copolymer 255, 289
 - graft-on-graft architecture 291
 - grid 154ff.
 - grid of grids arrangement 164
 - grid-like architecture 156
 - grid-like array 155
 - [2 × 2] grid 158ff.
 - chiral heterobimetallic 162
 - double-T shaped 170f.
 - with peripheral *H*-acceptor groups 164
 - with peripheral *H*-donor groups 164
 - [4 × 4] grid 170f.
 - guanine-cytosine (G-C) DNA base pair 329
- h*
- halfgrid 156
 - head-to-head helicate 173
 - Heck cross-coupling reaction 44
 - HEEDTA (sodium salt of *N*-(hydroxyethyl) ethylenediamine triacetic acid) 292

- helicate 171
 – dinuclear double helicate 181
 – heteroduplex 175
 4'-heteroaryl-2,2':6',2''-terpyridine 38ff.
 heteroditopic ligand 50
 heterometallo-macrocycle 137f.
 HETPHEN (heteroleptic phenanthroline)
 complexation approach 148
 HETTAP (heteroleptic terpyridine and
 phenanthroline) complexation concept 148
 hexaazakekulene 143
 hexakis(terpyridine) 152
 – star-shaped 38
 Hg^{II} ion 365
 highly ordered pyrolytic graphite
 (HOPG) 416ff.
 homopolymer
 – A-[M]-A 272, 291ff.
 – metallo-supramolecular 294
 – supramolecular 291
 – tpy-TIPNO 285
 Horner–Wadsworth–Emmons (HWE)
 condensation 41ff.
 hydrosilylation
 – metal-catalyzed 463
 4'-(4-hydroxyphenyl)-2,2':6',2''-
 terpyridine 448, 472
- i**
- ibuprofen
 – regioselective oxidation 474
 initiation
 – ionic polymerization reaction 277
 initiator
 – functional terpyridine-containing 277
 intercalation 320ff.
 – Pt^{II} mono(terpyridine) complex 321ff.
 interfacial electron transfer (IET) 446
 intra-ligand charge-transfer (³ILCT) state 85
 ionic liquid 423
 ionochromism 258
 Ir^{III} bis-complex
 – mono-cyclometalated 114
 Ir^{III} bis(terpyridine) complex 107ff., 185, 383
 – metallocopolymer 252
 Ir^{III} complex
 – bis-cyclometalated 484
 – terpyridine ligand 107
 Ir^{III} mono(terpyridine) complex 364, 470ff.
 Ir^{III}-Pt^{II} mixed-metal dinuclear complex 337
 Ir^{III}-Ru^{II} complex 100f., 111
 [Ir(tpy-mes)₂]³⁺ (mes: 2,4,6-
 trimethylphenyl) 108
 iron, *see* Fe
- iron regulatory element (IRE) 352
 IRP (iron regulatory protein) 353f.
 isoprene 475
 Irving-Williams series 67
- j**
- Jameson's protocol 14
- k**
- Kröhnke condensation 14f., 40
 – variant 17
 Kröhnke-motif 4
 Kröhnke-type mono(terpyridine) 39
 Kröhnke-type 2,2':6',2''-terpyridine 38, 82
 – non-planar 41, 82
 – planar (pyrimidin-2-yl)-substituted 82
- l**
- L-lactide 279
 lactoferrin (LF) 405
 labeling
 – biomolecule 388
 lanthanide(III)
 – Ln^{III} chelate 388
 – Ln^{III} mono(terpyridine) complex 387
 – Ln^{III}-Pt^{II} mixed-metal trinuclear
 complex 337
 – metal ion 336
 layer-by-layer (LBL) self-assembly 429f.
Leishmania parasite 346f.
 Li^I cation 436
 ligand-to-ligand charge-transfer (LLCT) 113
 light absorption sensitizer (LAS) 482
 light-driven hydrogen formation 483
 light-induced excited-state spin-trapping
 (LIESST) 143
 lower critical solution temperature
 (LCST) 293f.
- m**
- [M(tpy)₂]²⁺ 292f.
 macrocycle 181
 – shape-persistent metal-free hexagonal 143
 [2+2]-macrocycle 133
 – heterometallic 132
 [3+3]-macrocycle
 – homo- and heterometallic triangular 136
 macroligand 281
 – ditopic 272
 – monotopic 272ff.
 – monotopic terpyridine-functionalized 274
 manganese, *see* Mn
 maximum coordination site occupancy
 – deviation 169

- melamine formaldehyde (MF) particle 215
- metal-to-ligand coordination 1
- metallo-dendritic architecture 24
- metallo-intercalator 324ff.
- mono(terpyridine) d^8 metal complex 320
- metallo-macrocycle
 - hexameric 141
 - hexameric dodecanuclear 146
 - mononuclear 131
 - oxidized single-wall carbon nanotube (oxi-SWNT) 140ff.
 - terpyridine-containing 130
 - trinuclear hexagonal metallo-macrocycle containing Fe^{II} ions 143
- [6+6]-metallo-macrocycle 136
- 3D metallo-network 219
- metallo-semiconducting material 282
- metallo-supramolecular architecture 272
 - helical 171
 - self-assembly 166
 - terpyridine complex 129ff.
- metallo-supramolecular assembly
 - bicyclic 184
- metallo-supramolecular brush
 - amphiphilic 302
- metallo-supramolecular homopolymer 294
- metallo-supramolecular material
 - self-assembly of bis(terpyridine) 266
- metallo-supramolecular micelle 298
- metallo-supramolecular polyelectrolyte (MEPE) 212
- metallo-supramolecular polymer 22
 - mononuclear 291
- metallo-supramolecular polymerization 200
- metallo-supramolecular triblock copolymer 267
- metallo-supramolecular zipper 187
- metallomonomer 221
- metallopolymer 201ff., 219ff.
 - amido- and imido-linkages 226
 - Cd^{II} ion 208
 - chiral 219ff.
 - color 224, 251
 - Fe^{II} ion 222
 - Ir^{III} bis(terpyridine) complexes in the side-chain 252
 - non-classical 220
 - π -conjugated bis(terpyridine) 204
 - polydisperse BIP-type ligand 224
 - Ru^{II} ion 206
 - self-assembly 212
 - synthesis 202, 213ff., 225f., 264
 - terpyridine-functionalized π -conjugated polymer 229
 - type 201
 - Zn^{II} ion 208ff.
- methoxy-poly(tetrahydrofuran) (MPTHF) 273
- methyl methacrylate (MMA) 247
 - RAFT polymerization 247
- 9-methylantracene (9-MA) 146
- micellar gel 308
- micelle 297ff.
 - core-shell-corona 305
 - $PS_{47-b-P^tBA_{55}}-[Fe]-PEO_{125}$ 307
 - $PS_{47-b-P^tBA_{55}}-tpy$ 307
 - $PS_{80-b-P^tBA_{200}}-tpy$ 307
- microbead 449
 - terpyridine-functionalized TentaGelTM 449
- ³MLCT (metal-to-ligand charge-transfer)
 - excited-state 76ff., 481
 - lifetime 76f.
- ³MMLCT 485
- MMLCT absorption 117
- Mn
 - complex 492
 - dinuclear μ -(O)₂-bridged Mn^{III}/Mn^{IV} mono(terpyridine) catalyst 473
 - Mn_4 161
 - Mn_{12} 161
 - $Mn^{III}(O)_2Mn^{IV}$ 500
 - $Mn^{IV}(O)_2Mn^{IV}$ 500
 - $[(ptpy)(H_2O)Mn^{III}(\mu-O)_2Mn^{IV}(H_2O)(ptpy)]^{3+}$ 473
 - $[(tpy)(H_2O)Mn(\mu-O)_2Mn(H_2O)(tpy)]^{3+}$ 492
- Mn^{II} complex
 - dinuclear 470
 - dioxygen-bridged dinuclear 464
 - mononuclear 499
- Mn^{II} mono(terpyridine) complex 445ff., 464ff., 499
- modified methylalumoxane (MMAO) 475
- molecular monolayer memory (MMM)
 - device 413f.
- molecular monolayer non-volatile memory
 - device (MMNVM) 413f.
- molecular motion
 - oxidation-induced 178
- molecular switch 178
- molecular wire-type behavior 157
- mono(terpyridine)
 - aldehyde-functionalized 45f.
 - amine-bridged 25
 - ethynyl-functionalized 33
 - nonlinear optical behavior 46

- mono-terpyridine complex 66
- metallo-intercalator based on mono (terpyridine) d⁸ metal complex 320
- mono[tris(pyridin-2-yl)triazine] (tptz) complex 356
- monocyclometalated species 113
- monocyclometalating tridentate ligand 113
- monohydride mechanism 468f.
- multi-ion pair association 142
- multi-walled carbon nanotube (MWNT) 428f.
- myosin 451
- n**
- N[^]C[^]N ligand 445
- [(N[^]C[^]N)Ir(N[^]N[^]C)]⁺ 115
- N[^]N[^]N[^]-ligand (tridentate ligand) 339, 445
- [(N[^]N[^]N[^])Ir(C[^]N[^]C)]⁺ 115
- NafionTM 493f.
- nanocluster
- bis(4-iodophenyl)silane-modified [PW₁₁O₃₇]⁷⁻ 431
- nanomaterial
- inorganic 420
- nanoprism 149ff.
- self-assembly 152
- nanosstructure 399ff.
- ⁿBA (*n*-butyl acrylate) 283f.
- neighbor exclusion model 328
- nickel
- grid 163ff.
- Ni^{II} ion 244, 267, 292
- Ni^{II} mono(terpyridine) complex 472
- [Ni(tpy)₂]²⁺ connectivity 292
- [(tpy)Ni(Me)] 471f.
- NIPAM (*N*-isopropylacrylamide) 283
- nitroxide-mediated polymerization (NMP) 244ff., 285
- norbornene derivative 244
- nucleoside 342
- nucleotide 342
- o**
- oligo(ethylene oxide) methacrylate (OEGMA₄₇₅) 291
- oligo(hexylthiophene) (OHT) 231
- oligo(phenylene-ethylene) (OPE)
- thiol-functionalized 410
- oligo(phenylenevinylidene) (OPV) trimer 231
- terpyridine-functionalized 231
- oligonuclear complex
- V-shaped 106
- X-shaped 106
- oligodeoxynucleotide (ODN) 377
- middle-(Ru^{II}-complex)-ODN 377
- ODN × DNA duplex 377
- 3'-(Ru^{II}-complex)-ODN 377
- 5'-(Ru^{II}-complex)-ODN 377
- Ru^{II}-labeled ODN-conjugate 377
- organic light-emitting diode (OLED) 140ff., 200, 257
- organic solar cell (OSC) 257
- organopolymeric resin 447
- Os^{II}
- grid 163
- Os^{II} bis-complex
- thiophene-substituted 229
- Os^{II} bis(terpyridine) complex 81ff., 411
- anthracene-substituted 86
- heteroleptic 75, 183
- homoleptic 75ff.
- synthesis 68ff.
- TP⁺-functionalized (TP⁺: 2,4,6-triarylpyridinium) 80
- Os^{II} bis(terpyridine) unit
- oligonuclear complex 89
- Os^{II} complex 228, 491
- monocyclometalated 88
- photophysical property 88
- Os^{III} mono(terpyridine) complex 68
- oxidation
- alkene 495
- electrocatalytic 476
- molecular terpyridine-based catalysts for water oxidation 488
- photocatalytic 487
- regioselective oxidation of ibuprofen 474
- oxidation potential 482
- oxime
- photocleavage 496
- oxygen
- electroreduction 480
- singlet 375, 495f.
- p**
- palladium
- Pd^{II} mono(terpyridine) complex 340f., 470
- [(tpy)Pd(NCMe)](BF₄)₂ 468
- PCBM ([6,6]-phenyl-C₆₁-methyl butyrate) 206
- PDIm (perylene diimide) 402, 417
- PEG (poly(ethylene glycol)) 255, 265ff., 464
- amino-functionalized PEG₇₅ 289
- PDMS-[Ru]-PEG 303
- PEB-[Ru]-PEG 303
- PEB₇₀-[Ru]-PEG₇₀ 303
- PEG-*b*-PPG-*b*-PEG 271
- PEG-PDIm terpyridine 417
- (PEG₄₄-[Ru])₃ 310f.

- palladium (*continued*)
 – (PEG₄₄-[Ru])₄ 310f.
 – PEG-[Ru]-PS 297
 – PFDS₁₂-[Ru]-PEG₇₀ 303f.
 – PPG-*b*-PEG-*b*-PPG 271
 – PS₂₂-*b*-PEG₇₀ 298
 – PS₇₆-*b*-PTFMS₄₂-[Ru]-PEG₇₀ 306
 – PS₃₂-*b*-P2VP₁₃-[Ru]-PEG₇₀ 303
 – PS₂₀-[Ru]-PEG₇₀ 297ff.
 – PS₅-[Ru]-PEG₅ 298ff.
 – PTFMS₂₀-*b*-P^{BA}₂₅-*b*-PS₃₅-[Ru]-PEG₇₀ 306
 penta-amine macrocycle
 – terpyridine-containing 133
 pentadentate ligand
 – terpyridine-based 30
 4'-(pentafluorophenyl)-2,2':6',2''-terpyridine 40
 PEO₁₂₅-tpy 307
 3-(phenanthroline-2-yl)-1,2,4-triazine ligand 358
 1,10-phenanthroline (phen) 319
 phenanthroline-based ligand 177
 phenanthroline-terpyridine rotaxane 178
 2-phenyl-4,6-bis[6-(pyridin-2-yl)-4-(pyridin-4-yl)pyridin-2-yl]pyrimidine (2,4'-BTP) 417
 4'-phenyl-2,2':6',2''-terpyridine (ptpy) 39, 473
 – [(ptpy)₂Mn₂(μ-O)₂(H₂O)₂](ClO₄)₃ 470
 4'-(4-phenylmethanethiol)-2,2':6',2''-terpyridine 421
 photocatalytic process 480
 photochemical open–close cycle
 – reversible 43
 photochromic dithienylethene (DTE) 43
 photocleavage
 – oxime 496
 photoelectrochemical cell (PEC) 234
 – water-splitting 492
 photoinduced electron-transfer (PET) 487
 photosensitized electron transfer process 483
 photovoltaic application 431
 photovoltaic (PV) cell
 – bulk-heterojunction 260
 photovoltaic device 232
 photovoltaic quantum yield 439ff.
 platinum, *see* Pt
 platinyne-bis(terpyridine) 132
 PMDETA (*N,N,N,N',N''*)-pentamethyldiethylenetriamine) 246, 282, 428, 475
 poly(acrylic acid) (PAA) 287, 436
 – PS₁₂₀-[Ru]-PAA₁₃₅ 303ff.
 poly(ϵ -caprolactone)-macroligand 280ff.
 poly(chloromethylstyrene-codivinylbenzene) (PCD) 448, 472
 – [PCD-tpy]Fe(H₂O)₃]³⁺ 472
 – terpyridine-functionalized PCD resin 448
 poly(dialkoxyphenylene-thiophene) 260
 poly(dialkylfluorene-thiophene) 260
 poly(dimethylsiloxane) (PDMS) 274
 – PDMS-[Ru]-PEG 303
 poly(ethylene glycol), *see* PEG
 poly(ethylene imine) (PEI) 214, 436
 – metallo-supramolecular 278
 poly(ethylene oxide) monomethyl ether (MPEG) 272
 poly(ethylene-co-butylene) (PEB) 273
 – PEB-[Ru]-PEG 303
 – PEB₇₀-[Ru]-PEG₇₀ 303
 poly(3,4-ethylenedioxythiophene)-poly(styrenesulfonate) (PEDOT:PSS) layer 414
 poly(2-ethyloxazoline) (PetOx)
 – hydroxyl-functionalized 274
 poly(2-ethyloxazoline)-*block*-poly(2-phenyloxazoline) 278
 poly(ferrocenyldimethylsilane) (PFDS) 275
 – PFDS₁₂-[Ru]-PEG₇₀ 303f.
 poly(*N*-isopropylacrylamide) (PNIPAM) 275, 294
 poly(L-lactide)-macroligand 280
 poly(methyl methacrylate) (PMMA) 247
 poly(*n*-octylthiophene) 442
 poly(2-oxazoline)-macroligand 277
 poly(oxytetramethylene)
 – α -carboxy- ω -terpyridin-4'-yl-functionalized 269
 poly(*p*-phenylenevinylene) (PPV) 261
 poly(*p*-phenylenevinylidene)-type (PPV) polymer 231
 – tpy-functionalized 233
 poly(propylene glycol) (PPG) 271
 poly(styrene sulfonate) (PSS) 214
 poly(styrene-*alt*-diphenylethylene) copolymer
 – terpyridine-terminated 276
 poly(tetrahydrofuran) (PTHF) 271
 poly(*p*-trifluoromethylstyrene) (PTFMS) 288
 – PS₇₆-*b*-PTFMS₄₂-[Ru]-PEG₇₀ 306
 – PTFMS₂₀-*b*-P^{BA}₂₅-*b*-PS₃₅-[Ru]-PEG₇₀ 306
 poly(vinyl chloride) (PVC) 256
 – terpyridine-functionalized 256
 poly(2-vinylpyridine) 286
 polybutadiene
 – terpyridine-modified 275
 polybutadiene-*block*-poly(ethylene glycol) 273
 polyelectrolyte-amphiphile complex (PAC) 216
 polyelectrolyte-surfactant-like complex 253
 polyimide 227

- polyisoprene (PI)
 - terpyridine-modified 275, 286
- polymer
 - α,ω -dihydroxy-functionalized 270
 - block copolymer 254
 - chain-extended polymers from polymeric building blocks 269
 - functional polymers incorporating terpyridine-metal complexes 241ff.
 - metal ions/complexes 201
 - π -conjugated 199ff., 257ff.
 - terpyridine metal complex 199ff.
 - terpyridine units in the side-chain 242
 - terpyridine within the polymer backbone 262
 - terpyridine-functionalized 259
- polymer light-emitting diode (PLED) 199, 257
- polymer light-emitting device (PLED)
 - supramolecular 206
- polymer solar cell (PSC) 206
- polymerization 243ff.
 - anionic 276
 - complex first method 224
 - ionic 277
 - radical 281
 - RAFT (reversible addition-fragmentation chain-transfer) 244ff.
 - transition metal ion coordination 204
- polyoxometalate (POM) 430
- polystyrene (PS)
 - latex particle 215
 - PEG-[Ru]-PS 297
 - polystyrene-*block*-poly(2-vinylpyridine) 273
 - PS₄₇-*b*-P^tBA₅₅-[Fe]-PEO₁₂₅ 307
 - PS₄₇-*b*-P^tBA₅₅-tpy 307
 - PS₈₀-*b*-P^tBA₂₀₀-tpy 307f.
 - PS₂₂-*b*-PEG₇₀ 298
 - PS₇₆-*b*-PTFMS₄₂-[Ru]-PEG₇₀ 306
 - PS₃₂-*b*-P2VP₁₃-[Ru]-PEG₇₀ 303
 - PS₁₂₀-[Ru]-PAA₁₃₅ 303ff.
 - PS₂₀-[Ru]-PEG₇₀ 297ff.
 - PS_x-[Ru]-PEG_y 298ff.
 - PTFMS₂₀-*b*-P^tBA₂₅-*b*-PS₃₅-[Ru]-PEG₇₀ 306
- post-polymerization functionalization 250ff., 288
- Potts' methodology 14f.
- protecting group approach 406
- proton-coupled electron-transfer (PCET) 488
- Pt^{II} complex
 - cyclometalated [Pt(pbpy)]⁺ (pbpy: 6-phenyl-2,2'-bipyridine) 410
 - hexanuclear 147
 - Ir^{III}-Pt^{II} mixed-metal dinuclear complex 337
 - Ln^{III}-Pt^{II} mixed-metal trinuclear complex 337
 - [Pt(tpy)]²⁺ 384
 - [Pt(tpy)(Cl)]⁺ 384
 - [(tpy)Pt(H₂O)]²⁺ 385
 - [(tpy)Pt(His)]²⁺ complex 384
 - Pt^{II} mono(terpyridine) complex 66, 115ff., 321ff., 333ff., 348, 383ff., 486ff.
 - antitumor agent 343
 - azido-functionalized dinuclear 385
 - carborane-containing 346
 - dinuclear 119, 334ff.
 - DNA intercalation 321ff.
 - dyad 120
 - estrogen-modified 386
 - glycosylated 330, 349
 - labeling 385
 - luminescent 116
 - mononuclear 345f.
 - pH-responsive 118
 - polymer-bound 496
 - silica-bound 496
 - styrene functionalized 496
 - triad 120
 - [Pt(tpy)Cl]⁺ 484f.
 - [Pt(tpy)Cl]⁺ 487
 - 4'-(pyridin-4-yl)-2,2':6',2''-terpyridine 133
 - 6'-(2''-pyridyl)dipyrido[3,2-*a*:2',3'-*c*]phenazine (dppzp) 360
 - 4'-(pyrimidin-2-yl)-2,2':6',2''-terpyridine 81
 - planar 41
 - 10-(1*H*-pyrrol-1-yl)decane-1-thiol 421
- q**
 - quenching 481
 - quinquepyridine 187ff.
 - 2,2':6',2'':6'',2''':6''',2''''-quinquepyridine 172
 - ligand 373
 - 2,2':6',2'':6'',2''':6''',2''''-quaterpyridine 172, 176
- r**
 - rack 154
 - anthracene-containing 157
 - rack-type architecture 156
 - radiotherapeutic agent 350
 - RAFT (reversible addition-fragmentation chain-transfer) polymerization 247
 - methyl methacrylate (MMA) 247
 - NIPAM 283
 - styrene 283
 - Re^I(CO)₃ mono(terpyridine) complex 463
 - [Re(CO)₅]Br 147

- redox system 476, 489
- reduction
 - CO₂ 479
 - electrocatalytic 476
 - ketone 469
 - water 484
- reduction potential 482
- resorc[4]arene
 - terpyridine-functionalized 187
- rhodium
 - Rh^{III} complex 364
 - Rh^{III} mono(terpyridine) complex 462, 479
 - [Rh(COD)Cl]₂ (COD: cycloocta-1,5-diene) 463
 - [Rh(phen)₂(phi)]³⁺ (phen: 1,10-phenanthroline; phi: 9,10-phenanthrenequinone diimine) 353
- ring-assembly strategy 14
- ring-opening metathesis polymerization (ROMP)
 - Ru^{II}-catalyzed 244
- ring-opening polymerization (ROP)
 - cationic 278
 - coordinative 279
- Risch's methodology 17
- rotaxane 177f.
- Ru (ruthenium) complex
 - {O[Ru(H₂O)₂(tpy-PO(OH)₂)]₂}⁴⁺ [tpy-PO(OH)₂: 2,2':6',2''-terpyridin-4'-yl-phosphonic acid] 497
 - [(tpy)(H₂O)Ru(dpp)Ru(H₂O)(tpy)]³⁺ 499
- Ru^{II} 292
 - grid 163
- Ru^{II} bis(terpyridine) complex 36, 78ff., 137, 180ff., 254, 371ff., 411ff., 428, 440ff., 484f.
 - anthracene-substituted 86
 - dendritic, oligonuclear 445
 - dinuclear 95ff.
 - dithiol-functionalized 420
 - DNA intercalation 335
 - heteroleptic 73, 420, 438
 - homoleptic 74ff., 357ff., 438
 - monomeric 428
 - mononuclear 76
 - photophysical property 75ff.
 - synthesis 73f.
 - TP⁺-functionalized (TP⁺: 2,4,6-triarylpyridinium) 80
- Ru^{II} bis(terpyridine) unit
 - dendritic system 102
 - oligonuclear complex 89
 - star-shaped system 102
- Ru^{II} complex
 - A-[Ru]-A (A, B are complementary DNA strands) 378
 - B-[Ru]-B (A, B are complementary DNA strands) 378
 - bis-triazole-pyridine ligand 87
 - carbene-type ligand 87
 - diiodo-functionalized 227
 - dinuclear 363, 493
 - heteroleptic 188, 221, 256, 464
 - monocyclometalated 88, 221, 445f.
 - mononuclear 363
 - neutral 473
 - photophysical property 88
 - pyrrole-functionalized dimeric 498
 - 3'-(Ru^{II}-complex)-ODN 377
 - 5'-(Ru^{II}-complex)-ODN 377
 - [Ru(tpy)(bpy)]²⁺ 410
 - [(tpy)Ru(L)]²⁺ (L: bpy or phen) 380
 - *trans*-[(tpy)Ru(κN-NC₅H₄O)₂(H₂O)] 469
- Ru^{II} coordination polymer 207
- Ru^{II} ion 182, 269
 - metallopolymer 206, 212ff., 244
- Ru^{II} mono(terpyridine) complex 157, 357, 444, 462ff.
- Ru^{III} mono(terpyridine) complex 68, 439
- Ru^{II} mono(tptz) complex 357
- Ru^{II} oligopyridinyl complex 372
- Ru^{II} polyimide 227
- Ru^{II} tris(bipyridine) complex 184, 279, 484
- Ru^{II} tris-thiocyanato complex 261
- Ru^{III} tris-thiocyanato complex 438
- Ru^{II} Zn^{II}-porphyrin complex
 - tetranuclear 444
- Ru^{II}-Ir^{III} array 186
- Ru^{II}-Os^{II} array 186
- Ru^{II}-Os^{II} dyad 185
- Ru^{III}/Ru^{II} coordination chemistry
 - selective 255
- Ru^{II}/Ru^{III} redox system 476, 478, 489
- Ru^{III}/Ru^{IV} redox system 476, 489
- Ru^{IV}/Ru^{III} redox system 478
- Ru^{VI}/Ru^{IV} redox system 478
- Ru^{III}-terpyridine monocomplex 244
- Ru^{III}ORu^{III} 489
- Ru^{IV}ORu^{III} 489
- Ru^{IV}ORu^{IV} 489f.
- Ru^VORu^V 490Ru(acetone)₆(BF₄)₃ 219
- [Ru(bpy)₃]²⁺ 424, 483f.
- cis*-[Ru(bpy)₂(py)(H₂O)]²⁺ 488
- [Ru(bpy)₂(py)(O)]²⁺ 488
- [Ru₂(btpyan) (qu^{1,5-})(O₂⁻)]⁰ [btpyan: 1,8-bis(2,2':6',2''-terpyridin-4-yl)anthracene; qu: quinoline] 492

- [Ru(*p*-cymene)Cl₂]₂ 473
 Ru(dmsO)₄Cl₂ 177
cis-RuL₂(NCS)₂ (L: 2,2'-bipyridyl-4,4'-dicarboxylic acid) 432
 [RuL(NCS)₃](*n*-Bu₄N)₃ (L: 2,2':6',2''-terpyridyl-4,4'4''-tricarboxylate) 432
 [RuO]^{IV} complex 351ff.
 [RuO]^{IV} mono(terpyridine) complex 351
 [Ru(OH)]^{III} complex 354
 [Ru(tptz)Cl₂(PPh₃)] 357
 [Ru(tpy)₂]²⁺ 181, 227, 255, 292ff.
 [Ru(tpy)₂](BPh₄)₂ unit 298
 [Ru(tpy)Cl₃] 471
 [Ru(tpy)(dmbpy)Cl] (dmbpy: 4,4'-dimethyl-2,2'-bipyridine) 256
 [Ru₂(tpy)₂](PF₆)₄ 157
 [Ru₃(tpy)₃](PF₆)₆ 157
 ruthenium polymer 206
 – A-[Ru]-B 296
 – A-[Ru]-B-[Ru]-A triblock copolymer 309
 – PDMS-[Ru]-PEG 303
 – PEB-[Ru]-PEG 303
 – PEB₇₀-[Ru]-PEG₇₀ 303
 – (PEG₄₄-[Ru]-)₃ 310f.
 – (PEG₄₄-[Ru]-)₄ 310f.
 – PEG-[Ru]-PS 297
 – PFDS₁₂-[Ru]-PEG₇₀ 303f.
 – PS₇₆-*b*-PTFMS₄₂-[Ru]-PEG₇₀ 306
 – PS₁₂₀-[Ru]-PAA₁₃₅ 303ff.
 – PS₂₀-[Ru]-PEG₇₀ 297ff.
 – PS_{*x*}-[Ru]-PEG_{*y*} 298ff.
 – PTFMS₂₀-*b*-P^{*t*}BA₂₅-*b*-PS₃₅-[Ru]-PEG₇₀ 306

 s
 Sauer methodology 16
 scandium
 – chiral Sc^{III} mono(terpyridine) complex 472
 schizophyllan 451
 – terpyridine-modified (tpy-SPG) 451
 scorpionate-complex 189
 self-assembled monolayer (SAM) 401ff., 419
 self-assembly 152ff.
 – bis(terpyridine) 266
 – chiral heterobimetallic [2 × 2] grid 162
 – directional 173
 – Fe^{II} ion 378
 – hierarchical 215, 253
 – metallo-supramolecular architecture 166
 – metallo-supramolecular material 266
 – metallopolymer 212ff.
 – reversible redox-state-dependent switching of sexipyridine 175
 – redox-switching of septipyridine 174
 – step-wise 296, 404
 – supramolecular polymer 253
 – terpyridine functionalized Au nanoparticle 423
 – terpyridine-functionalized PMMA 249
 self-healing material 288
 semi-self-assembly approach 137
 sensitizer 445
 – Ru^{II}-based 433ff.
 – Ru^{III}-containing 441
 septipyridine
 – disubstituted 173
 – redox-switching of the self-assembly process 174
 2,2':6',2'':6'',2''':6''',2''':6''',2''''-sexipyridine 172
 Sierpiński hexagonal gasket 138f.
 silver, *see* Ag
 single-molecule magnet (SMM) 161
 single-walled carbon nanotube (SWNT) 427f., 451
 SnO₂
 – nanocrystalline 442
 Sonogashira cross-coupling approach 35f.
 – iterative 34
 spiro-metallodendrimer 133f.
 spoke set with rim elements 152ff.
 spoked wheel-type architecture 152ff.
 steroid
 – α-unsaturated 465
 structure-within-structure morphology 253
 styrene 283f.
 – asymmetric epoxidation of styrene derivative 465
 – aziridination 466
 – fluorinated derivative 286
 – *para*-substituted 466
 4'-(4-styryl)-2,2':6',2''-terpyridine 243
 sulfanylbenezene 402
 4'-(4-sulfanylphenyl)-2,2':6',2''-terpyridine 402
 11-sulfanylundecan-1-ol matrix 405
 superoxide radical 367
 superpolystyrene 276
 supramolecular gel 260
 – reversible self-assembly of terpyridine-functionalized PMMA 249
 supramolecular protecting group chemistry 406
 Suzuki–Miyaura cross-coupling reaction 42ff.

 t
 tamoxifen
 – ferrocene-substituted 369

- TBT (terpyridine–bipyridine–terpyridine) 173
- terbium
- Tb^{III} ion 251f.
- terpolymer
- random 250
- 2,2':6',2''-terpyridin-4'-yl triflate 135
- 2,2':6',2''-terpyridin-4'-yl-carboxylic acid 40
- terpyridine 2ff., 426
- acrylate-functionalized monomer 20
 - alkoxy-substituted 416
 - 4'-alkyl-functionalized 27
 - amino-functionalized 410
 - anchoring 407
 - biotin-modified 383
 - catalytic application 459ff.
 - chiral 460
 - dialkenyl-functionalized 183
 - disulfide-functionalized 425
 - dithienylethene-bridged 43
 - ferrocene-functionalized 419
 - fullerene-functionalized 21
 - 4'-functionalized 4, 27
 - fused 155
 - [(H₂O₃P-tpy)Ru(O)₂(H₂O)]²⁺ 478
 - inorganic nanomaterial 420
 - liquid crystalline (LC) behaviour 29f.
 - macrocyclic terpyridine 135
 - methacrylate-functionalized monomer 20
 - molecular terpyridine-based catalyst for water oxidation 488
 - nano-structured TiO₂ 431
 - 4'-nitro-functionalized 25
 - {O[Ru(C₂O₄)(tpy)]₂(H₂O)₈} (C₂O₄²⁻: oxalate) 489
 - PS₄₇-*b*-P^fBA₅₅-tpy 307
 - PS₈₀-*b*-P^fBA₂₀₀-tpy 307f.
 - rigid U-shaped 4, 49
 - [(4'-R-tpy)PtCl]⁺ 116
 - S-shaped 49
 - serino-functionalized 378
 - star-shaped 104
 - terthiophene-functionalized 23
 - tetraacid-functionalized 29
 - thioalkyl-functionalized 420
 - thiol-functionalized 424
 - TIPNO-functionalized (tpy-TIPNO, TIPNO: 2,2,5-trimethyl-4-phenyl-3-azahexane nitroxide) 22f., 284
 - [(tpy)(bpy)Ru(H₂O)]²⁺ 477
 - [(tpy)(bpy)Ru(H₂O)]²⁺/[(tpy)(bpy)RuO]²⁺ 476
 - [(tpy)(bpy)RuO]²⁺ 477
 - [(tpy)(H₂O)Mn(O)₂Mn(H₂O)(tpy)]³⁺ 492
 - [(tpy)(H₂O)Ru(dpp)Ru(H₂O)(tpy)]³⁺ 497
 - [(tpy)Ir(C^{^N}^N^{^C})]⁺ 113ff.
 - [(tpy)Ir(N^{^C}^C^{^N})]²⁺ 113
 - [(tpy)Ir(N^{^N}^N^{^C})]²⁺ 113
 - [(tpy)Ir(tpy-R)]³⁺ (R: biphenyl) 110
 - [tpy-M-tpy']²⁺ complex 262
 - tpy-ⁿBA-*b*-PS-*b*-ⁿBA-tpy (ⁿBA: *n*-butyl acrylate) 283
 - [(tpy)(phen)Ru(H₂O)]²⁺ 478
 - tpy-PNIPAM 294
 - tpy-PPFS₃₀-*g*-AP₇-*b*-PS₇₃-TIPNO 291
 - tpy-PPFS₃₀-*g*-AP[(OEGMA₄₇₅)₁₀]₇-*b*-PS₇₃-TIPNO 291
 - tpy-PPFS₃₀-*g*-AP(PLA₁₁)₉-TIPNO 291
 - tpy-PPFS₃₀-*g*-AP₉-TIPNO 291
 - tpy-PPFS₃₀-*g*-(PEG₇₅)₁₀-TIPNO 289
 - tpy-PS-*b*-ⁿBA-*b*-PS-tpy 283
 - tpy-PS₃₅-*b*-PMA₅₄-*b*-PPFS₉₇-TIPNO 288
 - tpy-PS₃₅-*b*-PMA₅₄-PTFMS₂₀-TIPNO 288
 - tpy-PS₅₀-*b*-PPFS₈₀-TIPNO 286
 - tpy-PS₅₀-*b*-PTFMS₃₄-TIPNO 286
 - tpy-PS₁₆₀-TIPNO 287
 - tpy-PS-TIPNO 288
 - tpy-PS_n-TIPNO-UPy 288
 - [(tpy)Pt(H₂O)]²⁺ 385
 - [(tpy)Pt(His)]²⁺ complex 384
 - tpy-PTFMS₄₂-TIPNO 287
 - tpy-PTFMS₄₂-*b*-PS₇₆-TIPNO 287
 - [(tpy)Ru(bpy)(H₂O)]²⁺ (bpy: 2,2'-bipyridine) 351
 - [(tpy)Ru(bpy)(L)]²⁺ complex (L: labile ligand) 355
 - [(tpy)Ru(bpy)(L)](PF₆)₂ 355
 - [(tpy)Ru(bpy)(O)]²⁺ 353f.
 - [(tpy)Ru(bpy)(OH)]²⁺ 354
 - [(tpy)Ru(bpy)]²⁺–protein adduct 355
 - *mer*-(tpy)RuCl₃ 361
 - [(tpy)Ru(dppene)Cl]⁺ (dppene: *cis*-1,2-bis(diphenylphosphino)ethylene) 479
 - [(tpy)Ru(dppz-COOH)(MeCN)]²⁺ 376
 - [(tpy)Ru(dppz)(H₂O)]²⁺ 351
 - [(tpy)Ru(dppz-ODN)(H₂O)]²⁺ 377
 - [(tpy)Ru(L)]²⁺ (L: bpy or phen) 380
 - [(tpy)Ru(PPh₃)Cl₂] 470
 - [(tpy)Ru(pydic)] (pydic: pyridine-2,6-dicarboxylate) 463ff.
 - 4,4',4''-tri(*tert*-butyl)-substituted 475
 - (1*H*-1,2,3-triazol-1-yl)-substituted 25
 - 2,2':6',2''-terpyridine
 - 4'-(hetero)aryl-substituted 364
 - 2,2':6',2''-terpyridine (tpy) 2, 216, 358
 - five-membered *N*-heterocycles replacing the outer pyridine rings 51
 - 4'-functionalized 27

- synthesis 13ff.
- symmetrically substituted on the outer pyridine rings 28
- vinyl-functionalized 243
- 2,2':6',3''-terpyridine 364
- 2,2':6',4''-terpyridine 364
- terpyridine complex 411
 - d⁸ late transition metal ion 320
 - heavy d⁶ transition metal ion 350
 - transition metal ion 364, 459ff.
- terpyridine derivative 19ff.
 - fullerene-substituted 427
 - hydroxyl-functionalized 279
 - liquid crystalline (LC) behaviour 29f.
 - 4'-substituted 24
 - symmetrical and unsymmetrical ditopic 51
- terpyridine ligand
 - 4'-(boronate ester)-substituted 27
 - chiral 460
 - star-shaped 105
 - tri- and tetratopic 169
- terpyridine macroligand
 - monotopic 272
- terpyridine metal complex 319ff.
 - biological activity 320
 - functional polymer 241ff.
 - π -conjugated polymer 199ff.
- terpyridine rotaxane 180
- terpyridine transition metal ion complex 65ff.
 - catalytic application 459ff.
 - basic synthetic strategy 66ff.
 - binding enthalpy 67
 - characterization tool 66ff.
 - stability constant 67
- terpyridine-calixarenes 186
- terpyridine-cyclodextrin 185
- terpyridinophane macroligand 134
- tetrabutylammonium Oxone[®] 464
- tetrakis(2,2':6',2''-terpyridin-4'-oxymethyl)methane 105
- tetrakis(terpyridine) 46, 310
 - amine-bridged 25
- tetrakis(terpyridine)-porphyrin 445
- thermochromism 251
- thieno[3,4-*b*]pyrazine-bridged bis(terpyridine) 47
- 4'-(thiophen-5-yl-2-phosphonic acid) 442
- Thummel's methodology 17
- tin, *see* Sn
- TiO₂ 431ff., 447
 - dye-sensitized nanoparticle 443
 - nano-structured 431
- TIPNO (2,2,5-trimethyl-4-phenyl-3-azahexane nitroxide) 284, 296
 - TIPNO-PS₂₄₀-[M(dmf)₃Cl₂] 295
 - TIPNO-PS₂₄₀-[M]-PEG₂₃₀ 295
- TMPO (2,2,6,6-tetramethylpiperidine N-oxide) 494
- 4'-tolyl-2,2':6',2''-terpyridine (tpty)
 - [(tpty)Mn(H₂O)O]₂ 464
 - [(tpty)Ru(tppz)IrCl]²⁺ 91
 - [(tpty)Ru(tpy-Ph_n-tpy)]²⁺ 91
 - [(tpty)Ru(tpy-Ph_n-tpy)Os(tpty)]⁴⁺ 91
 - [(tpty)Ru(tpy-Ph_n-tpy)Rh(tpty)]⁵⁺ 91
- tpty, *see* terpyridine
- trefoil knot 182
- 4,4',4''-tri(*tert*-butyl)-2,2':6',2''-terpyridine 466
- tri-N-oxide 460
- triad
 - porphyrin-containing 92
- 1,3,4-triaryldihydropyrrole 487
- triblock copolymer 283, 303
 - A-[M]-B-[M]-A 272
 - A-[Ru]-B-[Ru]-A 309
 - coil-rod-coil 309f.
 - metallo-supramolecular 267
- tridentate ligand
 - bis-cyclometalating 113
 - C[^]N[^]N[^] (mono-cyclometalating tridentate ligand) 445
 - expanded bite angle 53
 - monocyclometalating 113
 - multitopic hydrazone-based 158
 - N[^]N[^]N[^]-ligand 339, 445
 - phenanthroline-based ditopic 159
- trinuclear complex 94ff.
 - heterometallic 92
 - mixed-metal Ru^{II}–Ir^{III} 100f.
 - strapped biphenyl 97
- tris(phenanthroline) 149
- tris(pyridine) 151
- 2,4,6-tris(pyrimidin-2-yl)-1,3,5-triazine 171
- 1,3,5-tris(2,2':6',2''-terpyridin-4'-yl)benzene 39
- 1,4,7-tris[(2,2':6',2''-terpyridin-5-yl)methyl]-1,4,7-triazanonane 131
- tris(terpyridine) 46, 104, 151, 310, 409
 - amine-bridged 25
 - star-shaped 38
- trithiocyanato Ru^{II} terpyridine complex 260
- tritopic ligand 169
 - star-shaped 172
- tpty, *see* 4'-tolyl-2,2':6',2''-terpyridine
- Typanosoma* parasite 346f.

u

ureido-pyrimidinone (UPy) moiety 280

v

vanadium

– $[\text{VO}(\text{O}_2)_2]^{\text{V}}$ complex 375
 – $[\text{VO}(\text{O}_2)_2]^{\text{V}}$ mono(terpyridine) complex 375

– $[\text{VO}(\text{O}_2)_2(\text{tpy})]^+$ complex 375

– $[\text{VO}(\text{O}_2)_2(\text{tpy})(\text{H}_2\text{O})]^+$ 375

4'-vinyl-2,2':6',2''-terpyridine 242

vinylbenzamide monomer

– polymerization 246

viologen-like structure 219

vitamin H 381

Volmer–Weber growth mode 419

w

water

– oxidation 488

– reduction 484

white light-emitting diode (WOLED) 252

Wittig condensation 41ff.

z

Ziessel-type bis(terpyridine)

– dithieno[3,2-*b*:2',3'-*d*]phosphole-containing 35

– fluorene-containing 35

Ziessel-type mono(terpyridine) 37

Ziessel-type terpyridine 4

Ziessel-type 2,2':6',2''-terpyridine 31

zinc

– π -conjugated Zn^{II} coordination polymer 209

– Zn^{II} ion 248, 292

– Zn^{II} bis(terpyridine) complex 366, 406

– Zn^{II} coordination polymer 207

– Zn^{II} copolymer 209

– Zn^{II} metallopolymer 210

– Zn^{II} mono(terpyridine) complex 366, 422

– Zn^{II} -bis(terpyridine) coordination polymer 208

– $\{[\text{Zn}(\text{bis}(\text{terpyridine}))](\text{PF}_6)_{2n}\}$ 208

– Zn^{II} -porphyrin-bis(terpyridine) 151

zirconium

– anchoring of terpyridine to a Zr^{IV} phosphate monolayer 407