

1.3.1.1.3 Survey

R. General properties

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
AnX , AnY			Formation of correlated f-states in actinide rocksalt compounds			87HS
			<i>Ab initio</i> band structure treatments. Schematic re- presentation of DOS for AnX and AnY mono- compounds, exemplified for Pu-monopnictides.	R.1A		02PSTS
AnSb , (An = U, Np, Pu)			High resolution ARPES	R.1B		04DJLO
AnX, UX			Unrestricted Hartree-Fock band picture; anomalous properties			95K2
AnX , AnY			L ₃ -edge X-ray absorption			87KKBS1
			Rocksalt (NaCl)-type of crystal structure (cubic B1-type, s.g. Fm3m) and scenario of chemical bonding and magnetic exchange interactions.	R.2		81SLSV, 95LB
AnX			Full nuclear fcc Brillouin zone and connection with multi- <i>k</i> magnetic structures.	R.3		86HF
(X = P...Bi)			Lattice parameters		T1	Compil. 87B
			Lattice parameters as a function of atomic <i>Z</i> number of the actinide monopnictides crystal- lizing in the NaCl (B1)-type crystal structure.	R.4		
(An = U, Pu)			Lattice parameters, melting points			67KM2
(X = P, As, Sb)						
AnX (LnX)			Lattice parameters of AnX compared to corresponding LnX	R.5a		79DHP1, 82SF, 86DDT
(An = Np...Bk)						81DD
(X = N...Sb)			Phenomenological parameter, Δ , of the 5f electron delocalization <i>versus</i> An-An distance	R.5b		
AnX			Structural transitions under pressure		T5	95B
(An = Th...Pu)						
(X = C; N...Bi)						
(An = Th...Pu)			Bulk moduli, B_0 , and pressure derivatives B_0'		T6	95B
(X = C; N...Sb)						
(An = Am, Cm, Cf)			High-pressure data for transplutonium monopnictides AnN and AnBi		T7	95B
			Log p_t (transition pressure) vs. the ratio r_C/r_A (cation/anion size)	R.6		93B2
AnX, AnY			Log-log B_0 vs. V_0	R.8		90DBHS
(An = Th...Pu)						
and CmBi						
AnX(LnX)			Bulk moduli, B_0 , vs. atomic number <i>Z</i> .	R.7a		95B,
(An = Ac...Cm)			p_t vs. <i>Z</i> for the transition from B1 to B2 or	R.7b		92BDDG,
(X = P...Bi)			others. – LnX for comparison			93BH
AnX			Crystal structure distortions		T9	80KLMV
(An = U, Np, Pu)						
(X = As, Sb, Bi)			a) Transition pressure p_t vs. r_{An}/r_X .	R.9a		94G
			b) $\Delta V/V_0$ vs. r_{An}/r_X .	R.9b		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
An ⁿ⁺			The spin-orbit parameters ξ_{5f} and F^k Coulomb integrals for $5f^{n+}$			84DF
An ³⁺⁼ U ³⁺ ...Cm ³⁺			Free ion energy levels Solution absorption spectra Radial parameters and free-ion hyperfine fields for actinide ions			64CW 72DK
An ^{3+,4+} (=U ^{3+,4+})			Form factor $f(Q)$. The calculated $\langle j_0(Q) \rangle$ and $\langle j_2(Q) \rangle$ functions			76FDLF, 84DF
AnX, AnY		P	Crystal electric field (CEF) effects: A) Russell-Saunders (R-S) scheme B) Intermediate coupling (IC) scheme	R.10		62LLW 70CL, 74CL 02OA
AnX, AnY			Empirical evaluation of the thermodynamic and magnetic properties from the (An-An) distances			
AnX (An = U...Cf) (X = N...Bi)			Magnetic and related properties of actinide monopnictides (see also Landolt-Börnstein LBIII/12c, p.419- 437; Figs. 1...79 together with the solid solutions AnX _{1-x} Y _x (not included here) (1982) and Ref. 85F (Table 17)		T2	80T2, 85FT, 92MV, 93VM, 95VM, 95LB, 99SLE 87HN
(An = Am...Cf)			Magnetic properties of transplutonium monopnictides			87HN
(An = U, Np, Pu)			Magnetic transition temperature T_0 vs. $d_{\text{An-An}}$			70H
(An = U, Np, Pu)		AF	Ordered moment, p_0 , vs. $d_{\text{An-An}}$	R.11		Compil.
(X = N...Bi)						
(An = U...Cf)		AF/F	Transition temperatures T_C , T_N vs. $d_{\text{An-An}}$	R.12		83HNNH, 87HN
(X = N...Bi)						
(An = U, Np, Pu)			Critical parameters, β and v , anisotropy ratio, R , Néel temperature T_N		T8	93L2
(An = U, Pu)			Knight shift		T12	70F1
(X = C, N, P)						
(An = Th, U)			Average volume, V , vs. Z	VI.1		82BBF
(X = P...Bi)						
AnX, AnY (An = U)			Electronic band structures by LMTO/ASA. The bonding between U 5f and ligands X p and Y p (the equation of state). Semi relativistic, self-consistent calculation of lattice parameters			79B1, 80BG1
(An = U, Np)			Electronic structure and exchange interaction:			
(X = C, P, As)			a) Electron delocalization model.	R.13a		73RE, 74RE
		AF/F	b) RKKY exchange interaction and various type of magnetic order	R.13b		73RE, 68GK
AnX		AF	Multi- k magnetic structures for A) the type I (AF I) and B) type IA (AF IA) Magnetic structures, multi- k structures	R.14		86BRQV, 87R1, 95LB 93L2

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
AnX (cont.)		P/AF	Initial and reduced BZs for AF I-1 k and 3 k type of ordering	R.15		95K2
			Polarized neutron scattering (PNS), angular scattering of thermal neutrons (form factor), $f(Q)$. The ratio p_v/p_s			92L, 97LLBS
		AF	Neutron inelastic scattering (INS) Magnetic excitations, spin waves in a) single- k and b) triple- k structures (theory)	R.16		94HL 81JB
(An = U) (X = N...Sb)			Magnetic response functions $S(\mathbf{Q}, \omega)$			81L
			Specific heat (review)			79B2
(An = U) (X = C, N, Sb)			Thermal properties		T3	85ROV2
			Therm. prop.: S and κ at 25, 500 and 1000°C			68MKH
(An = U, Pu) (X = C, N, P, (S))			NMR data		T12	70F1, 74F
AnX, LnX (An = U, Pu)		P	NMR line-shift, H_{hf} , vs. n (No. of 5f- electrons)	R.17		71FG
ThX (X = C...P, S)			Band structure and chemical bonding using tight-binding (TB) method, DOS			75IAH
ThX (UX) (X = C; N...Bi)			High-pressure structural data			86SSGB
ThX (X = N...Sb)			Log-log B_0 vs. V_0	R.18	T5	95B
(X = C, N, P)			Bulk moduli		T6	88GSBD
AnX (An = Th, U)		TIP	χ_m vs. T			95B
(X = C, N, P)			INS: optical frequency and An-X bonding force constant vs. $d_{\text{An-X}}$	R.19		73AI1 74W
(X = C, P, As)			NMR data: $dK/d\chi$, H_{hf} and H_{eff}			70F1
(X = C, N, P) and PuC, PuP			Heat capacities (see Tables 21 and 22)			85FT
UX (X = N...Bi)			Electronic band structures by RSSS model	R.20		79MW
(X = N...Bi)			Unhybridized bandwidth (LMTO/LDA) and lattice parameter a_0 against atomic number, Z , of X (pnictogen element)	R.21		79AB
(X = C...Sb)			Electronic structure; non-relativistic calculations: KKR method			69AI,70D, 74D
(X = N...Sb)			Electronic structure by LMTO in ASA; bonding model: the mixing of the f-d bands of uranium with the p-bands of the pnictogen			79B2,80BG1
(X = P, As, Sb)			Energy band structure by using the linearized KKR ASA equations, calculations of lattice parameters a_0 and bulk modulus B_0			84B2
			Radial charge densities of constituent elements as the free atom state or as that in solid one (LMTO/ASA)	R.22		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UX (cont.) (X = C...Sb)			Self-consistent energy band and density functional theory: trends in lattice parameters and cohesive energy			85B2
UX, UY			Crystal field scheme for the $5f^2$ configuration vs. a_0			80MB
UX (X = N...Sb) (X = N, P, As) (US) (X = P...Bi) (X = P, As, Sb) (X = C; N...Bi) (X = C...Sb)	sc		UPS spectra ($h\nu = 40$ eV) LBIII/12c, p.421, Fig.9 ESCA spectra of U 4f peaks and their satellites Enthalpy of formation data (ΔH_f^0) V/V_0 vs. p up to 25 GPa, Transition pressures a) B_0 vs. $V^{-5/3}$ b) Log-log B_0 vs. V_0 c) Poisson's ratio σ and B_0 vs. a_0^{-1}	R.23 LB		87R2 79TVT 70BS 93L1 95B 86LORV 89SGBD 83BHJM
UX, UY			Effective radial force constants: U–X, U–U and X–X (Y–Y)	R.26	T6 T11	95B 86JHBD
UX (X = N, P, As, Sb) (X = C...Sb) (X = N...Sb)			Low-temperature lattice distortion		T9	80KLMV
		P	Elastic constants c_{ij} at RT χ_m^{-1} vs. T up to 1000 K	R.27	T10 T2	Compil. 84T 84RLB, 92MV
(X = P, As, Sb) (X = N...Sb)	sc	P AF	χ_m^{-1} vs. T up to 1200 K Magnetic properties	R.28		79BHV 67TPST, 85F,85FT 78ST
(X = P, As, Sb) (X = C...Sb) (X = N...Bi) (X = N, As, Sb)		AF/Fi AF	Magnetization in fields up to 40 T Transport data Thermal properties p_0 vs. d_{U-U}		T4 T3	84SFV 85ROV2 80SLV
(X = P, As, Sb)	sc	AF	Neutron intensity $I_{ }$, I_{\perp} vs. uniaxial pressure in the case of multi- k ordering	R.29 R.30		80RBQV, 95LB
		AF	Projection AF I and AF IA ordering onto the (001) plane	R.31		96MGBV
		AF	Stability magnetic diagrams for the fcc structures	R.32		83MW,86M
(X = N...Bi) UX, UY		AF AF:F	Interaction constants J_1 , J_2 derived from MFT Ruderman–Kittel sums for fcc lattice CEF model	R.33		68GKF,70AI 68GK, 68GKF
UX (NpX) (X = N...Bi)		AF	Ordering temperatures (T_N , T_C) vs. lattice parameter $a(p)$	R.34		98BDGI
(X = P, As, Sb) UX (CeX)		AF AF	Magnetic phase diagram T_N vs. a_0 Magnetic phase diagrams T_0 vs. p Diffuse critical neutron scattering (DCNS): inverse correlation lengths ratio R	R.35 R.36		96BGMO 96MGBV 82L1,2 84HF, 86HF
(Pu, Np)X				IV.106	T8	93L2 91LA

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
U, Np, Pu			RXMS: The absorption coefficient μ	R.37		94LSLR2, 99MLLR
UX (X = N, P, As)	sint.	P	Thermoelectric power S vs. T (°C) up to high temperatures	R.38		64WP
(X = C, N, P)	sint.	P	A)a) κ vs. T up to 1000 K b) ρ vs. T up to 1000 K B) Models of separation κ_{el} and κ_{ph} from κ_{total}	R.39A		76KTM1
(X = P, As, Sb)	sc	AF	a) Log-log C_N vs. T at 0.12...1 K b) $H_{\text{hf}}(X)$ vs. Θ_p	R.39B R.40a R.40b		84RO 85ROV2
(X = N...Sb)	sc	AF	C_p/T vs. T^2 between 1.5 ...12 K	R.41	T3	85ROV2
(X = P, Sb, (S))		AF	$H_{\text{hf}}(\text{U})$ vs p_{U}	R.42		72SKDK
(X = P, As, Sb)	sc	P	Re σ_{xx} vs. $h\nu$	R.43		98S
(X = P, As, Sb)		P or F	Calculated $\sigma_{xx}^{(1)}$ vs. $h\nu$	R.44		05KO
(X = N...Sb)			Muon spin rotation (μSR) data			95SG
NpX			Lattice distortions		T9	74LM
(X = C...Sb)						
(X = N...Sb)		P	$V/V(300\text{K})$ vs. T (see LBIII/12c, p.433, Fig.59)	R.45 LB		74LM, 74ADHL, 74MLKR
(X = As, Sb, Bi)		AF	a) T_N vs. p up to 16 GPa b) T_N vs. $\Delta V/V_0$	R.46a R.46b		97IZBS
(X = N...Bi)		AF	$H_{\text{hf}}(\text{Np})$ vs. a_0	R.47		95K1
(X = C...Sb)		AF	H_{hf} vs. p_0 at 4.2 K	R.48		69DBKS, 73LDAN, 74ADHL
(X = C...Sb)			Hyperfine parameters: B_{hf} , IS, eq		T13	85DK
(X = C...Sb)			IS(^{237}Np) vs. $d_{\text{Np-Np}}$	R.49		85DK
NpX		AF	H_{hf} vs. IS(^{237}Np)	R.50		85DK, 88BBAK
(X = C...Sb)						
(X = N...Sb)			IS vs. oxidation state of neptunium	R.51		Compil. based on 85DK
(X = N...Sb)			Experimental and calculated electric field gradient, $eq(^{237}\text{Np})$	R.52		85DK
AnX (An = Pu ³⁺ , Am ⁴⁺)			Crystal electric field, J -mixing (IC)			72LC
PuX			a) Band structure (LMTO) b) DOS	R.53a R.53b		90WC
(X = As, Sb, Bi)						
(X = As, Sb, Bi)	sc	F	Anisotropic magnetization, [100] easy axis, $p_{\text{Pu}} = 0.67, 0.65, 0.61 \mu_B$, respectively			83CTSM, 86MVSR2
(X = As, Sb, Bi)			Rel. volume vs. pressure	R.54A		04SS
			Transition pressure vs. sum of s and p electrons of the anions	R.54B		
			Elastic constants vs. lattice parameter	R.54C		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
AmX (X = N...Bi, O)			Electronic structure by <i>ab initio</i> self- interaction-corrected, local spin-density approximation (SIC-LSD)			01PSTS
(X = N...Bi)			Partial density of states calculated by LDA+ <i>U</i>	R.55		05GDOB
(X = N...Bi)			Absorptive part of optical conductivity $\text{Re } \sigma$ computed by LDA and LDA+ <i>U</i>	R.56		05GDOB
(X = N...Bi)			Lattice parameters		T1	76CBDD, 75CBDM, 74R
(X = N, As, Bi)		TIP	χ_m vs. <i>T</i>	R.57		76KCMM, 93VM
(X = N, Bi)			High-pressure crystallographic data		T7	95B
AnX			Magnetism of the heavy actinide monopnictides			87HN
(An = Am...Cf)			Synthesis of compounds using micro techniques. Lattice parameters		T1	79DHP2, 80DPH1, 93GHBH
²⁴⁸ CmX (X = N...Bi)						76CBDD
²⁴³ CmX (X = N...Sb)			Lattice parameters			
(X = N, Bi)			High-pressure crystallogr. data		T7	95B
CmX, GdX		AF/F	Ordering temperature (<i>T_N</i> , <i>T_C</i>) vs. <i>a</i> ₀	R.58		92MV
(X = N...Sb)						
²⁴⁹ BkX (X = N...Sb)			Synthesis of compounds using micro techniques			80DHP2
			Lattice parameters		T1	
CfX (X = N, As, Sb)		P	χ_m^{-1} vs. <i>T</i> up to 330 K		T2	86NMHP
(X = As, Sb, Bi)			Lattice parameters		T1	79DHP2, 82BBF
(X = N, Bi)			High-pressure crystallographic data		T7	95B
I. Actinide monocarbides						
AnC (An = Th...Np)			DOS calculated by RAPW and LDA (see also LBIII/19f2, Fig.373)	I.1		90HY2
			Energy band structure (RKKR, <i>X_α</i>)	LB		
			a) Radial charge densities $\sigma(r)$ within the metal spheres	I.2		82M,87WG
			b) The single site Friedel sums	I.3a		82M
(An = U, Np, Pu)			Sc-ground state energy levels (Dirac-Slater cluster scheme)	I.3b		82E
(An = Th, U)			Defect structures, lattice deformations			82D
AnC, AnN			Molar volumes <i>V</i> ₀ vs. <i>Z</i> of actinide elements	I.4		87I,87B
AnC			<i>a</i> = <i>f(T)</i> , at 50...300 K	I.5		79BDM
(An = Pa, U, Pu)						
AnC _{1-x} (An = Th, Np, Pu)			Lattice defects, electronic properties, thermodynamics, self-diffusion and homogeneity ranges <i>a</i> ₀ = <i>f(x)</i> curves			76D

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
ThC _{0.75} , ThC, U(C _{0.6} N _{0.4}), NpC _{0.82}			DNS: Atomic short-range order in nonstoichiometric actinide carbides			76DFJ
AnC, AnN (An = Th, U, Pu, Np, Am)			Log-log B_0 vs. V_0 , experimental and theoretical data	I.6		90GSBL, 84B1,2,3
AnC (An = U, Np, Pu)			C_p vs. T up to 350 K	I.7		70SG
Th–C			Phase diagram			69BS, 67CKD,75H
ThC, (UC)			A) Energy band structure (RAPW, X_α) B) Fermi surface C) DOS by RAPW	I.8A I.8B I.1		90HY1 90HY2
			Energy band structure by RKKR-method V/V_0 vs. p up to 50 GPa (see LBIII/19f2, Fig. 375)	I.9 LB		82M 86GSBI, 86SSGB,
			Transition pressures B_0 and B_0' a_0 vs. C/Th ratio (x)		T5 T6	90GSBL, 95B
ThC _x x = 0.66...0.96 x = 0.72...1.02 x = 0.76			a vs. T up to 1100°C Formation of the ordered structure at 830 K	I.10 I.11		65AS,67S1, 67S3, 76D 76PZ 69LD
x = 0.9...1.0 ThC, UC			$a(T)$ vs. x at 25...1600°C Time-of-flight (TOF) spectra: a) for ThC b) for UC	I.12a I.12b		67CW 74W
ThC _x x = 0.74...0.88		TIP	χ_g vs. T at 83, 197 and 299 K $\chi_g = 0.134 \cdot 10^{-6}$ emu/g at RT $a_0 = 0.5340$ nm			68AA
ThC		TIP	χ_g^{-1} vs. T at 100...1100 K $\chi_g(\text{RT}) = 0.014(1) \cdot 10^{-6}$ emu/g			64BU
ThC _x x = 0.79...0.91		sint.	a) ρ vs. T up to 450 K, R_H and S vs. x	I.13a		65AASS, 67AA2
x = 0.76			b) $\rho(T)/\rho(\text{RT})$ vs. T (300...1100°C)	I.13b		67S2
ThC _x , ThC _{1-x} N _x , ThN		TIP	a) ρ vs. VEC (valence electron concentration) at 4.2 K and RT b) χ_g and thermoel. power S vs. VEC c) R_H vs. VEC	I.14a I.14b I.14c		68AA, 67AA2
ThC _{0.86} ThC _x x = 0.75 ThC			Two band conduction model ρ vs. T at 4.2...1200 K C_p/T vs. T^2 , 2...10 K $\gamma(0) = 3.38$ mJ/mol K ² , $\Theta_D = 238$ K C_p vs. T at 1.5...300 K ($a_0 = 0.53444(2)$ nm) C_p/T vs. T^2 at 1.5...7 K, $\gamma(0) = 2.12$ mJ/mol K ² , $\Theta_D = 262(2)$ K, $\Theta_E = 467(5)$ K C_p/T vs. T^2 at $T < 4.2$ K, $\gamma(0) = 2.9(2)$ mJ/mol K ² , $\Theta_D = 280$ K	I.15		64CL 79MBA 75D2 75D2 64HMM

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
ThC _x x = 0.84, 0.93, 1.02			¹³ C NMR, Knight shift	II.93		68LRKW, 76BD
ThC _{1-x} N _x x = 0.4			¹³ C and ¹⁵ N NMR, Knight shift (-0.025%) and <i>TT</i> ₁ at 4.2, 77, 300 K			76BD
PaC			Energy band structure by RKKR-method DOS by RAPW (see also LBIII/19f2, Fig. 373)	I.1 LB		82M, 87WG 90HY2
		Dia	<i>a</i> = <i>f</i> (<i>T</i>) at 50...300 K <i>χ</i> _m vs. <i>T</i> up to 300 K, <i>χ</i> _m = -50·10 ⁻⁶ emu/mol, <i>a</i> ₀ = 0.50570(9) nm	I.16		79BDM 77HWBD
UC _{1+x}			Phase diagram <i>T</i> (<i>x</i>)	I.17		70LB, 75H
UC			Crystallography and chemical bonding			63F
UC, UN, UO			Equation of state. Comparison lattice parameters and bulk modulus (theory – exp.)	I.18	tab.	84BJS
UC			a) Energy band structure (RAPW, <i>X_α</i>) b) DOS	I.19a I.19b		77FK 90HY2
			Quasi-consistent energy band structure by RKKR-method; chemical bonding			79WPMN, 82M
			Electronic structure by RAPW; the energy of the 5f-band			79SH
			Energy band structure by self-consistent LMTO-method; radial charge densities			84B1
UC, UN			Equation of state and DOS compared to CeN by RLMT0-ASA			85B1
UC, UN			DOS and NOS by DFT	I.20		84B1,3; 85B2
UC _{1-x} , x = 0, 0.1, 0.2, 0.3			Electronic structure by RKKR-method and XPS spectra, partial and total DOS			90S
UC			A) Energy band structure by RLMT0, including SOC within LSDA	I.21A		95TWB
			B) Total and partial DOS	I.21B		
			C) Full and monospherical charge density contours	I.21C		
			a) Energy band structures by symmetrized sc- RAPW using DFT in LDA	I.22a		99YHIM, 01MHYO,
			b) DOS, <i>γ</i> _b = 4.8 mJ/K ² mol (28 states/Ry cell)	I.22b		01YHMI
			DOS by RAPW (see also LBIII/19f2, Figs. 372, 373 and 374)	I.1 LB		90HY2 90HY1, 90OUKS, 90S
		sc	A) dHvA B) Fermi surface (see also LBIII/19f2, Figs. 384 and 385)	I.23A I.23B LB		99YHIM, 01MHYO 90OUKS, 90HY1,2
		sc	A) XPS and BIS B) 4f core-level spectrum C) Comparison EDC to partial DOS (see also LB III/19f2, Fig. 374)	I.24A I.24B I.24C LB		93EMST, 93I, 96ESSS
UC, UN			Electronic structure by self-consistent molecular orbital (MO) calculation compared to corresponding EDC's	I.25		90S 80JG, 80ZGW

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UC			Valence band structure by discrete-variational Dirac-Slater (DV-DS) method (cluster models)			99KHSO
			High resolution ARPES energy bands compared to calculated ones (shown in Fig. I.22a)	I.26		01IKTY 99YHIM
UC, UN			U-L ₃ XANES at $p = 0$ and 33.3 GPa	I.27a,b		90BKSV
			White-lines (WL) shift vs. pressure	I.27c		
UC			A) U-L ₃ XANES spectra	I.28A		87IBDD
			B) Near-edge U-L ₃ structure at 8 and 42 GPa	I.28B		86SBDG
			V/V_0 vs. p up to 50 GPa	I.29		86SSGB, 86SGBI
			(see LBIII/19f2, Fig. 378)	LB		79BDM
			$\alpha = f(T)$ up to 300 K	I.5		60W
			$\alpha = f(T)$ up to 1500°C			72BF
			$\alpha = f(T)$ up to 2100°C			64MT
			Linear thermal expansion $\alpha(T)$			76KNMT, 90MTHK
			Fission fragment damages			
			Phonon dispersion relations	I.30		71SG, 72M2,73W
			(see LBIII/19f2, Fig. 379)	LB		71R,72S
			Elastic constants		T10	74CL
		WTDP	χ_m vs. T up to 900 K	I.31		67LNRM
			(see also LBIII/19f2, Figs. 380 and 381)	LB		64BU
		WTDP	χ_g vs. T at 90...1100 K, $\chi_g = 3.19(6) \cdot 10^{-6}$ emu/g at RT			
		WTDP	χ_g vs. T at 100...1100 K $\chi_m = 8.0 \cdot 10^{-4}$ emu/mol at 80...300 K			72M1,64BU
	irra- diated sc		a) ρ vs. T up to 300 K	I.32a		88MKY
			b) $d\rho(T)/dT$ vs. T	I.32b		
			(see also LBIII/19f2, Fig. 382)	LB		90OUKS 90OUKS
			a) R_H , independent of temperature ($5.3 \cdot 10^{-5}$ cm^3/C)			
			b) Magnetoresistance, $\Delta\rho/\rho \sim H^{1.7}$ at 0.5 K (compensated metal)			
			(see also LBIII/19f2, Fig.383)	LB		
	poly sc		$\Delta\rho/\rho$ vs. fission dose	I.33		72MKO, 81MHK, 90MTHK 690K1
	mel- ted mel- ted, sint- ered sc sc		ρ vs. T at 100...1100 K			
			Thermoelectric power S vs. T at 300...1100 K			
			ρ vs. T up to 1800 K	I.34		64C, 80MTNK, 70FKWM
			Effect of fission damage on ρ vs. T			83MHOK
			Influence of carbon and uranium vacancies on ρ vs. T			89MKYO
			C_p vs. T at 1.8...4.2 K, $\gamma(0) = 18.7 \text{ mJ/K}^2\text{mol}$			64HMM
			C_p vs. T at 20...85 K, $\gamma(0) = 20.3 \text{ mJ/K}^2\text{mol}$, $\Theta_D = 254 \text{ K}$			63DCM

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UC (cont.)			C_p vs. T at 5...350 K, $\gamma(0) = 18.5 \text{ mJ/K}^2\text{mol}$			65WTS, 59FHHH
			C_p vs. T at 300...2500 K			70A,73ONS
			Thermal conductivity, $\kappa(T)$, at 300...873 K			67MK
			κ and el. resistivity at 77...900 K	R.39A		76KTM1
			κ_{ph} and κ_{el}	R.39B		
UC, UN			a) thermoelectric power S vs. T , 77...300 K	I.35a		72OKN
			b) S vs. T up to 1100°C, σ vs. T up to 900°C	I.35b		64WP
UC		WTDP	^{13}C NMR data, Knight shift $K = 0.199\%$, $\mu_0 H_{eff} = -4.7 \text{ T}$, $a_0 = 0.49613(3) \text{ nm}$ (UC _{1.03}) ^{13}C NMR data, Knight shift $K = 14.4 \cdot 10^{-4}$, TT_1 at 4.2, 77, 300 K			68LRKW
U _{1-x} Th _x C 0 ≤ x ≤ 0.2		WTDP	χ_g vs. T at 90...1100 K, $\gamma(0)$ varies from 18.6...14.65 mJ/K ² mol (see LBIII/19f2, Figs.377 and 387)	LB		64BU 64HMM
x ≥ 0.85			a) $\rho(RT)$ vs. x b) R_H vs. x at 78 and 300 K c) thermoelectric power S vs. x at 300 K d) Schematic DOS	I.36a I.36b I.36c I.36d		68AA,69AA
UC _{1-x} O _x 0 ≤ x ≤ 0.5			χ_g vs. x at RT (see LBIII/19f2, Fig.386)	LB		71OS
0 ≤ x ≤ 0.34			ρ vs. T at 300...1200 K			72LW
UC-LnN (Ln= La...Nd, Sm, Gd, Dy, Er)			a_0 vs. composition			80EWVB1
NpC			Energy band structure by RKKR-method DOS by RAPW (see LBIII/19f2, Fig.373)	I.1 LB		82M 90HY2
NpC _{1-x} x = 0.04, 0.11, 0.18		F/AF	a) χ_g vs. T at 225...350 K b) magnetization σ vs. T , $T \leq 250 \text{ K}$	I.37a I.37b		71LMPL, 74LA
x = 0.04		P	χ_m vs. T curve at 400...1000 K calculated by J -mixing scheme (see LBIII/19f2, Fig.397)	I.38 LB		70CL
x = 0.05		F/AF/ P	χ_m vs. T and χ_m^{-1} vs. T up to 1000 K (see in LB III/19f2, Fig. 394)	I.39 LB		68DL
NpC		F/AF P	Magnetization σ vs. T at 200...330 K, $p_s =$ 1.4 μ_B , p_{eff} (at 310...350 K) = 3.0 μ_B	I.40		67RL 74LA
		F/AF	a) p_{Np} vs. T b) $\Delta\alpha$ (rhombohedral distortion.) vs. T (see LBIII/19f2, Fig. 396)	I.41a I.41b LB	T9	69LHMA 74LM
NpC _{1-x} x = 0.07		F/AF	Relative sublattice magnetization $\sigma/\sigma(0)$ vs. T around T_C compared to the results of the electron delocalization theory	I.42		69LHMA, 74RE
x = 0.07			ρ vs. T around T_C (= 210 K) (see LBIII/19f2, Fig.395)	I.42 LB		72B
x = 0.04, 0.11, 0.18			^{237}Np Mössbauer effect			71LMPL
NpC, NpN		F/AF	Relationship between ΔH_{orb} (= $H_{hf} - H_{core}$) vs. p_{Np}	I.43		72DK

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
PuC			A part of U–Pu phase diagram	I.44		86H,63RNM
PuC_{1-x}			a_0 vs. x	I.45		63RNM
$x = 0.13$			$a_0 = 0.49730$ (1) nm			62K
PuC			$\Delta a/a$ vs. T up to 600°C	I.46		64BSC
			$a = f(T)$ at 50...300 K	I.5		78BDS, 79BDM
			Linear expansion and its coefficient α	I.47		79BDM
PuC_{1-x}		AF	T_N vs. $a_0(x)$	I.48		65LCP
$x = 0.11, 0.15$		AF/P	a) χ_m vs. T	I.49a		67LNRM
and 0.18			b) χ_m^{-1} vs. T	I.49b		
$\text{PuC}_{0.78}$		P	χ_m^{-1} vs. T up to 1200 K			74LA
PuC			(see LB III/19f2, Figs. 398 and 399)	LB		64CL
Pu(C, O)			$(\chi - \chi_0)^{-1}$ vs. T up to 300 K			65LCP
$\text{PuC}_{0.91}$		AF	Magnetic structure, $a_0 = 0.49743$ nm, $p_{\text{Pu}} = 0.8 \mu_B$, $T_N \approx 100$ K; no identification of superstructure.			70GALN
PuC_{1-x}			$R(T)/R(300 \text{ K})$ vs. T up to 200 K			65LCP
$x = 0.15$	melt.		a) ρ vs. T at 300...1000 K	I.50a		67KM1
			b) thermoelectric power S vs. T at 300...1000 K	I.50b		
PuC		AF	a) $\rho(T)/\rho(\text{RT})$ vs. T ; b) thermoelectric power S vs. T ; c) $(\chi - \chi_0)^{-1}$, $T_N = 94$ K			64CL
			(see LB III/19f2, Fig. 399)	LB		
PuC_{1-x}		AF/P	a) C_p vs. T at 10...300 K	I.51a	tab.	77HHL
$x = 0.10, 0.12,$			b) ΔC_p vs. T	I.51b		
$0.15, 0.17, 0.18$						
$x = 0.10, 0.18,$		AF/P	C_p vs. T at 10...300 K			76MHHL
0.20			(see also LBIII/19f2, Fig. 400)	LB		80HHLM
$x = 0.20$			C_p vs. T at 10...350 K; evidence for order-disorder			75S
$\text{PuC}_{1-x}\text{N}_x$			a vs. T at 50...345 K			78BDS
$(\text{U,Pu})\text{C}$			Phase relationships. binary and ternary systems			76P

II. Actinide mononitrides

AnN			Valence band spectra (VBS):			80NTCB
(An = Th, U)			a) for ThN compared to Th metal	II.1a		
	sc		b) for UN (s.c.) compared to U metal	II.1b		
ThN (Th_3N_4)	thin		a) 4f-core spectra	II.2a		02GHBW
	film		b) valence band spectra	II.2b		
AnN			Lattice parameters a_0 calculated by: 1. self	II.3	tab.	82B2,
(An = Th...Am)			consistent LMTO, 2. RLMTTO and 3.			84B3
			LMTO+SP compared to experimental data			
(An = Th...Bk)			Lattice parameters, a_0 , vs. atomic No. Z	II.4	T1	87B
			V_0 in the normal state and under high pressure	I.4		87I,87B
			as a function of Z			
(An = Th,U)			Transition pressures		T5	95B
(An = Th...Am)			Log-log B_0 vs. V_0 , experimental and	I.6		90GSBL,
			theoretical data			84B1,2,3
(An = Th,U)			B_0 and B_0'		T6	95B
AnN			Magnetic parameters based on the literature		T2	Compil.
(An = U...Cf)			data			

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
AnN(C) (An = Th, U, Pu)			Ternary phase equilibria			75H
Th–N–O ThN			Phase stability diagram at high temperatures $a(p)/a_0$ at RT vs. p up to 47 GPa	II.5		87UKM 85GSBI, 85SGB
	thin film		HeII and 4f core spectra Calculated band structure parameters	II.2		02GHBW 82B2, 84B3, 86BJES
ThN, (UN) ThN		TIP	TOF spectra $\chi_m = 35 \cdot 10^{-6}$ emu/mol at RT ρ vs. T at 4...850 K, $\Theta_D^R = 300$ K R_H vs. valence electron concentration at 4...375 K, $n_H = 1.47$ e/Th at.	II.6 I.14		74W 69RD2, 68AA 67AA1
(UN) ThN			C_p vs. T at 2...300 K; $\Theta_D = 291$ K, $\Theta_E = 495$ K Lattice contrib. C_L vs. T ; $\Theta_D = 225$ K, $\Theta_E = 530$ K ^{14}N Knight shift, quadrupole effect ^{15}N Knight shift and TT_1 at 4.2 and 77 K	II.7		72DDD, 90YS 68K2 76BD
ThC _{1-x} N _x 0 ≤ x ≤ 1 0 ≤ x ≤ 1 0.108 ≤ x ≤ 0.937			$a_0 = f(x)$ T_S vs. a_0 ρ vs. T at 4.2...700 K; S vs. T at 100...400 K; R_H vs. T at 4...373 K	II.8 II.9		63SW 72GSK 70AA
x = 0.4			χ_g, ρ, R_H, S vs. VEC C_p/T vs. T^2 at 2...8 K; $\gamma(0) = 1.9$ mJ/mol K ² C_p/T vs. $T, T_S = 3.8$ K	I.14 II.10 Inset		79MBA
Th _{1-x} Ln _x N (Ln=Y, La, Ce, Pr, Nd); 0 ≤ x ≤ 1 PaN AnN (An = U...Am) (An = Np, Pu, Am) (An = U...Am)		sc	$a_0 = f(x)$ Synthesis of single crystals, $a_0 = 0.5047(1)$ nm Energy band structures by RLMTO	II.11		80HS, 80EWVB2 78BM 84B3
			DOS 1. Calculated spin-only magnetic form factor 2. Calculated total-moment magnetic form factor compared to experimental one of UN	II.12		86BJES 83BK, 84B3 65C
UN			Partial U–N phase diagram	II.13		66BB, 71H, 70BBB
			Quasi sc-band structure by RKKR Sc-MO-calculations of electronic structure Sc-band structures by LMTO in ASA for different a_0	II.14 I.25 II.15		80WMPN 80JG, 80ZGW 84B1
			Equation of state Band structure compared to PES	I.18 II.16	tab.	84BJS 80WMPN 82B2, 83BCCH, 87WG
			Total DOS and NOS by sc-DFT Hybridization between U f and pnictogen X p-bands by sc-RLMTO method	I.20		85B2, 84B1,3 80BG2

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UN (cont.)	sc		a) DOS by sc-CMS b) Theoretical total DOS compared to angle-integrated EDC	II.17		79EK2, 79KE
UN, (U ₂ N ₃)	thin film		a) UPS spectra of VB b) 4f-core level spectra	II.18a II.18b		01BMGH
UN, (USb)	sc (100)		Angle-integrated EDC's compared to those of USb	II.19		83RHH, 82RMV
UN	sc (100)		Angle-resolved EDC's at 33, 45 and 75 K	II.20		83RHH 82RHH
UN(ThN)	sc		A) XPS-VB spectra B) 4f-core level spectra compared to that of UO ₂	II.21		80NTCB
UN	sc		Band structure from high-resolution ARPES U L ₃ -XANES for ambient pressure and 33.3 GPa	II.22 I.27		01IKST 90BKSV
UN, PuN, (U, Pu)N UN			Linear thermal expansion α vs. T at 300...2600 K Lattice parameter $a_0 = 0.4889$ nm Lattice parameter at zero carbon content $a_0 = 0.48883(2)$ nm	II.23		98SA 71TB 79MT
UN	sc	AF/P	X-ray diffraction at 5...165 K: a) FWHM vs. T b) Position of peak (600) vs. T c) $a(c) = f(T)$, distortion at $T < T_N$	II.24a II.24b II.24c		75MSWK
	poly sc	AF/P	$a = f(T)$ at 4.2...300 K Diffraction profile (600) at 5.25 K and its simulation (no distortion at $T < T_N$)	II.25 II.26		70M 80KLMV
	sc	AF	(FWHM) Δ vs. δ (simulated tetragonal distortion); $\delta \leq 3 \cdot 10^{-4}$ at 5K	II.27		80KLMV
		AF	a vs. T^2 , $T \leq T_N$	II.28		70M
	sc	AF/P	$\Delta L/L$ vs. T up to 200 K $\Delta L/L \sim m^2$ (sublattice magnetization) $a = f(T)$ at 300...2593 K compared to the MD results	II.29 Inset II.30		77VD2 90HTP1, 00KYYU1
			a) V vs. p up to 34 GPa b) V/V_0 vs. p up to 55 GPa a vs. p up to 1.5 GPa compared to the MD calculation results	II.31a II.31b II.32		85SGB 03LIH 90HTP1, 00KYYU1
	sc	AF	Phonon dispersion relation at 4.2 K	II.33		78DHSB
	sc	AF/P	Elastic constants c_{ij} vs. T at 4.2...290 K, c_{ij} (RT) values	II.34	T10	77VD1, 72GC, 78DHSB
	sc (100) (110) sintered		v_L and v_S velocities (RT), Poisson's ratio 0.263			69WFP
	sc	AF	$\Delta c_{11}/c_{11}^0$ vs. T/T_N compared to theory	II.35		77DV, 77LV
	sc	AF	c_{44}/c_{44}^0 vs. T/T_N compared to m^2 vs. T/T_N	II.36		77VD1, 79L

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UN (cont.)	sc	AF/P	c_{ij} vs. T (at 4.2...280 K)	II.37		85YLGS
	sc		$c_L = (c_{11} + c_{12} + 2c_{44})/2$ vs. B up to 22 T	II.38		90YS
	sc	AF/P	a) Mode velocities (elastic stiffness constants) and b) Grüneisen parameters $\gamma(p, N)$, both as a function of mode propagation direction Young's modulus (E), shear modulus (G), bulk modulus (B_0), Poisson's ratio (σ)	II.39	tab.	86SMSD
	sc	AF/P	χ_m^{-1} vs. T for three main crystallographic directions. Average values: $T_N = 51.5$ K, $\Theta = -249$ K, $p_{\text{eff}} = 2.65 \mu_B$, χ_m vs. T for $T < 100$ K	II.40		90HTP2
	sc	AF/P	a) χ_g vs. T at 4...1000 K along [100], $T_N = 53.1(2)$ K, χ_g vs. T at 50...55 K, along [100], [110] b) χ_v^{-1} and $(\chi_v - \chi_0)^{-1}$ vs. T up to 1000 K (see also LBIII/12c, p.420, Figs. 3 and 4)	Inset II.41a	tab.	77VD2
	poly (irrad.)	P	(see also LBIII/12c, p.420, Figs. 3 and 4)	Inset LB		
		AF/P	χ (in J/T ² kg units) vs. T up to 260 K under different fission doses	II.42		83MTKN
		P	Calculated χ_m^{-1} vs. T in the crystal field framework, fitted to two sets of experimental data	II.43		78LL2 69RD2, 75T
		AF	Magnetic structure of AF I-1 <i>k</i> type, $T_N = 53$ K, $p_0 = 0.75 \mu_B/U$	II.44		65C, 80RBQV
		AF	a) a vs. p up to 3 GPa at 4.2 K, κ (compressibility) = $0.5 (\text{Mbar})^{-1}$ b) Reduced moment $p_s(p)/p_s(0)$ vs. p c) T_N vs. p up to 0.6 GPa (see also LBIII/12c, p.421, Fig.8)	II.45a II.45b II.45c		80FBBV
		AF	$\chi(T)/\chi(T_N)$ vs. T/T_N compared to theoretical prediction for an itinerant antiferromagnet	II.46		79FBD
	thin film	AF→F -Pauli Para AF	Magnetic properties: an induce of a ferro-magnetic component of cluster glass type and finely PP with increasing crystal disorder Calculated magnetic form factor for different moment, m , reduced by pressure	II.47		05RHKW
	sc	AF	INS: Intensity, I , vs. frequency transfer ν Magnetic broad response at 4.2 THz	II.48		83BHJM, 81BMJH
	sc	AF	INS: Spin response at zone center, intensity at (110) rlp vs. ν at 4.2, 40, 70 and 300 K	II.49		79HSBL, 80BMHS, 81BHMJ, 83BMHS
	sc	AF	INS: Distribution of scattered neutrons at 4.2 K vs. frequency ν from constant- Q scans	II.50		84HBSL
	sc	AF	INS: Contours of constant magnetic scattering intensity at 4.2 K	II.51		80BMHS, 82HBSL

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UN (cont.)	sc	AF/P	INS, double-log curves: a) Intensity of the ordering wavevector vs. reduced temperature t and b) Inverse correlation lengths, $\kappa_{\parallel, \perp}$, within and between (001) sheets vs. t , compared to 2D Ising and 3D Heisenberg models	II.52a		80BHMS
				II.52b		82HBSL
	sc	P	a) Critical scattering at $T > T_N$ at (110) rlp b) Inverse correlation lengths κ_1 vs. T .	II.53a II.53b		82HBSL
	sc	AF/P	Log-log plot of square root of the (110) Bragg peak intensity I vs. t . $T_N = 49.5(5)$ K, $\beta = 0.31(3)$	II.54		82HBSL
	sc [100]	AF/P	ρ , $d\rho(T)/dT$ vs. T up to 80 K, $T_N = 50.5$ K (Figs. 5 and 6 in LBIII/12c, p.420)	II.55 LB		76NKMT
	sc [100]	AF/P	a) ρ vs. T up to 70 K fitted to the theoretical formula (indicated) suitable for antiferromagnets, $\rho_0 = 0.2 \mu\Omega\text{cm}$, $\Delta = 162$ K	II.56a		05DTSM
		AF	b) ρ vs. $(T/T_N)^n$, $n = 1, 2$ and 3	II.56b		05DTSM
	sc	AF/P	a) Log-log ρ vs. T , $T_N = 51.7(2)$ K ρ vs. T hump below T_N b) $d\rho(T)/dT$ vs. T up to 75 K, in all cases along three main crystallographic axes	II.57a Inset II.57b		05DTSM
	sc [100]	AF/P	ρ vs. T at 4...300 K, $T_N = 51.7$ K A hump in $\rho(T)$ below T_N	II.58 Inset		77DV, 77VD3
	irrad.	AF/P	a) ρ vs. T up to 100 K b) a , ρ and T_N vs. irradiation dose	II.59a II.59b		80TOMM
	sc		Radiation damage in ion bombarded sample			90TFM
	sc [100]	AF/P	ρ vs. T at 2...100 K under high pressure up to 7 GPa, $p_{\text{cr}} = 3.5$ GPa, $T_N(p) = T_N(0) \cdot (1 - p/p_{\text{cr}})^n$; $n = 0.65$			03NHYT
	sc	AF/P	a) R vs. T at 0 and $B = 8$ T and b) Magnetoresistivity, $\Delta\rho/\rho_0$, vs. T around T_N c) $\Delta\rho/\rho_0$ vs. T up to 65 K, in all cases along three main crystallographic axes	II.60		05DTSM
		P	High temperature (HT) (max. 1600 K) ρ vs. T curves	II.61		64KMGF, 70MFM, 72OKN, 72DC, 83T 90HTP3
	sint- ered	AF/P	See HT-electrical resistivity correlation of results of different authors a) ρ vs. T up to 1000 K 1. $AT^{2.38}$ for $T < T_N$ 2. $\rho_\infty = 142.4 \mu\Omega\text{cm}$ b) Thermoelectric power S vs. T up to 400 K	II.62a II.62b		70MFM
	sc [100]	AF/P	Thermoelectric power S vs. T up to 300 K compared to the sintered data S vs. T up to 60 K for three axes compared to those found for the polycrystalline sample	II.63 Inset		05DTSM, 70MFM, 72OKN

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UN (cont.)	hot-pressed	P	a) Thermoelectric power S vs. T at 77...300 K b) S and el. conductivity σ up to 1100 and 900°C, respectively S up to 1200°C	I.35a I.35b R.38		72OKN 64WP
		poly	Anomalous Hall effect at 4...300 K Thermal conductivity κ vs. T on a log-log plot up to 100 K	II.64		68K1 69RW, 70MFM
	sc [100] [111]	AF/P	a) κ vs. T at 4.2...300 K for $\Delta T \parallel [100]$ and $[111]$ b) κ_{ph} and κ_{el} contributions calculated on the basis of the Wiedemann-Franz (WF) law Calculated κ_L vs. T by the MD method at 300...2000 K and κ_{el} found from the WF law The $(\kappa_L + \kappa_{el})$ sum is compared to the experimental values κ_{tot} of many authors Thermal conductivity and el.resistivity at 77...1000 K $\kappa_{el}(T)$ and $\kappa_L(T)$	II.65a II.65b II.66 R.39A R.39B		05DTSM 00KYYU3 76KTM1
		P				
		AF	C_p vs. T at 5.7...60 K, $T_N = 52$ K	II.67		66WB
		AF	C_p vs. T^2 at 1.3...4.6 K and in $B = 1.2, 3.5$ T $\gamma(0) = 49.58$ mJ/mol K ² , $\Theta_D = 324(7)$ K	II.68	T3	68SDFB
	annealed					
	non-annealed		$\gamma(0) = 48.14$ mJ/mol K ² , $\Theta_D = 322(13)$ K			
	UN, (ThN)	AF/P	a) C_p vs. T at 2...300 K and the lattice contribution C_L being $C_p(T)$ of ThN (see Fig.II.7) b) $[C_{magn} + \gamma(T) \cdot T]$ vs. T Schottky anomaly	II.69a II.69b		66WB, (72DDD) 72DDD
		AF/P	a) C_p vs. T up to 300 K and calculated contributions: C_D , C_E (see Fig.II.7), and $(C_p - C_v)_d$ b) $\Delta C/T$ vs. T compared to the calculated results by applying the band model [86YLS]	II.70a II.70b		90YS
UN		AF/P	Magnetic entropy, S_{magn} , vs. T and ΔC_p vs. T using both C_{ph} as $C_p(\text{ThN})$ and $C_p(\text{calc.})$	II.71 Inset		Compil.
		AF	Calculations of C_{magn} by MFA for the U5f ² configuration and CEF on spin-disorder spins			71D
		P	C_p vs. T up to 1000 K of many authors-empirically correlated Correlated C_p vs. T at 298...2628 K compared to the sum of calculated contributions $C_v + C_d + C_{el}$	II.72 II.73		90HTP4 Compil. 90HTP4, 00KYYU1
		poly	Optical properties (experimental)	II.74A		71AW
	sc	P	a) optical conductivity σ_{xx} b) MO-Kerr effect c) optical conductivity σ_{xy} vs. photon energy	II.74B		05MBST
		P	Calculated optical conductivity $\sigma_{xx}^{(1)}$ vs. $h\nu$	II.75		05O

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UN (cont.)		P	Knight shift $K(^{14}\text{N})$ vs. χ_m at 77...300 K	II.76		69K
		AF/P	$K(^{15}\text{N})$ vs. χ_m at 77...300 K			70KV
			a) Muon spin relaxation rate, λ , vs. T	II.77a		93MKKA
			b) Frequency shift $\Delta\nu$ vs. T	II.77b		
$\text{UN}_{1-x}\text{C}_x$			A) DOS by RKKR	II.78A		91SM
$x = 0, 0.6, 0.8, 1.0$			B) calculated XPS	II.78B		
$0 \leq x \leq 1$			$a_0 = f(x)$	II.79		75C
			see also			59WS,
$0 \leq x \leq 1$			Elastic constants			69LPSL
$x = 0.6$			Scattering function $S(Q, \omega)$ vs. ω	II.80		70PGD
$0.5 \leq x \leq 0.98$			χ_g vs. T at 80...300 K			78WDM
$0 \leq x \leq 1$	AF/P/ WTD		χ_m vs. T up to 900 K	II.81		71OS
$x = 0.14, 0.22$	AF/P		χ_m^{-1} vs. T up to 300 K	II.82		72DC
$x \leq 0.11$	AF		p_0 vs. x from NDS	II.83		74LLRM
$0 \leq x \leq 1$	AF/P		ρ vs. T at:			74LLRM
			a) 4...300 K	II.84a		72DC
			b) 4...900 K	II.84b		
$0 \leq x \leq 0.8$	AF/P		ρ vs. T^2 , $T \leq 200$ K	II.85		78B
$x \leq 0.2$	AF		$T_N, \rho_{\text{magn}}(\text{at } T_N)$ vs. x	II.86		83TMMK,
						74LLRM,
$0 \leq x \leq 1$	AF/P		a) ρ vs. T , $T \leq 100$ K	II.87a		72DC
			b) $d\rho(T)/dT$ vs. T	II.87b		83TMMK
$x = 0.04$	AF/P		a) ρ and $d\rho/dT$ vs. T up to 90 K	II.88		76NKMT
$x = 0.09$			b) ρ vs. T up to 90 K			
$0 \leq x \leq 1$	P		a) κ vs. T at 100...900 K	II.89a		74KTM
			b) κ vs. x at 100...900 K	II.89b		
$0 \leq x \leq 1$	AF		C_v/T vs. T^2 at 1.5...10 K	II.90		70DC, 72DC
$0 \leq x \leq 1$	AF		$\gamma(0)$ and $\chi_m(4.2 \text{ K})$ vs. x	II.91		72DC
$0 \leq x \leq 1$ and $\text{UC}_{1-y} \text{ y} \leq 0.3$	AF		Calculated γ_b vs. x by RKKR(Gr) method, compared to such dependence of the experimentally obtained results	II.92		91SM
						72DC
$\text{UN}_{1-x}\text{C}_x$		P	NMR: $K(^{13}\text{C})$ vs. χ_m	II.93		76BD
$x = 0.4, 0.6, 0.8$ and 1.0						
$x = 0.4$		P	$K(^{13}\text{C})$ and χ_m vs. T at 4.2...300 K	II.94		76BD
$(\text{U}_{1-x}\text{A}_x)\text{N}$			Pseudo-ternary systems UN-AN, A = An, Ln, T - solubilities			86H
$(\text{U}_{1-x}\text{Ln}_x)\text{N}$			$a_0 = f(x)$			79EWV
(Ln=La, Ce, Pr, Nd, Sm, Gd, Dy, Er)						
$0 \leq x \leq 1$						
AnN (An = Np, Pu, Am)			DOS and NOS by a) LMTO and b) RLMTTO calculations	II.95		84B3, 86BJES

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpN		F/P	$a=f(T)$, rhombohedral distortion at $T_C=87$ K	II.96		74MLKR
		P	χ_m^{-1} vs. T at 90...300 K, $\Theta_p=100$ K, $p_{\text{eff}}=2.4\mu_B$ (see in LBIII/12c, p.434, Fig. 60)	II.97	T9	74LM
	sintered	F/P	$\rho(T)/\rho(300\text{ K})$ vs. T up to 300 K, $T_C=87$ K, $\rho(\text{RT})=3100\mu\Omega\text{cm}$ (see in LBIII/12c, p.434 Fig.61)	LB	T2	74ADHL
		F/P	ρ vs. T up to 900 K, $T_C=84$ K	II.98		74ADHL
AnN (An = U, Pu)	P		C_p vs. T at 300...2600 K at 350...1600 K and at 740...1600 K for NpN	II.99 II.100		68DL 98SA 94AOS, 02NA
NpN (UN, PuN)			C_p vs. T at 350...1000 K compared to UN and PuN	II.101		02NA
NpN (An,An')N (U _{1-x} Pu _x)N			Hyperfine field content H_{orb} vs. p_{Np} a_0 vs. composition at RT $a=f(x)$	I.43 II.102		72DK 98SA 63A
AnN (An = U, Np, Pu); (An _{1-x} An' _x)N	P		a) κ vs. x at 1273 K b) κ vs. T at 700...1600 K	II.103a II.103b		98SA, 90HTP3, 94AOS, 92ASIO
PuN			Fabrication and physical properties			76ACKR
PuN _x $x=0.89$, PuN _{0.56} C _{0.28}	P		$a=f(T)$ at 50...345 K	II.104		78BDS
PuN	P		$a=f(T)$ at 300...1200 K (experiment) and at 300...3000 K by MD calculations χ_m vs. T at 4...1000 K, $T_N=13$ K NDS: no indication of magnetic order at 4.2 K ($T_N=13$ K)	II.105		63C, 62RS 00KYYU2 69RD2 84BCFM
²³⁹ PuN						
PuN			κ vs. T at 700...1700 K	II.106		92ASIO
	P		κ_L vs. T at 300...2000 K by MD calculation a) C_p vs. T at 11...22 K			00KYYU2 78HLMM
	AF		b) C_p/T vs. T^2 at 10...16.5 K, $\gamma(0)=66\text{ mJ/mol K}^2$, $\Theta_D=255$ K C_p vs. T at 10...300 K C_p vs. T at 298...1562 K	II.107a II.107b II.108		78HLMM 78O
²⁴¹ AmN			High-temperature thermodynamic functions Synthesis of compound $a_0=0.5000(4)\text{ nm}$ (Am+NH ₃) $a_0=0.5005(5)\text{ nm}$ (Am+N ₂)			67A
	thin film		a) UPS and b) 4f core XPS spectra, both compared to Am metal	II.109a II.109b		05GOHW
		TIP	χ_g vs. T at various magnetic fields, $\chi_m(H=\infty)=777\cdot 10^{-6}\text{ emu/mol}$	II.110		76KCMM

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
²⁴⁴ CmN		F/P	a) Squared magnetization ratio $[\sigma(T)/\sigma(0)]^2$ vs. T , $T_C = 109$ K	II.111a		76KCMM
²⁴⁸ CmN		P	b) χ_g^{-1} vs. T , $\Theta = 109$ K, $p_{\text{eff}} = 7.02 \mu_B$	II.111b		
		P	χ_m^{-1} vs. T ($B = 3$ T), $\Theta = 129$ K, $p_{\text{eff}} = 6.8 \mu_B$ Squared magnetization σ^2 vs. T at $B = 0.5$ and 3 T, $T_C = 129$ K, $p_s = 1.7 \mu_B$ (at 5 T)	II.112 Inset	T2	87HN, 81NHPD
²⁴⁹ BkN		F/P	χ_m^{-1} vs. T at 1.6 T and up to 150 K, $\Theta = 68$ K, $p_{\text{eff}} = 7.9 \mu_B$	II.113	T2	87HN, 81NHH
		F/P	σ^2 vs. T at $B = 0.16$ T, $T_C = 88$ K χ_m^{-1} vs. T up to 330 K, $\Theta = -41$ K, $p_{\text{eff}} = 10.3 \mu_B$ χ_m vs. T at $B = 0.5$ and 3 T, $T_C = 25(5)$ K	Inset II.114 Inset	T2	87HN, 86NMHP

III. Actinide monophosphides

Th–P			Phase diagram	III.1		67JB
ThP _x x>1			The phosphorous-rich phase (neutron diffraction)	III.2		81LT
ThP			V/V_0 vs. p up to 50 GPa		T5	89SGBL, 95B
			Transformation to CsCl-type at ≈ 30 GPa, $\Delta V/V = 12\%$; B_0 and B_0'		T6	
			a) C_p vs. T up to 300 K	III.3a		85BLGT
			b) C_p/T vs. T^2 at $5 \dots 17$ K	III.3b		
			$\Theta_D = 228$ K, $\gamma(0) = 2.9$ mJ/mol K ² $\Theta_D = 214$ K, $\gamma(0) = 2.89$ mJ/mol K ² TOF spectrum compared to that of UP			79MBA 74W
			³¹ P – NMR: $T_1 \cdot T$ vs. T	III.13a III.4		69KM 68K2
ThP _{0.95}		Dia	Knight shift $K_c = 4.4(2) \cdot 10^{-4}$, $\Delta\mu_0 H = 85(10) \cdot 10^{-6}$ T			
UP _{1.0} , U–P,			Phase diagram, $a_0 = 0.55889(2)$ nm, $T_m = 2850^\circ\text{C}$	III.5		68BW
			UPS at $h\nu = 40$ eV	R.23		87R2
UP, (UAs)			Growth of single crystals			83HHR
UP _{1-x}			a) a_0 for different heat treatment temperatures b) thermal expansion $\Delta l/l$ at $20 \dots 980^\circ\text{C}$	III.6a III.6b		66B
UP	irrad.	AF/P	$\Delta a/a_0$ vs. T around T_N for non-irradiated and irradiated samples	III.7		90MTHK
			V/V_0 vs. p		T5	86LORV, 86VORL, 86VRL,93L1
			a) up to 25 GPa	III.8a, R.24		88SGBD
			b) up to 51 GPa	III.8b		95B
			B_0 and B_0'		T6	76VKKK
			see also this dependence up to 16 GPa			87IBDD
			a) X-ray absorption spectra – L ₃ -edge at $5.9 \dots 43.0$ GPa, $\log I_0/I$ vs. E_r	III.9a		
			b) ΔE (white line energy) vs. p compared to V/V_0 vs. p	III.9b		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UP (cont.)		AF/P	Thermal expansion $\Delta l/l$ at two magnetic phase transitions: a) T_t (AF I- $2k \rightarrow$ AF I- $1k$) and at b) T_N (see also LBIII/12c, p.423, Fig.16)	III.10		79SG
		AF/P	$a = f(T)$ up to 300 K, no sign of distortion at T_N $a_0 = 0.55888(1)$ nm	III.10a III.10b LB III.11		70M 67KM2, 68DE
			Calculated phonon dispersion curves a) TOF spectrum compared to that of ThP b) Phonon spectrum	III.12 III.13a III.13b	T1	86JHBD 74W
		AF/P	Summary of magnetic transitions in UP χ_m vs. T	III.14		63TT, 74T compil.
	sc	AF/P	χ_m^{-1} vs. T along three main axes compared to data on powder sample	III.15		79BHV 74T, 74TL
		AF/P	χ_g vs. T near T_N compared to that of UAs	III.16		85FT
	irrad.	AF/P	χ and χ^{-1} vs. T for non-irradiated and irradiated samples	III.17		87MSNH
		P	$(\chi_m - \chi_0)^{-1}$ vs. $(T - \Theta_p)$ at (1) 130...950 K and (2) 180...950 K; $\Theta_p =$ (1) 32.3 K and (2) 37 K, $p_{\text{eff}} =$ (1) 3.17 μ_B and (2) 3.26 μ_B ; $\chi_0 =$ (1) 42.4 $\cdot 10^{-6}$ emu/mol and (2) 40 $\cdot 10^{-6}$ emu/mol	III.18		70ADJM, 74TL
		P	χ_m^{-1} vs. T up to 1000 K compared to the calculated susceptibility in full J -mixing CF theory	III.19		74TL
	sc	AF	I_{magn} (110) vs. T around T_t ($= 22.44$ K)	III.20		69HMAZ, 70HMAH
		AF	Theoretical evaluation of the transition AF I- $2k \rightarrow$ AF I- $1k$ at T_t	III.21		71LW
		AF	Plane projections of the single- k and double- k types of magnetic structures	III.22		85BQRH
	sc	AF/P	a) I_{magn} vs. T around T_N ($= 122$ K). First order transition	III.23a		85BQRH
		AF	b) Domain variation in applied magnetic field of 2.5 T	III.23b		
		AF	Theory: the electron delocalization model (EDM) – thermodynamical data	III.24		73RE
		AF/P	Sublattice magnetization M/M_0 (based on NMR data) and χ_g both vs. T described by EDM	III.25		73RE
		AF	Hybridization-mediated interaction theory (HMIT): Magnetic moment p_U and free energies F vs. T of the AFI- $1k$ and $2k$ structures	III.26		85TC
		AF	Calculated imaginary dyn. susceptibility $\chi''(\omega)$ vs. ω for AF I-phase at 4.2 K	III.27		88HC, 89HCL, 93HC

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UP (cont.)	sc [110]	AF	a) Magnetic moment p_U vs. H up to 20 T for $T < T_t$ ($= 22.5$ K)	III.28a		80VWB
			b) p_U vs. T at 2...10 T and temperatures up to 130 K	III.28b		
			c) (H, T) MPD for fields up to 16 T and 36 T	III.28c		
	poly sc	AF	d) p_U vs. H up to 38 T at 1.3, 20 and 77 K	III.28d		78ST
		AF	p_U vs. H up to 18 T at 4.2 K in three directions compared to the powder data at 1.3 K	III.29		80VWB 78ST
	sc	AF	a) Neutron intensities I vs. T around T_t upon pressures up to 4.1 GPa	III.30a		96MGBV
			b) (T, p) MPD, $dT_N/dp = -1.3$ K/GPa; AF I-2k destabilized by applied pressure	III.30b		
	sc	AF/P	Critical neutron scattering around T_N ($= 121.0$ K) and above T_N	III.31 III.32		98WSVC
	sc	AF	RXMS: $\log I_x$ vs. T at 40... T_N	III.33		97SLVG
	sc	AF/P	RXMS: critical scattering around T_N ($= 120.5$ K)	III.34		97SLVG
	sint- ered	AF	a) ρ vs. T at 4.2...78 K	III.35		76NKMT
			b) ρ and $d\rho(T)/dT$ vs. T around T_t			
			c) ρ vs. T^2			
	melt. sc		See also ρ vs. T			74TK 84SFV
	sint- ered	AF/P	a) χ_g and ρ vs. T up to 280 K	III.36a	tab	87M
			χ_g , ρ and $d\rho(T)/dT$:			
			b) around T_N ($= 123.3$ K)	III.36b		
			c) above T_N up to 150 K	III.36c		
	sc irrad.	AF/P	d) at 150...250 K	III.36d		
			Normalized (at 285 K) ρ vs. T for non-irradiated and irradiated samples	III.37		87MSNH
	sc [110]	AF/P	a) ρ vs. T at $\mu_0 H = 0$ and 14.5 T	III.38a		87TFSV
			b) Magnetoresistivity $\Delta\rho/\rho_0$ vs. T calculated from figure (a)	III.38b		Compil.
	sc [110]	AF/P	ρ vs. T (at 4.2, 20 and 67 K) vs. H up to 15 T	III.39		87TFSV
	sc [001]	AF/P	ρ vs. T up to 140 K under stress at 1bar... 1.2 kbar	III.40		90BBTN, 93FG
			Thermoelectric power S vs. T at 0...900°C	R.38B		64WP
	sc	AF	The ratio of pressure coefficient dT_0/dp per distant (U–U) coefficient dT_0/dD compared to other uranium pnictides (T_0 – ordering temp.)	III.41		91HWFm
	sint.	AF/P	Thermal diffusivity α (at 300...1000 K) and calculated thermal conductivity κ at 100...1000 K	III.42a III.42b, R.39A		74KTM1 76KTM1
			See also recalculated κ vs. T from α of Ref. 67MK			
		AF/P	Thermal conductivity separation into κ_{ph} and κ_{el} by assuming $L(T) = L_0$ Three different ways of the above separation.	III.43 R.39B		76KTM1

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UP (cont.)	sc	AF	Log-log C_p vs. T for $T < 1$ K, log-log C_N vs. T for $T < 0.5$ K C_p vs. T at 11...320 K $T_t = 22.5$ K, $T_N = 121$ K	III.44, R.40a III.45		84RO, 85ROV2 67CDJM
	sc		C_p/T vs. T^2 at 0.12...30 K $\Theta_D = 319.(4)$ K, $\gamma(0) = 32.1(1.1)$ mJ/mol K ²	III.46, R.41	T3	85ROV2
	poly		$\Theta_D = 233$ K, $\gamma(0) = 32$ mJ/mol K ² S_{magn} vs. T up to 300 K	III.46 III.47		05TM 85BLGT
		AF/P	A) C_p vs. T at 80...1080 K and around T_N	III.48A Inset		75YTM
		P	B) ΔC_p vs. T , calculated C_{Sch} vs. T ($C_p - 6R$)/ T vs. T^{-3} plot at 220...670 K used to determine Θ_∞ and γ_p ($= 7.4$ mJ/mol K ²)	III.48B III.49		79YT
	sc (100)	AF	Optical properties: a) θ_K and ε_K (at 25 K and 10 T) vs. $h\nu$ b) opt. conductivity σ_{xx} and c) σ_{xy} both vs. $h\nu$ Calculated <i>ab initio</i> optical conductivity	III.50		86R
	sc	AF/P	Polar Kerr-rotation θ_K vs. T at 10 T and $h\nu = 1.85$ eV	R.44 III.51		05KO 86R, 90RS
		P	$K(^{31}\text{P})$ vs. χ_g $\mu_0 H_{\text{hf}} = 2.16$ T/ μ_B , $\chi_0 = 1.6 \cdot 10^{-6}$ emu/g \equiv $0.43 \cdot 10^{-3}$ emu/mol	III.52		67SGB
		P	$K(^{31}\text{P})$ vs. χ_m , $\chi_0 = 0.50 \cdot 10^{-3}$ emu/mol	III.53		71FG
		P	NMR:a) $T_1(^{31}\text{P}) \cdot T$ vs. T plot for 4, 8 and 12 MHz b) $(T_1 \cdot T)^{-1}$ vs. K^2 plot for 4, 8 and 12 MHz $T_1 T K^2 = 38 \cdot 10^{-6}$ sK	III.54a III.54b		69KM, 69KLB 70KBM 69KBM, 69KCB
		P	a) $T_1(^{31}\text{P})$ vs. T up to 800 K b) Relaxation rate $1/\tau_f$ vs. T	III.55a III.55b		87TNYK 93STMV
		AF	a) Log-log plot $T_1^{-1}(^{31}\text{P})$ vs. T b) Korringa product $(T_1(^{31}\text{P}) \cdot T)^{-1}$ vs. T for $T < T_t$ ($= 21.3$ K)	III.56a III.56b		94T
		AF	NMR (^{31}P) frequency, ν , vs. T below 80 K ($T_t = 22.3$ K) ν vs. T^2	III.57 Inset		94T
		AF	Dynamical magnetic response, $\text{Im } \chi(\mathbf{q}, \omega)$ vs. ω for various Γ (Kondo-coupling) values	III.58		94T
		AF/P	0.1 T-TF-damping factor, λ , vs. T up to 150 K a_0 vs. x	III.59 III.60		89AAGH 81T
	U _{1-x} Th _x P 0 ≤ x ≤ 1 0 ≤ x ≤ 1	AF/P	a) (T, x) MPD (see also Ref.73 AIK) b) Neutron diffraction pattern at 4.2 and 88 K	III.61a III.61b		81T, 81TLM
	x = 0.23 0 ≤ x ≤ 0.44	AF/P	a) χ_g vs. T at 4.2...300 K b) χ_g vs. T at 4.2...200 K	III.62a III.62b		81T
	0.4 ≤ x ≤ 0.87 0.15 ≤ x ≤ 0.87	AF/P	χ_g^{-1} vs. T at 4.2...300 K Θ and p_{eff} vs. x	III.63 Inset		81T 81T, 68CSPS

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
$U_{1-x}Th_xP$ (cont.) $x = 0.9$		P	a) p_U vs. H (up to 14 T) at 4.2...60 K b) Theoretical p_U vs. H for $U^{3+}(5f^3)$ and $U^{4+}(5f^2)$ free-configurations (see also Ref. 79CV for $U_{0.1}Th_{0.9}Sb$)	III.64a III.64b		81T 85TC
$U_{1-x}R_xP$ $R = Pr, Nd$ $0 \leq x \leq 1$		AF/P	a,b) (T, x) MPD	III.65a,b		78TNLM
$R = Nd$, $x = 0.78$ $R = Pr, Nd$ $0 \leq x \leq 1$		AF	c) Neutron diffraction pattern at 4.2 K, I vs. T d) An average p_0 vs. x	III.65c Inset III.65d		
$U_{1-x}Pr_xP$ $0 \leq x \leq 0.1$ $0.1 \leq x \leq 0.43$ $0.48 \leq x \leq 0.88$ $0 \leq x \leq 1$ $x = 0.68, 0.78, 1.0$ $0.18 \leq x \leq 0.58$		AF P induced F	a) χ_g vs. T , up to 60 K around T_i b) χ_g vs. T up to 150 K c) χ_g vs. T up to 150 K $\chi_g(T_N)$ vs. x χ_m^{-1} vs. T up to 800 K Magnetization σ vs. H up to 14 T	III.66a III.66b III.66c Inset III.67 III.68		81T 78TNLM 84NT 85NMT
$U_{1-x}Nd_xP$ $0.1 \leq x \leq 0.38$ $0.48 \leq x \leq 0.95$ $0 \leq x \leq 1$ $0.38 \leq x \leq 1$ $0.18 \leq x \leq 1$		AF/P P AF/ind uced F	a) χ_g vs. T up to 150 K b) χ_g vs. T up to 150 K $\chi_g(T_N)$ vs. T χ_m^{-1} vs. T up to 800 K Magnetization σ vs. H up to 14 T	III.69a III.69b Inset III.70 III.71		78TNLM 84NT 85NMT
$U_{1-x}R_xP$ $R = Pr, Nd$ $0 \leq x \leq 1$ $R = Th, Pr, Nd$ $0 \leq x \leq 1$			Θ and p_{eff} vs. x Characteristic temperatures vs. a_0, d_{U-R}	III.72 III.73		78TNLM 80T1
$Nd_{1-y}U_yP$ $0.2 \leq y \leq 0.6$ $y = 0.7$		AF	INS: a) energy spectra of neutrons at 5 K b) energy spectra at 5, 80 and 293 K	III.74a III.74b	tab tab	79MLNT
NpP		AF/P	$a = f(T)$ (see also LB III/12c, p.434, Fig.63) $V/V(300 K)$ vs. T	III.75 LB R.45		73MLKR, 74LM 74LM
	poly, sc [100] sc [110] poly sc	AF/P AF	a) p_{Np} vs. T (up to 300 K) at 1 T b) χ_m^{-1} vs. T (up to 300 K) $T_N = 120 K, \Theta = 104 K, p_{eff} = 2.85 \mu_B$ $\rho(T)/\rho(300K)$ vs. T a) p_{Np} vs. H up to 9 T at 4.2 K along [100], [110] and [111] b) p_{Np} vs. H at 3.5...5.8 T at 1.5 K along [100] c) p_{Np} vs. H between 4...5 T at 20 K along [111] Three critical fields H_1, H_2, H_3	III.76a III.76b III.77a III.77b III.77c		74ADHL, 92MVRS, 94VM 74ADHL 92MVRS 02WCRL

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpP (cont.)	sc [100]	AF	p_{Np} vs. T at various magnetic fields up to 7 T	III.78		02WCRL
		AF	p_{Np} vs. T at 1 T, both at 4.2...300 K	Inset		
	sc [100]	AF	Harmonic amplitudes 1 st and 3 rd order vs. T (see LB III/12c, p.434, Fig.65)	III.79		73LDMN
		AF	(H , T)-MPD's	LB		
	sc [100]	AF	RXMS: commensurate magnetic structure (3+, 3-) without (a) and with inner distortion (b)	III.80a		92MVRS
		AF		III.80b,c		02WCRL
	sc	AF	RXMS: a) Lattice scans vs. T	III.81		02LPBL
		AF	b) Wavevector k vs. T	III.82a		02LPBL
	AF	AF	RXMS: Integrated intensity I_x of 1 st , 2 nd and 3 rd - order harmonics vs. T	III.82b		
		AF		III.83		02LPBL
PuP	AF	AF	A) Mössbauer (^{237}Np) hyperfine spectrum at 5 K	III.84A	tab.	73LDMN
		AF	B) Model of two LW-moment arrangements	III.84B		
	P	P	$1/[K_{\text{NpP}}-K_{\text{ThP}}]$ (^{31}P) vs. T	III.85		74LF
	P	P	NMR: $T_1(^{31}\text{P}) \cdot T$ vs. T up to 350 K	III.86		74LF
	F	F	Synthesis of compounds.			57G
			$a_0 = 0.5644(4)$ nm			
			a) $a = f(T)$, tetragonal distortion for $T < T_C$ ($= 125$ K)	III.87a		79MLHK
	P	P	b) $(c-a)/a$ vs. T	III.87b		
			c) FWHM vs. T (see LB III/12c, p.436, Fig.76)	III.87c		
	P	P	χ_m^{-1} vs. T dependence compared to that calculated including IC-mixing	III.88		78JELR
AmP	F/P	F/P	sc-local density approach using an embedded cluster model			82E, 85E, 85LE
			Hysteresis loop at 4.2 K along [100]	V.126c		92MV
	P	P	χ_m^{-1} vs. T up to 300 K	III.89		69LFFK
	F	F	p_s and χ_m^{-1} vs. T compared to those calculated using an intermediate coupling (IC) approach	III.90		74LF
			Sc-local density approach using an embedded cluster model			82E, 85E, 85LE
	F	F	a) Magnetization σ vs. T ($T_C = 126$ K)	III.91a		69LFFK
			b) $\sigma(T)/\sigma_s$ vs. T/T_C	III.91b		
	F	F	ND: $p_{\text{Pu}} f(Q)$ vs. Q ($= \sin\theta/\lambda$) at 4.2 K, $p_0 = 0.77 \mu_B$, CEP, $\Delta p_{\text{Pu}} = -0.35 \mu_B$	III.92		76LL, 76LR
	sint-ered	P	a) ρ vs. T ,	III.93a		67KM1
			b) thermoel. power S vs. T , both at 300...1000 K	III.93b		
CmP, (CmSb)	F/P	F/P	a) C_p vs. T , at 11.4...300 K	III.94a		85HJLM
			$T_C = 125$ K, $\gamma(0) = 12.8$ mJ/mol K ² , $\Theta_D = 187$ K, $\Theta_E = 320$ K			
	F	F	b) ΔC vs. T at 70...160 K, $T_C = 125.5(5)$ K	III.94b		
			NMR: a) $1/[T_1(^{31}\text{P}) \cdot T]$ vs. K_f	III.95a		69F, 70F2
	F	F	b) $[K_{\text{PuP}}-K_{\text{ThP}}]^{-1} (^{31}\text{P})$ vs. T	III.95b		69LFFK
			Partial DOS by SIC-LSD approximation	III.96		01PSTS
	F	F	Normalized magnetization $[\sigma(T)/\sigma(0 \text{ K})]^2$ vs. T , $T_C = 73$ K	III.97		81NHPD
	F	F				

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
IV. Actinide monoarsenides						
AnAs (An=Th...Cm)			Bond length, cohesive energy and bulk modulus calculated from Hartree-Fock theory with relativistic correlations			87HS
(An = U, Np)			L ₃ -edge X-ray absorption white line shift compared to respective dioxides	IV.1		87KKBS1, 87KKBS2
(An = Th...Pu)			Lattice parameter and interatomic distances at p_0 (ambient pressure) and p_t (B1/B2-transi- tion), variations on Z (atomic number An)	IV.2		89DBSP
(An = Th...Pu)			B_0 and B_0' vs. $Z(\text{An})$	IV.3	T6	89DBSP, 95B
Th-ThAs			Phase diagram, $T_m = 2780^\circ\text{C}$	IV.4		68B
ThAs			Synthesis, $a_0 = 0.5960\text{ nm}$			55F
			V/V_0 vs. p up to 43 GPa	IV.5		88GSBD
			TOF spectrum at RT	IV.6		82LLMM
			Spectroscopic function $S(E, \theta)$ vs. E at 150 K	IV.40		82LLMM
			C_p vs. T up to 300 K	IV.56		80BTLM
PaAs			5f-electron contribution to bonding by sc- LMTO method			80BCSR
	sc	TIP	$\chi_m = 460 \cdot 10^{-6}\text{ emu/mol}$ at 4.2...300 K			80BCSR
U-UAs			Phase diagram, $T_m = 2705^\circ\text{C}$	IV.7		68BT
UAs			a) Energy band structure by LMTO, the 5f states treated as core states	IV.8a		93KYCS
			b) Partial DOS for the U 6d and As p-bands	IV.8b		
UAs			Growth of single crystals			83HHR
			Calculated L ₃ -XANES with different types of scattering paths compared to the experimental results	IV.9		87KKBS2
UAs, (USb)			Comparison of experimental and calculated L ₃ -edge XANES	IV.10		87KKBS1, 95HRB
UAs	sc (100)		PE: energy distribution curves (EDC) at RT, $h\nu = 5...40.8\text{ eV}$	IV.11		80GHOG
	sc		UPS at $h\nu = 40\text{ eV}$	R.23		87R2
	sc		XPS and BIS spectra	IV.12		80B
	sc		U (a) and As (b) electron core levels	IV.13ab		80GHOG
	sc	AF	a and FWHM (800-reflection) vs. T at 60... T_N (= 126 K)	IV.14		80KLMV
			γ -ray diffraction, no evidence for distortion at T_t and T_N			80BFMR
	sc		Phonon dispersion curves.	IV.15		80SLV,
			Elastic constants and		T10	83SLV
			radial and tangential forces		T11	
			V/V_0 vs. p	IV.16		89SGBD
			1) up to 55 GPa, B_0 and B_0'		T6	88LVRR
			2) up to 25 GPa for			
			B1-phase, $B_0 = 100.7(2)\text{ GPa}$, $B_0' = 2.7(3)$			
			B2-phase, $B_0 = 121.6(5)\text{ GPa}$, $B_0' = 2.0(5)$			
			$V_0^{B2}/V_0^{B1} = 89.2(5)\%$			

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UAs (cont.)			V/V_0 vs. p up to 22 GPa Theory: a) Difference in Gibbs free energy ($\Delta G = G_{B1} - G_{B2}$) vs. p b) Comparison of experimental and calculated results for $V/V_0 = f(p)$	R.24 IV.17a IV.17b		93L1 97JS 88LVRR, 97JS
UAs, (UP) UAs		AF/P P	χ_g vs. T curve near T_N compared to that of UP χ_m^{-1} vs. T up to 1000 K compared to its calculated dependence by J -mixing based on the CF-IC theory	III.16 IV.18		85FT 74TL
	sc	AF/P	χ_m^{-1} vs. T up to 1180 K, $\Theta_p = 47$ K, $p_{\text{eff}} = 3.43 \mu_B$, $\chi_0 = 34 \cdot 10^{-6}$ emu/mol	IV.19		98VMLR
	sc	AF/P	χ_m^{-1} vs. T up to 280 K a) along three axes [100], [110] and [111] b) along [100] in two magnetic fields Relative sublattice magnetization, σ/σ_0 , and χ_g vs. T fitted to EDM	IV.20a IV.20b IV.21	T2	84RLB, 92MV 78BV
	sc	AF	ND: p_U vs. T around T_t ($= 63.5$ K), $p_U = 2.20 \mu_B$ at 4.2 K and $1.93 \mu_B$ at 78 K Other ND studies which allowed to determine the AF IA magnetic structure.	IV.22		81SLSV 67TMZL, 68WHC, 68LKB, 70LMPT
	sc [110]	AF	$I(201)$ vs. T around T_N ($= 123$ K) for single domain crystal	IV.23		80RBBT, 81SLSV
	sc [001]	AF	A) $I/I_0(201)$ at 70 K and $I/I_0(20\frac{1}{2})$ at 50 K corresponding to AF I and AF IA phases vs. uniaxial pressure p B) Magnetic structure AF IA- $2k$ and its projection onto the basal plane	IV.24A IV.24B		80RBBT
	sc	AF	$I_{\text{magn}}(11\frac{1}{2})$ and $I_{\text{magn}}(\frac{1}{2}11)$ vs. T around T_t ($= 62$ K) at 8 T applied along $[1\bar{1}0]$	IV.25		85RBQV
		AF	Theory: p_U vs. T for AF IA- $2k$ and AF I- $1k$ structures calculated by hybridization-mediated interaction (HMI) model Transformation properties on the basis of RG	IV.26		85TC
		AF	Calculated $\chi''(\omega)$ vs. ω for the AF I-phase at 11 K	IV.27		76PM 88HC, 93HC
	sc	AF	p_U vs. H up to 16 T along the three main axes	IV.28		85RBQV
	sc	AF	a) p_U vs. H up to 15 T along the three main axes b) (p_U, T, H) MPD	IV.29a IV.29b		79BVB
	sc	AF	p_U vs. H at 60 K, up to 15 T along the three main axes	IV.30		78BV
	sc [001]	AF/Fi/ P	a) (H, T) MPD, $T_N = 124.5$ K at $H = 0$ b) Projection of the magnetic structures occurring in MPD of UAs	IV.31a IV.31b		82RBQV

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UAs (cont.)	sc	AF	a) ND: $I(20k)$ for $H \parallel [001]$ at 4.2 and 10 K and $k = 0.5 \dots 0.66$	IV.32a		82RBQV
		AF/Fi/ P	b) $I(20k)$ and $I(k20)$ vs. T for $H \parallel [001]$ at 40...130 K and at 9.7 T	IV.32b		
		AF/Fi/ P	p_U vs. H up to 38 T at 1.3 and 77 K	IV.33		78ST
	sc	AF/Fi/ P	a) p_U vs. T around T_N at 2...13 T	IV.34a		80RBBT
			b) (H, T) MPD around T_N , $H \parallel [001]$ in both cases	IV.34b		
	sc	AF/Fi/ P	A) p_U vs. T around T_N at 4.04 and 7.07 T and pressures up to 0.8 GPa	IV.35A		80RBBT
			B) (T, p) MPD in two above fields, $H \parallel [001]$	IV.35B		
	sc	AF	ac magnetic susceptibility (χ_{ac}) around T_N	IV.36		80RBBT
			a) without and b) with uniaxial stress applied along $[001]$			
		AF/Fi/ P	a) Summary (T, H, p) MPD	IV.37a		85FT
			b) Theory: MPD by renormalization group approach	IV.37b		84S2
	sc	AF/P	ND: $I(110)$ and $I(120)$ vs. T at pressures of 0, 3.1, 5.0 and 5.6 GPa	IV.38		95GMAL, 98BDGI
	sc	AF/P	(T, p) MPD up to 17 GPa determined by ND and resistivity	IV.39		98BDGI, 94GMSR
		AF/P	Spectroscopic function $S(E, \theta)$ vs. E at 80 and 150 K compared to those of ThAs at 150 K	IV.40		82LLMM
	sc	AF	INS: a) $I(110)$ vs. frequency at 10, 60 and 80 K and b) $I(001)$ vs. frequency at 10 and 80 K	IV.41a IV.41b		81L, 80SLV
		AF/P	a) $\chi(Q) \cdot T$ vs. Q at 80 and 150 K	IV.42a		82LLMM,
			b) $I/2$ vs. Q	IV.42b		74TL
			c) $I/2$ vs. T up to 300 K	IV.42c		
			d) χ_m (static) and $\chi(Q = 0.7 \text{ \AA}^{-1})$ vs. T up to 300 K	IV.42d		
	sc	AF	RXMS: $I_{\mu}(0, 0, 5/2)$ vs. $h\nu$ from 3.4...5.0 keV through the M_5 (3.552 keV), M_4 (3.728 keV) and M_3 (4.303 keV) absorption edges	IV.43		90MVII, 98M
			Expanded view of M_3 edge	Inset		
	sc	AF	a) M_4 -edges intensity I_x vs. τ at T_N ($= 122.09$ K) along (00τ) rlp	IV.44a		95BSVD
			along $(\tau 03)$	Inset		
			b) Bulk and surface ordered magnetic moment p_0 vs. T around T_N	IV.44b		
	sc	AF	M_4 -edge $I_x(0, 0, 5/2)$ vs. $h\nu$ at 33 K compared to the theory	IV.45		89IMPI 88HTBG
	sc	AF	M_5 -edge $I_x(0, 1/2, 2)$ vs. $h\nu$	IV.46		89IMPI
			$I_x(0, 1/2, 2)$ and $(0, 0, 1)$ vs. T around T_i ($= 61$ K)	Inset		
	sc	AF	a) $I_x(0, 0, l)$ vs. l at 62.25 K ($T > T_i$) and 61.50 K ($T < T_i$), distortion $c/a > 1$	IV.47a		90MVII
			b) $I_x(0, 0, 3)$ vs. T at $T \leq T_i$	IV.47b		
	sc	AF	As K-edge $I_x(1/2, 0, 6)$ vs. azimuthal angle, ψ , new observed phenomenon (see the Introduction)	IV.48		01MSBP
				Insets		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UAs (cont.)	sc	AF/P	a) Critical neutron scattering (CNS) around $Q = 2\pi/a$ (1, 1, 0) point at $T_N + 1.2$ K b) I vs. η along (11 η) (rlp) near T_N (= 123.5 K) c) Calculated and observed critical scattering for different η around the [11 η] direction at $T_N + 1.25$ K	IV.49a IV.49b IV.49c		80SLSV1, 80SLSV2 81SLSV, 84RLB
	sc	AF/P	a) ρ vs. T at 0 and 19 T for $T \leq 140$ K b) ρ vs. H up to 20 T at 4.2, 7 and 38 K both for $i \parallel H \parallel [100]$	IV.50a IV.50b		87TFSV
	sc	AF/P	a) ρ vs. T at 0...10 T up to 300 K b) ρ vs. T at 0 and 10 T up to 300 K for both cases $H \parallel [001]$	IV.51a IV.51b		84SFV, 87BBTT, 87TSFV
	sc	AF/P	ρ vs. T at 50...130 K under stress from 1...300 bar applied along [001]	IV.52		90BBTN, 93FG
	sc	AF/P	Electrical resistivity, ρ , at T_i and T_N under parallel and perpendicular stress	IV.53		87BBTT
	sc	AF/P	Resistance R vs. T up to 300 K at 2.7...23.4 GPa Hall effect	IV.54		98BDGI 68K1
	sc	AF	Thermoel. power S vs. T at 0...800 °C Log-log C_p vs. T at $T < 1$ K, $\gamma(0) = 53.2$ mJ/mol K^2 , $\Theta_D = 221(2)$ K	R.38 IV.55	T3	64WP 85ROV2
	sc	AF	Log-log C_N vs. T	R.40a		84RO, 85ROV2
	sc	AF/P	a) C_p vs. T up to 300 K C_p of ThAs as a reference of C_L b) Magn. entropy ΔS_{magn} vs. T , CF-doublet as a ground state	IV.56a IV.56b		80BTLM
	sc		C_p vs. T up to 200 K in magnetic fields up to 8 T	IV.57		80RBBT
	sc		C_p vs. T^2 at 1.5...12 K, $\gamma(0) = 53.2$ mJ/mol K^2 , $\Theta_D = 221(2)$ K	R.41		89ROV1,2
	sc	AF/Fi/ P	(B , T) MPD around T_i (b) and T_N (a), the triple points and hysteresis based on the heat capacity (C_B) data	IV.58a, b		03PJBS
	sc	AF/Fi/ P	Total (B , T) MPD based on the heat capacity C_B and magnetocaloric M_T measurements	IV.59		03PJBS
	sc	AF/Fi/ P	a) M_T vs. T (up to 160 K) and B (up to 13 T) b) M_T vs. B at 109...127 K, i.e. around AF I-1k/Para and Ferri-1k/Para transitions c) M_T vs. B at 21...61 K, i.e. around AF IA-2k/Ferri-2k transition and around AF I-1k/Ferri-2k transition	IV.60a IV.60b IV.60c Inset		03PJBS
	sc	Fi/AF/ [100] P	a) C_B vs. T (20...160 K) and B (up to 13 T) b) C_B vs. T up to 130 K in 0...13 T to present the AF I-1k/Ferri-1k/Para transitions	IV.61a IV.61b		03PJBS
	sc	Fi/AF	c) C_B vs. T up to 68 K in 0...13 T to present the AF IA-2k/AF I-1k/Ferri-2k transitions d) C_B vs. T up to 70 K in 7.5, 9 and 10 T to present the Ferri-2k/AF IA-2k/AF I-1k trans.	IV.61c IV.61d		

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
UAs (cont.)	sc	Fi/AF/P	Three-dimensional figures: entropy difference $\Delta S_s = S_s(T, B) - S_s(20 \text{ K}/0 \text{ T})$ vs. T (20...160 K) and B (up to 13 T)	IV.62a, b		03PJBS
	sc	Fi/AF	Entropy difference $\Delta S = (S_{\text{ferri-2k}} - S_{\text{AF IA-2k}})$ vs. $T, M_T = 0$	IV.63		03PJBS
	sc		Calculated and experimental reflectivity spectrum R vs. $h\nu$	IV.64		05KO, 80S3
UAs, (USb), (CeN)	sc		Optical (NNIR) reflectivity R vs. $h\nu$ up to 12 eV	IV.65		80S3, 84S3
UAs, (USb)	sc		Opt. conductivity $\text{Re } \sigma$ vs. $h\nu$ up to 12 eV	IV.66		80S3
UAs			$\text{Re } \sigma_{xx}$ up to 6 eV	R.43		98S
			Calculated <i>ab initio</i> σ_{xx} vs. $h\nu$	R.44		05KO
	sc		ε_1 (real) and ε_2 (imaginary) parts of dielectric function at 300 K	IV.67		80S3
UAs, (USb)	sc		Energy loss function E_{loss} vs. $h\nu$	IV.68		80S3
UAs	sc		Reflectivity R vs. $h\nu$ under pressures 0...22 GPa	IV.69		94B
	sc		a) Polar Kerr effect θ_K (Kerr-rotation) and ε_K (Kerr ellipticity) vs. $h\nu$ up to 5.7 eV at 20 K and 10 T	IV.70a		86R, 90RS
			b) Optical conductivity σ_{xx} vs $h\nu$ up to 12eV at RT and $B = 0$	VI.70b		84RSV
			c) optical conductivity σ_{xy} vs. $h\nu$ up to 5.7 eV at 20 K and 10 T	VI.70c		86R
	sc	AF/Fi/P	θ_K vs. T up to 130 K in fields up to 10 T	IV.71		84RSV
	(100)	P	NMR: a) $K(^{75}\text{As})$ vs. χ_m and T (140...650 K)	IV.72a		93STMV
			b) T_1 and T_1^{-1} vs. T up to 700 K	IV.72b		
			c) I_{loc} vs. T up to 700 K	IV.72c		
		AF	Magnetic structures of AF I-1k and AF IA-2k with μ^+ site	IV.73		86ABGK
	sc	AF/P	μSR : a) ZF-spectrum at 100, 150 and 250 K	IV.74a		90KKAL
			b,c) ZF-spectrum at 56 K	IV.74b, c		86ABGK, 89A
		AF/P	a) $\mu^+\text{SR}$ frequency, ν , vs. T at field of 300 mT	IV.75a		86ABGK,
			b) Damping rate λ vs. T at field of 300 mT	IV.75b		87ABGK, 89A
		AF	μSR : ZF-rotation frequencies, ν , vs. T below T_t (= 62 K)	IV.76		86ABGK, 87ABGK
		AF/P	μSR spectra at 250 and 114 K in fields of 0...10 mT	IV.77		89AKKL, 90KKAL, 90A
U _{1-x} Th _x As			a) Occupied DOS	IV.78a		80WP
0.25 ≤ x ≤ 0.99			b) DOS vs. x	IV.78b		
0 ≤ x ≤ 0.5	sc	AF/P	χ_m vs. T up to 200 K	IV.79		84BBTV
0 ≤ x ≤ 0.5	sc	AF/P	(T, x) MPD	IV.80		84BBTV
x = 0.05	sc	AF/P	a) p_U vs. H up to 15 T at 4.2 and 75.3 K	IV.81a		80V
	[100]		b) p_U vs. T up to 130 K in fields 2...7 T	IV.81b		
			Three critical temperatures T_1, T_2 and $T_3 = f(H)$			

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
$U_{1-x}Th_xAs$ (cont.) $x \leq 0.1$	sc		(H, T) MPD and (T, x) MPD, $H \parallel [100]$ (see Figs. 39 and 40, LB III/12c, p.428)	LB		80VB
$x = 0.2, 0.3$ and 0.4	sc		p_U vs. H up to 19 T at 4.2 K	IV.82		84BBTV
$x = 0.05$	sc	AF	ND: I vs. T of three magnetic peaks up to 120 K	IV.83		80FSV
$x = 0.05, 0.10$	sc	AF	a) k -value (LW-phase) vs. T at $T_1 \dots T_N$	IV.84a		80FSV
and 0.20			b) p_U vs. $T, (T, x)$ MPD	IV.84b		
$x \leq 0.10$	sc	AF/P	(T, x) MPD			80VB
$0.03 \leq x \leq 1.0$		AF/P	ρ vs. T up to 300 K, negative $d\rho/dT$ up to $x = 0.70$	IV.85		94NBBB
$U_{1-x}Y_xAs$ $0.05 \leq x \leq 0.3$	poly	AF/Fi	a) Magnetization σ vs. B up to 14 T at 4.2 K	IV.86a		89PM, 85P
$x = 0.05, 0.1$			b) in pulsed fields up to 36 T at 4.2 K	IV.86b		
and 0.15			c) σ vs. B up to 14 T at 4.2, 10, 20 and 30...50 K	IV.86c		
$x = 0.35$	sc		(T, x) MPD	IV.87		83CTV
$0 \leq x \leq 0.15$	[100]					
$UAs_{1-x}P_x$ $0 \leq x \leq 1.0$			$a_0 = f(x)$	IV.88		74T
$0 \leq x \leq 1.0$			(T, x) MPD	IV.89		74T
$0.50 \leq x \leq 0.75$			ND: I vs. T	IV.90		71LMP
$UAs_{1-x}P_x$ $x = 0.48$			a) C_p vs. T up to 300 K	IV.91a		85BLGT
$0 \leq x \leq 1.0$		AF	b) Entropy S_{magn} vs. T up to 250 K	IV.91b		
			a) Theoretical (T, x) MPD compared to that data obtained experimentally and being shown in Fig.IV.89	IV.92a		74RE
			b) Exchange interaction integral, $J(0)$, vs. the number of band electrons w_0 at $T = 0$ K, deduced from the ED-theory	IV.92b		
NpAs			a) SP-band structure by TB LMTO within ASA	IV.93a		98TRN
			b) Total DOS	IV.93b		
			Near-edge XA fine structure at the Np L_3 threshold			87KKBS1, 87KKBS2
			a) Energy, E , vs. cell volumes, V , of B1 and B2 phases	IV.94	tab.	98TRN
			b) Enthalpy, ΔH , vs. p (up to 21.8 GPa) for the B1 and B2 phases			
			a) $a(c)$ vs. T up to 300 K (see also Fig.R.45, and Fig. 67 in LB III/12c, p.435)	IV.95a		74ADHL
			b) Lattice parameters (a and c) normalized to a at T_0 ($= 143$ K), found by X-ray and RXMS measurements	LB IV.95b		94LSLR2
			a) V/V_0 vs. p up to 53 GPa	IV.96a		86DDBS
			b) V/V_0 vs. p up to 20 GPa within only the B1 phase, $B_0 = 70(1)$ GPa and $B_0' = 6.2(4)$	IV.96b	T5	95B
			Systematic of the volume coefficients: $\partial T_0 / \partial \ln V$ and $\partial \ln p_{Np} / \partial \ln V$			93PGMZ

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpAs (cont.)		P	χ_m^{-1} vs. T , up to 290 K; $\Theta_p = 180$ K, $p_{\text{eff}} = 2.82 \mu_B$	V.113		89V
	sc	P	χ_m^{-1} vs. T up to 980 K, $\Theta_p = 190$ K, $p_{\text{eff}} = 2.67 \mu_B$ and $\chi_0 = 25 \cdot 10^{-6}$ emu/mol	IV.97	T2	98VMLR
	sc	AF/MT	a) p_{Np} vs. H up to 8 T at 4.2 K along three main axes	IV.98a		92MVRS
		AF/MT	b) p_{Np} vs. H up to 8 T at 125 K along three main axes	IV.98b		
		P	c) χ_m^{-1} vs. T up to 280 K along three main axes, $\Theta = 176$ K, $p_{\text{eff}} = 2.82 \mu_B$	IV.98c		
	sc [iii]	AF/P	a) p_{Np} vs. T up to 250 K at 9.5 T along three main axes	IV.99a		92MVRS
	[100]		b) p_{Np} vs. T up to 250 K in fields 0.5...9.5 T along [100] axis	IV.99b		
	sc [111]		(H, T) MPD	IV.100		92MVRS
	sc (1, -1, 0)	AF/P	a) (H, T) MPD up to 8 T, $H \parallel [1, \bar{1}, 0]$	IV.101a	tab.	86BQKB,
			b) $k = [00k]$ vs. T in $H = 0$. ($T_N = 175$ K, $T_{\text{IC}} = 154$ K and T_i or $T_0 = 138$ K)	IV.101b		87BBQR
			c) Relative intensity of $[1, 1, 1-k]$, $[1, 1-k, 1]$, $[1-k, 1, 1]$ peaks vs. T in $H \parallel [1, \bar{1}, 0]$ and 0.6 T	IV.101c		
			d) I_{magn} vs. T at 1.7 T, $H \parallel [1, \bar{1}, 0]$	IV.101d		
			e) I_{magn} vs. T at 8 T, $H \parallel [1, \bar{1}, 0]$	IV.101e		
			f) I_{magn} vs. H up to 10 T at 110 K, $H \parallel [1, \bar{1}, 0]$	IV.101f		
	sc	AF/P	ND: (I_{magn}, T) MPD at 130...175 K, $T_N = 173.6$ K, $T_{\text{IC}} = 158.2$ K and $T_0 = 140$ K, p_{Np} (at 10 K) = $2.5 \mu_B$	IV.102		91JSLR, 94LSLR2
	sc	AF	Modulation vector (k -value) vs. T at $T_{\text{IC}} < T < T_N$	IV.103		91JSLR, 92JLSL
	sc	crit	A) Log-log I vs. T below T_N ($= 173.64$ K), $\beta = 0.38$ for $T < T_N$ and $T < T_{\text{IC}}$, $T_{\text{IC}} = 158.2$ K	IV.104 A		91JSLR
			B) Critical scattering planes: $I(nk)$ vs. $[I(k)]^n$ (Landau theory)	IV.104 B		
	sc		Inverse correlation length (as log-log) κ_{\parallel} vs. t	IV.105		91JSLR
	sc		Correlation range ratio $R = \xi_{\perp}/\xi_{\parallel}$ vs. $\log T_N$ compared to those for (U, Np, Pu)Sb	IV.106		91LA, 93L2
	sc		RXMS: Log I_x vs. $h\nu$	IV.107		92LS, 94LSLR2
	sc (001)	AF	RXMS: Log I_x vs. L(rlu) direction scan of Np M_4 at 135 K	IV.108		94LSLT, 95LSLG
	sc	AF/P	(T, p) MPD determined by RXMS studies	IV.109		97IZBS
	sc	AF/P	RXMS: Critical scattering above T_N ($= 172.8$ K)	IV.110		94LSLR3
	sc	crit.	Two components exist to the critical scattering			
	sc	AF/P	RXMS: Inv. correlation length κ vs. t for			94LSLR1,
		crit.	a) single-Lorentzian model and for	IV.111a		94LSLR3
			b) both Lorentzian and Lorentzian squared two-component model. Critical exponents are: $\nu(\text{broad}) = 1.5$, $\nu(\text{sharp}) = 1.0$ compared to $\nu(\text{neutron}) = 0.73$	IV.111b		

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpAs (cont.)		AF	RXMS: a) Magnetic domains: C-type domains vs. T at 130...176 K	IV.112a		94LSLR2, 94LSLT
			b) Magnetic wavevectors $k_L(k_K)$ vs. T	IV.112b		
		AF/P crit.	c) Log I_x [0, k_K , 2] at various T around T_N (= 172.8 K)	IV.112c		
		AF	d) I_x vs. k_L at $145 < T < 153$, i.e. around T_{IC}	IV.112d		
			e) I_x vs. k_K (B-type domains) at 152.5 K	IV.112e		
	sc	AF/P crit.	RXMS critical scattering around T_N , $I_x(0, k, 2)$ vs. T , $\beta = 0.36$; $T_N = 172.8$ K	IV.113		94LSLR1
	sc	AF/P	Resistance R vs. T up to 300 K under pressure 0.2...2.2 GPa	IV.114		97IZBS
	sc		ρ vs. T up to 300 K at zero pressure	Inset		90P, 93FG
	poly		log ρ vs. T up to 300 K (LB III/12c, p.436, Fig.70)	LB		74ADHL
	sc	AF	Resistance, R , vs. T up to 200 K at 2.5 GPa	IV.115		97IZBS
			Note a kink at 120 K with hysteresis			
	sc	AF/P	R vs. T up to 300 K under pressures			97IZBS
			a) 2.2...9.3 GPa	IV.116a		
			$dR(T)/dT$ vs. T at 9.3 GPa	Inset		
			b) 9.3...27.3 GPa	IV.116b		
	sc	AF/P	Hall resistivity, ρ_H , vs. T up to 300 K at $\mu_0 H = 0.4$ and 0.7 T	IV.117		93FG
PuAs		AF	a) Hyperfine field, B_{hf} , vs. T	IV.118a		89K,
				IV.118b		89PMPZ
			b) ND: (p_{Np} , T) MPD			74ADHL
		AF	B_{hfl} (B_{hfl2}), isomer shift and T_N vs. p up to 9 GPa	IV.119		89PMPZ, 87PMPL
		AF	^{237}Np Mössbauer spectra at 4.2 K at 0, 1.1 and 8.1 GPa	IV.120		87PMPL
		AF	Relative intensity of the Zeeman pattern (B_{hfl}) up to 8.6 GPa	IV.121		90K
			DOS calculated by (SIC)-LSD method for:	IV.122		02PSTS
			a) $\text{Pu}^{3+}(5f^5)$ and			
			b) $\text{Pu}^{4+}(5f^4)$			
			a) Band structure (LMTO)	R.53a		90WC
			b) DOS	R.53b		
			Synthesis of compounds; $a_0 = 0.5855(4)$ nm			57G
PuAs			V/V_0 vs. p up to 45 GPa	IV.123	T5,	89BDDL
			Bulk modulus, B_0 and B_0'		T6	95B
	poly	F	a) Magnetization σ vs. T , $T_C = 129$ K, $p_s = 0.3 \mu_B$	IV.124a		73BFS
			b) $\sigma(T)/\sigma(0)$ vs. T/T_C	IV.124b		
			(see also Fig.77 in LB III/12c, p.437)	LB		
			c) χ_g^{-1} vs. T , $\Theta_p = 129$ K, $p_{\text{eff}} = 0.97 \mu_B$, $\chi_0 = 0.33 \cdot 10^{-3}$ emu/mol	IV.124c		
	sc	F	p_{Pu} vs. H up to 4.6 T at 4.2 K along three main axes, $p_s[100] = 0.67 \mu_B$	IV.125	T2	86MVS2
			ND: $p_{\text{Pu}} f(Q)$ and reduced moment p/p_0 vs. T , $T_C = 123$ K, $p_0 = 0.75 \mu_B$	IV.126	T2	84BQRS
				a, b		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
CmAs		F	a) Magnetization $[\sigma(T)/\sigma(0)]^2$ vs. T , $T_C = 88$ K b) χ_g^{-1} vs. T up to 300 K, $\Theta = 88$ K, $p_{\text{eff}} = 6.58 \mu_B$ (see also Fig.79 in LB III/12c, p.437)	IV.127a IV.127b LB	T2	76KCMM
CfAs			Growth of single crystals $a_0 = 0.5809$ nm			80DHP1
		AF	χ_m^{-1} vs. T up to 340 K, $\Theta = -29$ K, $p_{\text{eff}} = 10.1 \mu_B$ χ_m vs. T up to 60 K at 0.5 T and 2 T; $T_N = 17.5$ K	IV.128 Inset	T2	87HN
V. Actinide monoantimonides						
AnSb , (AnBi) (An = U...Cf)			a_0 vs. $Z(\text{An})$	V.1		87GH
AnSb (An = Th...Pu)			B_0 and B_0' vs. $Z(\text{An})$	V.2		90DB
ThSb , (USb)			Energy band structure by RKKR method	V.3		80WP, 80PW
ThSb			a) sc-APW band structure with LDA b) Total and partial DOS	V.4a V.4b		90TK1
	sc		EDC's at RT and $h\nu = 40$ eV	V.84		81RMEV, 82RMV
	sc		Conduction band CIS spectra	V.86		82RMEA
ThSb, (USb)	sc		Normalized EDC's compared to those of USb and UTe at and off resonance	V.5		82RMEA
	sc		The constant initial state (CIS) spectra compared to those of USb	V.6		82RMEA, 80BBBBP
ThSb			V/V_0 vs. p up to 55 GPa B_0 and B_0'	V.7	T5, T6	88GSBD 95B
	sc	TIP	ρ vs. T up to 300 K From R_H , conduction electron conc. 1.48 el./FU	V.100a		82FSVA
ThSb, (USb)	sc	AF/P	$\rho(T)/\rho(300 \text{ K})$ vs. T compared to those of USb having different RRR-values	V.8		95OHHS
AnSb (An = U, Pu)			L_3 -edge, X-ray absorption white line shift	IV.1		87KKBS1,2
(An = U, Np and Pu)		AF	Correlation range ratio, $R (= \xi_{\perp}/\xi_{\parallel})$ vs. $\log T_N$	IV.106		91LA, 93L2
USb			Hybridization between U-f and pnictogen p- bands by sc RLMTD method			80BG2
			Energy band structure by RKKR method	V.3b		80WP, 80PW
	P		Energy band structure by RSP-LAPW method, $\gamma_b = 63.74$ mJ/mol K ²	V.9		00Y
	AF		Electronic band structure close to E_F by R(NC)SP-LAPW in triple- k state	V.10		99Y, 00Y
	AF		DOS in triple- k state calculated by R(NC)SP- LAPW ($\gamma_b = 4.92$ mJ/mol K ²), $p_0(\text{calc}) =$ 1.52 μ_B compared to $p_0(\text{neutron}) = 2.85 \mu_B$ Theory:	V.11		98Y, 99Y, 00Y
			A) Wave function, $ \psi_f(r) ^2$, vs. atomic radius r	V.12A		93CSL
			B) DOS of the bands containing or non- containing f-electrons	V.12B		93SCL, 94SCL
			C) Total DOS and $l = 3$ projected DOS	V.12C		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
USb (cont.)			Energy band structure by RLAPW	V.13		95HH, 97IASS
		AF	a) Brillouin-zone of NaCl-type crystal structure related to that of AF I-3 k magnetic structure	V.14a		97IASS
	sc	AF	b) dHvA frequencies at 45 mK and in fields 7...13.5 T	V.14b		
	sc		The dHvA results of USb in the 3 k magnetic order [95HOSS] explained by the orbit split Hartree-Fock-type band model			95K3, 96 K
			Fermi surfaces based on band structure shown in Fig. V.13	V.15		97IASS
		AF	Energies and moments p_0 calculated by SDFT for single- k and triple- k structures vs. a_0	V.16		00KS
		AF	Energy band structure and DOS calc. with SDFT within ASW method	V.17		00KS
		AF	A) Fermi surface (triple-3 k) calc. in SDFT B) dHvA branches calculated and compared to the experiment for the triple- k structure	V.18A V.18B		00KS
			Energy band structure by RLAPW within LDA for U5f-electrons treated both as a) localized and b) itinerant ones	V.19		00KIAH
	sc	AF	HR-ARPES spectrum at 25 K for USb and compared to the energy bands calculated within LDA by [85H]; LaSb energy bands for comparison	V.20		98TKIA, 99KKIA, 00KIAH
USb	sc		Band structure from HR-ARPES near E_F and calculated energy band structure with U5f- electrons included	V.21		00KIAH
			HR-ARPES spectra at 25 K with HeI resonance line for the BE ranges: a) $E_F-5.5$ eV and b) $E_F-1.5$ eV	V.22A		00KIAH
	sc		HR-ARPES data: a) as a function of analyzer angle b) FWHM vs. binding energy c) resonance and anti.resonance scans	V.22B		04DJLO
			Comparison of experimental and calculated L ₃ -edge XANES	IV.10		87KKBS1 95HRB
			a) L ₃ -edge XA spectra at 0 and 18.2 GPa compared to that of UF ₄ b) Relative positions and intensity of L ₃ -edge lines vs. p	V.23		87SBKV,
			UPS and XPS (see also LB III/12c, p.431, Fig.52)	V.24 LB		79BNB
	sc		ARPES-EDC spectrum at $h\nu = 45$ eV compared to the energy band structure determined by LMTO method in ASA	V.25		80BBBP

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
USb (cont.)	sc		a) Experimental PE spectrum compared to one-dimensional calculated DOS b) Fano-type resonance of U-5f electrons between $h\nu = 70\ldots 120$ eV	V.26a V.26b		80BBBP
	sc		Normalized EDC's compared to those of ThSb and UTe	V.5		82RMEA
	sc	AF	Angle integrated EDC at $h\nu = 40$ eV and 33 K	V.102		82RMV
	sc		The constant initial state (CIS) spectra compared to those of ThSb XPS, 4f core levels Core-level binding energy for non-uranium atoms	V.6 V.123		80BBBP, 82RMEA, 83BCCH 82MRV
	sc		Angle integrated EDC's at $h\nu = 25$ and 40 eV compared to UN	II.19		83RHH
	sc	AF/P	ND: a) $I(110)$ vs. T at $130\ldots T_N$ b) a vs. T at $80\ldots 300$ K and c) FWHM at $60\ldots 300$ K, $T_N = 220.6$ K V/V_0 vs. p up to 25 GPa B1→B2 transition at $8\ldots 10$ GPa	V.27 V.28		80KLMV 89SGBD, 86VORL
			B_0 and B_0' values	R.7a	T5	95B
	sc		Phonon dispersion curves (PDC)	V.29	T6	95B
			Elastic constant values for c_{11} , c_{44} and c_{12}		T10	83SLV, 86NVVW
		AF	Magnetic structure of the AF I-3k model	V.30		02NSML1
	sc	P	a) χ_m^{-1} vs. T up to 1200 K compared to the results calculated from CEF, based on the form factor behaviour in HMTII's, IC-scheme, and compared to RPA calculations of the magnetic excitation spectrum	V.31a		79BHV 76LMSV, 85TC, 03G 86HF
	sc	AF/P	b) χ_m^{-1} vs. T up to 400 K, $T_N = 220$ K, $\Theta = 138$ K, $p_{\text{eff}} = 3.6 \mu_B$	V.31b		05TSMC
	[111] [100]		See also magnetization σ vs. T at $100\ldots 300$ K	Inset	T2	02NPSM
		AF	Magnetization σ vs. B up to 35 T at 1.3 K, no signals of MT	V.32		78ST
		AF	High-energy magnetic spectrum, response function S vs. E at 20 K. No crystal field excitations	V.33		88OHJS
	sc	AF	Search for multiplet transition a) Experimental and calculated effective magnetic form factor $f(Q)$ at $T = 78$ K b) Schematic magnetization densities dependent on the variation of $f(Q)$ c) CEF scheme vs B_{exch} in MF model d) Reduced magnetic moment $p_U(T)/p_0$ vs. T/T_N ($p_0 = 2.82 \mu_B/\text{U at.}$, $T_N = 241.2$ K) compared to the $J = 1/2$ and $9/2$ Brillouin functions (see also LB III/12c, p.430, Fig.47)	V.34a V.34b V.34c V.34d LB		92JSLO 76LMSV, 77L

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
USb (cont.)		AF	Theory: $p_U(\text{AF I-3}\mathbf{k})$ vs. T based on the hybridization-mediated, two-ion interaction (HMTII) theory	V.35		85TC, 85CSYT
	sc	AF	PNS: Depolarization of polarized neutrons against T	V.36		95LS
	sc	AF/P	ND: $I(1\bar{1}0)$ vs. T under pressure of 0.2, 2.0 and 4.9 GPa	V.37a		96MGBV
	sc	AF/P	(T, p) MPD up to 6 GPa	V.37b		
	sc	AF/P	(T, p) MPD up to 6 GPa based on ND and resistivity data	V.38		96MGBV, 96BGMO
	sc	AF	INS: A) Constant Q -scan at 8 K at the X point at (110) and (001) magnetic zone center B) Magnetic excitation intensity, $I(1.15, 1.15, 0)$ at 8...255 K, ($T_N = 241.2$ K)	V.39		79LSV1, 2, 80LS
	sc	AF	INS: Spin-wave frequency, ω , along the $[00\zeta]$, $[\zeta\zeta 0]$ and $[\zeta\zeta\zeta]$ directions vs. wavevector Q	V.40		80LS, 84HBSL, 88HSL
	sc	AF	INS: Magnon dispersion curve below 6 THz compared to the phonon dispersion curves. The anisotropy gap $\Delta = 1.53$ THz	V.41		79LSV1, 2, 80LS
	sc	AF	a) Constant Q -scans near (003) and (221) positions at 10 K b) Magnetic excitation spectrum at 10 K	V.42a		85HV, 86HF
			Exchange interaction tensor $J^{\mu\nu}(\mathbf{q})$ along the symmetry directions by RPA calculation	V.43		86HF
	sc	AF	INS: Spin waves for five Q -values around (110) at 12...160 K	V.44		88HSL
	sc	AF/P	INS: Inverse correlation lengths, κ_x and κ_y , at 209...218 K ($T_N = 212.30$ K), also inverse susceptibility, $[\chi(0)]^{-1}$ and the Lorentzian width $\Gamma(0)$, vs. T	V.45		88HSL
	sc		ND: Log-log κ_x and κ_y and $\Gamma(0)$ vs. T for:			88HSL
		AF crit	a) $T < T_N$ (160...220 K)	V.46a		
		P crit	b) $T > T_N$ (212...320 K)	V.46b		
	sc	crit	RXMS: Log-log plots of the static susceptibility, χ_0 and χ_0' for broad (L) and narrow (L_2) components, respectively, vs. t	V.47		96PNSL
	sc	crit	RXMS: Inverse correlation lengths, κ_{\parallel} and κ_{\perp} , vs. t as log-log plot (broad component)	V.48		96PNSL
	sc	AF/P crit	RXMS: Inverse correlation lengths κ_{\parallel} and κ_{\perp} and their ratio vs. t (narrow and broad component)	V.49		96PNSL
	sc	AF/P crit	ND: Critical scattering. Rod shape intensity at the (110) position (see also LB III/12c, p.430, Fig.49)	V.50		78LSSV
	sc	AF/P	Log-log plot M/M_0 vs. t , $\beta = 0.32$, $T_N = 241.17$ K (see also LB III/12c, p.430, Fig.48)	LB V.51 LB		78LSSV

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
USb (cont.)	poly	AF/P	Relative neutron intensity I/I_0 (210) vs. T near T_N , $T_N = 215.5$ K	V.52		02NPSM
			A log-log plot I/I_0 vs. t	Inset		
	sc	AF/P	a) χ vs. T curve at 100...250 K compared to calculated ones, $T_N = 217.7$ K, critical coefficient $\gamma = 1.3$ determined at 130...210 K b) Kouvel-Fisher and power-form fits at 210...218 K ($\gamma = 1.2$)	V.53		02NPSM
	sc	AF	RXMS: $\log I_x$ vs. $h\nu$ at 12 K; M_5 and M_4 -edges spectra	V.54		92TSLG
	sc	AF	$I_x(001)$ vs. $h\nu$ at 12 K; peaks at the resonance energy of M_5 and M_4	V.55a, b		92TSLG
USb, (PuSb)	sc	P	RXMS: Two components in critical scattering above T_N	V.56		96PNSL
	sc	AF	The ratio of orbital (p_L) and spin (p_S) components of the total moment vs. n (number of f-electrons)	V.57		93L3
USb	sc	AF/P	ρ vs. T at 2...300 K. The power T^4 and $T^2 \exp(-\Delta/T)$ fits up to 45 K The temperature derivative $\Delta\rho/\Delta T$ vs. T ($T_N = 215.5$ K)	V.58	T4	84SFV
			Inset			
	sc	AF/P	a) ρ vs. T/T_N for two crystals with different RR compared to that in Fig.V.58, $\rho_{RT} = 580 \mu\Omega\text{cm}$ Power law dependences b) $\Delta\rho^{A-B}(T)/\rho_0$ (between two samples A, B) vs. $\log T$, $T_K = 37$ K	V.59		95HW, 01WH
	sc	AF/P	Reduced resistivity, $\rho(T)/\rho(300\text{ K})$, vs. T with different RRR compared to that of ThSb	V.8		95OHHS
	sc	AF	a) $T_N \cdot d\rho(T)/dT$ vs. T/T_N for two samples (see Fig. V.59) b) ρ (of two samples) vs. $(T/T_N)^{5/2}$ at 2...60 K	V.60a		95HW
	sc	AF	ρ vs. T for samples with different RR at $T < 25$ K	V.60b		
	sc	AF	Resistance R vs. T up to 300 K under pressures 0...19 GPa	V.61		01WH
	sc	P	ρ vs. T at $T > T_N$ ($= 210.3$ K) analyzed for temperature range up to 285 K.	V.62		96BGMO
	[110]					
	sc	AF	The ratio of pressure coefficient dT_0/dp per distant (U–U) coefficient dT_0/dD compared to other uranium pnictides; T_0 is the ordering temperature.	V.63		95HW, 96WH
	sc	AF	Transverse magnetoresistivity $\Delta\rho/\rho$ vs. B at 0.4...4.1 K $d(\Delta\rho/\rho)/dB$ vs. T at very low temperatures	III.41		91HWFm
	sc	AF	Magnetoresistance $\Delta R/R_0$ vs. B up to 10 T at 1.67 K and 4.2 K	V.64		01WH
	sc	AF/P	Thermoel. power S vs. T up to 300 K for two samples with different RR	Inset V.65 V.66		94SWOS 95HW

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
USb (cont.)	sc	AF	Thermoel. power S vs. T , below 20 K, for three samples with different RR	V.67		01WH
	sc	AF/P	Thermoel. power S vs. T up to 300 K for three samples with different RRR	V.68		05TSMC
	sc	AF/P	R_H vs. T up to 300 K in fields up to 10 T. See also [94OSSS].	V.69		84SFV
	sc	AF	Log-log C_p vs. T at 0.1...5 K. Not accurate $\gamma(0)$ -value.	V.70		83RFOV, 85ROV2
	sc	AF/P AF	Determination C_N vs. T	R.40a		
			a) C_p vs. T measured by different authors	V.71a		94OSSS, 05TSMC
		P	b) C_p/T vs. T^2 up to 9.5 K, $\gamma(0) = 4.5$ mJ/mol K ²	V.71b		85ROV2, 05TSMC
			Calculated and experimental reflectivity spectrum, R , vs. $h\nu$	V.72		05KO, 79SV
	sc		a) NNIR R and ε_1 and ε_2 dielectric functions at RT vs. $h\nu$	V.73a		78SV, 79SV
			b) Energy level scheme	V.73b		
	sc		Optical (NNIR) reflectivity, R , vs. $h\nu$ up to 12 eV	IV.65		80S3, 84S1, 84S3
	sc		Opt. conductivity $\text{Re } \sigma$ vs. $h\nu$ up to 12 eV	IV.66		80S3
	sc		Energy loss function, E_{loss} , vs. $h\nu$	IV.68		80S3
	sc	AF/P	Comparison of $f \rightarrow d$ transition energy in some solid solutions based on USb	V.74		86R
	sc	P	A) General band model of f and d states close to E_F in some solid solutions based on USb	V.75A		86R
	poly	AF	B) Scheme of f and d states	V.75B		
			a) NGR (²³⁸ U) spectrum at 4.2 K	V.76a		70SKRD
		AF	b) NGR (¹²¹ Sb) spectrum at 4.2 K	V.76b		
			μ SR at 4 and 200 K	V.77		90AKKL
			μ SR: Reduced static width, $\Delta(T)/\Delta(4\text{ K})$ and the (L-T) rate vs. T up to 200 K	V.78		90AKKL
U(Sb _{1-x} As _x) $x = 0.20, 0.50, 0.95$ $0.2 \leq x \leq 0.95$	sc	AF/P	ρ vs. T up to 300 K	V.80	tab.	87ROFV
	sc	AF	a) C_p/T vs. T^2 at 1.5...11 K b) $\gamma(0)$ vs. x . The $\gamma(0)$ and Θ_D values are given in the Table	V.81a V.81b		87ROV, 87ROFV
U _{1-x} Th _x Sb $0.25 \leq x \leq 0.99$ $0.05 \leq x \leq 0.90$			a) DOS by KKR-ATA	V.82a		80WP
			b) Local DOS close to E_F for the d - and s -electrons	V.82b		
U _{1-x} Th _x Sb $x = 0.9$ U _{1-x} Y _x Sb $x = 0.9$			Energy level schemes for USb and dilute solid solutions	V.83a, b		85SFV

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
$U_{1-x}Th_xSb$ $x = 0, 0.15, 0.66$ and 1.0	sc		EDC spectra at RT and $h\nu = 40$ eV	V.84		81RMEV, 82RMV, 82RMEA
$x = 0.66$	sc		EDC spectra at RT and $h\nu = 88$ and 86 eV	V.85		82RMEA
$x = 0.66$	sc		a) Conduction-band CIS spectra	V.86a		82RMEA
	(100)		b) EDC's at RT and $h\nu = 92$ eV, both compared to those of USb and ThSb	V.86b		80BBBP, 81RMEV
$U_{1-x}Th_xSb$ ($USb_{1-y}Te_y$) $0 \leq x(y) \leq 1$	sc	AF:F	A) p_0 (AF) and p_s (F) vs. x compared to theoretical approaches: 1) $U^{3+} \rightarrow U^{4+}$ for $x \geq 0.3$ or 2) constant valence independent of x	V.87A		80CVS1,2
			B) p_U vs. parameter z compared to calculated one under assumption of a constant U valence	V.87B		81RMEV 82FSVA
$U_{1-x}Th_xSb$ $x = 0.2$ (0.5) $x = 0.9$	sc	AF	a) Magnetic moment, p (in $\mu_B/F.U$), vs H up to 14 T at 4.2 K along three main axes b) p_U vs. H up to 10 T at 4.2 K and CEF-scheme approaches	V.88a V.88b		79CV (80CSV2) 79CV
$0 \leq x \leq 0.86$ $0.05 \leq x \leq 0.9$		AF/F/ P	χ_m^{-1} vs. T up to 300 K A) χ_{ac} vs. T up to 290 K B) (T, x) MPD C) χ_{ac} vs. T up to 100 K	V.89A V.89B V.89C		80CSV2 86TBBV
$x = 0.3$ $U_{1-x}Th_xSb$ $x = 0.15$	sc	F/P	Three-dimensional plots, p_U vs. H in increasing and decreasing fields up to 20 T at various T	V.90		82RBQV
$0 \leq x \leq 1$	sc	AF/F/ P	(T, x) MPD and p_0, p_s vs. x	V.91		82RBQV
$x = 0.15$	sc	P	χ_m^{-1} vs. T up to 300 K, $T_C = 145$ K, $T_N = 190$ K For $T > 190$ K $p_{eff} = 3.50 \mu_B$	V.92		93PLTS
	sc	F:	σ_m vs. T around T_C and T_N in different fields,	V.93a,		93PLTS
	[111]	AF	$p_s = 2.7 \mu_B/U$ at.	b		
	sc	F	ND: I vs. T at $T \leq T_C$ ($= 145$ K) for $q = 0, \frac{1}{4}$ and $\frac{3}{4}$	V.94		93PLTS
	[111]					
	sc	F	a) I vs. $(h, 2, 0)$ rlu at 89 K (ferromagnetic state)	V.95a		93PLTS
		F/ AF	b) $I(h, 2, 0)$ vs. T at 20...180 K in $0.45 < h < 0.55$ range	V.95b		
			c) q_{IC} (rlu) vs. T around T_C ($= 145$ K)	V.95c		
		F	Models of the magnetic structure, $p_0^{max} = 3.4 \mu_B$	V.96a, b, c		93PLTS
	sc	AF:F	RXMS: X-ray patterns in the paramagnetic and ordered states	V.97		93PLTS
	[001]					
	sc	F	$I_x(0, 0, 5/2)$ vs. $h\nu$ taken close to M_4 and M_5 resonance edges at 12 K	V.98a, b, c		92TSLG
	sc	F/ AF	a) I_x vs. T at 120...190 K for three different components of q	V.99a		93PLTS
			b) q_{IC} vs. T at 130...190 K	V.99b		
		F/ AF/P	c) FWHM of (002) and (004) reflections vs. T at 90...200 K	V.99c		

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
$U_{1-x}Th_xSb$ (cont.) $0 \leq x \leq 1.0$ $x = 0.1$	sc	AF:F/P	ρ vs. T up to 300 K	V.100 a, b	tab.	82FSVA
	sc	F/P	a) Hall resistivity, ρ_H , vs. T up to 300 K at 6 and 9 T b) Normal, R_0 , and abnormal, R_s , Hall coefficients vs. T	V.101a V.101b		82FSVA
$U_{1-x}Y_xSb$ $x = 0.5$ $0 \leq x \leq 1.0$			EDC's at $h\nu = 40$ eV at RT compared to USb at 33 K	V.102		82RMV
			a_0 and magnetic moment p (in $\mu_B/F.U.$) vs. x ; valence transition at $x = 0.85$	V.103		84FSHV
$0 \leq x \leq 1.0$	sc	AF:F/P	a) (T, x) MPD b) p_0 (AF) and p_s (F) vs. x at 4.2 K and 0 and 10 T	V.104a V.104b		82RBQV
	sc	AF:F/P	p_0 and p_s vs. x	V.105		80CVS1
$x = 0.6$	sc	F	p_U vs. H up to 10 T at 4.2 K along three main axes	V.106		80CVS1
$0 \leq x \leq 1.0$ $x = 0.85, 0.92, 0.97$	sc	AF:F/P	a) ρ vs. T up to 300 K b) $\Delta\rho/1-x$ vs. T compared to theoretical ρ_{th} vs. T	V.107a V.107b		84FSHV
$x = 0.92$	sc	P	INS: spectra at various T and Q ; CF analysis	V.108		80FV
$U_{1-x}Y_xSb$ $0 \leq x \leq 0.92$ $x = 0.3, 0.6$ and 0.85	sc		Opt. conductivity σ_1 vs. $h\nu$, up to 12 eV	V.109		84S1, 84FSHV
	sc (100)	AF:F:P	A) Kerr-rotation, θ_K , and ellipticity, ε_K , vs. $h\nu$, up to 5 eV B) Absorptive, σ_{2xy} , and dispersive, σ_{1xy} , parts of conductivity vs. $h\nu$ Angle integrated PES results at 40.8 eV. Photon energy dependence V/V_0 vs. p up to 52 GPa Bulk modulus B_0 and B_0'	V.110A V.110B R.1B		86R 04DJLO
NpSb		AF/P	χ_m vs. T at 175...325 K $T_N = 205$ K, $p_{eff} = 2.3 \mu_B/Np$	V.111 V.112	T5 T6	90DBHS 95B 72L
	sc	AF/P	χ_m^{-1} vs. T up to 290 K $T_N = 190$ K, $\Theta_p = 161$ K, $p_{eff} = 2.71 \mu_B$	V.113		89V, 92MVRS
	Poly	AF	ND: A) p_0^2 vs. T , $T_N = 207$ K (see LB III/12c, p.436, Fig.71)	V.114A LB		74ADHL
	sc		B) I vs. T along three k vectors at 0, 2.1 and 6 T as well as at 7.5 T, $p_0 = 2.50(5) \mu_B$ In all cases $H \parallel [1, \bar{1}, 0]$	V.114B Inset		88SBQB
	sc	P	ND: Critical scattering: a) Anisotropy of neutron scans at 199.26 K ($T > T_N$) b) Log-log intensity vs. t . $T_N = 199.01$ K, $\beta = 0.257$, $R = 4.5$	V.115a V.115b		91JSLR
	sc	AF/P	a) Resistance R vs. T up to 300 K at pressures 0.7...8.1 GPa ρ vs T at 1 bar b) $dR(T)/dT$ vs. T at 0.7, 1.3 and 2.3 GPa, $dT_N/dp = -11.5$ K/GPa	V.116a Inset V.116b	T8	94ABIB, 97IZBS

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpSb (cont.)	sc	AF/P	a) Resistance R vs. T up to 300 K at pressures 2.3...23.8 GPa	V.117a		94ABIB
	sc	AF	b) $dR(T)/dT$ vs. T up to 300 K for $p \geq 2.7$ GPa T_N and characteristic temperatures vs. p up to 8 GPa. $dT_N/dp = -11.5$ K/GPa; $dR(T)/dT$ for $p = 2.7$ GPa (two transitions)	V.117b V.118		94ABIB
PuSb	sc	AF:P	Resistance R vs. p up to 24 GPa at 4.2 and 300 K	Inset V.119		94ABIB
	sc	AF	Mössbauer spectra at 4.2 K for ^{237}Np and ^{121}Sb for sc crushed sample	V.120	tab.	88SBQB
		AF	Mössbauer ^{237}Np spectra at 4.2 K at 0...9 GPa, at ambient pressure	V.121		97IZBS 88SBQB
		AF	a) B_{hf} , e^2qQ , IS vs. $\Delta V/V_0$ at 4.2 K	V.122a		97IZBS,
			b) B_{hf} , e^2qQ , IS vs. p , up to 9 GPa at 4.2 K	V.122b		98BDGI
			a) Band structure	R.53a		90WC
			b) DOS	R.53b		
			XPS (Mg K_{α}) of VB and Pu and Sb core levels	V.123		83BCCH
			a) UPS-VB spectra (Sb5p)	V.124a		00GWRH
			b) 4f-core spectra compared to that of α -Pu	V.124b		
			Angle integrated PES results at 40.8 eV.	R.1B		04DJLO
			Near-edge XA fine structure at the Pu L_3 threshold			87KKBS1,2
			V/V_0 vs. p up to 57 GPa	V.125		89BDDL,
			$B1 \rightarrow B2 \rightarrow$ tetragonal transitions		T5	90DBHS
			B_0 and B_0' values		T6	95B
	sc	F	a) p_{Pu} vs. H , up to 10 T at 4.2 K along three main axes, $p_s = 0.67 \mu_B/\text{Pu}$ along [100]	V.126a		83CTSM
			b) Hysteresis loops up to 3 T at 4.2 K for three axes	V.126b		86F
			c) Hysteresis loops up to 10 T at 4.2 K and along [100] compared to that in PuP	V.126c		92MV
	poly	F:P	a) χ_m^{-1} vs. T up to 300 K compared to calculated curves in terms of IC scheme of CEF; p_{Pu} vs. T	V.127a		72L
	sc	P	b) χ_m^{-1} vs. T up to 1000 K, $\Theta_p = 85$ K, $p_{\text{eff}} = 1.0 \mu_B$, $\chi_0 = 40 \cdot 10^{-6}$ emu/mol	V.127b	T2	98VMLR
	sc	F/ AF/P	a) IC wavevector k vs. T at 0 and 0.6 T along [001] measured between T_{IC} (67 K) and T_N (85 K)	V.128a		84BQRS
			b) I_{magn} vs. T at 0, 0.6 and 1 T for $H \parallel [001]$	V.128b		
			c) (H, T) MPD based on ND studies along [001] axis	V.128c		
	sc	F/ AF/P	ND: AF/P, $p_{\text{Pu}}f(Q)$ vs T , $T_C = 67$ K, $T_N = 85$ K, $p_0 = 0.74 \mu_B$			
			(H, T) MPD for $H_{\text{max}} = 4$ T for $H \parallel [100]$ based on ND studies	V.129		86MVSRI
	sc	F/ AF/P	a) Experimental and theoretical p_0 vs. T variation	V.130a		88HKBC
			b) Theoretical ratio of inverse correlation lengths R vs. CEF and exchange interaction parameters	V.130b		

Compound	Sample	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
PuSb (cont.)		F	Free energies for fcc $\text{Pu}^{3+}(\text{f}^5)$ at $T = 0$ K on the basis of HMTII-model	V.131		84BCT
		F	a) Experimental and theoretical p_{Pu} vs. T curves for two CEF approaches for the $\text{Pu}^{3+}(\text{f}^5)$ ion: 1) L - S and 2) IC (J -mixing)	V.132a		83CTSM
			b) Calculation based on the ND results of [84LDBS]. $p_0 = 0.745 \mu_{\text{B}}$	V.132b		84BCT
	sc [001]	F	INS: neutron inelastic scans at 10 K for different \mathbf{Q} -vectors and at 10, 40 and 60 K for $\mathbf{Q} = [102]$	V.133		86LSRS
		F	Calculated dispersion curves for: A) L - S coupling and B) IC-scheme, compared to the experimental [86LSRS] one	V.134		88HKBC
			Calculated energies and dispersion shapes of an excitation by HMTII model			86BC
	sc	F	Magnetic amplitude $p_0 f$ (form factor) vs. scattering vector \mathbf{Q} compared to calculated one on the basis of CEF interactions	V.135a		84LDBS, 85LDBS, 87L2, 88LWRS
			$p_0 f$ for small values of Q	Inset		87L1
			C_2 coefficient of $\langle j_2 \rangle$ vs. q^2 or $\cos^2 \theta$	V.135b		
	sc	F	ND: $p_0 f(Q)$ for (111) and (2k0) vs. T , $p_0 = 0.74 \mu_{\text{B}}$, $T_{\text{N}} = 85$ K	IV.126		84BQRS, 87L2, 88LWRS
	sc	P	κ_i vs. t for $T > T_{\text{N}}$ for $\mathbf{q} \parallel$ and $\perp \mathbf{k}$, $v = 0.58$, $T_{\text{N}} = 85.30$ K	V.136		89BQRS
	sc	AF	a) Log-log I_{magn} vs. t , $\beta = 0.31$ and	V.137a		87BRLS
			b) log-log Δk vs. t , both for $T < T_{\text{N}}$ ($= 85.30$ K)	V.137b		
	sc	F/ AF/P	a) ρ vs. T up to 300 K along [100] and [111], ρ_{max} is indication of Δ_{CEF}	V.138a		85BCFR, 93FG
			b) $d\rho(T)/dT$	V.138b		
			c) ρ_{magn} vs. $\log T$	V.138c		
	sc	F/ AF/ P	a) Resistance R vs. T up to 300 K at pressures 0...17.9 GPa	V.139a		94LBWW
			b) $dR(T)/dT$ at 4.6, 8 and 11 GPa	V.139b		85BCFR
			c) R vs. p , up to 26 GPa at 4.2 and 273 K	V.139c		94LBWW
			d) Structural and magnetic phase diagram	V.139d		94B
	sc	F/ AF/P	Resistance R vs. T up to 300 K at 25 GPa	V.140		94LBWW
	sc	F/ICA	(T, p) MPD based on $R(p)$ measurements, $p_{\text{max}} = 13.6$ GPa	V.141		94LBWW
	sc	F/	ρ_{H} vs. T up to 290 K	V.142		87TBFR
		AF/P	ρ_{H} vs. $1/(T - \Theta_{\text{p}})$	Inset		
	sc	F/AF/ P	a) C_{p} vs. T at 13...300 K	V.143a		86HJMS
		F/ AF	b) Separation C_{p} -anomaly into two peaks at 58 (T_{C}) and 79 K (T_{N})	V.143b		
		F	c) C_{p}/T vs. T^2 at 10...20 K, $\gamma(0) = 20$ mJ/mol K ² , $\Theta_{\text{D}} = 151$ K	V.143c		

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
PuSb (cont.)		F	^{121}Sb Mössbauer spectra at 4.2 K and the parameters compared to those of USb and NpSb (see the Table)	V.144		87SSRV
$\text{U}_{1-x}\text{Pu}_x\text{Sb}$	sc		a_0 vs. x	V.145a	tab.	98RWRB
$0 \leq x \leq 1$		AF/P	T_N , Θ_p , p_{eff} vs. x	V.145b		02KWRL
$x = 0.25, 0.50,$ and 0.75	sc	AF/P	H/σ_m vs. T up to 300 K at 1 T	V.146	tab.	02KWRL
$x = 0.5$	sc	AF	FC and ZFC M/H vs. T up to 300 K, $T_N = 155$ K, $T^* \approx 55$ K	V.147		02KWRL
$x = 0.75$	sc	AF/P	a) M/H vs. T up to 300 K at 1 and 7 T. $T_{1k} = 55$ K, $T_{3k} = 93$ K, for both $k = 0.25$ rlu b) (H, T) MPD	V.148a V.148b		02KWRL, 02NSML1, 02NSML2
$x = 0.5$ and 0.75	sc		ND: a) I (1 st order harmonics) vs. T/T_N	V.149a		02NSML1
$x = 0.75$		AF	b) (H, T, I) MPD, the $3k \rightarrow 1k$ transition at high fields	V.149b		
$x = 0.50$ and 0.75	sc		RXMS: A) Energy spectra, $\log I_x$ vs. $h\nu$ for U and Pu contents B) I_x vs. $h\nu$, an appearance of an additional resonance near Pu M_5 -edge	V.150A V.150B		02NSML2
$\text{U}_{1-x}\text{Pu}_x\text{Sb}$	sc	AF	RXMS: A) Reciprocal lattice scans for the U and Pu-edges at 10 K, $I_x(0, 0.25, 2)$ (the 1 st order harmonic); integrated intensity I_x vs. T , sluggish transition from $3k \rightarrow 1k$ -structure	V.151A		02NSML1
$x = 0.75$		AF/P	B) FWHM $(0, 0.25, 2)$ vs. T ($T_N = 90$ K). Scans along $[010]$ and $[001]$. Highly frustrated system	V.151B		
		AF	C) $I_x(0, 0.75, 2)$ (3 rd order satellite); squaring exists only within the single- k state for uranium and plutonium contents	V.151C		
$x = 0.5, 0.75$	sc	AF	D) $I_x(0, 0.25, 2)$ vs. T (two competing terms!)	V.151D		
		F/ AF/P	ρ vs. T up to 300 K compared to USb and PuSb	V.152 a, b		98RWRB
$\text{Pu}_{1-x}\text{Y}_x\text{Sb}$	sc	F	a) Magnetic moment p (in $\mu_B/\text{F.U.}$) vs. H hysteresis loop, up to 10 T along the $[100]$ and $[111]$ axes at 4.2 K	V.153a		99VLMR
$x = 0.4$		P	b) χ_m^{-1} vs. T up to 300 K along $[100]$.	V.153b		
$x = 0.7$		F	$\Theta_p = 46.2$ K, $p_{\text{eff}} = 1.05 \mu_B/\text{Pu at.}$ c) Magnetic moment p (in $\mu_B/\text{F.U.}$) vs. H up to 9 T along three main axes at 4.2 K	V.153c		
$x = 0.4, 0.6, 0.75$		F/AF/P	$\rho(T)/\rho(300 \text{ K})$ vs. $\log T$, up to 300 K	V.154		98RWRB
AmSb			Mössbauer spectra at 4.2 K compared to that of Am_3Se_4	V.155		71DLKS
		TIP	$\chi_m = 1250 \cdot 10^{-6}$ emu/mol at 4.2...320 K, CEF calculations in the IC scheme: $\chi_m = 1120 \cdot 10^{-6}$ emu/mol		T2	92MV
	thin film		a) UPS and b) 4f core XPS both compared to Am metal			05GOHW

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
²⁴⁸ CmSb		F	Normalized (to 0 K) squared magnetization, $[\sigma(T)/\sigma(0)]^2$ vs. T , $T_C = 162$ K, $p_s \approx 0.4 \mu_B$ compared to $p_s(f^7) = 7.55 \mu_B$	III.97		81NHPD
CfSb ²⁴⁹ CfSb		AF/P	Growth of single crystals; $a_0 = 0.6166$ nm χ_m^{-1} vs. T up to 340 K. $T_N = 25$ K, $\Theta = -18.2$ K, $p_{\text{eff}} = 10.3 \mu_B$ χ_m vs. T up to 60 K at 0.2 and 4.5 T	V.156 Inset	T2	80DHP1 86NMHP, 87HN
VI. Actinide monobismuthides						
AnBi (An = U...Cm)			a_0 vs. $Z(\text{An})$, B_0 and B_0'	V.1		87GH
ThX, UX (X = P...Bi)			An average volume, V , for thorium and uranium monopnictides Heat formation ΔH	VI.1		82BBF 82BBF
Th–Bi			Phase diagram, indication of ThBi ($a_0 = 0.3909$ nm) and Th ₅ Bi ₃ -phase (Mn ₄ Si ₃ - type), $a_0 = 0.962$ nm, $c_0 = 0.664$ nm			75RVFG, 82BBF
ThBi			Crystal structure CsCl (B2)-type		T5	95B
U–Bi			Phase diagram	VI.2		81CAA
UBi			a) sc-RKKR-type energy bands b) Radial charge densities, $\sigma_k^p(r)$, of the U states c) Radial charge density difference $\Delta\sigma_p(r)$	VI.3a VI.3b VI.3c		82WPN
			a) V/V_0 vs. p , up to 42 GPa B_0 and B_0' ($B_0 = 91$ GPa, $B_0' = -5$) b) Difference of the Gibb's free energy with pressure, ΔG vs. p	VI.4a VI.4b	T5	92BDDG, 93GHBH 03JS
		AF	χ_g and χ_g^{-1} vs. T up to 420 K. $T_N = 290$ K, $\Theta = 115$ K, $p_{\text{eff}} = 4.06 \mu_B$	VI.5		66TZ
		AF	ND: $p_0 = 3.0 \mu_B$			69KLC
NpBi			V/V_0 vs. p ; the transition of B1 to tetragonal structure at 8.5 GPa, $\Delta V/V_0 \sim 12\%$		T5	95B
	sc		Phonon dispersion diagram	VI.6		97BBBF
	sc	AF	INS: Energy scans at $Q = (110)$ and 10...159 K, $T_N = 192.5$ K	VI.7		97BBBF
			Longitudinal and transverse modes vs. T	Inset		
	sc	AF	Dispersion curves and I at 10 K along (11ζ) and $(1+\zeta, 1+\zeta, 0)$	VI.8A, B		97BBBF
	sc	AF	a) p_{Np} vs. T up to $T_N (= 192.5$ K), $p_{Np}(T = 0 \text{ K}) = 2.48 \mu_B$ b) I_{magn} vs. T along $[1\bar{1}0]$ axes at 4.6 T, $T_N = 192.4$ K	VI.9		92BBRS
	sc	AF/P	Critical neutron scattering Log-log I_{magn} vs. t , $T_N = 192.5$ K, $\beta = 0.31$	VI.10		92BBRS
	poly	AF/P	ρ vs. T , up to 300 K $\rho(T)$ near $T_N (= 193$ K)	VI.11 Inset		93FG
	sc	AF/P	Resistance log R vs. T up to 300 K at pressures 0.2...3.9 GPa	VI.12		97IZBS

Compound	Sam- ple	State	Electronic, structural, magnetic, transport and related properties	Fig.	Tab.	Ref.
NpBi (cont.)	sc	AF/P	R vs. T up to 300 K at 3.9...22 GPa $dR(T)/dT$ at 12.3 GPa	VI.13 Inset		97IZBS
PuBi	sc	AF/P	R vs. p , up to 22 GPa at 10 and 300 K a) Band structure (LMTO) b) DOS V/V_0 vs. p , up to 50 GPa, $B_0 = 61$ GPa, $B_0' = 6.1$ $a_0 = 0.63588(8)$ nm	VI.14 R.53a R.53b VI.15		97IZBS 90WC 99MHRR
	sc [100]	AF	p_{Pu} vs. H , up to 9 T at 40...63 K	VI.16		86MVS2
	sc [001]	AF:F	ND: a) $I_{\text{magn}}(2k0)$ vs. T at 0...6.5 T, $T_N = 58$ K, single- k ($4^2, 5$) type of magnetic structure b) $I_{\text{magn}}(2k0)$ vs. H , up to 9 T at 4.2 K, $k = 0.232$ c) (H, T) MPD, $H \parallel [001]$ Band structure by LDA compared to LDA + U ($U = 2.5$ eV). The absorptive part $\text{Re } \sigma(\omega)$ as computed by LDA and LDA + U .	VI.17a VI.17b VI.17c		87BQRS 05GDOB
			Partial DOS for Bi p and Am d,f electron contributions by SIC-LSD approximation High-pressure crystallographic data $a_0 = 0.6332(8)$ nm	VI.18		01PSTS
	sc	WTDP	χ_m vs. T , up to 290 K, $a_0 = 0.6333(11)$ nm [87GH] a) V/V_0 vs. p , up to 48 GPa, $B_0 = 53$ GPa, $B_0' = 8$ b) Difference in the Gibb's energy with pressure, ΔG vs. p High-pressure crystallographic data	VI.19 VI.20a VI.20b	T7	95B 87GH 92MV 93GHBH, 95B 03JS 95B, 92G
CfBi					T7	