

Index

This index is divided by element into eight parts. Each part is subdivided into sections devoted to each oxidation state, preceded by a general section. Thus if you want to find out about phosphine complexes of Rhodium, there is a general entry to phosphine complexes as well as separate references to phosphine complexes under the headings of Rhodium(0), (I), (II) and (III).

Index terms

Links

Gold

Alkene complexes	319			
Alkynyl complexes	313			
Ammine complexes	292			
Aqueous chemistry	283			
Arsine complexes	292	304	317	
Auranofin	325			
Auride ion	291			
Aurophilicity	323			
Binary compounds	276	279		
Bond lengths				
acetylacetonate complex	316			
alkyls and aryls	293	310	313	316
ammine complexes	292	302		
carboxylates	293			
cyanide complexes	303			
dialkyl sulphide complexes	304			
dithiocarbamates	305			
to gold	274	297	312	320
	323			

Index terms**Links**Bond lengths (*Continued*)

halide complexes	287	293	301	317
halides	278			
hydroxide complexes	302			
nitrate complexes	301			
oxides	283			
phosphine complexes	287	293	301	313
thiocyanate complexes	293	295		
thiolate complexes	293	296		
xanthate complexes	293			
Carbonyl complexes	296	313		
Carboxylate complexes	292			
Chemical vapour deposition (CVD)	310	316		
Cluster compounds	319			
Colour	323			
Co-ordination numbers	273	305		
Cyanide complexes	276	305	325	
Dithiocarbamates	297	305		
Divalent	298			
Element	274			
ESR	299			
Extraction	275			
Gold(-I) complexes	291			
Gold(I) complexes				
arsenic-donors	292			
carbon-donors				
decomposition	313			
structures	292	296	310	
syntheses	293	296	310	

Index terms**Links**Gold(I) complexes (*Continued*)

halogen-donors				
structure	292			
synthesis	295			
vibrational spectra	295			
nitrogen-donors	282			
oxygen donors	292			
phosphorus-donors				
structure	292	310	326	
synthesis	292	310		
trans-influence	293			
sulphur-donors	296	324	325	
two coordinate	273	280	283	292
	310			
Gold(II) complexes				
sulphur-donors	298			
ylids	299	318		
Gold(III) complexes				
arsenic-donors	317			
carbon-donors	313			
decomposition	318			
structures	313	317		
syntheses	317			
five co-ordinate	305			
halogen-donors				
structure	301			
synthesis	301			
vibrational spectra	301			
nitrogen-donors	302			
phosphorus-donors	303	316		

<u>Index terms</u>	<u>Links</u>		
Gold(III) complexes (<i>Continued</i>)			
sulphur-donors	304		
trans-effect	306		
trans-influence	303	306	
unusual co-ordination numbers	305		
Gold(IV) complexes	307		
Gold(V) complexes	281	307	
Halide complexes	292	300	
Halides	276	279	
+1 state	279		
+2 state	280		
+3 state	280		
+5 state	281		
+7 state	281		
Heptavalent	281		
Ionisation energies	273		
Isolation	275		
'Liquid gold'	297		
Macrocycle complexes	299		
Medicinal chemistry	325		
Mixed-valence systems	280	300	327
Monovalent	292	310	
Mössbauer spectroscopy	326		
Myocrisin	325		
Nitrate complexes	292	301	
Organo compounds	292	296	307
Oxidation states	273		
Oxidative addition reactions	303	311	
Pentavalent	281	307	

Index terms**Links**

Phosphine complexes	273	292	303	316
	326			
Plating	276			
Redox potentials	283			
Relativistic effects	273	323		
Solganol	325			
Tetravalent	307			
Thiocyanate complexes	297			
Thiolate complexes	292	296		
Trivalent	280	283	301	313
Trans-effect	306			
Trans-influence	293	303	306	
Two coordinate	273	280	283	292
	310			
Ylids	299	318		

Iridium

Alkene complexes	132	157		
Alkyls and aryls	145	152	155	170
Ammine complexes	146			
Aqueous chemistry	87			
Arsine complexes	148	158		
Binary compounds	79			
Bond lengths				
aqua complexes	87	156		
alkyl and aryl complexes	156	170		
alkylsulphide complexes	147			
bipyridyl complexes	158			
buckminsterfullerene complexes	136			

Index terms**Links**Bond lengths (*Continued*)

carbonyl complexes	136	142		
dioxygen complexes	136	143		
disulphur complexes	144			
dithiocarbamates	147			
fullerene complexes	136			
halide complexes	82	136	156	158
halides	81			
hydride complexes	136	150	155	161
nitrosyl complexes	136	165		
phosphine complexes	134	151	155	158
	161			
Carbonyl complexes	132	149		
infrared spectra	138			
oxidative additions	135	139		
reactions	135	141		
structures	136	142		
syntheses	135	138		
Dimethylphenylphosphine complexes	143	152		
Dinitrogen complexes	144			
Dioxygen complexes	134	142		
Disulphur complexes	143			
Divalent	144			
Element	78			
ESR spectra	83	158	160	
Ethylenediamine complexes	147			
Extraction	79			
Halide complexes	81	85	87	
structures	82	88		
vibrational spectra	83			

<u>Index terms</u>	<u>Links</u>			
Halides				
+3 state	80			
+4 state	81			
+5 state	81			
+6 state	81	83		
Hydride complexes	86	133	141	149
	155	160		
NMR spectra	150	154	162	
non-classical	150	152	162	
structures	150	155	161	
syntheses	148	160		
Hydroxide	86			
Iridium(I) complexes	132			
arsine complexes	140			
carbonyl complexes	132			
infrared spectra	138			
structures	136	139		
syntheses	135	138		
dinitrogen complexes	143			
dioxygen complexes	134	142		
oxidative addition reactions	132	139		
phosphorus donors	132			
structures	132	136	142	
syntheses	132	138		
thiocarbonyl complexes	144			
trans-influence	133			
Iridium(II) complexes				
aryl complexes	145			
phosphorus donors	144			

<u>Index terms</u>	<u>Links</u>		
Iridium(III) complexes			
ammine complexes	146		
alkyls and aryls	152	170	
alkylsulphide complexes	147		
aqua ion	87	146	
arsine complexes	148		
carbonyl complexes	149		
dithiocarbamates	147		
halogen donors	81	146	
hydride complexes	86	149	155
NMR spectra	150	154	
structures	150	155	
syntheses	148	152	
vibrational spectra	150		
phosphorus donors	148		
NMR spectra	150	154	162
structures	150	155	
syntheses	148		
pyridine complexes	147		
sulphur donors	147		
trans-influence	155		
Iridium(IV) complexes			
alkyls and aryls	171		
arsine complexes	158		
bipyridyl complexes	158		
halogen donors	82	85	158
structures	82		
vibrational spectra	83	158	
hydride complexes	160		
hydroxy anions	160		

Index terms**Links**

Iridium(IV) complexes (<i>Continued</i>)				
nitrate complexes	160			
oxygen donors	160			
phenanthroline complexes	158			
phosphorus donors	158			
ESR spectra	158	160		
pyridine complexes	158			
Iridium(V) complexes				
aryls	171			
halogen donors	82			
hydride complexes	161			
Isocyanide complexes	134			
Isomerism in complexes	85	146	151	156
Monovalent	131			
Nitrosyl complexes	163			
MO diagrams	167			
structures	165			
syntheses	163			
vibrational spectra	165			
NMR spectra	151	154	162	
Oxidation states	78	80	131	145
Oxidative addition reactions	132	139	149	
Oxides	86			
Paramagnetic compounds	81	83	144	158
	160			
Pentavalent	82	161	171	
Phenanthroline complexes	158			
Phosphine complexes	132	148		
complexes of alkyl-di- <i>t</i> -butylphosphines	161			
complexes of bis(diphenylphosphino)ethane	134	141	143	

Index terms**Links**Phosphine complexes (*Continued*)

complexes of diethylphenylphosphine	148	158	161	
complexes of dimethylphenylphosphine	143	150	160	171
complexes of methylphenylphosphine	132			
complexes of tricyclohexylphosphine	139	162		
complexes of triisopropylphosphine	150	161		
complexes of trimethylphosphine	133	138	140	161
complexes of triphenylphosphine	132	135	138	143
	163			
complexes of tris(o-tolyl)phosphine	139			
infrared spectra	140	162		
NMR spectra	154	162		
structures	143	151	155	161
syntheses	132	148	161	
Photochemistry	147			
Pyridine complexes	147	158		
Sulphides	86			
Sulphur dioxide complexes	135			
σ -bonded organo compounds	145	152	155	170
Tetravalent	82	86	158	171
Thiocarbonyl complexes	144			
Trans-influence in complexes	133			
Trivalent	81	146		
Vaska's compound	135			
Vibrational spectra				
ammine complexes	147			
carbonyl complexes	138			
dioxygen complexes	134	138		
halide complexes	83	147	158	
halides	81			

Index terms**Links**Vibrational spectra (*Continued*)

hydride complexes	150	162		
nitrosyl complexes	165			

Osmium

Acetylacetonates	68			
Alkyls and aryls	76			
Ammine complexes	54			
Aqueous chemistry	22			
Arsine complexes	61			
Binary compounds	2			
Bipyridyl complexes	56			
Bond lengths				
alkyls and aryls	76			
ammine complexes	56			
arsine complexes	61			
bipyridyl complexes	56	66		
carboxylate complexes	66			
dinitrogen complexes	56			
ethylenediamine complexes	56	70		
Bond lengths halide complexes	10	14	59	61
halides	4	9		
hydride complexes	21	57	62	
imide complexes	74			
nitride complexes	20	72		
osmyl complexes	57	70	76	
oxides	19			
oxyhalide complexes	17			
oxyhalides	7			

Index terms**Links**

Bond lengths (<i>Continued</i>)			
phosphine complexes	59	61	
porphyrin complexes	71		
pyridine complexes	68		
Carbonyl complexes	54		
Carboxylates	14	66	
Diketonate complexes	68		
Dinitrogen complexes	56		
Discovery	1		
Dithiocarbamate complexes	68		
Divalent	54	58	64
Element	1		
EPR spectra	7	59	
Ethylenediamine complexes	56		
Extraction	1		
Halide complexes	9		
dinuclear	14		
structures	10	14	
vibrational spectra	9	12	15
Halides			
+3 state	4		
+4 state	5		
+5 state	5		
+7 state	6		
Hydride complexes			
classical	21		
NMR spectra	62		
non-classical	56	62	65
+2 state	64		
+4 state	21	58	63

Index terms**Links**

Hydride complexes (<i>Continued</i>)				
+6 state	62			
Imide complexes	71	74		
Isocyanide complexes	68			
Isolation	1			
Isomerism in complexes	12	55	58	68
Magnetic properties				
ammines	57			
halide complexes	10	11	14	
halides	4	6		
oxyhalides	7			
phosphine complexes	59	60		
Nitrido complexes	20	55	73	
Nitrile complexes	68			
Nitrosyl complexes	66			
Octavalent	6	18	74	
Osmiamate ion	20			
Osmium(0) complexes	54			
Osmium(II) complexes				
ammine complexes	55			
arsine complexes	61			
dinitrogen complexes	55			
hydride complexes	64			
phosphorus donors	58	64		
Osmium(III) complexes				
ammine complexes	55			
dinitrogen complexes	55			
halogen donors	14			
oxygen donors	68			
phosphorus donors	57			

Index terms**Links**

Osmium(III) complexes (<i>Continued</i>)				
sulphur donors	68			
Osmium(IV) complexes				
ammine complexes	51	55		
arsine complexes	61			
carbon donors	76			
halogen donors	9			
hydride complexes	21	58	63	
oxygen donors	68			
phosphorus donors	57			
sulphur donors	66			
Osmium(V) complexes				
halogen donors	9	10		
imides	75			
Osmium(VI) complexes				
carbon donors	76			
halogen donors	9			
imide complexes	74			
nitride complexes	55	72		
oxygen donors	57	69		
phosphorus donors	57			
Osmium(VIII) complexes	17	74		
Osmyl compounds	1	57	69	76
Osmyl esters	70			
Oxidation states	1			
Oxidative addition reactions	67			
Oxides	1	18		
Oxyanions	20			
Oxyhalides	6			
Pentavalent	5	10	74	

<u>Index terms</u>	<u>Links</u>			
Phenanthroline complexes	56			
Phosphine complexes	54	57		
ESR spectra	59			
NMR spectra	62			
structures	59	61		
Porphyrin complexes	71			
Pyridine complexes	68			
σ -bonded organo compounds	76			
Terpyridyl complexes	73			
Tetravalent	9	21	51	55
	63	76		
Thiolate complexes	60			
Trivalent	14	55	68	
Uses	2			
Vibrational spectra				
dinitrogen complexes	55			
halide complexes	9			
halides	9			
hydride complexes	57	62		
nitride complexes	20	55	73	
nitrosyl complexes	67			
osmium ion	20			
osmyl complexes	58	69		
oxide	19			
oxyhalides and complexes	7	17		
Zerovalent	54			

<u>Index terms</u>	<u>Links</u>			
Palladium				
Ammine complexes	201	260		
infrared spectra	205			
Aqueous chemistry	187			
Arsine complexes	217	231	260	
Binary compounds	175			
Bipyridyl complexes	207	260		
Bond lengths				
alkyl and aryl complexes	271			
bipyridyl complexes	271			
dioxygen complexes	271			
halide complexes	181	185	260	271
halides	175	177		
isocyanide complexes	271			
phosphine complexes	188	271		
porphyrin complexes	208			
sulphoxide complexes	271			
thiaethers	227			
thiocyanate complexes	231			
Carbonyl complexes	195			
Carboxylates	200			
Cyanide complexes	224			
Diketonates	199			
Dioxygen complexes	194	271		
Divalent complexes	180	199		
Element	173			
ESR spectra	181	248		
Extraction	174			
Five co-ordinate complexes	199	211	235	

Index terms**Links**

Halide complexes			
+2 state	180		
+3 state	181		
+4 state	181		
+5 state	183		
Halides	175		
Hydride complexes	186	214	
Hydrides	185		
Internal metallation	217		
Isocyanide complexes	197		
Isomerism in complexes	201	209	232
Monovalent complexes	197		
Oxidation states	171	199	260
Oxidative addition reactions	193		
Oxides	186		
Palladium(0) complexes	188		
carbonyl complexes	195		
isocyanide complexes	197		
phosphorus donors			
effect of ligand size on coordination number	189		
reactions	193		
structures	188		
syntheses	188		
Palladium(I) complexes			
carbon-donors	198		
phosphorus donors	197		
Palladium(II) complexes			
ammine complexes	201	205	
infrared spectra	205		
isomerism	201		

Index terms**Links**Palladium(II) complexes (*Continued*)

aqua ion	187			
arsine complexes	217	231		
bipyridyl complexes	207			
carbon-donor ligands	219			
carboxylates	200			
cyanide complexes	224			
diketonates	199			
halogen donors	180			
hydride complexes	214			
nitrogen-donors	201	205		
oxygen donors	199			
phenanthroline complexes	207			
phosphorus donors	210	214	216	217
	219	220		
dimeric complexes	216			
structures	214			
syntheses	210			
porphyrin complexes	208			
selenium donors	226			
sulphoxide complexes	227			
sulphur donors	225			
thiocyanate complexes	231			
thiolates	225			
Palladium(III) complexes				
halogen donors	181			
macrocyclic complexes	248			
nitrogen donors	248			
sulphur donors	248			

<u>Index terms</u>	<u>Links</u>			
Palladium(IV) complexes				
ammine complexes	260			
arsine complexes	260			
bipyridyl complexes	260			
carbon-donor ligands	260	264		
halogen donors	181	260		
structures	182	260		
vibrational spectra	183			
nitrogen-donors	260			
phenanthroline complexes	260			
phosphorus donors	260			
sulphur donors	260			
Palladium(V) complexes	183			
Paramagnetic compounds	175	181	183	
Phenanthroline complexes	207	260		
Phosphine complexes	188	210	214	216
	218	260		
Porphyrins	208			
Sulphides	186			
Sulphoxide complexes	227			
σ -bonded organo compounds	219	222	260	264
Tetravalent complexes	181	260	264	
Thiocyanate complexes	231			
Thiolates	225			
Trans-influence in complexes	216			
Trivalent complexes	181	248		
Vauquelin's salt	206			
Vibrational spectra				
ammine complexes	205			
halide complexes	181	183		

Index terms**Links**Vibrational spectra (*Continued*)

halides	177
thiocyanate complexes	231
Zerovalent	188

Platinum

Ammine complexes	201	250	257
infrared spectra	204	252	
synthesis	201		
Anti-cancer compounds	267		
Aqueous chemistry	187		
Arsine complexes	217	245	254 256
Binary compounds	175		
Bond lengths	271		
alkyl and aryl complexes	219		
ammine complexes	202	251	271
arsine complexes	235	256	
bipyridyl complexes	271		
dioxygen complexes	194	271	
ethylenediamine complexes	225	253	
halide complexes	181	185	242 251
	253	259	271
halides	178		
halostannate complexes	235		
hydride complexes	242		
isocyanide complexes	271		
macrocyclic complexes	254		
phosphine complexes	188	193	212 219
	242	254	259 271
sulphoxide complexes	271		

<u>Index terms</u>	<u>Links</u>			
Bond lengths (<i>Continued</i>)				
thiolates	226			
Carbene complexes	222			
Carbonyl complexes	195			
Carboxylates	200			
Cisplatin	201	267		
Cyanide complexes	224			
Diketonates	199			
Dioxygen complexes	192	271		
Dithiocarbamates	227			
Divalent complexes	180	199		
Element	173			
extraction	174			
Five coordinate complexes	211	235		
Halide complexes				
+2 state	180			
+4 state	181			
+5 state	178	180		
Halides				
+2 state	175			
+3 state	175			
+4 state	175			
+5 state	178	180		
+6 state	175	180		
Hydride complexes	186	213	238	242
	255			
Internal metallation	217	266		
Isocyanide complexes	197	212		

<u>Index terms</u>	<u>Links</u>			
Isomerism in complexes	183	193	205	212
	226	233	246	253
	256	265		
Krogmann salts	224			
Kurnakov's test	202			
Magnus's salt	204			
Mixed-valence compounds	224	250		
Monovalent complexes	197			
NMR spectra	214	245	255	263
Olefin complexes	222			
Oxidation states				
Oxidative addition reactions	193	251	257	261
Oxides	186			
Paramagnetic compounds	209			
Phenanthroline complexes	253			
Phosphine complexes	188	196	209	233
	242	254	259	264
Platinum blues	209			
Platinum(0) complexes				
carbonyl compounds	195			
isocyanide complexes	197			
phosphorus donors				
effect of ligand size on coordination number	189			
reactions	192			
structures	188			
syntheses	188			
Platinum(I) complexes				
carbon-donors	198			
phosphorus donors	198			

<u>Index terms</u>	<u>Links</u>			
Platinum(II) complexes				
ammine complexes	201			
infrared spectra	204			
isomerism	210			
synthesis	201			
aqua ion	187			
arsine complexes	217	245		
bipyridyl complexes	207	233		
carbon-donor ligands				
reactions	220			
structures	219	243	271	
syntheses	219			
carboxylates	200			
diketonates	199			
dithiocarbamates	227			
ethylenediamine complexes	207			
five co-ordinate complexes	211	235		
halogen donors				
structures	181			
syntheses	180			
vibrational spectra	181			
hydride complexes				
infrared spectra	214	245		
NMR spectra	214	245		
structures	242			
syntheses	213			
isomerism	193	205	212	220
	226	229	233	245
nitrogen-donors	201	240		
oxygen donors	199			
phenanthroline complexes	207			

Index terms**Links**Platinum(II) complexes (*Continued*)

phosphorus donors	209	235
dimeric	212	216
NMR spectra	214	245
structures	242	271
syntheses	209	233
trans-influence	242	
porphyrin complexes	208	
pyridine complexes	206	
selenium donors	227	
sulphoxide complexes	228	
sulphur donors	225	
thiocyanate complexes	233	
trans-effect	236	
trans-influence	240	
Platinum(III) complexes		
carbon-donor ligands	249	
nitrogen donors	248	
oxygen donors	249	
sulphur donors	248	
Platinum(IV) complexes		
ammine complexes	250	
isomerism	251	
synthesis	250	256
arsine complexes	254	
bipyridyl complexes	253	
carbon-donor ligands	261	
reactions	262	
structures	262	
syntheses	262	

Index terms**Links**

Platinum(IV) complexes (<i>Continued</i>)				
ethylenediamine complexes	253			
halogen donors				
structures	182	185	271	
vibrational spectra	182			
hydride complexes	255			
isomerism	183	251	256	
nitrogen-donors	225	250		
phenanthroline complexes	253			
phosphorus donors	254	259	264	
isomerism	254			
structures	259			
syntheses	254			
trans-influence	259			
porphyrin complexes	254			
sulphur donors	256			
thiocyanate complexes	256			
Platinum(V) compounds	183			
Platinum(VI) compounds	178	180	183	184
Porphyrins	208			
Pyridine complexes	206			
Reductive elimination reactions	218	220	241	266
Stability of isomers	220	229	233	252
Sulphoxide complexes	228			
σ -bonded organo compounds	219	261		
Tetravalent complexes	181	250	261	
Thiocyanate complexes	233			
Thiolates	225			

Index terms**Links**

Trans-effect in complexes	202	223	230	236
	256			
use in synthesis	202	240	256	
Trans-influence in complexes	242	258		
Trivalent	178	248		
Vauquelin's salt	206			
Vibrational spectra				
ammine complexes	204	252	254	
halide complexes	181	183	184	254
hydride complexes	214	245	247	
phosphine complexes	254			
sulphoxide complexes	229			
thiocyanate complexes	233			
Wolfram's red salt	225			
Zeise's salt	222			
Zerovalent	188			

Rhodium

Alkene complexes	104			
Ammine complexes	116			
Aqueous chemistry	87			
Arsine complexes	109			
Binary compounds	79			
Bipyridyl complexes	122			
Bond lengths				
acetylacetonate	115			
alkene complexes	104			
alkyl and aryl complexes	118	170		
ammine complexes	118			
aqua ion	87			

Index terms**Links**Bond lengths (*Continued*)

carbonyl complexes	98			
carboxylates	109			
dimethyl glypxime complex	114			
dithiocarbamates	124			
EDTA complex	116			
halide complexes	82	88		
halides	79	80		
hydride complexes	128	130		
isocyanide complexes	105			
nitrile complexes	113			
nitrite complexes	122			
oxalate	115			
phosphine complexes	89	94	96	100
	106	126	130	
porphyrin complexes	123			
tetrahydrothiophen complex	124			
thiocyanate complexes	123			
Carbonyl complexes	98	114	126	
infrared spectra	99			
oxidative addition reactions	101			
structures	98			
syntheses	98	103		
Carboxylate complexes	107	115		
bonding	111			
Raman spectra	110			
structures	109			
Catalysis	92	95		
Dinitrogen complexes	130			
Dioxygen complexes	97	123		

<u>Index terms</u>	<u>Links</u>			
Divalent	106			
EDTA complexes	125			
Element	78			
ESR spectra	107	114		
Ethylenediamine complexes	121			
Extraction	79			
Halide complexes	81			
structures	82	88		
vibrational spectra	83			
Halides				
+3 state	79			
+4 state	80			
+5 state	80			
+6 state	80			
Hydride complexes	86	98		
NMR spectra	95	99	133	
Hydroxide	86			
Infrared spectra	99			
Isocyanide complexes	105			
Isomerism in complexes	84	87	119	121
	124			
Monovalent	88			
Nitrile complexes	113	121		
Nitrite complexes	121			
Nitrosyl complexes	163			
NMR spectra	84	90	93	99
	101	118	127	131
	133			
Olefin complexes	104			

<u>Index terms</u>	<u>Links</u>			
Oxidation states	78	88	106	114
Oxidative addition reactions	92	95	97	101
	105			
Oxides	85			
Paramagnetic compounds	80	83	106	114
	170			
Phenanthroline complexes	122			
Phosphine complexes	88	106	125	170
complexes of alkyl-di- <i>t</i> -butylphosphines	103	126	132	
complexes of diethylphenylphosphine	126			
complexes of dimethylphenylphosphine	88	125	128	
complexes of tricyclohexylphosphine	89	106		
complexes of triethylphosphine	126			
complexes of triisopropylphosphine	89	130		
complexes of trimethylphosphine	89	129	170	
complexes of triphenylphosphine	88	98	129	
complexes of tris(<i>o</i> -tolyl)phosphine	106			
complexes of tris(2,4,6-trimethoxyphenyl)phosphine	107			
complexes of tri- <i>t</i> -butylphosphine	128	131		
NMR spectra	90	93	95	99
	101	126	131	133
reactions	92	97		
structures	89	94	126	130
syntheses	89	96	125	129
Photochemistry	120			
Photography	80			
Pyridine complexes	121			
Rhodium(0) complexes	88			

<u>Index terms</u>	<u>Links</u>		
Rhodium(I) complexes	88		
alkene complexes	104		
carbonyl complexes	98		
infrared spectra	99		
reactions	101		
dioxygen complexes	91		
hydride complexes	93	98	
isocyanide complexes	105		
phosphorus donors	89		
NMR spectra	90	93	95
reactions	92	97	
structures	90	94	
syntheses	89	96	
sulphur donors	101		
Rhodium(II) complexes	106		
aqua ion	87	113	
aryl	170		
carbonyl complexes	107	114	
carboxylate complexes	107		
bonding	111		
Raman spectra	110		
structures	109		
dimethylglyoxime complex	114		
EPR spectra	106	114	
nitrile complexes	113		
phosphorus donors	106		
porphyrin	114		
sulphur donors	175		
σ -bonded organo compounds	170		

Index terms**Links**

Rhodium(III) complexes				
acetylacetonate	115			
ammine complexes	116			
infrared spectra	116			
photochemistry	120			
synthesis	116			
aqua ion	87			
bipyridyl complexes	122			
carbonyl complexes	126			
carboxylate complexes	115			
dialkylsulphide complexes	123			
dithiocarbamates	124			
EDTA complex	115			
ethylenediamine complexes	121			
halogen donors	81			
hydride complexes	86	95	125	129
	133			
NMR spectra	95	133		
nitrile complexes	121			
nitrite complexes	121			
oxalate	115			
oxygen donors	115			
phenanthroline complexes	121			
phosphorus donors	125			
NMR spectra	127	133		
reactions	126	129		
structures	125	127		
syntheses	125	129	132	
virtual coupling	127			
photochemistry	120			
pyridine complexes	121			

Index terms**Links**

Rhodium(III) complexes (<i>Continued</i>)				
sulphur donors	123			
σ -bonded organo compounds	118	170		
Rhodium(IV) complexes				
halogen donors	82			
Rhodium(V) complexes				
halogen donors	82			
Sulphur dioxide complexes	100			
σ -bonded organo compounds	94	118	170	
Tetravalent complexes	81			
Thiocarbonyl complexes	92	94		
Thiocyanate complexes	123			
Trivalent complexes	114			
Vibrational spectra				
ammine complexes	116			
carbonyl complexes	99			
carboxylate complexes	110			
halide complexes	83			
hydride complexes	118			
nitrosyl complexes	165			
Virtual coupling	127			
Wilkinson's compound	89			
Zerovalent	88			
Ruthenium				
Alkyls and aryls	49	75		
Ammine complexes	21			
Anti-cancer compounds	39	41	49	52
Aqueous chemistry	21			

Index terms**Links**

Arsine complexes				
Binary compounds	20			
Bipyridyl complexes	26			
Bond lengths				
alkyls and aryls	49	75		
ammine complexes	21			
aqua ions	21			
bipyridyl complexes	26			
carboxylates	36			
dinitrogen complexes	23	29		
EDTA complexes	52			
ethylenediamine complexes	28			
halide complexes	9	10	17	
halides	2			
hydride complexes	21	30	34	36
nitride complexes	73			
nitrosyl complexes	46			
oxides	18			
oxyanions	20			
oxyhalide complexes	17			
oxyhalides	6			
phosphine complexes	31	34	36	
porphyrin complexes	48	50		
pyridine complexes	52			
sulphoxide complexes	42			
Carbonyl complexes	22			
Carboxylates				
dimeric	36			
monomeric	39			
trimeric	37			

<u>Index terms</u>	<u>Links</u>			
Catalysts	30	31	39	51
Dinitrogen complexes	22			
Dithiocarbamates	45	53		
Divalent	21	39		
EDTA complexes	49			
Element	1			
EPR spectra	20	24	32	36
Ethylenediamine complexes	27			
Extraction	1			
Halide complexes	9			
dimeric	15			
Halides				
+3 state	2			
+4 state	3			
+5 state	3			
+6 state	4			
Heptavalent	20			
Hydride complexes	21	30	33	
classical	21	30		
NMR spectra	35			
non-classical	35			
+2 state	30	33		
+4 state	35			
+6 state	35			
structures	21	31	34	36
Imide complexes	73			
Isolation	1			
Isomerism in complexes	31	34		

<u>Index terms</u>	<u>Links</u>			
Magnetic properties				
halide complexes	10	16		
halides	3			
Medicinal uses	29	39	41	
Mixed-valence complexes	24	30	32	36
Nitrido complexes	73			
infrared spectra	73			
Nitrile complexes	52			
Nitrosyl complexes	43			
Octavalent	18			
Oxidation states	1			
Oxides	18			
Oxyanions	20			
Oxyhalides	6			
Pentavalent	3	10		
Phenanthroline complexes	26			
Phosphine complexes	29			
dimeric	32			
ESR spectra	32			
infrared spectra	31			
NMR spectra	31	35		
structures	30			
Photochemistry	26			
Porphyrin complexes	48			
Pyridine complexes	31	52		
'Ruthenium blues'	16			
Ruthenium brown	25			
Ruthenium(0) complexes	22			

Index terms**Links**

Ruthenium(II) complexes			
ammine complexes	22		
aqua ion	21		
bipyridyl complexes	26		
carboxylates	37		
dinitrogen complexes	21		
EDTA complexes	50		
ethylenediamine complexes	27		
hydride complexes	30		
nitrile complexes	53		
nitrosyl complexes	43		
phenanthroline complexes	26		
phosphorus donors	29		
porphyrin complexes	48		
pyridine complexes	31	42	52
sulphoxide complexes	39		
Ruthenium(III) complexes			
ammine complexes	23		
aqua ion	21		
bipyridyl complexes	26		
carbon donors	75		
carboxylates	37		
EDTA complexes	50		
ethylenediamine complexes	27		
halide complexes	14		
nitrile complexes	52		
oxygen donors	52		
phenanthroline complexes	26		
phosphorus donors	29	32	
porphyrin complexes	49		

Index terms**Links**

Ruthenium(III) complexes (<i>Continued</i>)				
sulphoxide complexes	39			
sulphur donors	41			
terpyridyl complexes	29			
Ruthenium(IV) complexes				
carbon donors	76			
halogen donors	10			
hydride complexes	21			
nitrogen donors	49			
phosphorus donors	35			
porphyrins	49			
sulphur donors	53			
thiolates	53			
Ruthenium(V) complexes	10			
Ruthenium(VI) complexes				
nitride complexes	73			
phosphine complexes	35			
porphyrin complexes	49			
Ruthenium red	25			
Sulphide complexes	43			
Sulphoxide complexes	39			
σ -bonded organo compounds	75			
Terpyridyl complexes	29			
Tetravalent	4	10	17	21
	35	48	53	
Thiolates	53			
Thionitrosyls	48			
Trivalent	3	14	21	32
	36	38	41	48
	75			

Index terms**Links**

Uses	2	
Vibrational spectra		
aqua complexes	21	
dinitrogen complexes	23	28
halide complexes	9	
halides	9	
hydride complexes	31	
nitride complexes	73	
nitrosyl complexes	43	46
oxyhalide complexes	6	
sulphoxide complexes	40	41
Zerovalent	22	

Silver

Alkene complexes	308	
Ammine complexes	285	
Aqueous chemistry	283	
Arsine complexes	286	
Binary compounds	282	
Bond lengths		
ammine complexes	285	
aqua ion	284	
carbonyl complexes	308	
halide complexes	287	290
halides	278	
macrocyclic complexes	290	
phosphine complexes	287	
to silver	274	
Carbonyl complexes	308	
Carboxylates	285	

<u>Index terms</u>		<u>Links</u>
Chemical vapour deposition (CVD)	287	
Cluster compounds	288	
Colour	323	
Co-ordination numbers	273	
Cyanide complexes	288	
Dithiocarbamates	288	
Element	274	
Extraction	275	
Halide complexes	287	
Halides		
+1 state	277	
+2 state	278	
+3 state	279	
Ionisation energies	273	
Isolation	275	
Macrocycle complexes	290	
Medicinal chemistry	285	
Mixed-valence systems	300	327
Nitrate	284	
Organo compounds	307	
Oxidation states	273	290
Oxides	282	
Phosphine complexes	286	
Photography	278	285
Redox potentials	283	
Silver(I) complexes		
arsenic-donors	286	
carbon-donors	288	
halogen-donors	287	290

Index terms**Links**

Silver(I) complexes (<i>Continued</i>)		
nitrogen-donors	285	
oxygen donors	285	
phosphorus-donors	286	
sulphur-donors	288	
two coordinate		
Silver(II) complexes		
halogen donors	290	
macrocyclic complexes	290	
nitrogen-donors	290	
Silver(III) complexes		
halogen-donors	291	
macrocyclic complexes	291	
nitrogen-donors	291	
oxygen-donors	291	
Thiolates	288	
Thiosulphate complexes	285	
Trivalent		
Two coordinate	287	308