

Table of contents

VIII/11 Nanocrystalline Materials Subvolume B

	List of frequently used symbols and abbreviations.	X
	Symbols.	X
	Abbreviations.	XIV
2	Transition metal hard magnetic phases.	1
	References.	2
2.1	Disordered solid solution $\text{Co}_{100-x}\text{Pt}_x$ ($0 < x \leq 40$).	3
2.1.1	Single-phase solid solution $\text{Co}_{100-x}\text{Pt}_x$ ($0 < x \leq 40$).	3
2.1.1.1	Structural and nanostructural characteristics.	3
	References.	4
2.1.1.2	Magnetic properties and nanostructure.	5
	References.	7
2.1.2	$\text{Co}_{100-x}\text{Pt}_x$ -based solid solution heterocomposites.	8
2.1.2.1	Structural and nanostructural characteristics.	8
	References.	14
2.1.2.2	Magnetic properties and nanostructure.	15
	References.	25
2.1.2.3	Transport properties.	27
	References.	28
2.1.2.4	Mechanical properties.	29
	References.	30
2.1.2.5	Corrosion properties.	31
	References.	32
2.2	Ordered hexagonal Co_3Pt phase.	33
2.2.1	Structural and nanostructural characteristics.	33
	References.	34
2.2.2	Magnetic properties and nanostructure.	35
	References.	36
2.2.3	Magneto-optical properties.	37
	References.	38
2.2.4	Mechanical properties.	39
	References.	40
2.3	AB-based nanomaterials ($A = \text{Co}, \text{Fe}; B = \text{Pt}, \text{Pd}$).	41
	References.	43
2.3.1	CoPt-based nanomaterials.	44
2.3.1.1	CoPt-based homocomposites.	44
2.3.1.1.1	Structural and nanostructural characteristics.	44
	References.	46
2.3.1.1.2	Thermodynamic characteristics.	47
	References.	48
2.3.1.1.3	Magnetic properties and nanostructure.	49
	References.	51

2.3.1.1.4	Electrochemical characteristics	52
	References	53
2.3.1.2	CoPt-based heterocomposites	54
2.3.1.2.1	Structural and nanostructural characteristics	54
	References	63
2.3.1.2.2	Magnetic properties and nanostructure	66
	References	87
2.3.1.2.3	Electrical properties	90
	References	91
2.3.1.2.4	Magneto-optical properties	92
	References	93
2.3.1.2.5	Magnetoelectronic properties	94
	References	95
2.3.1.2.6	Mechanical properties	96
	References	97
2.3.2	FePt-based nanomaterials	98
2.3.2.1	FePt-based homocomposites	98
2.3.2.1.1	Crystallographic characteristics and nanostructure	98
	References	110
2.3.2.1.2	Thermodynamic and kinetic characteristics	114
	References	116
2.3.2.1.3	Magnetic properties and nanostructure	117
	References	131
2.3.2.1.4	Optical and magneto-optical properties	134
	References	135
2.3.2.1.5	Transport and magnetotransport properties	136
	References	137
2.3.2.1.6	Nuclear gamma resonance (NGR) data	138
	References	139
2.3.2.1.7	Mechanical properties	140
	References	141
2.3.2.1.8	Corrosion properties	142
	References	143
2.3.2.2	FePt-based heterocomposites	144
2.3.2.2.1	Structural and nanostructural characteristics	144
	References	195
2.3.2.2.2	Thermodynamic characteristics	208
	References	210
2.3.2.2.3	Magnetic properties and nanostructure	211
	References	285
2.3.2.2.4	Transport and magnetotransport properties	297
	References	303
2.3.2.2.5	Optical and magneto-optical properties	304
	References	306
2.3.2.2.6	Nuclear gamma resonance (NGR) data	307
	References	313
2.3.2.2.7	Corrosion properties	314
	References	315
2.3.2.2.8	Mechanical properties	316
	References	317
2.3.3	FePd-based nanomaterials	318
2.3.3.1	FePd-based homocomposites	318
2.3.3.1.1	Crystallographic characteristics and nanostructure	318
	References	321

2.3.3.1.2	Magnetic properties and nanostructure	322
	References	323
2.3.3.1.3	Optical and magneto-optical properties	324
	References	325
2.3.3.1.4	Transport and magnetotransport properties.	326
	References	327
2.3.3.2	FePd-based heterocomposites	328
2.3.3.2.1	Structural and nanostructural characteristics.	328
	References	331
2.3.3.2.2	Magnetic properties and nanostructure	332
	References	336
2.3.3.2.3	Transport and magnetotransport properties	337
	References	338
2.3.3.2.4	Nuclear gamma resonance (NGR) data	339
	References	341