

Catalysts (Contd.)	Page	Catalysts (Contd.)	Page
Complexes, isomerisation of deuterio olefins on, <i>a</i>	37	Platinum , black, activity of, in liquid phase	
complexes, Ph ₃ As, hydrogenation of soybean oil methyl ester on, <i>a</i>	118	hydrogenation, <i>a</i>	156
complexes, Ph ₃ P, hydrogenation of soybean oil methyl ester on, <i>a</i>	118	complexes, oxidation and reduction by	93
disproportionation of cyclohexene C ₂ H ₄ , oxidation of, on, <i>a</i>	118, 153	complexes, oxidation of C ₂ H ₄ on, <i>a</i>	158
films, conversion of methyl propyl ketone on, <i>a</i>	76	complexes, Ph ₃ As, Ph ₃ P, Ph ₃ Sb, <i>a</i>	118
films hydrogenolysis and isomerisation on, <i>a</i>	117	dehydrogenation of cyclohexane on, <i>a</i>	35
films, isomerisation on, <i>a</i>	36	electrodeposited, activity of, <i>a</i>	115
hydrogenation of butyronitrile on, <i>a</i>	157	C ₂ H ₄ , oxidation of, on, <i>a</i>	153
hydrogenation of rosin on, <i>a</i>	38	film, conversion of methyl propyl ketone on, <i>a</i>	76
hydrolysis of allyl chlorides, <i>a</i>	118	film, H ₂ -O ₂ reaction on, <i>a</i>	75
isomerisation on, <i>a</i>	37	gauze, manufacture of HNO ₃ and HCN	60
membranes, decomposition on, <i>a</i>	36	hydrogenation of benzyl alcohol on, <i>a</i>	76
mixed oxides, activity of, <i>a</i>	156	hydrogenation of butyronitrile on, <i>a</i>	157
potential of, <i>a</i>	74	hydrolysis of allyl chlorides, <i>a</i>	118
synthesis of caprolactam, <i>a</i>	156	hydrogenolysis and isomerisation on, <i>a</i>	117
Palladium Acetate , reaction with vinyl acetate, <i>a</i>	118	isomerisation of hexanes on, <i>a</i>	35
PdCl₂ , carbonylation of carboxylate compounds, <i>a</i>	38	isomerisation on, <i>a</i>	36, 37
cleavage of Si-Si bond, <i>a</i>	118	losses in HNO ₃ manufacture, <i>a</i>	154
dimerisation of alkenes, <i>a</i>	119	mixed oxides, activity of, <i>a</i>	156
isomerisation of butenes, <i>a</i>	77	oxidation of carbonaceous fuels on, <i>a</i>	158
oxidation of <i>n</i> -butylamine, <i>a</i>	77	potential of, <i>a</i>	74
production of vinyl acetate, <i>a</i>	118	reforming, automation of, <i>a</i>	154
reactions with nucleophiles, <i>a</i>	37, 38	reforming, conversion of	
synthesis of π -allylic Pd complexes, <i>a</i>	119	bicyclonaphthenes on, <i>a</i>	116
PdCl₂-CuCl₂ , production of vinyl acetate, <i>a</i>	118	reforming, damage in use, <i>a</i>	35
Pd-Cu , hydrogenation of C ₆ H ₆ on, <i>a</i>	76	single crystal growth, of CdCr ₂ Se ₄ , <i>a</i>	155
Palladium Cyanide , synthesis of olefinic cyanides with, <i>a</i>	37	S-modified	57
Pd-Au , activity of, <i>a</i>	154	supported, conversion of methyl propyl ketone on, <i>a</i>	76
C ₂ H ₄ , hydrogenation of, on, <i>a</i>	76	suspension of, CO adsorption on, <i>a</i>	74
C ₂ H ₄ , oxidation of, <i>a</i>	153	PtCl₂ , preparation of butadiene on, <i>a</i>	157
CH ₄ , oxidation of, on, <i>a</i>	36	PtCl₂(PPh₃)₂ , isomerisation of 1,5-cyclo-octadiene, <i>a</i>	157
Pd-Au-H , poisoning of, with CO, <i>a</i>	154	Pt-Ph black , electrodeposited, activity of, <i>a</i>	115
Palladium Hydride , hydrogenation on, <i>a</i>	36	Pt-Ni , C ₂ H ₄ , oxidation of, <i>a</i>	153
Pd(OH)₂/C , non-pyrophoric, preparation of, <i>a</i>	116	Pt/Al₂O₃ , activation of, <i>a</i>	75
Pd/Al₂O₃ , conversion of dicyclopentyl methane on, <i>a</i>	35	adsorption kinetics of, <i>a</i>	156
conversions of spiro-(4,5)-decane and spiro-(4,4)-nonane on, <i>a</i>	75	chemisorption of H ₂ and properties, <i>a</i>	35
deuteration of C ₂ H ₄ on, <i>a</i>	75	conversion of dicyclopentylmethane on, <i>a</i>	35
hydrogenation of acetophenone	86	conversions of spiro-(4,5)-decane and -(4,4)-nonane on, <i>a</i>	75
hydrogenation of acetylenic compounds	86	dehydrogenation of dicyclohexyl on, <i>a</i>	117
hydrogenation of aromatic nitro compounds	86	deuteration of C ₂ H ₄ on, <i>a</i>	75
hydrogenation of C ₆ H ₆ on, <i>a</i>	76	electron microscopy of	141
hydrogenation of olefinic compounds	86	exoelectronic emission from, <i>a</i>	75
production of vinyl acetate, <i>a</i>	118	H ₂ -O ₂ reaction on, <i>a</i>	34
reduction of tail gas on, <i>a</i>	116	intra-pellet heat and mass transfer, <i>a</i>	35
Pd/BaSO₄ , hydrogenation of phosphatides on, <i>a</i>	38	isomerisation of hexanes on, <i>a</i>	35
Pd/CaCO₃ , hydrogenation of phosphatides on, <i>a</i>	38	specific activity of, <i>a</i>	35
Pd/C , adsorption of unsaturated compounds on, <i>a</i>	156	surface area of, <i>a</i>	35
carbonylation of carboxylate compounds on, <i>a</i>	38	Pt/C , adsorption kinetics of, <i>a</i>	156
conversion of penicillins on, <i>a</i>	37	adsorption of unsaturated compounds on, <i>a</i>	156
hydrogenation of cyclohexene on, <i>a</i>	76	conversion of dihydropyran and propyldioxene on, <i>a</i>	75
hydrogenation of olefinic compounds	86	effect of KOH on activity of, <i>a</i>	156
hydrogenation of phosphatides on, <i>a</i>	38	electron microscopy of	141
hydrogenation of unsaturated compounds on, <i>a</i>	156	hydrogenation of cyclohexene on, <i>a</i>	76
production of MAZDA with, <i>a</i>	76	hydrogenation of unsaturated compounds on, <i>a</i>	156
selectivity and active sites of, <i>a</i>	76	preparation <i>in situ</i> of, <i>a</i>	74
Pd/FeCl₃ , synthesis of isocyanates, <i>a</i>	118	recrystallisation of, <i>a</i>	115
Pd/polyacrylonitrile , hydrogenation of allyl alcohols on, <i>a</i>	76	Pt/Cr₂O₃ , activity and electronic emission, <i>a</i>	36
dimethylethynylcarbinol on, <i>a</i>	156	Pt/MgO , activity and electronic emission, <i>a</i>	36
Pd/SiO₂ , hydrogenation of phosphatides on, <i>a</i>	38	exoelectronic emission from, <i>a</i>	75
production of vinyl acetate, <i>a</i>	118	Pt/polyacrylonitrile , hydrogenation of allyl alcohols on, <i>a</i>	76
Pd/zeolite , resistance to poisoning of, <i>a</i>	76	Pt/polyvinyl alcohol , properties of, <i>a</i>	36
Pd-Raney Ni , hydrogenation of glucose on, <i>a</i>	156	Pt/pumice , isomerisation of hexanes on, <i>a</i>	35
Pd-Rh , C ₂ H ₄ , oxidation of, on, <i>a</i>	153	Pt/SiO₂ , electron microscopy of	141
		hydrogenation of cyclohexene on, <i>a</i>	117
		specific activities of, <i>a</i>	117
		Pt/SiO₂-Al₂O₃ , chemisorption and properties of, <i>a</i>	35
		isomerisation of <i>n</i> -butane on, <i>a</i>	117
		Pt/ZrO₂ , exoelectronic emission from, <i>a</i>	75
		PtO₂ , reduced, hydrogenation of cyclohexene on, <i>a</i>	76
		Pt-Raney Ni , hydrogenation and oxidation on, <i>a</i>	36
		hydrogenation of glucose on, <i>a</i>	156
		Pt-Rh , activity of	155
		atomic susceptibility of, <i>a</i>	155
		C ₂ H ₄ , oxidation of, <i>a</i>	153
		gauze, for HNO ₃ manufacture	2, 100

Catalysts (Contd.)	Page	Electrodeposition of (Contd.)	Page
hydrogenation of C_6H_5COOH on, <i>a</i>	155	in chloride electrolytes, <i>a</i>	34
Pt-Rh/C, surface area of, <i>a</i>	155	Platinum, electrochemical activity of, <i>a</i>	115
Pt-Sn complexes, hydrogenation of methyl linoleate on, <i>a</i>	157	foils, <i>a</i>	74
Rhodium, alkyl complex, reaction with C_2H_4 , <i>a</i>	119	Platinum-Iridium, <i>a</i>	115
black, hydrogenation of phenyl-acetylene on, <i>a</i>	38	Platinum-Lead black, electrochemical activity of, <i>a</i>	115
complexes, isomerisation of deuterio olefins on, <i>a</i>	37	Platinum Metals, thickness of deposits	13
complexes, reactions of, <i>a</i>	158	Rhodium, bright and smooth, <i>a</i>	154
complexes, synthesis of, <i>a</i>	158	foils, <i>a</i>	74
C_2H_4 , oxidation of, <i>a</i>	153	Ruthenium, film, catalytic activity of, <i>a</i>	157
films, hydrogenolysis and isomerisation on, <i>a</i>	117	Electrodes, Iridium, coated, thermionic	
hydrogenation of benzyl alcohol on, <i>a</i>	76	emission from, <i>a</i>	79
hydrogenation of butyronitrile on, <i>a</i>	157	evolution and dissolution of O_2 at, <i>a</i>	34
hydrolysis of allyl chlorides, <i>a</i>	118	wire, formation and reduction of O_2 on, <i>a</i>	115
isomerisation on, <i>a</i>	37	Osmium, coated, thermionic emission from, <i>a</i>	79
RhCOCl (PPh)₃ , decarbonylation of acyl halides, <i>a</i>	39	Palladium-Gold, pretreatment of, <i>a</i>	154
carbonylation of alkyl halides, <i>a</i>	39	Platinum, adsorption and electro-oxidation on, <i>a</i>	115
RhCl₃ , dimerisation of alkenes, <i>a</i>	119	black, area changes of, <i>a</i>	33
homogeneous and heterogeneous catalysis by, <i>a</i>	38	cathodic protection by, <i>a</i>	39
hydride transfer on, <i>a</i>	37	coated, thermionic emission from, <i>a</i>	79
reaction of dienes on, <i>a</i>	157	electrolytic polishing of, <i>a</i>	153
RhCl(PPh)₃ , addition of D_2 , <i>a</i>	77	gauze, hydrogenation on, <i>a</i>	39
decarbonylation of acyl halides, <i>a</i>	38	gauze, in O_2 meter, <i>a</i>	116
decarbonylation of α,β -unsaturated aldehydes on, <i>a</i>	157	ionisation of H_2 on, <i>a</i>	33
hydrogenation of unsaturated aldehydes on, <i>a</i>	119	in fuel cells, <i>a</i>	78
Rh-Cu , C_2H_4 , oxidation of, <i>a</i>	153	in measurement of soil aggressiveness, <i>a</i>	154
Rh(OH)₃ + Pd(OH)₂/C , non-pyrophoric, preparation of, <i>a</i>	116	interaction of CO_2 with H_2 on, <i>a</i>	73
Rh/Al₂O₃ , deuteration of C_2H_4 on, <i>a</i>	75	moveable, partially submerged, <i>a</i>	158
hydrogenation of C_2H_2 on, <i>a</i>	38	platinised, catalytic activity of, <i>a</i>	153
Rh/BaSO₄ , hydrogenation of phenyl-acetylene on, <i>a</i>	38	Raney, in fuel cells, <i>a</i>	78
Rh/C , hydrogenation of benzene polycarboxylic acids, <i>a</i>	77	Raney, with Se and S, oxidation of $HCOOH$ on, <i>a</i>	115
hydrogenation of phenol	86	Platinum-Gold, pretreatment of, <i>a</i>	154
Rh/FeCl₃ , synthesis of isocyanates, <i>a</i>	118	Platinum Metals, adsorption and electro-oxidation on, <i>a</i>	115
Rh/SiO₂ , hydrogenolyses of C_2H_6 on, <i>a</i>	157	Pt/asbestos, in fuel cells, <i>a</i>	119
Rh₂O₃ , in hydroformylation, <i>a</i>	119	Pt/Nb, anode, in electrolytic dissolver, <i>a</i>	119
Rh-Pd , C_2H_4 , oxidation of, on, <i>a</i>	153	Pt-O ₂ , cathodes, effect of HNO_3 on, <i>a</i>	33
Rh-Pt, activity of	155	Pt/Ti, anodes, in sea water	149
atomic susceptibility of, <i>a</i>	155	corrosion of, <i>a</i>	115
deactivation of, <i>a</i>	155	critical evaluation, <i>a</i>	158
C_2H_4 , oxidation of, on, <i>a</i>	153	durability of, <i>a</i>	115
gauze, for HNO_3 production	2, 100	in sea return dc system	103
hydrogenation of benzoic acid, <i>a</i>	155	Pt-Teflon, separation of O_2 by, <i>a</i>	154
Rh-Pt/C , surface area and activity of, <i>a</i>	155	Pt-Teflon-Ta, structural studies on, <i>a</i>	153
Ruthenium , complexes, oxidation of C_2H_4 on, <i>a</i>	158	Pt-plated Ni, mesh, in battery, <i>a</i>	158
C_2H_4 , oxidation of, on, <i>a</i>	153	Platinum-Rhodium, evolution and dissolution of H_2 at, <i>a</i>	34
hydrogenation of butyronitrile, <i>a</i>	157	Reversible O_2 , Pt surface of, <i>a</i>	33
thin film, electrodeposition of, <i>a</i>	157	Rhodium, evolution and dissolution of O_2 at, <i>a</i>	34
RuCl₃ , decarbonylation of $HCOOH$, <i>a</i>	78	Rh/Ti, corrosion of, <i>a</i>	115
hydrogenation of olefinic compounds, <i>a</i>	78	Rhodium-Platinum, evolution and dissolution of H_2 at, <i>a</i>	34
RuCl₃ , complexes, oxidation of C_2H_4 on, <i>a</i>	158	Ruthenium-Platinum, adsorption and electrooxidation on, <i>a</i>	115
hydride transfer on, <i>a</i>	157	Silver-Palladium, cathode, hydrogenation on, <i>a</i>	39
Ru(OH)₂ + Pd(OH)₂/C , non-pyrophoric, preparation of, <i>a</i>	116	Teflon-bonded Pt, <i>a</i>	78
Ru/BaSO₄ , reduction of <i>p</i> -chloronitrobenzene, <i>a</i>	77	Tungsten, Os-coated, in thermionic valves	15
Ru/C , hydrogenation of acetophenone on, <i>a</i>	77	Gas Indicator , underground use of, <i>a</i>	34
Ru/SiO₂ , hydrogenolysis of C_2H_6 on, <i>a</i>	157	Glass, Pt melting apparatus, O_2 blisters on, <i>a</i>	79
Ru phthalocyanine , activity of, <i>a</i>	158	preparation of, in Pt crucible, <i>a</i>	158
V_2O_5 , WO_3 /Al ₂ O ₃ , Pt-promoted, oxidation on, <i>a</i>	156	Hydrogen , absorption in Pd, <i>a</i>	71
Cathodic Protection , of drying cylinders, in paper-making, <i>a</i>	39	absorption in Pd alloys, <i>a</i>	31
platinised Ti anodes, in sea water	149	absorption in Pd-Au, <i>a</i>	151
Coatings , Ir, in ion engines	147	detection of, in air, <i>a</i>	116
Computers , memory stores	92	in Pd, internal friction of, <i>a</i>	72
Crystal Growth , sapphire, <i>a</i>	74	Hydrogen Cyanide , production of, over Pt gauzes	67
De l'Isle , identity of	106	Hydrogen Diffusion , in Pd, rate of, <i>a</i>	31, 78
Deuterium , absorption in Pd-Au, <i>a</i>	151	in Pt, <i>a</i>	34
Electrical Contacts , Pd, deposits on	56	Hydrogenation , new laboratory technique, <i>a</i>	74
Electrodeposition of, Iridium	115	Integrated Circuits , thick film	126
Palladium, foils, <i>a</i>	74	Ion Engines , Ir coatings in	147
		Ionisation Detector , for H_2 in air, <i>a</i>	116
		Iridium , afterheater lining of, <i>a</i>	74
		anions, synthesis of metal-metal bonds via, <i>a</i>	73
		coatings in ion engines	147
		N_2 adsorption on, <i>a</i>	32
		properties of, influence of purity on, <i>a</i>	70
		vapour, electron and ion emission from, <i>a</i>	72

Iridium Alloys, Iridium-Aluminium,	<i>Page</i>	Palladium Alloys (Contd.)	<i>Page</i>
crystal structure of, <i>a</i>	152	Palladium-Gadolinium, expansion	
Iridium-Carbon, eutectic points of, <i>a</i>	112	characteristics of, <i>a</i>	72
Iridium-Osmium, lattice parameters of, <i>a</i>	72	Palladium-Gold, deformation of, <i>a</i>	112, 151
Iridium-Platinum, elastic properties of, <i>a</i>	33	density of states and resistivity of, <i>a</i>	151
electrodeposition of, <i>a</i>	115	electron diffraction study of, <i>a</i>	112
low-temperature specific heat of, <i>a</i>	70	H ₂ and D ₂ solubility in, <i>a</i>	151
Iridium-Rare Earths, Laves phases of, <i>a</i>	72	ordering in, <i>a</i>	32, 71
Iridium-Rhenium, lattice parameters of, <i>a</i>	72	oxidation of C ₂ H ₄ on, <i>a</i>	118
Iridium-Rhodium, high-temperature		permeability for H ₂ , <i>a</i>	31
behaviour of	53	resistivity and Hall effect of, <i>a</i>	151
Iridium-Titanium, intermediate phases in, <i>a</i>	32	Palladium-Gold-Deuterium, neutron	
Iridium-Vanadium, structure and constitution		diffraction study of, <i>a</i>	112
of, <i>a</i>	152	Palladium-Gold-Hydrogen, neutron	
Iridium Complexes and Compounds, 73, 114, 152, 153, 154		diffraction study of, <i>a</i>	112
		Palladium-Hydrogen, absorption of H ₂ , <i>a</i>	71
		internal friction in, <i>a</i>	72
		mixing behaviour of, <i>a</i>	113
		system	99
Johnson Matthey, 150th anniversary of	18	Palladium-Iron, electronic structure and	
new refinery in S. Africa	131	properties of	109
		magnetic properties of, <i>a</i>	32, 113
		thermoelectric power of, <i>a</i>	113
Magnetic Device, for study of phase changes, <i>a</i>	116	Palladium-Lead, H ₂ absorption in, <i>a</i>	31
MAZDA, production from soybean oil, <i>a</i>	76	Palladium-Manganese, electronic structure	
		and properties of	109
Osmium, anodic corrosion of, <i>a</i>	74	magnetic properties of, <i>a</i>	32
coating of valve emitters	15	thermoelectric power of, <i>a</i>	113
magnetic susceptibility of, <i>a</i>	152	Palladium-Nickel, electronic structure and	
on Pt, electrochemistry of, <i>a</i>	154	properties of	109
Osmium Alloys, Osmium-Chromium,		H ₂ absorption in, <i>a</i>	31
nonstoichiometry of phases, <i>a</i>	31	permeability for H ₂ , <i>a</i>	31
Osmium-Iridium, lattice parameters of, <i>a</i>	72	Palladium-Nickel-Chromium, brazing of	
Osmium-Platinum, lattice parameters of, <i>a</i>	72	graphite to Mo by	140
Osmium-Rare Earths, Laves phases of, <i>a</i>	72	Palladium-Phosphorus, structure of, <i>a</i>	32, 72
Osmium-Titanium, intermediate phases in, <i>a</i>	32	Palladium-Platinum, heat resistance of, <i>a</i>	150
Osmium Complexes and Compounds	33, 104	Palladium-Rhodium, H ₂ absorption in, <i>a</i>	31
Osmium Heptafluoride, production and properties		magnetic behaviour of, <i>a</i>	71
of, <i>a</i>	33	speed of sound in, <i>a</i>	31
Osmium Tetrachloride, brown and black		Palladium-Samarium, expansion	
forms of, <i>a</i>	153	characteristics of, <i>a</i>	72
Osmium Tetroxide, vapour, negative		Palladium-Silver, as temperature indicator, <i>a</i>	39
staining with, <i>a</i>	34	electrical resistance of, <i>a</i>	151
Oxidation, by transition metal complexes	93	formation of, <i>a</i>	113
Oxygen Meter, <i>a</i>	116	magnetic properties of, <i>a</i>	71
		mixing behaviour of, <i>a</i>	113
		permeability for H ₂ , <i>a</i>	31
		properties of, <i>a</i>	113
		speed of sound in, <i>a</i>	31
Pallabrazed, use of, review, <i>a</i>	74	Palladium-Silver-Chromium, mechanical	
Palladium, additions, sintering of W and		properties of, <i>a</i>	151
W-ThO ₂ , <i>a</i>	158	Palladium-Silver-Cobalt, mechanical	
cementation of, on Cu, <i>a</i>	34	properties of, <i>a</i>	151
characteristic temperature of, <i>a</i>	151	Palladium-Silver-Hydrogen, electrical	
chromaticity coefficient and luminance of, <i>a</i>	70	resistance of, <i>a</i>	151
contacts, deposits on	56	pressure-composition isotherm for, <i>a</i>	151
diffusion of H ₂ in, <i>a</i>	31, 78	Palladium-Silver-Iron, mechanical	
electronic structure and properties of	109	properties of, <i>a</i>	151
Fermi surface of, <i>a</i>	112	Palladium-Tin, H ₂ absorption in, <i>a</i>	31
film, adsorption of CO on, <i>a</i>	112	Palladium-Titanium, corrosion resistance of	50
film, electrical resistance of, <i>a</i>	112	Palladium-Tungsten, ordering in, <i>a</i>	32
flake formation, reduction of, in steel, <i>a</i>	113	Palladium-Vanadium, thermoelectrical	
foils, deposition and thickness of, <i>a</i>	74	power of, <i>a</i>	113
grain boundaries, deposition of, <i>a</i>	112	Palladium-Ytterbium, expansion character-	
heat resistance of, <i>a</i>	150	istics of, <i>a</i>	72
heat of sublimation of, <i>a</i>	151	Palladium-Zirconium, binary compounds	
mono- and diatomic equilibrium in, <i>a</i>	71	of, <i>a</i>	114
optical properties of, <i>a</i>	112	Palladium Chloride, catalysis of nucleophilic	
properties of, influence of purity on, <i>a</i>	70	reaction, <i>a</i>	37
vapourisation of, <i>a</i>	151	heating of, <i>a</i>	114
wire, detection of H ₂ , <i>a</i>	116	preparation of, <i>a</i>	114
yield point of	94	structure and properties of Pd ₂ Cl ₂	114
Palladium Alloys, Palladium-Antimony,		Palladium Complexes and Compounds	72, 73, 114
magnetic susceptibility of, <i>a</i>	32	Palladium Oxide, electrical conductivity, forma-	
thermodynamic properties of, <i>a</i>	72	tion, Hall effect of,	152
Palladium-Cadmium, magnetic		Penicillins, conversion of, <i>a</i>	37
susceptibility of, <i>a</i>	32	Phase Changes, detection of, <i>a</i>	116
thermodynamic properties of, <i>a</i>	72	Petroleum Reforming, automation of, <i>a</i>	154
Palladium-Cerium, expansion		Platforming, mathematical description of, <i>a</i>	155
characteristics of, <i>a</i>	72	Platinum, anodic corrosion of, <i>a</i>	74
Palladium-Chromium, thermoelectric power		apparatus for DTA	111
of, <i>a</i>	113	apparatus in glass industry, O ₂ reboil theory, <i>a</i>	79
Palladium-Cobalt, electronic structure and		chromaticity coefficient and luminance of, <i>a</i>	70
properties of	109		
ordering in, <i>a</i>	32		
thermoelectric power of, <i>a</i>	113		
Palladium-Copper, deformation of, <i>a</i>	112, 151		
formation of, <i>a</i>	113		
resistivity and Hall effect of, <i>a</i>	151		
structure and mechanical properties of, <i>a</i>	32		

Platinum (Contd.)	Page	Rhodium-Alloys (Contd.)	Page
coils, detection of phase changes with, <i>a</i>	116	Rhodium-Iron , magnetic properties, <i>a</i>	32, 113, 152
crucible, preparation of glass, <i>a</i>	158	phase transformations of, <i>a</i>	113
depleted zones in, <i>a</i>	31	structure of, <i>a</i>	152
dispersed, absorption of gases on, <i>a</i>	115	triple point, <i>a</i>	113
economic history of	18	Rhodium-Mercury , crystal structure of, <i>a</i>	114
electrical resistance of, <i>a</i>	70, 120	Rhodium-Nickel , magnetic susceptibility and	
expansion of production	9, 131	specific heat of, <i>a</i>	152
field ion microscopy, <i>a</i>	31	Rhodium-Palladium , magnetic behaviour of, <i>a</i>	71
filament, in gas indicator, <i>a</i>	34	Rhodium-Platinum , heat resistance of, <i>a</i>	150
foils, deposition and thickness of, <i>a</i>	74	thermal conductivity of, <i>a</i>	150
for brazing, <i>a</i>	74	wire, hemispherical emittance of, <i>a</i>	39
heat resistance of, <i>a</i>	150	Rhodium-Selenium , phases of, <i>a</i>	114
oxidation kinetics of, <i>a</i>	150	Rhodium-Titanium , intermediate phases in, <i>a</i>	32
oxide-dispersion strengthened, <i>a</i>	112	Rhodium-Zirconium , binary compounds of, <i>a</i>	114
permeability for H ₂ , <i>a</i>	34	Rhodium Chloride , hydride transfer on, <i>a</i>	37
properties of, influence of purity on, <i>a</i>	70	thermal conversion of, <i>a</i>	33
resistivity of, below 20°K, <i>a</i>	150	Rhodium Complexes , H-metal bond in	58
sheet, structure of, <i>a</i>	70	π -crotylrhodium(III)-C ₂ H ₄ , <i>a</i>	119
structure, electron diffraction study of, <i>a</i>	150	reactions of, <i>a</i>	158
surface free energy, variation of, <i>a</i>	70	synthesis of, <i>a</i>	158
surface self-diffusion, <i>a</i>	150	(PPh ₃) ₃ Rh(I), <i>a</i>	153
thermal conductivity of, <i>a</i>	70, 150	with C ₂ H ₂ , structure of, <i>a</i>	114
wire, in computer memory stores	92	with organometallic compounds, <i>a</i>	153
Platinum Alloys, Platinum-Carbon , eutectic		Rhodium Porphyryns , synthesis and chemistry of, <i>a</i>	114
points of, <i>a</i>	112	Rustenburg Platinum Mines , production	
Platinum-Chromium , nonstoichiometry of	31	expanded at	9, 131
phases of, <i>a</i>	31	Ruthenium , anodic corrosion of, <i>a</i>	74
Platinum-Cobalt , magnetic properties of	71, 129	elastic properties of, <i>a</i>	33
Platinum-Copper , formation of, <i>a</i>	113	oxide glaze resistors	126
magnetic susceptibility of, <i>a</i>	32	thermal conductivity and electrical	
oxidation in air, <i>a</i>	150	resistivity, <i>a</i>	70
thermodynamic properties of, <i>a</i>	72	Ruthenium Alloys, Ruthenium-Rare Earths ,	
Platinum-Gold , deformation and fracture		Laves phases of, <i>a</i>	72
of, <i>a</i>	150	Ruthenium-Zirconium , binary compounds	
low-temperature specific heat of, <i>a</i>	70	of, <i>a</i>	114
Platinum-Iridium , elastic properties of, <i>a</i>	33	Ruthenium Boron Trifluoride , structure of, <i>a</i>	33
low-temperature specific heat of, <i>a</i>	70	Ruthenium Compounds , chlororuthenates, <i>a</i>	78
Platinum-Iron , activity of O ₂ in, <i>a</i>	31	dodecacarbonylruthenium, reactivity of, <i>a</i>	73
Platinum-Manganese , magnetic properties of, <i>a</i>	71	reaction with H ₂ SO ₄ , <i>a</i>	73
Platinum-Molybdenum , intermediate phases	132	RuBiSe, synthesis of, <i>a</i>	33
Platinum-Niobium-Uranium , phase change		Ruthenium Dioxide , glaze resistors	126
in, <i>a</i>	112	Ruthenium Sulphate , green, <i>a</i>	73
Platinum-Osmium , lattice parameters of, <i>a</i>	72	Ruthenium Trichloride , structure of, <i>a</i>	33
Platinum-Palladium , heat resistance of, <i>a</i>	150	Ruthenium Triiodide , structure of, <i>a</i>	33
Platinum-Rare Earth , preparation and		Ruthenocene Polymers , preparation of, <i>a</i>	33
structure of, <i>a</i>	71	Screen Printing , preparations, RuO ₂ for	126
Laves phases of, <i>a</i>	72	Sound , speed of, in Pd alloys <i>a</i>	31
Platinum-Rhenium , gauzes, <i>a</i>	116	Spacecraft , stabilising of, <i>a</i>	31
lattice parameters of, <i>a</i>	72	Strain Gauges , Pt-W, foil-type	55
Platinum-Rhodium , heat resistance of, <i>a</i>	150	Temperature Measurement , fifty years of, <i>a</i>	39
thermal conductivity of, <i>a</i>	150	hemispherical emittance of coated wires, <i>a</i>	39
wire, hemispherical emittance of, <i>a</i>	39	Pt electrical resistivity below 11°K, <i>a</i>	120
Platinum-Silver , formation of, <i>a</i>	113	Ag-Pd wire for, <i>a</i>	39
Platinum-Tungsten , strain gauges, foil-type	55	Thermionic Valves , Os-coated W emitter in	15
Platinum Chloride , Pt ₂ Cl ₁₂ , structure and		Thermocouples , Noble Metal, physical properties <i>a</i>	79
properties of, <i>a</i>	114	Platinum Metal, survey of, <i>a</i>	79
Platinum complexes	114, 153	Platinum:Gold-Palladium, physical	
Platinum Dioxide , formation of, in HNO ₃ plants, <i>a</i>	154	properties of, <i>a</i>	79
Platinum Metals , alloys, structure of	138	Platinum:Platinum-Palladium-Gold,	
carbonyl halide complexes	148	physical properties of, <i>a</i>	79
in fuel cells	12, 130	Platinum-Platinum-Cobalt, physical	
thermal conductivity and electrical		properties of, <i>a</i>	79
resistivity, <i>a</i>	70	Platinum-Platinum-Copper, physical	
Platinum Oxygen Complexes , with PPh ₃ , <i>a</i>	72	properties of, <i>a</i>	79
Power Sources , 5th Int. Symp.	12	Platinum:Platinum-Iridium, physical	
Resistance Thermometers , Pt, calibration of, <i>a</i>	159	properties of, <i>a</i>	79
Pt, electrical resistivity below 11°K, <i>a</i>	120	Platinum:Platinum-Molybdenum, physical	
Pt, in accurate temperature measurement, <i>a</i>	120	properties of, <i>a</i>	79
Resistors , RuO ₂ glaze	126	Platinum:Platinum-Osmium, physical	
Rhodium , chlorination of, <i>a</i>	33	properties of, <i>a</i>	79
chromaticity coefficient and luminance of, <i>a</i>	70	Platinum:Platinum-Rhenium, physical	
dispersed, adsorption of gases on, <i>a</i>	115	properties of, <i>a</i>	79
foils, deposition and thickness of, <i>a</i>	74	Platinum:Platinum-Tungsten, physical	
heat of sublimation of, <i>a</i>	151	properties of, <i>a</i>	79
N ₂ adsorption on, <i>a</i>	32	Platinum:Rhodium-Platinum, for research	
properties of, influence of purity on, <i>a</i>	70	and industry, <i>a</i>	159
synthesis of metal-metal bonds, <i>a</i>	73	physical properties of, <i>a</i>	79
vaporisation of, <i>a</i>	151	Rhodium-Platinum:Rhodium-Platinum ,	
Rhodium Alloys, Rhodium-Aluminium , crystal		reference table for "six-thirty"	10
structure of, <i>a</i>	152	selection of sheaths for	49
Rhodium-Hafnium , superconductivity of, <i>a</i>	72		
Rhodium-Iridium , high temperature			
behaviour of	53		