### REFERENCE

UNITED STATES PARTMENT OF DMMERCE JBLICATION



## Properties of Selected Superconductive Materials

U.S. PARTMENT OF OMMERCE National

QC 100 15753 10.724 1972

#### NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards<sup>1</sup> was established by an act of Congress March 3, 1901. The Bureau's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Bureau conducts research and provides: (1) a basis for the Nation's physical measurement system, (2) scientific and technological services for industry and government, (3) a technical basis for equity in trade, and (4) technical services to promote public safety. The Bureau consists of the Institute for Basic Standards, the Institute for Materials Research, the Institute for Applied Technology, the Center for Computer Sciences and Technology, and the Office for Information Programs.

**THE INSTITUTE FOR BASIC STANDARDS** provides the central basis within the United States of a complete and consistent system of physical measurement; coordinates that system with measurement systems of other nations; and furnishes essential services leading to accurate and uniform physical measurements throughout the Nation's scientific community, industry, and commerce. The Institute consists of a Center for Radiation Research, an Office of Measurement Services and the following divisions:

Applied Mathematics—Electricity—Heat—Mechanics—Optical Physics—Linac Radiation<sup>2</sup>—Nuclear Radiation<sup>2</sup>—Applied Radiation<sup>2</sup>—Quantum Electronics<sup>3</sup>—Electromagnetics<sup>3</sup>—Time and Frequency<sup>3</sup>—Laboratory Astrophysics<sup>3</sup>—Cryogenics<sup>3</sup>.

THE INSTITUTE FOR MATERIALS RESEARCH conducts materials research leading to improved methods of measurement, standards, and data on the properties of well-characterized materials needed by industry, commerce, educational institutions, and Government; provides advisory and research services to other Government agencies; and develops, produces, and distributes standard reference materials. The Institute consists of the Office of Standard Reference Materials and the following divisions:

Analytical Chemistry—Polymers—Metallurgy—Inorganic Materials—Reactor Radiation—Physical Chemistry.

THE INSTITUTE FOR APPLIED TECHNOLOGY provides technical services to promote the use of available technology and to facilitate technological innovation in industry and Government; cooperates with public and private organizations leading to the development of technological standards (including mandatory safety standards), codes and methods of test; and provides technical advice and services to Government agencies upon request. The Institute also monitors NBS engineering standards activities and provides liaison between NBS and national and international engineering standards bodies. The Institute consists of the following divisions and offices:

Engineering Standards Services—Weights and Measures—Invention and Innovation—Product Evaluation Technology—Building Research—Electronic Technology—Technical Analysis—Measurement Engineering—Office of Fire Programs.

THE CENTER FOR COMPUTER SCIENCES AND TECHNOLOGY conducts research and provides technical services designed to aid Government agencies in improving cost effectiveness in the conduct of their programs through the selection, acquisition, and effective utilization of automatic data processing equipment; and serves as the principal focus within the executive branch for the development of Federal standards for automatic data processing equipment, techniques, and computer languages. The Center consists of the following offices and divisions:

Information Processing Standards—Computer Information—Computer Services —Systems Development—Information Processing Technology.

THE OFFICE FOR INFORMATION PROGRAMS promotes optimum dissemination and accessibility of scientific information generated within NBS and other agencies of the Federal Government; promotes the development of the National Standard Reference Data System and a system of information analysis centers dealing with the broader aspects of the National Measurement System; provides appropriate services to ensure that the NBS staff has optimum accessibility to the scientific information of the world, and directs the public information activities of the Bureau. The Office consists of the following organizational units:

Office of Standard Reference Data—Office of Technical Information and Publications—Library—Office of International Relations.

<sup>&</sup>lt;sup>1</sup> Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

<sup>&</sup>lt;sup>2</sup> Part of the Center for Radiation Research. <sup>3</sup> Located at Boulder, Colorado 80302.



# Properties of Selected Superconductive Materials

B. W. Roberts

Superconductive Materials Data Center General Electric Research and Development Center P. O. Box 8, Schenectady, New York 12301

t. Technical note 1. 724

(Supersedes and extends NBS Technical Note 482)



U.S. DEPARTMENT OF COMMERCE, Peter G. Peterson, Secretary

Issued June 1972

### National Bureau of Standards Technical Note 724 Nat. Bur. Stand. (U.S.), Tech. Note 724, 100 pages (June 1972)

CODEN: NBTNAE

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Order by SD Catalog No. C13.46:724). Price \$1.00.

#### Contents

p	•	an.
- <b>T</b>	а	RC

Introduction	l
Background	1
General Properties of Superconductors	2
High Field Superconductivity	2
Criteria for the Existence of the Superconductive State and New Developments	4
Metallurgical Aspects of Sample Preparation	7
Notes Concerning the Data Tables	9
Table 1. Properties of Superconductive Elements	10
Table 2. Tabulation of Superconductive Materials	14
Table 3. High Magnetic Field Superconductive Materials           and Some of Their Properties	70
Bibliography	78
Review Articles and Books on Superconductivity	89



#### B. W. Roberts

This is a noncritical compilation of data on superconductive materials that have been extracted from the literature published up to early 1971. The properties concerned are composition, critical temperature, critical magnetic fields, crystallographic data, and the lowest temperature tested for materials specifically explored for superconductivity. The compilation also includes a bibliography, a list of general review articles, and a special tabulation of high magnetic field superconductors.

#### Key Words: Bibliography; compilation of data; composition; critical field; critical temperature; crystallographic data; low temperature; superconductivity.

#### INTRODUCTION

This Technical Note extends the data set on superconductive materials published in Vol. IV of Progress in Cryogenics, 1964,\* pages 160-231, and is in addition to the addendum, National Bureau of Standards Technical Note 482 of May 1969. The new material includes a portion of that data readily available to the author to early 1971. However, the world activity in the study of superconductive materials has continued at a high rate such that more than 500 references are in hand and yet to be perused for available data as this Technical Note is assembled.

#### BACKGROUND

Sixty years of research on the phenomena of superconductivity has led to an impressive current world activity aimed at further understanding and exploitation. This effort has produced a technology employed by many industrial concerns. Some of the latest developments include superconductive coils capable of producing magnetic fields approaching 25 Tesla. Superconductive magnets with precise and homogeneous fields and with selective spacial configurations are readily produced including some field gradient patterns that are impossible with normal state conductors. Huge linear accelerators are planned utilizing superconductive cavity walls. Large superconductive magnets have been constructed for hydrogen bubble chambers with coil diameters on the order of 3 meters and more. Plasma researchers have constructed floating superconductive

<sup>\*</sup> This data set has also been published in a Soviet book "New Materials and Methods of Investigating Metals and Alloys", edited by Professor I. I. Kornilov of the Baikov Institute of Metallurgy, 1966, Moscow, pp. 1-98.

coils. A direct current transformer has been produced utilizing a special arrangement of superconductive thin films for tunneling. A superconductive motor of 3250 hp. has been operated successfully as well as a 150 hp. superconductive generator. Doubtlessly, other applications will be stimulated as the information on superconductivity research and the data produced are disseminated to the scientific and industrial community.

#### GENERAL PROPERTIES OF SUPERCONDUCTORS \*\*

The historically first observed and most distinctive property of a superconductive body is the near total loss of resistance at a critical temperature  $T_c$  characteristic of each material. Figure 1(a) illustrates schematically two types of possible transitions. The sharp vertical discontinuity is indicative of that found for a single crystal of a very pure element or one of a few well annealed alloy compositions. The broad transition, illustrated by broken lines, suggests the transition shape seen for materials that are inhomogeneous and contain unusual strain distributions. Careful testing of the resistivity limits for superconductors shows that it is less than 4 x 10<sup>-25</sup> ohm-m, while the lowest resistivity observed in metals is of the order of 10<sup>-15</sup> ohm-m. If one compares the resistivity of a superconductive body to that of copper at room temperature, the superconductive body is at least 10<sup>17</sup> times less resistive.

The temperature interval,  $T_c$ , over which the transition between the normal and superconductive states takes place, may be of the order of as little as  $2 \times 10^{-5}$ K or several K in width, depending upon the material state. The narrow transition width was observed in 99.9999 purity gallium single crystals.

A Type I superconductive body below  $T_c$ , as exemplified by a pure metal, exhibits perfect diamagnetism and excludes a magnetic field up to some critical field  $H_c$ , whereupon it reverts to the normal state as shown in the H-T diagram of Figure 1(b).

#### HIGH FIELD SUPERCONDUCTIVITY

The discovery of the large current-carrying capability of Nb<sub>3</sub>Sn and other similar alloys has led to an extensive study of the physical properties of these alloys. In brief, a high field superconductor, or Type II superconductor, passes from the perfect diamagnetic state

<sup>\*\*</sup> The NBS Office of Standard Reference Data, as administrator of the National Standard Reference Data System, has officially adopted the use of SI units for all NSRDS publications, in accordance with NBS practice. This publication does not use SI units uniformly because contractual commitments with the author predate establishment of a firm policy on their use by NBS. Other appropriate conversion factors will be found in Tables 1 and 2. We urge that specialists and other users of data in this field accustom themselves to SI units as rapidly as possible.



Figure 1. Physical properties of superconductors. (a) Resistivity versus temperature for a pure and perfect lattice (solid line). Impure and/or imperfect lattice (dashed line). (b) Magnetic fieldtemperature dependence for Type I or "soft" superconductors. (c) Schematic magnetization curve for "hard" or Type II superconductors.

at low magnetic fields to a mixed state and finally to a sheathed state before attaining the normal resistive state of the metal. The magnetization of a typical high field superconductor is shown in Figure 1(c). The magnetic field values separating the four stages are given as  $H_{c1}$ ,  $H_{c2}$ , and  $H_{c3}$ . The superconductive state below  $H_{c1}$  is perfectly diamagnetic and identical to the state of most pure metals of the "soft" or Type I type. Between  $H_{c1}$  and  $H_{c2}$  a "mixed superconductive state" is found in which fluxons (a minimal unit of magnetic flux) create lines of normal superconductor in a superconductive matrix. The volume of the normal state is proportional to  $-4\pi$ M in the "mixed state" region. Thus at H<sub>c2</sub> the fluxon density has become so great as to drive the interior volume of the superconductive body completely normal. Between Hc2 and Hc3 the superconductor has a sheath of current-carrying superconductive material at the body surface, and above Hc3 the normal state exists. With several types of careful measurement, it is possible to determine  $H_{c1}$ ,  $H_{c2}$ , and  $H_{c3}$ . Table III contains some of the available data on high field superconductive materials.

A more complete representation of the states present in a high field superconductor is given in Fig. 2 with the additional phenomenon called fluctuation superconductivity. The latter phenomenon is evidenced in several physical properties above the appropriate critical fields and temperatures.

High field superconductive phenomena are also related to specimen dimension and configuration. For instance, the Type I superconductor, Hg, has entirely different magnetization behavior in high magnetic fields when contained in the very fine set of filamentary tunnels in an unprocessed Vycor glass. The great majority of superconductive materials are Type II. The elements in very pure form with the possible exceptions of vanadium and niobium are Type I.

A further complication in describing a high field superconductor has been found in a few examples wherein a specific alloy may exhibit Type II behavior up to a temperature intermediate between  $T_c$  and absolute zero and then is a Type I superconductor from the intermediate temperature to  $T_c$ .

#### CRITERIA FOR THE EXISTENCE OF THE SUPERCONDUCTIVE STATE AND NEW DEVELOPMENTS

Substantial numbers of experimental and theoretical attempts are still being actively pursued to enhance the known criteria outlining the existence of the superconductive state in materials. Still, the most used criteria are Matthias' rules developed empirically but with qualitative theoretical support. The primary prediction of Matthias' rules is that alloys with average valence electron per atom values just below 4 (3.7-3.9), 5 (4.7), and 7 (6.7) will often have notable superconductive critical temperatures. The average valence electron per atom ratio is taken directly from the periodic table and the prime example is shown in Fig. 3. T<sub>c</sub> data for most of the known alloys with the  $\beta$ -W (or CrO<sub>2</sub> or Al5) structures



Figure 2. H-T phase diagram representation of Type I and Type II superconductors with locations for fluctuation superconductivity indicated. (R. R. Hake, personal communication and J. Applied Phys. 40, 5148 (1969). "The Thermodynamics of Type I and Type II Superconductors"). which have been prepared and tested for superconductivity are presented as a function of valence electron per atom ratio. The pronounced peaking at 4.7 and 6.7 is evident. The evidence for the peak below the value 4 has been demonstrated from a group of alloys with seven different crystal structures. (b) Many additional parameters such as the mean atomic volume, the valence electron density and the mass of the constituent atoms have been useful but most often only in comparison among similiar structures or materials. A recently described oscillatory dependence of  $T_c$  on the mean number of valence electrons per atom has been described for the  $Cu_3Au$ -type  $(Ll_2)$  alloys. (c) In five ternary alloy systems they find maxima in  $T_c$  near 3.3 and 3.7 valence electrons per atom. The authors indicate that Brillouin zone effects lead to the oscillatory behaviour.

Another theoretical insight leap is needed to lead materialists to the 30 K critical temperature realm which the superconductive technologists state would greatly amplify the present application of superconductive devices. Critical temperatures around 30 K would permit high magnetic field production with inexpensive liquid hydrogen as a coolant.

A wave of interest has swept the technical world for even higher critical temperatures in one-dimensional organic materials and two-dimensional layered arrays requiring new mechanisms for the super-conductive state. A novel series of metallo-organic compounds have just been reported(d) which are composed of "atomically-thin, metallic layers of TaS<sub>2</sub> and layers of substituted pyridines" in alternation. Selected examples of such sandwich construction are

TaS <sub>2</sub> (pyridine) <sub>0.5</sub>	$\frac{1}{3.55}$
TaS <sub>2</sub> (4-Dimethylamino pyridine) <sub>0.34</sub>	2.30
TaS <sub>2</sub> (3-Ethyl pyridine) <sub>0.29</sub>	4.50
TaS <sub>2</sub> (2,3,6-Trimethyl pyridine) <sub>0.165</sub>	1.95

from data on twenty combined materials. The added complexity for systematic data selection from these materials could become quite involved as this field may grow.

Several selected new developments include the reconsideration of Pauling's resonating-valence-bond theory of superconductivity(e) which gives good correlation for observed and calculated critical temperatures of Y, Zr, Nb, Mo, Tc, Ru and Rh.

Not only has fluctuation superconductivity been well documented above T but in high field superconductors two types of behavior have been delineated: (f) "standard" Type II and "extreme" Type II. The need for designation in these tables is under study.

Perusal of the new data in the "Pressure" portion of Table 1

illustrates the intense activity of study of the elements under various very high pressures and we note that several elements have been found superconductive including the alkali metal Cs. Further data are given in Table 2 along with a considerable number of new results on alloys prepared or studied while under high pressure.

A significant block of study has enveloped the discovery of the high critical temperatures in the ternary alloys of Nb (Al, Ge) and suitably composed and annealed alloys have been found to have an onset critical temperature of 20.98 K(g) and has been quoted as  $21 + 0.1 \text{ K}^{(h)}$ .

Andres and Jensen<sup>(i)</sup> have shown a clear correlation of T with the mean electron density in over fifty alloys of the noble transition elements covering the temperature range 0.015 K to 5 K.

An extension of Ginzburg and Kirzhnits theory of surface superconductivity by Pashitskii<sup>(j)</sup> suggests another mechanism for the superconductive state with critical temperatures in the realm of  $\sim 10^2$  to  $10^3$  K.

A calculated value of the critical temperature of Al which agrees well with experiment has been obtained from inelastic neutron scattering data on phonons and the Heine-Abarenkov pseudopotential for the electron-ion form factor. (k)

The critical temperature of Be co- deposited at low temperatures with KCl or zinc etioporphyrin has been found to increase  $T_c$  from the usual range of 5.4 to 8.6 K to 10.2 and 10.6 K respectively. ( $\mathcal{L}$ ) These very new results may be due to three-dimensional electron quantization effects on superconductivity in very tiny crystallites. (m)

#### METALLURGICAL ASPECTS OF SAMPLE PREPARATION

The sensitivity of superconductive properties to the material state is most pronounced and has been used on occasion in a reverse sense to study and specify the detailed state of alloys. The mechanical state, the homogeneity, and the presence of impurity atoms and other electron scattering centers are all capable of controlling the critical temperature and the current-carrying capabilities in high magnetic fields. Well annealed specimens usually show sharper transitions than those that are strained or inhomogeneous. This sensitivity to mechanical state underlines a general problem in the tabulation of properties for superconductive materials. The occasional divergent values of the critical temperature and of the critical fields quoted for a Type II superconductor may lie in the variation in sample preparation. Critical temperatures of materials studied early in the history of superconductivity must be evaluated in light of the probable metallurgical state of the material as well as the availability of less pure starting elements. It has been noted that, recent work has given extended consideration to the metallurgical aspects of sample preparation.

- (a) B. W. Roberts "Superconductive Compounds" in <u>Intermetallic</u> <u>Compounds</u>. Edited by J. H. Westbrook, John Wiley and Sons, New York (1967) pp. 581-613.
- (b) Cooper, A. S. et.al, Proc. Nat. Acad. Sci. 67, 313 (1970).
- (c) Havinga, E. E., Damsa, H. and VanMaaren, M. H., J. Phys. Chem. Solids <u>31</u>, 2653 (1970).
- (d) Gamble, F. R., Osiecki, J. H. and DiSalvo, F. J. To appear in J. Chem. Phys. Gamble, F. R., DiSalvo, F. J., Klemm, R. A. and Geballe, T. H., Science <u>168</u>, 568 (1970).
- (e) Pauling, L., Proc. Nat. Acad. Sci. <u>60</u>, 59 (1968).
- (f) Hake, R. R., Phys. Rev. 158, 356 (1967).
- (g) Matthias, B. T., Inter. J. of Quantum Chem. Vol. IIIS, 903 (1970).
- (h) Arrhenius, G., et.al, Proc. Nat. Acad. Sciences 61, 621 (1968).
- (i) Andres, K. and Jensen, M. A., Phys. Rev. 165, 541 (1968).
- (j) Pashitskii, E. A., Zh. Eksp. Teor. Fiz. <u>56</u>, 662 (1969). Trans: Soviet Physics JETP <u>29</u>, 362 (1969).
- (k) Carbotte, J. P. and Dynes, R. C., Physics Letters <u>25A</u>, 685 (1967).
- (L) Alekseevski, N. E., Tsebro, V. I. and Filippovich, E. I., ZhETF Pis. Red. <u>13</u>, 247 (1971).
- (m) Parmenter, R. H., Phys. Rev. <u>166</u>, 392 (1968).

#### Acknowledgments

Preprints and courtesy copies of reports on superconductive materials and comments and suggestions have been kindly sent by many researchers in the field and found most useful and are gratefully acknowledged. Thanks are extended to E. Bucher, J. Volger, Ch.J. Raub, B. R. Coles, K. Yasukochi, J. Muller, F. Galasso, N. E. Alekseevski, A. C. Rose-Innes, A. F. Rice, V. B. Compton, R. A. Hein, W. DeSorbo, G. T. Meaden, R. D. Blaugher, S. Geller, R. E. Jones, Jr., L. E. Toth, D. C. Hamilton, E. C. VanReuth, A. L. Giorgi, E. G. Szklarz, K. Noto, H.P.R. Frederikse, S.S. Schalyt, R. M. Waterstrat, G. V. Samsonov, F. Hulliger, G. L. Guthrie, D. R. O'Boyle, W. J. McDonald, S. Foner, B. T. Matthias, A.S. Cooper, A. P. Shepelev, T. H. Geballe, G. C. Carter, A. Echarri, H. Krebs, J. E. Cox, R. R. Hake, M. H. VanMaaren, and M. S. Lubell and to others inadvertently not included. The expert assistance of Mrs. Joan Wolfe, Mrs. June Falcone, Mrs. Barbara Fisher and S. L. Decker have contributed greatly to the monograph. The thorough coverage of the scientific literature is due to the library staff's fine efforts in seeking pertinent articles under the direction of Miss Vera O. Chase.

Table 1 lists the elements and some of their superconductive properties. The data have been selected generally from recent studies in which sample purity and perfection appear to have been seriously considered.

Table 2 contains superconductive materials reported during the period plus all materials that have been reported to be tested specifically for a superconducting transition down to some temperature T<sub>n</sub> without discovery of a transition. All compositions are denoted on an atomic basis, i.e., AB, AB, or AB3 for compositions, unless noted. Solid solutions or odd compositions may be denoted as AzB1-z, or A.B. A series of three or more alloys is indicated as  $A_x B_y$  or by actual indication of the atomic fraction range such as  $A_{0-0.6}B_{1-0.4}$ . The critical temperature of such a series of alloys is denoted by a range of values or possibly the maximum value. In many cases several references will be found for the same alloy. This usually denotes a separate measurement by each source, and in a few cases may even indicate a disagreement over the superconductive properties. In view of the previous discussions concerning the variability of the superconductive properties as a function of purity and other metallurgical aspects, it is recommended that the appropriate literature be checked to determine the most probable critical temperature or critical field of a given alloy. Another point of difficulty lies in the selection of the critical temperature from a transition observed in the effective permeability or the change in resistance, or possibly the incremental changes observed in frequency observed by certain techniques. Most authors choose the mid-point of such curves as the probable critical temperature of the idealized material, and others will choose the highest temperature at which a deviation from the normal state property is observed. Often the choice is not specified.

Table 3 lists high magnetic field superconductors.

Review articles concerned primarily with the experimental and material aspects of superconductivity are appended.

#### PROPERTIES OF THE SUPERCONDUCTIVE ELEMENTS

Table 1.Properties of the Superconductive Elements (New Data on the<br/>Elements are Referenced in Table 2 Along with Crystal Structure<br/>Data and Parameters for Non-superconductive Elements)

Element	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds) <sup>1</sup>	θ <sub>D</sub> (K)†	$\gamma(mJ mole^{-1} deg. K^2)^{\ddagger}$
Al	1.175	104.93	420	1.35
Be	0.026			0.21
Cd	0.56, 0.518	29.6	209	0.688
Ga	1.0833	59.3	325	0.60
Ga(β)	6.2			
Ga (Y)	7.62	HF*		
Hg (α)	4.154	411	87, 71.9	1.81
Hg (β)	3.949	339	93	1.37
In	3.405	281.53	109	1.672
Ir	0.14, 0.11	19	425	3.27
La (¤)	4.88	808	142	10.0
La (β)	6.0	1,600	139	11.3
Мо	0.916	90	460	1.83
Nb	9.25	1970, HF	277	7.80
Os	0.655	65	500	2.35
Pa	1.4			
Pb	7.23	803	96.3	3.0
Re	1.697	188	415	2.35
Ru	0.493	66	580	3.0
Sb	2.6-2.7**	HF		
Sn	3.722	305	195	1.78
Та	4.47	831	258	6.15
Тс	7.79, 7.92			
Th	1.374	131, 162	163.3	4.31
Ti	0.39	56, 100	429	3.32
Tl	2.39	179	78.5	1.47
V	5.31	1100, HF	382	9.82
W	0.0154	1.15	550	0.90

Note: Symbols explained on page 13.

Element	Т <sub>с</sub> (К) -	H <sub>o</sub> (oersteds) <sup>1</sup>	θ <sub>D</sub> (K)†	γ(mJ mole <sup>-1</sup> deg. K <sup>2</sup>
Zn	0.875	55	319.7	0.633
Zr	0.53	47	290	2.78
Zr (u)	0.65			
	Thin Films	Condensed at Sev	eral Temj	peratures
A1	1.30-~5.7			
Ве	5-8.2	HF		
with KCl	6.5-10.6			
with Zn e	etio-porphyrin			
	10.2			
Bi	6.154, 6.173			
Ga	8.4, 6.5			
In	3.43-4.5			
in Glass	Pores			
	3.68-4.17	HF		
La	5.0-6.74			
Мо	4-6.7			
Nb	6.2-10	HF		
Pb	7.7			
Re	~7			
Sn	3.84-6.0			
Та	3.16-4.8	HF		
Ti	1.3			
w	1.7-4.1			
Zn	~1.9			

#### DATA FOR ELEMENTS STUDIED UNDER PRESSURE

Element	T <sub>c</sub> (K)	Pressure <sup>2</sup>
As	0.31-0.5	220-140 kbar
	0.2-0.25	~140-100 kbar
Ba II	~1.3	55 kbar
III	3.05	85-88 kbar
III	~5.2	>140 kbar
Bi II	3.916, 3.90, 3.86	25, 25.2, 26.8 katm
III	6.55, 7.25	~37 kbar, 27-28.4 katm
IV	7.0	43, 43-62 kbar
v	8.3, 8.55	81 kbar
VI	8.55	90, 92-101 kbar
Ce	1.7	50 kbar
Cs	~1.5	> ~125 kbar
Ga II	6.24, 6.38	≥35 katm
II'	7.5	≥35 katm Then P →0
Ge	4.85-5.4	~120 kbar
La	~5.5-11.93	0 to ~140 kbar
Р	4.7	>100 kbar
	5.8	170 kbar
Pb II	3.55, 3.6	160 kbar
Sb	3.55	85 kbar
	3.52	93 kbar
	3.53	100 kbar
	3.40	~150 kbar
Se II	6.75, 6.95	~130 kbar
Si	7.1	120-130 kbar
Sn II	5.2	125 kbar
	4.85	160 kbar
III	5.30	113 kbar

Ele	ement	т <sub>с</sub> (К)	Pressure <sup>2</sup>
Те	П	2.05	43 kbar
	III	4.28	70 kbar
	IV	4.25	84 kbar
Tl	(CUB)	1.45	35 kbar
	(HEX)	1.95	35 kbar
U		2.3	10 kbar
Y		~1.2~2.7	120-170 kbar

- † For another data set see Mendelssohn, K., Cryophysics, p. 178 (Interscience, New York, 1960) and Gschneidner, K.A., Jr. in Solid State Physics <u>16</u>, 275-426 (1964).
- Parkinson, D. H., Rep. progr. Phys. 21, 226 (1958). Also see Reference 572 and Gschneidner, K. A., Jr. in Solid State Physics 16, 275-426 (1964).
- $\mathrm{HF}^{*}$  See Table 3 for additional data on  $\mathrm{H_{c_1}}$ ,  $\mathrm{H_{c_2}}$  and  $\mathrm{H_{c_3}}$ . M equals maximum. FCC is face-centered cubic. HCP is hexagonal close-packed.

\*\* Metastable

<sup>1</sup>To convert "oersteds" to ampere/meters, multiply by 79.57.

<sup>2</sup>To convert "atm" to "newton/meter<sup>2</sup>", multiply by 1.013 x 10<sup>5</sup>.

Table 2. Tabulation of Superconductive Materials (including Proven Non-superconductors) with Critical Temperatures and Fields, Crystal Structure Data where determined, and References.

Symbols used:

- \* Eutectic alloy
- △ Uncertain composition.
- R Resistance measurements.
- M Denotes maximum T<sub>c</sub> in series of specimens or compositions.
- \*\* T<sub>n</sub> is the lowest temperature at which a material has been checked for a superconductive transition.
- HF In  $H_0$  column indicates that some information is available in Table 3 on high field magnetic properties.
- ∇ On material or reference indicates a thin film study.
- ~ All cell edges are intended to be quoted in Angstrom units.

The entry  $T_{\rm C}^{*}$  (-0.3 K/a%) would indicate two or more measurements in which the critical temperature decreased 0.3 K per atomic percent of alloying element added.

- t  $T_c / T_{co}$
- o Impure material.
- C Calorimetric determination.
- VA Valence electron/atom
- SS Solid solution.
- n Number of carriers in superconductive semiconductive materials.
- # Electronic specific heat  $(\gamma)$  and/or Debye  $\theta$  data given.
- D Vacancy

Some of the above symbols may be found only in PROGRESS IN CRYOGENICS IV, 160-231, (1964).

#### KEY TO CRYSTAL STRUCTURE TYPES FOUND IN TABLE 2

"Struckturbericht" Type*	Example	Class
Al	Cu	Cubic, f.c.
A2	W	Cubic, b.c.
A3	Mg	Hexagonal, close packed
A4	Diamond	Cubic, f.c.
А5	White Sn	Tetragonal, b.c.
A6	In	Tetragonal, b.c. (f.c. cell usually used)
А7	As	Rhombohedral
A8	Se	Trigonal
A10	Hg	Rhombohedral
A12	∝- Mn	Cubic, b.c.
A13	B-Mn	Cubic
A15	B-W	Cubic
Bl	NaC1	Cubic, f.c.
В2	CsCl	Cubic
B3	ZnS	Cubic
B4	ZnS	Hexagonal
B8 <sub>1</sub>	NiAs	Hexagonal
B8 <sub>2</sub>	Ni <sub>2</sub> In	Hexagonal
B10	РЪО	Tetragonal
B11	γ-CuTi	Tetragonal
B17	PtS	Tetragonal
B18	CuS	Hexagonal
в20	FeSi	Cubic
B27	FeB	Ortho-rhombic

\*See W. B. Pearson, Handbook of Lattice Spacing and Structures of Metals (Pergamon, New York, 1958), p. 79, also Vol. II (Pergamon, New York, 1967), p. 3.

15

"Struckturbericht" Type)*	Example	Class
B31	MnP	Ortho-rhombic
B32	NaTl	Cubic, f.c.
в34	PdS	Tetragonal
Bf	δ-CrB	Ortho-rhombic
Bg	МоВ	Tetragonal, b.c.
<sup>B</sup> h	WC	Hexagonal
Bi	γ′-MoC	Hexagonal
C1	CaF <sub>2</sub>	Cubic, f.c.
C1 <sub>b</sub>	MgAgAs	Cubic, f.c.
C2	FeS <sub>2</sub>	Cubic
C6	CdI2	Trigonal
С11Ъ	MoSi <sub>2</sub>	Tetragonal, b.c.
C12	CaSi <sub>2</sub>	Rhombohedral
C14	MgZn <sub>2</sub>	Hexagonal
C15	Cu <sub>2</sub> Mg	Cubic, f.c.
C15 <sub>b</sub>	AuBe <sub>5</sub>	Cubic
C16	CuAl <sub>2</sub>	Tetragonal, b.c.
C18	FeS <sub>2</sub>	Ortho-rhombic
C22	Fe <sub>2</sub> P	Trigonal
C23	PbC12	Ortho-rhombic
C32	A1B <sub>2</sub>	Hexagonal
C36	MgNi <sub>2</sub>	Hexagonal
C37	Co <sub>2</sub> Si	Ortho-rhombic
C49	ZrSi <sub>2</sub>	Ortho-rhombic

$C54$ TiSi2Ortho-rhombic $C_c$ Si2ThTetragonal, b.c. $D0_3$ BiF3Cubic, f.c. $D0_{11}$ Fe3COrtho-rhombic $D0_{11}$ Fe3COrtho-rhombic $D0_{18}$ Na3AsHexagonal $D0_{19}$ Ni3SnHexagonal $D0_{20}$ NiA13Ortho-rhombic $D0_{22}$ TiA13Tetragonal $D0_{22}$ TiA13Tetragonal, b.c. $D1_3$ Al4BaTetragonal, b.c. $D1_c$ PtSn4Ortho-rhombic $D2_1$ CaB6Cubic $D2_2$ Mu6Tetragonal, b.c. $D2_4$ CaZn5Hexagonal $D5_2$ La2O3Trigonal $D5_3$ Sb2S3Ortho-rhombic $D7_3$ Th3F4Cubic, b.c. $D7_5$ Ta3B4Ortho-rhombic $D8_2$ Cu5Zn8Cubic, b.c.	"Struckturbericht" Type*	Example	Class	
$C_c$ Si $_2$ ThTetragonal, b.c. $DO_3$ $BiF_3$ Cubic, f.c. $DO_{11}$ $Fe_3C$ Ortho-rhombic $DO_{18}$ $Na_3As$ Hexagonal $DO_{19}$ $Ni_3Sn$ Hexagonal $DO_{20}$ $NiA1_3$ Ortho-rhombic $DO_{22}$ $TiA1_3$ Tetragonal, b.c. $DO_{22}$ $TiA1_3$ Tetragonal, b.c. $DO_{2}$ $Ni_3F$ Tetragonal, b.c. $Do_e$ $Ni_3F$ Tetragonal, b.c. $D1_c$ $PtSn_4$ Ortho-rhombic $D2_1$ $CaB_6$ Cubic $D2_d$ $CaZn_5$ Hexagonal $D5_2$ $La_2O_3$ Trigonal $D5_8$ $Sb_2S_3$ Ortho-rhombic $D7_3$ $Th_3^P4$ Cubic, b.c. $D7_b$ $Ta_3B_4$ Ortho-rhombic $D8_1$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	C54	TiSi <sub>2</sub>	Ortho-rhombic	
$DO_3$ $BiF_3$ Cubic, f.c. $DO_{11}$ $Fe_3C$ Ortho-rhombic $DO_{18}$ $Na_3As$ Hexagonal $DO_{19}$ $Ni_3Sn$ Hexagonal $DO_{20}$ $NiA1_3$ Ortho-rhombic $DO_{22}$ $TiA1_3$ Tetragonal $DO_e$ $Ni_3P$ Tetragonal, b.c. $DO_e$ $Ni_3P$ Tetragonal, b.c. $D1_3$ $Al_4Ba$ Tetragonal, b.c. $D1_c$ $PtSn_4$ Ortho-rhombic $D2_c$ MnU_6       Tetragonal, b.c. $D2_d$ $CaZn_5$ Hexagonal $D5_2$ $La_2O_3$ Trigonal $D5_8$ $Sb_2S_3$ Ortho-rhombic $D7_3$ $Th_3P_4$ Cubic, b.c. $D7_b$ $Ta_3B_4$ Ortho-rhombic $D7_b$ $Ta_3B_4$ Ortho-rhombic $D7_b$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	C <sub>c</sub>	Si <sub>2</sub> Th	Tetragonal, b.c.	
$DO_{11}$ $Fe_3C$ Ortho-rhombic $DO_{18}$ $Na_3As$ Hexagonal $DO_{19}$ $Ni_3Sn$ Hexagonal $DO_{20}$ $NiA1_3$ Ortho-rhombic $DO_{22}$ $TiA1_3$ Tetragonal $DO_{2}$ $TiA1_3$ Tetragonal, b.c. $DO_{2}$ $Ni_3P$ Tetragonal, b.c. $DO_e$ $Ni_3P$ Tetragonal, b.c. $D1_3$ $A1_4Ba$ Tetragonal, b.c. $D1_c$ $PtSn_4$ Ortho-rhombic $D2_1$ $CaB_6$ Cubic $D2_d$ $Ca2n_5$ Hexagonal $D5_2$ $La_2O_3$ Trigonal $D5_8$ $Sb_2S_3$ Ortho-rhombic $D7_3$ $Th_3P_4$ Cubic, b.c. $D7_b$ $Ta_3B_4$ Ortho-rhombic $D8_1$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	DO3	BiF <sub>3</sub>	Cubic, f.c.	
$DO_{18}$ $Na_3As$ Hexagonal $DO_{19}$ $Ni_3Sn$ Hexagonal $DO_{20}$ $NiA1_3$ Ortho-rhombic $DO_{22}$ $TiA1_3$ Tetragonal $DO_e$ $Ni_3P$ Tetragonal, b.c. $D1_a$ $A1_4Ba$ Tetragonal, b.c. $D1_c$ $PtSn_4$ Ortho-rhombic $D2_1$ $CaB_6$ Cubic $D2_c$ $MnU_6$ Tetragonal, b.c. $D2_d$ $Ca2n_5$ Hexagonal $D5_2$ $La_2O_3$ Trigonal $D5_8$ $Sb_2S_3$ Ortho-rhombic $D7_3$ $Th_3P_4$ Cubic, b.c. $D7_b$ $Ta_3B_4$ Ortho-rhombic $D8_1$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	DO	Fe <sub>3</sub> C	Ortho-rhombic	
$\begin{array}{ccccccc} {\tt DO}_{19} & {\tt Ni}_3 {\tt Sn} & {\tt Hexagonal} \\ {\tt DO}_{20} & {\tt NiAl}_3 & {\tt Ortho-rhombic} \\ {\tt DO}_{22} & {\tt TiAl}_3 & {\tt Tetragonal} \\ {\tt DO}_e & {\tt Ni}_3 {\tt P} & {\tt Tetragonal}, {\tt b.c.} \\ {\tt DO}_e & {\tt Ni}_3 {\tt P} & {\tt Tetragonal}, {\tt b.c.} \\ {\tt Dl}_3 & {\tt Al}_4 {\tt Ba} & {\tt Tetragonal}, {\tt b.c.} \\ {\tt Dl}_c & {\tt PtSn}_4 & {\tt Ortho-rhombic} \\ {\tt D2}_1 & {\tt CaB}_6 & {\tt Cubic} \\ {\tt D2}_c & {\tt MnU}_6 & {\tt Tetragonal}, {\tt b.c.} \\ {\tt D2}_d & {\tt CaZn}_5 & {\tt Hexagonal} \\ {\tt D5}_2 & {\tt La}_2 {\tt O}_3 & {\tt Trigonal} \\ {\tt D5}_8 & {\tt Sb}_2 {\tt S}_3 & {\tt Ortho-rhombic} \\ {\tt D7}_3 & {\tt Th}_3 {\tt P4} & {\tt Cubic}, {\tt b.c.} \\ {\tt D7}_b & {\tt Ta}_3 {\tt B4} & {\tt Ortho-rhombic} \\ {\tt D8}_1 & {\tt Fe}_3 {\tt Zn}_{10} & {\tt Cubic}, {\tt b.c.} \\ {\tt D8}_2 & {\tt Cu}_5 {\tt Zn}_8 & {\tt Cubic}, {\tt b.c.} \end{array}$	D0 <sub>18</sub>	Na <sub>3</sub> As	Hexagonal	
$\begin{array}{ccccccc} & {\rm NiAl}_3 & {\rm Ortho-rhombic} \\ & {\rm D0}_{22} & {\rm TiAl}_3 & {\rm Tetragonal} \\ & {\rm D0}_{e} & {\rm Ni}_3{\rm P} & {\rm Tetragonal}, {\rm b.c.} \\ & {\rm D1}_3 & {\rm Al}_4{\rm Ba} & {\rm Tetragonal}, {\rm b.c.} \\ & {\rm D1}_3 & {\rm Al}_4{\rm Ba} & {\rm Tetragonal}, {\rm b.c.} \\ & {\rm D1}_c & {\rm PtSn}_4 & {\rm Ortho-rhombic} \\ & {\rm D2}_1 & {\rm CaB}_6 & {\rm Cubic} \\ & {\rm D2}_c & {\rm MnU}_6 & {\rm Tetragonal}, {\rm b.c.} \\ & {\rm D2}_d & {\rm Ca2n}_5 & {\rm Hexagonal} \\ & {\rm D5}_2 & {\rm La}_2{\rm O}_3 & {\rm Trigonal} \\ & {\rm D5}_8 & {\rm Sb}_2{\rm S}_3 & {\rm Ortho-rhombic} \\ & {\rm D7}_3 & {\rm Th}_3{\rm P}_4 & {\rm Cubic}, {\rm b.c.} \\ & {\rm D7}_b & {\rm Ta}_3{\rm B}_4 & {\rm Ortho-rhombic} \\ & {\rm D8}_1 & {\rm Fe}_3{\rm Zn}_{10} & {\rm Cubic}, {\rm b.c.} \\ & {\rm D8}_2 & {\rm Cu}_5{\rm Zn}_8 & {\rm Cubic}, {\rm b.c.} \end{array}$	DO <sub>19</sub>	Ni <sub>3</sub> Sn	Hexagonal	
$\begin{array}{cccc} D0_{22} & TiAl_3 & Tetragonal \\ D0_e & Ni_3P & Tetragonal, b.c. \\ D1_3 & Al_4Ba & Tetragonal, b.c. \\ Dl_c & PtSn_4 & Ortho-rhombic \\ D2_1 & CaB_6 & Cubic \\ D2_c & MnU_6 & Tetragonal, b.c. \\ D2_d & CaZn_5 & Hexagonal \\ D5_2 & La_2O_3 & Trigonal \\ D5_8 & Sb_2S_3 & Ortho-rhombic \\ D5_8 & Sb_2S_3 & Ortho-rhombic \\ D7_3 & Th_3P_4 & Cubic, b.c. \\ D7_b & Ta_3B_4 & Ortho-rhombic \\ D8_1 & Fe_3Zn_{10} & Cubic, b.c. \\ D8_2 & Cu_5Zn_8 & Cubic, b.c. \\ \end{array}$	D0 <sub>20</sub>	NIA13	Ortho-rhombic	
$\begin{array}{cccc} {} {} DO_{e} & {} Ni_{3}P & {} Tetragonal, b.c. \\ {} Dl_{3} & {} Al_{4}Ba & {} Tetragonal, b.c. \\ {} Dl_{c} & {} PtSn_{4} & {} Ortho-rhombic \\ {} D2_{1} & {} CaB_{6} & {} Cubic \\ {} D2_{c} & {} MnU_{6} & {} Tetragonal, b.c. \\ {} D2_{d} & {} CaZn_{5} & {} Hexagonal \\ {} D5_{2} & {} La_{2}O_{3} & {} Trigonal \\ {} D5_{8} & {} Sb_{2}S_{3} & {} Ortho-rhombic \\ {} D7_{3} & {} Th_{3}P_{4} & {} Cubic, b.c. \\ {} D7_{b} & {} Ta_{3}B_{4} & {} Ortho-rhombic \\ {} D8_{1} & {} Fe_{3}Zn_{10} & {} Cubic, b.c. \\ {} D8_{2} & {} Cu_{5}Zn_{8} & {} Cubic, b.c. \end{array}$	DO <sub>22</sub>	TiAl <sub>3</sub>	Tetragonal	
$\begin{array}{cccc} {\tt D1}_3 & {\tt A1}_4 {\tt Ba} & {\tt Tetragonal, b.c.} \\ {\tt D1}_c & {\tt PtSn}_4 & {\tt Ortho-rhombic} \\ {\tt D2}_1 & {\tt CaB}_6 & {\tt Cubic} \\ {\tt D2}_c & {\tt MnU}_6 & {\tt Tetragonal, b.c.} \\ {\tt D2}_d & {\tt CaZn}_5 & {\tt Hexagonal} \\ {\tt D5}_2 & {\tt La}_2 {\tt O}_3 & {\tt Trigonal} \\ {\tt D5}_8 & {\tt Sb}_2 {\tt S}_3 & {\tt Ortho-rhombic} \\ {\tt D5}_8 & {\tt Sb}_2 {\tt S}_3 & {\tt Ortho-rhombic} \\ {\tt D7}_3 & {\tt Th}_3 {\tt P}_4 & {\tt Cubic, b.c.} \\ {\tt D7}_b & {\tt Ta}_3 {\tt B}_4 & {\tt Ortho-rhombic} \\ {\tt D8}_1 & {\tt Fe}_3 {\tt Zn}_{10} & {\tt Cubic, b.c.} \\ {\tt D8}_2 & {\tt Cu}_5 {\tt Zn}_8 & {\tt Cubic, b.c.} \end{array}$	DOe	Ni <sub>3</sub> P	Tetragonal, b.c.	
D1cPtSn4Ortho-rhombicD21CaB6CubicD2cMnU6Tetragonal, b.c.D2dCaZn5HexagonalD52La203TrigonalD58Sb2S3Ortho-rhombicD73Th3P4Cubic, b.c.D7bTa3B4Ortho-rhombicD81Fe3Zn10Cubic, b.c.D82Cu5Zn8Cubic, b.c.	D13	Al <sub>4</sub> Ba	Tetragonal, b.c.	
$D2_1$ $CaB_6$ $Cubic$ $D2_c$ $MnU_6$ $Tetragonal, b.c.$ $D2_d$ $CaZn_5$ $Hexagonal$ $D5_2$ $La_2O_3$ $Trigonal$ $D5_8$ $Sb_2S_3$ $Ortho-rhombic$ $D7_3$ $Th_3P_4$ $Cubic, b.c.$ $D7_b$ $Ta_3B_4$ $Ortho-rhombic$ $D8_1$ $Fe_3Zn_{10}$ $Cubic, b.c.$ $D8_2$ $Cu_5Zn_8$ $Cubic, b.c.$	Dl	PtSn <sub>4</sub>	Ortho-rhombic	
$D_{c}$ $MnU_{6}$ Tetragonal, b.c. $D_{d}$ $CaZn_{5}$ Hexagonal $D_{2}$ $La_{2}O_{3}$ Trigonal $D_{5}$ $Sb_{2}S_{3}$ Ortho-rhombic $D_{3}$ $Th_{3}P_{4}$ Cubic, b.c. $D_{7}$ $Ta_{3}B_{4}$ Ortho-rhombic $Da_{1}$ $Fe_{3}Zn_{10}$ Cubic, b.c. $Da_{2}$ $Cu_{5}Zn_{8}$ Cubic, b.c.	D2 <sub>1</sub>	CaB <sub>6</sub>	Cubic	
$D_{2d}$ $CaZn_{5}$ Hexagonal $D_{2d}$ $La_{2}O_{3}$ Trigonal $D_{5}2$ $La_{2}O_{3}$ Ortho-rhombic $D_{5}8$ $Sb_{2}S_{3}$ Ortho-rhombic $D_{73}$ $Th_{3}P_{4}$ Cubic, b.c. $D_{7b}$ $Ta_{3}B_{4}$ Ortho-rhombic $D_{7b}$ $Fe_{3}Zn_{10}$ Cubic, b.c. $D8_{2}$ $Cu_{5}Zn_{8}$ Cubic, b.c.	D2	MnU	Tetragonal, b.c.	
$D_{5_2}$ $La_2O_3$ Trigonal $D_{5_8}$ $Sb_2S_3$ Ortho-rhombic $D_{7_3}$ $Th_3P_4$ Cubic, b.c. $D_{7_b}$ $Ta_3B_4$ Ortho-rhombic $D8_1$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	D2 <sub>d</sub>	CaZn <sub>5</sub>	Hexagonal	
D58Sb2S3Ortho-rhombicD73Th3P4Cubic, b.c.D7bTa3B4Ortho-rhombicD81Fe3Zn10Cubic, b.c.D82Cu5Zn8Cubic, b.c.	D5 <sub>2</sub>	La <sub>2</sub> 03	Trigonal	
$D7_3$ $Th_3P_4$ Cubic, b.c. $D7_b$ $Ta_3B_4$ Ortho-rhombic $D8_1$ $Fe_3Zn_{10}$ Cubic, b.c. $D8_2$ $Cu_5Zn_8$ Cubic, b.c.	D5 <sub>8</sub>	Sb <sub>2</sub> S <sub>3</sub>	Ortho-rhombic	
$D7_{b} Ta_{3}B_{4} Ortho-rhombic$ $D8_{1} Fe_{3}Zn_{10} Cubic, b.c.$ $D8_{2} Cu_{5}Zn_{8} Cubic, b.c.$	D73	Th <sub>3</sub> P <sub>4</sub>	Cubic, b.c.	
D8 <sub>1</sub> Fe <sub>3</sub> Zn <sub>10</sub> Cubic, b.c. D8 <sub>2</sub> Cu <sub>5</sub> Zn <sub>8</sub> Cubic, b.c.	D7 <sub>h</sub>	Ta <sub>2</sub> B <sub>4</sub>	Ortho-rhombic	
D8 <sub>2</sub> Cu <sub>5</sub> Zn <sub>8</sub> Cubic, b.c.	D8,	Fe <sub>2</sub> Zn <sub>10</sub>	Cubic, b.c.	
2 5 6	D8 <sub>2</sub>	Cu <sub>c</sub> Zn <sub>o</sub>	Cubic, b.c.	
D8 <sub>2</sub> Cu <sub>o</sub> Al <sub>4</sub> Cubic	D8 <sub>2</sub>	Cu <sub>o</sub> Al,	Cubic	
D8 <sub>o</sub> Mn <sub>c</sub> Si <sub>2</sub> Hexagonal	D8 <sub>o</sub>	Mn <sub>c</sub> Si <sub>o</sub>	Hexagonal	
D8, CrFe Tetragonal	D8,	CrFe	Tetragonal	

"Struckturbericht" Type*	Example	Class	
D8 <sub>i</sub>	Mo2 <sup>B</sup> 5	Rhombohedral	
D10 <sub>2</sub>	Fe3 <sup>Th</sup> 7	Hexagonal	
E2 <sub>1</sub>	CaTiO <sub>3</sub>	Cubic	
<sup>Е9</sup> 3	Fe <sub>3</sub> W <sub>3</sub> C	Cubic, f.c.	
H11	A12 <sup>Mg0</sup> 4	Cubic, f.c.	-
L10	CuAu	Tetragonal	
L12	Cu <sub>3</sub> Au	Cubic	
L'2b	ThH <sub>2</sub>	Tetragonal, b.c.	
L'3	Fe2N	Hexagonal	

references. (See VIII-	l for symbols)	·····			
Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds) <sup>1</sup>	Crystal Structure	T_**	Ref.
Ag Zn				1.30	1009
A1	1.187				755
Al	1.175	104.8			762#
Al (420-9850A.)	1.217-1.405				757
A1					758 <sup>♥</sup>
Al (cold worked)	T <sub>c</sub> '(-0.028)				746
Al	1.174 (extrap	.)			746
Al (50-100A)	2.25-1.15				828⊽
Al (vs Pressure)	2.1-1.7				826⊽
Al (to 160A.)	~5.7 max.				837 <sup>∇</sup>
Al (~12-60A.)	3.0-4.6-3.8				837
Al	1.19				856#
A1 (200-200,000A.)		HF			888
Al (Granular)	3.66, 2.30				937
Al	1.18	103			791 <i>‡</i> /
Al (also vs Pressure)	1.1793	104.93			1004#
<sup>A1</sup> 0.9 <sup>As</sup> 0.05 <sup>Ga</sup> 0.05 <sup>Nb</sup> 3	19.2				939
Al <sub>1-x</sub> As <sub>x</sub> Nb <sub>3</sub>	18.52, and lowe:	r			939
Al <sub>1-x</sub> As <sub>x</sub> V <sub>3</sub>	10.6-10.1		A15		1015
<sup>A1</sup> 0.15 <sup>As</sup> 0.85 <sup>V</sup> 3	~3.0-2.5		A15		1 <b>01</b> 5
<sup>A1</sup> 0.4 <sup>As</sup> 0.6 <sup>V</sup> 3	~6.7-6.6		A15		1015
<sup>A1</sup> 0.45 <sup>As</sup> 0.55 <sup>V</sup> 3	~7.6-7.3		A15		1015
<sup>A1</sup> 0.6 <sup>As</sup> 0.4 <sup>V</sup> 3	~10.4-10.0		A15		1015
Al 2 <sup>Au</sup>				0.1	1011
<sup>A1</sup> 0.1 <sup>Au</sup> 0.9 <sup>V</sup> 3			A15	1.2	1015
<sup>A1</sup> 0.15 <sup>Au</sup> 0.85 <sup>V</sup> 3			A15	1.2	1015

Table 2. Tabulation of Superconductive Materials (including Proven Non-superconductors) with Critical Temperatures and Fields, Crystal Structure Data where determined, and references. (See VIII-1 for symbols)

<sup>1</sup> To convert "oersteds" to ampere/meters, multiply by 79.57

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
A10.2 <sup>Au</sup> 0.8 <sup>V</sup> 3			A15	1.2	1015
A10.35 <sup>Au</sup> 0.65 <sup>V</sup> 3			A15	1.2	1015
A10.5 <sup>Au</sup> 0.5 <sup>V</sup> 3			A15	1.2	1015
A10.2 <sup>B</sup> 5 <sup>Mo</sup> 1.8	5.7		C32		767
Al <sub>2</sub> C Mo <sub>3</sub>	9.2	HF	A1 3		966#
Al C TI <sub>3</sub>				1.15	711
Al CY3				1.15	711
Al <sub>2</sub> Ce <sub>x</sub> La <sub>1-x</sub>	3.237-2.1				953
A10.999 <sup>Fe</sup> 0.001	1.50				976#
Al <sub>1-x</sub> Ga <sub>x</sub> Nb <sub>3</sub>	18.52 (and higher)				939
Al <sub>1-x</sub> Ga <sub>x</sub> V <sub>3</sub>	14.5-5.5		A15		890
Al <sub>2</sub> Gd <sub>x</sub> La <sub>1-x</sub>	3.237-1.0				953
Al Gd <sub>x</sub> La <sub>3-x</sub>	6.16-2.03		D0 <sub>19</sub>		943
Al 3-x Gd La	2.2-6.16	HF			918
A12.966 <sup>Gd</sup> 0.034 <sup>La</sup>	2.05	HF	D019		918
Al 2.968 <sup>Gd</sup> 0.032 <sup>La</sup>	3.00	HF	D0 <sub>19</sub>		918
Al 2.98 <sup>Gd</sup> 0.02 <sup>La</sup>	4.00	HF	DO19		918
A12.988 <sup>Gd</sup> 0.012 <sup>La</sup>	5.00	HF	D019		918
Al <sub>1-x</sub> Ge <sub>x</sub>	T <sub>c</sub> '(-0.018)				746
Al Ge0.026	T <sub>c</sub> '(+0.005)				746
<sup>A1</sup> 0.65 <sup>Ge</sup> 0.35 <sup>Hf</sup> 3y <sup>Nb</sup> 3(1-y)	20.1-4.0-6.2 (annealed)				885
A10.70-0.75 <sup>Ge</sup> 0.30-0.25 <sup>Nb</sup> 3	21.0		A15		1019
A10.8 <sup>Ge</sup> 0.2 <sup>Nb</sup> 3	19.1-17.8	HF			823
<sup>A1</sup> 0.72 <sup>Ge</sup> 0.28 <sup>Nb</sup> 3.36	18.38 19.04(anneal)	ed)			859
Al0.72 <sup>Ge</sup> 0.28 <sup>Nb</sup> 3.61	18.45 18.97(anneald	ed)			859
All-x <sup>Ge</sup> x <sup>Nb</sup> 3	20.7	HF			876
Al <sub>1-x</sub> <sup>Ge</sup> x <sup>Nb</sup> 3(1-y) <sup>Zr</sup> 3y	20.2-6.1				885
A10.75 <sup>Ge</sup> 0.25 <sup>Nb</sup> 3	20.2				885

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>A1</sup> 0.65 <sup>Ge</sup> 0.35 <sup>Nb</sup> 3(1-y) <sup>Zr</sup> 3y	18.5-5.1-6.1 20.1-5.3-10.3	(as cast) (annealed)			885
<sup>A1</sup> 0.65 <sup>Ge</sup> 0.35 <sup>Nb</sup> 3	20.1				885
<sup>A1</sup> 0.65 <sup>Ge</sup> 0.35 <sup>Nb</sup> 3(1-y) <sup>T1</sup> 3y	18.50-1.37-1.8 20.1-4.7-6.2	3 (as cast) (annealed)			885
A10.66 <sup>Ge</sup> 0.33 <sup>Nb</sup> 2.5	19.6-20.1	HF			896
A10.75 <sup>Ge</sup> 0.25 <sup>Nb</sup> 3	18.5 <u>+</u> 0.9	HF			789
A10.75 <sup>Ge</sup> 0.25 <sup>Nb</sup> 3	18.5 <u>+</u> 0.9				789
Al0.153 <sup>Ge</sup> 0.057 <sup>Nb</sup> 0.79		HF	A15		787
Al <sub>x</sub> Ge <sub>1-x</sub> Nb <sub>3</sub>	11.4		A15		708
A10.8 <sup>Ge</sup> 0.2 <sup>Nb</sup> 3(2000A)	10.7		A15		708 <sup>⊽</sup>
A1x <sup>Ge</sup> 1-x <sup>Nb</sup> 3	4.2-11.4				<b>708</b> ⊽
Al <sub>1-x</sub> Ge <sub>x</sub> V <sub>3</sub>	6.5-12.3		A15		890
A1 <sub>x</sub> Ge <sub>1-x</sub> V <sub>3</sub>	5.9-13.9		A15		894
Al <sub>x</sub> Ge <sub>1-x</sub> V <sub>3</sub>	5.9-12-9.8-11	1.15	A15		894
Al <sub>0.212</sub> Ge <sub>0.036</sub> V <sub>0.751</sub>	10.65,6.42	2	A15		792
Al <sub>0.175</sub> <sup>Ge</sup> 0.072 <sup>V</sup> 0.753	10.98,7.0		A15		792
A1 <sub>0.125</sub> <sup>Ge</sup> 0.121 <sup>V</sup> 0.754	6.67, 9.9	98	A15		792
A10.075 <sup>Ge</sup> 0.169 <sup>V</sup> 0.756	11.8		A15		792
A10.038 <sup>Ge</sup> 0.205 <sup>V</sup> 0.757	9.7		A15		792
A10.1 <sup>Ge</sup> 0.9 <sup>V</sup> 3	9.2-8.9		A15		1015
A10.2 <sup>Ge</sup> 0.8 <sup>V</sup> 3	11.3-11.1		A15		1015
A10.3 <sup>Ge</sup> 0.7 <sup>V</sup> 3	12.0-11.5		A15		1015
A10.4 <sup>Ge</sup> 0.6 <sup>V</sup> 3	12.5-12.3		A15		1015
A10.5 <sup>Ge</sup> 0.5 <sup>V</sup> 3	11.8-11.4		A15		1015
Al <sub>2</sub> La	3.237				953
Al La <sub>3</sub>	6.16	HF	DO		943
Al <sub>4</sub> La			17	1.15	711
Al <sub>2</sub> La (Plus Ce, Pr, Nd, Sm Gd, Tb, Dy, Ho, Er,	, 3.24 (all cas	ses)			794

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Al Mg0.0106	1.132				ි <b>56</b> #
Al Mg <sub>0.0049</sub>	1.138				8 <b>56</b> #
A1 Mg0.0009	1.17				8 <b>5</b> 6#
Al <sub>1-x</sub> <sup>Mn</sup> x	1.17-0.12				951
A1 <sub>5</sub> Mo				1.15	712
<sup>A1</sup> 0.215 <sup>Nb</sup> 0.785	17.97,17.28				859
Al Nb <sub>3</sub> (diffusion wire)	17.14	HF	A15		880
Al Nb3	18.52-18.9		A15		939
Al Nb3	17.77-16.3		A15		801
Al Nb3	≈18.7	HF	A15		787
A10.8-0.1 <sup>Nb</sup> 3 <sup>Sb</sup> 0.2-0.9	16.74-3.92		A15		801
A10.95 <sup>Nb</sup> 3 <sup>Sb</sup> 0.05	17.81		A15		801
A10.9 <sup>Nb</sup> 3 <sup>Sb</sup> 0.1	18.06		A15		801
$A1_xNb_{4x}Si_{1-x}V_{3(1-x)}$	16.5-4.0-16.7		A15		893
A1 30s 2				1.15	711
Al <sub>2</sub> Os				1.15	711
Al <sub>2</sub> Os				1.15	711
A16Re	1.85				711
Al <sub>12</sub> Re				1.15	712
Al <sub>1-x</sub> Sb <sub>x</sub> V <sub>3</sub>	4.5-7.2		A15		890
Al <sub>1-x</sub> Si <sub>x</sub>	T <sub>c</sub> '(-0.019)				746
Al <sub>1-x</sub> Si <sub>x</sub> V <sub>3</sub>	5-14.5		A15		890
<sup>A1</sup> 0.0015 <sup>Sn</sup> 0.9985		HF			850
Al <sub>x</sub> Sn <sub>1-x</sub>	3.72-3.692				850
Al <sub>1-x</sub> Sn <sub>x</sub> V <sub>3</sub>	4.5-6		A15		890
Al <sub>2</sub> Th <sub>3</sub>	2.6		Tet.		927
Al <sub>3</sub> U			L12	0.07	715

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
A10.24 <sup>V</sup> 0.76	11.15		A15		894
Al V <sub>3</sub>					824
A1 V <sub>3</sub>	11.65		A15		792
A1 <sub>2</sub> Y <sub>3</sub>				1.15	711
Al Y <sub>2</sub>				1.15	711
A1 Y				1.15	711
А1 <sub>3</sub> Yb	0.94		L12		715
Al <sub>1-x</sub> <sup>Zn</sup> x	T <sub>c</sub> (-0.037)				746
As { 220-140 kbar ~140-100 kbar	0.31-0.5 0.2 -0.25				898
As				1.3	774
As <sub>2</sub> Cd Ge(60-70 kbar)	2.84-3.02		Tet.		867
As <sub>2</sub> Cd Sn(60 kbar)	1.79-2.29		B1		865
As Ge (30-65 kbar)	3-3.5				891
$As_{0.04}Ge_{0.15}Te_{0.81}(n \ge 10^{20})$	0.82R, 0.56				875
$As_3Sn_{3.80}(n=3.0 \times 10^{22})$	1.23-1.19				930
As V <sub>3</sub>			A15	1.2	015
Au Al <sub>2</sub>	0.095-0.074				866#
Au <sub>0.2</sub> <sup>B</sup> 5 <sup>Mo</sup> 1.8	4.5, 3.6-2.5		C32		767
Au <sub>0.1</sub> <sup>C</sup> 1.30 <sup>Y</sup> 0.9	10.1		D5		870
Au Ga <sub>2</sub>	1.12		•		1011
Au Ga <sub>2</sub>	1.12-1.05		C1		866#
Au0.98 <sup>Ga</sup> 2 <sup>Pd</sup> 0.02	1.35-1.25		C1		866#
Au0.95 <sup>Ga2<sup>Pd</sup>0.05</sup>	1.79				1011
$Au_{0.9}^{Ga_2^{Pd}}$ 0.1	1.73-1.72		C1		866#
Au0.85 <sup>Ga2<sup>Pd</sup>0.15</sup>	1.75-1.73		C1		866
Au Ge	2.7-2.25				908 <sup>⊽</sup>
Au Ge Au In <sub>2</sub>				1.4 0.1	908 1011

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Au In <sub>2</sub>	0.096-0.093				866#
Au0.9 <sup>In2<sup>Pd</sup>0.1</sup>				0.36	866
Au Nb3	10.5		A15		922#
Au Nb3	8.99		A15		707
Au Nb3	9.73		A15		707
Au Nb3	10.60		A15		707
Aux <sup>Nb</sup> 3 <sup>Pt</sup> 1-x	10.7-12.7-11.3 8.3-9.1	(annealed) (quenched)	A15	•	934
Au0.7 <sup>Nb</sup> 3 <sup>Pt</sup> 0.3	12.5		A15		92 <b>2</b> #
Au0.95 <sup>Pd</sup> 0.05 <sup>Ga</sup> 2	1.75-1.69		C1		866#
Au Ta <sub>4.3</sub>	0.58-0.51		A15		1015
Au Te <sub>2</sub> (n=2.5 x $10^{21}$ )				0.051	770
Au Ti <sub>3</sub>			A15	0.015	707
Au Ti <sub>3</sub>			A15	0.35	980
Au V <sub>3</sub>	2.55	HF			857
Au <sub>0.25</sub> V <sub>0.75</sub>	1.60				948#
Au <sub>0.25</sub> V <sub>0.75</sub>	2.20				948#
Au <sub>0.25</sub> V <sub>0.75</sub> (as cast)			A15	0.90	948#
$Au_{0.25}V_{0.75}$ (as cast,	0.67		A15		707
$Au_{0.28}v_{0.72}$ (as cast,	0.64		A15		707
Au V <sub>3</sub>			A15	0.015	707
Au V <sub>3</sub>	2.980	HF	A15		707
Au V <sub>3</sub>	1.785	HF	A15		707
Au V <sub>3</sub>	0.86	HF	A15		707
Au <sub>0.23</sub> v <sub>0.77</sub> (as cast, levitated)	0.66		A15		707
Au V <sub>3</sub>	2.97 to <0.0 (by heat tree	012 atment)			987
BC Mo2	7.1	HF	Ortho.		966#
<sup>B</sup> 0-0.2 <sup>C</sup> 1-0.8 <sup>Mo</sup>	14.3-12.5		B1		1006

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	T	Ref.
B6 <sup>Ce</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.8)				1014
B <sub>12</sub> Ce <sub>x</sub> Zr <sub>1-x</sub>	$T_{c}'(-0.15 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 6 <sup>Dy</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.65)				1014
B <sub>12</sub> <sup>Dy</sup> x <sup>Zr</sup> 1-x	$T'_{c}(-0.45 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 6 <sup>Er</sup> 0.01 <sup>Y</sup> 0.99	$T_{c}'(0.25)$				1014
B <sub>12</sub> Er <sub>x</sub> Zr <sub>1-x</sub>	$T_{c}^{\prime}(-0.25 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 6 <sup>Eu</sup> 0.01 <sup>Y</sup> 0.99	T'(-0.3)				1014
B <sub>12</sub> <sup>Gd</sup> x <sup>Zr</sup> 1-x	$T_{c}'(-0.6 \text{ K/a/}_{o})$				782
<sup>B</sup> 5 <sup>Hf</sup> 0.2 <sup>Mo</sup> 1.8	8.7, 8.4-8.1		C32		767
<sup>B</sup> 5 <sup>Hf</sup> 0.2 <sup>Nb</sup> 1.8	4.5, 3.6-2.6		C32		767
<sup>B</sup> 6 <sup>Ho</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.4)				1014
B <sub>12</sub> <sup>Ho</sup> x <sup>Zr</sup> 1-x	$T_{c}^{\prime}(-0.3 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 2.5 <sup>Mo</sup>	8.1, 7.45-5.2		C32		767
B2 <sup>Mo</sup>			C32	1.0	767
B Mo2	5.86				1020
<sup>B</sup> 5 <sup>Mo</sup> 0.2 <sup>Nb</sup> 1.8	4.9, 4.3-4.0		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.7 <sup>Nb</sup> 0.3	8.5, 8.3-8.2		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.8 <sup>Sc</sup> 0.2	9.0, 8.8-8.3		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.7 <sup>Ta</sup> 0.3	7.0, 7.0-5.9		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.7 <sup>Ti</sup> 0.3	7.4, 7.1-5.5		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.7 <sup>V</sup> 0.3	5.8, 5.5-5.0		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.9 <sup>Y</sup> 0.1	8.6, 8.0-7.5		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.9 <sup>Zr</sup> 0.1	9.0, 8.9-8.4		C32		767
<sup>B</sup> 5 <sup>Mo</sup> 1.69 <sup>Zr</sup> 0.31	11.2, 10.3-8.5		C32		767
<sup>B</sup> 2 <sup>Mo</sup> 1-0.75 <sup>Zr</sup> 0-0.25	<1 to 10.3				767
<sup>B</sup> 2.5 <sup>Nb</sup>	6.4, 4.0-3.0		C32		767
<sup>B</sup> 2 <sup>Nb</sup> 3			Tet.	0.1	927
B <sub>2</sub> Nb			C32	1.0	767

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
B2Nb					810#
<sup>B</sup> 5 <sup>Nb</sup> 1.8 <sup>Ru</sup> 0.2	6.0, 5.4-3.0		C32		767
<sup>B5Nb</sup> 1.9 <sup>Sc</sup> 0.1	6.6, 4.2-3.0		C32		767
<sup>B</sup> 5 <sup>Nb</sup> 1.8 <sup>Th</sup> 0.2	7.0, 6.1-4.9		C32		767
<sup>B</sup> 5 <sup>Nb</sup> 1.9 <sup>T1</sup> 0.1	4.0, 2.9-2.2		C32		767
<sup>B</sup> 5 <sup>Nb</sup> 1.8 <sup>V</sup> 0.2	2.5, 2.2-1.1		C32		767
<sup>B</sup> 5 <sup>Nb</sup> 1.9 <sup>Y</sup> 0.1	9.3, 8.2-5.2		C32		767
<sup>B</sup> 5 <sup>Nb</sup> 1.8 <sup>Zr</sup> 0.2	5.9, 5.1-2.6		C3 <b>2</b>		767
<sup>B</sup> 6 <sup>Nd</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.15)				1014
B <sub>12</sub> <sup>Nd</sup> x <sup>Zr</sup> 1-x	$T_{c}^{\prime}(-0.6 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 6 <sup>Pr</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.1)				1014
<sup>B</sup> 12 <sup>Pr</sup> x <sup>Zr</sup> 1-x	$T'_{c}(-13 \text{ K/a}_{o})$				782
<sup>B</sup> 6 <sup>Sm</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.4)				1014
<sup>B</sup> 12 <sup>Sm</sup> x <sup>Zr</sup> 1-x	$T'_{c}(-0.6 \text{ K/a/}_{o})$				782
B2 <sup>Ta</sup> 3			Tet.	0.1	927
<sup>B</sup> 6 <sup>Tb</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.9)				1014
$B_{12}^{Tb}x^{Zr}1-x$	$T'_{c}(-0.6 \text{ K/a/}_{o})$				782
<sup>B</sup> 6 <sup>Tm</sup> 0.01 <sup>Y</sup> 0.99	T <sub>c</sub> '(-0.4)				1014
<sup>B</sup> 12 <sup>Tm</sup> x <sup>Zr</sup> 1-x	$T'_{c}(-0.35 \text{ K/}^{a}/_{o})$				782
<sup>B</sup> 2 <sup>V</sup> 3			Tet.	0.1	927
BW2	3.18				1020
<sup>B</sup> 6 <sup>Y</sup> 0.99 <sup>Yb</sup> 0.01	T <sub>c</sub> '(-0.2)				1014
<sup>B</sup> 12 <sup>Yb</sup> 0.01 <sup>Zr</sup> 0.99	4.4				1014
B <sub>12</sub> Zr	6.0		Cub,		782
Ba (III)(Metastable, 85-88 kbar)	3.05				902
Ba (II) (at 55 kbar)	~ 1.3				777
Ba (III)(At or >140 kbar)	~ 5.2				777
Ba Bi <sub>3</sub>	5.80		Tet.		715

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
<sup>Ba</sup> 0.075 <sup>0</sup> 3 <sup>Sr</sup> 0.925 <sup>Ti</sup>	~0.5				988#
Ba0.025 <sup>0</sup> 3 <sup>Sr</sup> 0.975-0.875 <sup>Ti</sup> 0.125	0.52-<0.10	HF			1005
Ba $0_{3}$ Ti(n=1.3 x $10^{20}$ )	(n = 0.05-34 x)	10 <sup>19</sup> ).		0.059	770
Be (with KCl at 4.2 K)	10.6, 8.3, 6.9	5			1028 <sup>⊽</sup>
Be (with zinc etio- porphyrin)	10.2				1028 <sup>⊽</sup>
Be (25-200A)	6.4-8.2-5				899⊽
Be (>200-1000A)				1.3	899⊽
Be (~40 ppm impurity)	0.026				78 <b>3</b> #
Be <sub>5</sub> Co				1.15	712
Be <sub>12</sub> Co				1.15	712
Be <sub>11</sub> Fe				1.15	712
Be <sub>17</sub> <sup>Hf</sup> <sub>2</sub>				1.15	712
Be <sub>13</sub> Hf				1.15	712
Be <sub>12</sub> <sup>Mn</sup>				1.15	712
Be Mo <sub>3</sub>				1.15	712
Be2Nb3	2.3		Tet.		927
Be <sub>3</sub> Nb				1.15	712
Be <sub>17</sub> Nb <sub>2</sub>	1.47				712
Be <sub>2</sub> Nb	2.15				712
<sup>Be</sup> 2 <sup>Nb</sup> 1.5 <sup>Ta</sup> 1.5	1.7		Tet.		927
Be <sub>2</sub> Os	3.07				712
Be <sub>2</sub> Rh	1.37				712
Be <sub>17</sub> <sup>Ru</sup> 3				1.15	712
Be <sub>2</sub> Ru	1.35				712
Be2 <sup>Ta</sup> 3	1.0		Tet.		927
Be13 <sup>Th</sup>				1.15	712
Be <sub>13</sub> Ti				1.15	712

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Be <sub>12</sub> Ti				1.15	712
Be <sub>21</sub> <sup>W</sup> 5				1.15	712
Be <sub>13</sub> Zr				1.15	712
Be <sub>16</sub> Zr				1.15	712
Be <sub>17</sub> Zr <sub>2</sub>				1.15	712
Bi (V)(Ref.903 says BiVI)	8.55				904
Bi (VI) (90 kbar)	8.55			•	903
B1 (V) (68 kbar)	6.7				903
Bi (IV) (43 kbar)	7.0				903
Bi (V) (81 kbar)	8.30				780
Bi					773⊽
Bi (II) (26.4 kbar)		~320			785
Bi (690A at 1.5 K)	6.173				737 <sup>♥</sup>
Bi (750A at 4.2 K)	6.154				737 ♥
Bi (III) (~37 kbar)	6.55	HF			973
<sup>B1</sup> 0.3 <sup>C</sup> 1.45 <sup>Y</sup> 0.7				4.0	870
Bi0.1 <sup>C</sup> 1.45 <sup>Y</sup> 0.9	9.35		D5 <sub>c</sub>		870
Bi0.015 <sup>In</sup> 0.985					822⊽
Bi <sub>0.343</sub> In <sub>0.657</sub> (also to	5.55				843
Bi0.015 <sup>In</sup> 0.985	3.725				842
<sup>Bi</sup> x <sup>In</sup> 1-x	3.39-4.21				799
Bi <sub>0.019</sub> <sup>In</sup> 0.981	3.86	336			722
Bi <sub>2</sub> K (0 to 10 katm also)	3.57				897
Bix <sup>Pb</sup> 1-x		HF			750 <sup>V</sup>
<sup>Bi</sup> 0-0.056 <sup>Pb</sup> 1-0.44		HF			855
<sup>B1</sup> 0.3888 <sup>Pb</sup> 0.62-0.12	8.5-4.6				851
<sup>B1</sup> 0.26 <sup>Pb</sup> 0.74	8.3				851
Bi0.23 <sup>Pb</sup> 0.77	7.8				851

•

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Bi0-0.2 <sup>Pb</sup> 1-0.8	7.25-8.0		Al		851
$Bi_{0.1-1}^{Pb}_{0.9-0}$ (deposited	6-7.1				851
Bi <sub>x</sub> <sup>Pb</sup> 1-x					852
<sup>Bi</sup> 0.625 <sup>Pb</sup> 0.375	8.05, 7.25 after 30 kbar app	olied)			843
Bi <sub>x</sub> <sup>Pb</sup> 1-x	T <sub>c</sub> '(+0.22)				861
Bi0.025-0.40 <sup>Pb</sup> 0.975-0.60	t = 0.58-0.50	HF			949
Bi1-0.92 <sup>Pb</sup> 0-0.08 <sup>(500-1100A)</sup>	) 6.154-6.032				737 🏾
Bi1-0.95 <sup>Sb</sup> 0-0.05 <sup>(~700-900A)</sup>	) 6.154-6.374				737 <sup>♥</sup>
Bi Sn	3.72, 4.20				843
Bi <sub>3</sub> Sr	5.70		L12		715
$Bi_2Te_3(n = 1.0 \times 10^{21})$				0.019	770
Bi Ti <sub>3</sub>				1.15	712
Bi <sub>x</sub> <sup>T1</sup> 1-x	T <sub>c</sub> '(+0.16)		Hex.		858
<sup>B1</sup> 0.86 <sup>T1</sup> 0.14	650 and at 30 kbar				843
Bi0.62-0.18 <sup>T1</sup> 0.38-0.82	6.6-2.3				736
Bi1-0.87 <sup>T1</sup> 0-0.13 <sup>(550-820A)</sup>	6.154-6.220				737⊽
Bi <sub>~0.97</sub> <sup>T1</sup> ~0.03 <sup>(at 4.2 K)</sup>	6.1				990 <sup>⊽</sup>
Bi V <sub>3</sub>			A15	4.2	825
<sup>C</sup> 1.35 <sup>Ca</sup> 0.1 <sup>Y</sup> 0.9	10.5-11.5				870
C <sub>2</sub> Ce				2.0	784
<sup>C</sup> 1.45 <sup>Cr</sup> 0.1 <sup>Y</sup> 0.9	12.4		D5 <sub>c</sub>		870
C <sub>2</sub> Dy				2.0	784
C <sub>2</sub> Er				2.0	784
C <sub>2</sub> Gd				2.0	784
<sup>C</sup> 1.5 <sup>Ge</sup> 3 <sup>La</sup> 5	3.3-3.7		Cub.		767
<sup>C</sup> 1.35 <sup>Ge</sup> 0.1 <sup>Y</sup> 0.9	10.6		D5 <sub>c</sub>		870
<sup>C</sup> 2.5 <sup>H</sup> 2.5 <sup>N</sup> 0.5 <sup>Pd Te</sup> 2	1.65		Hex.		1027
$C_{2.5}^{H_{2.5}N_{0.5}S_{2}^{Ta}}$	3.5	HF	Hex.		1027

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>C</sup> 2.5 <sup>H</sup> 2.5 <sup>N</sup> 0.5 <sup>Nb</sup> S <sub>2</sub>	4.0		Hex.		1027
<sup>C</sup> 2.5 <sup>H</sup> 2.5 <sup>N</sup> 0.5 <sup>Se</sup> 2 <sup>Ta</sup>	1.5		Hex.		1027
C Hf0-0.2 <sup>Mo</sup> 1-0.8	14.3-11.7		B1		1006
C <sub>2</sub> Ho				2.0	784
<sup>C</sup> 1.35 <sup>In</sup> 0.15 <sup>Y</sup> 0.85				4.0	870
C Ir <sub>2</sub> Mo <sub>3</sub>	1.8		Cub.		793
C Ir Mo <sub>3</sub>	3.2		Cub.		793
C <sub>2</sub> Ir U <sub>2</sub>	•		Tet.	0.3	1018
C Ir <sub>2</sub> W <sub>3</sub>	2.1		Cub.		793
C <sub>2</sub> La	1.61		Tet.		863
C <sub>3</sub> La <sub>2</sub>	5.9-11.0		D5 <sub>c</sub>		869
C <sub>2</sub> La				2.0	784
C <sub>2</sub> Lu	3.33		Tet.		863
C <sub>2</sub> Lu				2.0	784
С Мо	8.0				815
C Mo <sub>2</sub>	2.9				815
<sup>C</sup> 0.42 <sup>Mo</sup>	2.8		L'3		9664
C Mo <sub>2</sub>	4.0		Ortho.		966#
<sup>C</sup> 0.64 <sup>Mo</sup>	8.0	HF	Hex.		9664
<sup>C</sup> 0.69 <sup>Mo</sup>	12.1	HF	B1		966#
С Мо	14.3		B1		1006
<sup>C Mo</sup> 1-0 <sup>Nb</sup> 0-1	11.1-10.8-14.3		B1		1006
C Mo <sub>3</sub> Pt <sub>2</sub>	1.1		Cub.		793
C Mo3Re2			Hex.	1.0	793
C2 <sup>Mo Re</sup>	3.8		Cub.		793
<sup>C Mo</sup> 0.90 <sup>Re</sup> 0.10	13.8		B1		1006
<sup>C Mo</sup> 0.90 <sup>Ru</sup> 0.10	13.6		B1		1006
$C Mo_{1-0}Ta_{0-1}$	10.1-8.3-14.3		B1		1006
Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
------------------------------------------------------	--------------------	---------------------------	----------------------	-----	--------------
C Mo <sub>1-0.8</sub> Ti <sub>0-0.2</sub>	14.3-12.0		B1		1006
<sup>C Mo</sup> 1-0.8 <sup>V</sup> 0-0.2	14.3-12.7		B1		1006
C Mo <sub>1-0</sub> W <sub>0-1</sub>	14.3-8.8-10.0		Bl		1006
C <sub>1.45</sub> <sup>Mo</sup> 0.1 <sup>Y</sup> 0.9	13.8		D5 <sub>c</sub>		870
<sup>C Mo</sup> 1-0.8 <sup>Zr</sup> 0-0.2	14.3-10.9		B1		1006
C <sub>0.48</sub> Nb				1.6	967#
C <sub>0.77</sub> Nb			B1	2.0	967#
C0.83 <sup>Nb</sup>	2.4		B1		967#
C0.86 <sup>Nb</sup>	3.7		B1		967#
C <sub>0.91</sub> Nb	6.3		B1		967#
C <sub>0.96</sub> Nb	9.8		B1		967∦
C Nb	11.1		B1		1006
C Nb <sub>1-0</sub> Ta <sub>0-1</sub>	11.1-8.9-10.1		B1		1006
C Nb <sub>1-0</sub> W <sub>0-1</sub>	11.1-13.5-10.0		Bl		1006
C <sub>1.35</sub> Nb <sub>0.1</sub> Y <sub>0.9</sub>	10.8		D5		8 <b>7</b> 0
C <sub>2</sub> Nd				2.0	784
C <sub>2</sub> Os U <sub>2</sub>			Tet.	0.3	1018
C Os <sub>2</sub> W <sub>3</sub>	2.9		Cub.		793
C <sub>2</sub> Pr				2.0	784
C <sub>2</sub> Pt U <sub>2</sub>	1.47		fet.		1013
C Pt <sub>2</sub> W <sub>3</sub>	1.2		Cub.		793
<sup>C</sup> 0.04 <sup>Re</sup> 0.96	1.98				712
C Re2W3			A1 3	1.0	793
C <sub>2</sub> ReW	3.8		Cub ·		793
C <sub>1.35</sub> <sup>Re</sup> 0.3 <sup>Y</sup> 0.7				4.0	870
C2Rh U2			Tet.	0.3	1018
C2Ru U2			Tet.	0.3	1018
C <sub>1.35</sub> <sup>Ru</sup> 0.3 <sup>Y</sup> 0.7				4.0	870

Material	T <sub>c</sub> (K) H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
C <sub>1.35</sub> <sup>Ru</sup> 0.1 <sup>Y</sup> 0.9	11.2	D5 <sub>c</sub>		870
C10Sc13(Ge0.01 to Ge0.16+)	7.0-8.5	Cub.		871
C <sub>3</sub> Sc <sub>4</sub>		Cub.	1.0	871
c <sub>1.35</sub> <sup>si</sup> 0.1 <sup>Y</sup> 0.9	11.3	D5		870
C <sub>2</sub> Sm			2.0	784
C1.35 <sup>Sn</sup> 0.1 <sup>Y</sup> 0.9	10.2	D5 <sub>c</sub>		870
C0.78 <sup>Ta</sup>		B1	1.6	967#
C <sub>0.47</sub> Ta		C6	1.6	<b>967</b> #
C <sub>0.95</sub> Ta	6.2	B1		967#
C <sub>0.93</sub> Ta	5.4	B1		967#
C <sub>0.83</sub> Ta	1.8	B1		967#
C Ta	10.1	B1		1006
C Ta1-0W0-1	10.1-10.2-9.0-10.0	B1		1006
C <sub>2</sub> Tb			2.0	784
C <sub>1.55</sub> Th <sub>0.3</sub> Y <sub>0.7</sub>	17.0	D5 c		870
<sup>C</sup> 1.35 <sup>Th</sup> 0.1 <sup>Y</sup> 0.9	12.0	D5 <sub>c</sub>		870
C1.35 <sup>Th</sup> 0.2 <sup>Y</sup> 0.8	14.7	D5 <sub>c</sub>		870
<sup>C</sup> 1.35 <sup>Th</sup> 0.3 <sup>Y</sup> 0.7	16.4	L5 <sub>c</sub>		870
<sup>C</sup> 1.35 <sup>Th</sup> 0.35 <sup>Y</sup> 0.65	16.8	D5 <sub>c</sub>		870
C1.35 <sup>Th</sup> 0.4 <sup>Y</sup> 0.6	16.0	D5 <sub>c</sub>		870
C1.35 <sup>Th</sup> 0.5 <sup>Y</sup> 0.5	15.5	D5 <sub>c</sub>		870
C <sub>1.35</sub> Th <sub>0.6</sub> Y <sub>0.4</sub>	15.1	D5 <sub>c</sub>		870
C <sub>1.35</sub> <sup>Th</sup> 0.7 <sup>Y</sup> 0.3	14.4	D5 <sub>c</sub>		870
C <sub>1.35</sub> <sup>Th</sup> 0.8 <sup>Y</sup> 0.2			4.0	870
<sup>C</sup> 1.35 <sup>Th</sup> 0.9 <sup>Y</sup> 0.1			4.0	870
C <sub>1.40</sub> Th <sub>0.3</sub> Y <sub>0.7</sub>	16.3	D5 c		870
C1.45 <sup>Th</sup> 0.3 <sup>Y</sup> 0.7	16.3	D5 c		870
<sup>C</sup> 0.150 <sup>Th</sup> 0.25 <sup>Y</sup> 0.7	16.8	D5 c		870

.

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>C</sup> 0.155 <sup>Th</sup> 0.7 <sup>Y</sup> 0.3				4.0	870
<sup>C</sup> 1.65 <sup>Th</sup> 0.4 <sup>Y</sup> 0.6				4.0	870
<sup>C</sup> 1.35-1.55 <sup>Th</sup> 0.40-0.25 <sup>Y</sup> 0.	15.4 <b>-</b> 17.0 60-0.75		D5 <sub>c</sub>		870
<sup>C</sup> 1.2-2.0 <sup>Th</sup> x <sup>Y</sup> 1-x			Tet.	4.0	870
<sup>C</sup> 1.2-2.0 <sup>Th</sup> 0.3 <sup>Y</sup> 0.7			Tet.	4.0	870
C <sub>0.52</sub> Ti	3.42	HF	Cub.		790
C <sub>0.69</sub> Ti			Cub.	1.5	790
C <sub>0.83</sub> Ti			Cub.	1.5	790
C <sub>0.91</sub> Ti			Cub.	1.5	790
<sup>C</sup> 0.46 <sup>TI</sup>	3.32	HF	Cub.		<b>7</b> 90
C1.55 <sup>Ti</sup> 0.1 <sup>Y</sup> 0.9	14.5		D5 <sub>c</sub>		870
<sup>C</sup> 1.50 <sup>TI</sup> 0.3 <sup>Y</sup> 0.7	12.9		D5 <sub>c</sub>		870
<sup>C</sup> 1.45 <sup>Ti</sup> 0.1 <sup>Y</sup> 0.9	14.2		D5 <sub>c</sub>	·	870
<sup>C</sup> 1.35 <sup>T1</sup> 0.1 <sup>Y</sup> 0.9	10.7		D5 <sub>c</sub>		870
C <sub>2</sub> Tm				2.0	784
<sup>C</sup> 1.45 <sup>U</sup> 0.15 <sup>Y</sup> 0.85			D5 <sub>c</sub>	4.0	870
c v					810#
<sup>C</sup> 1.45 <sup>V</sup> 0.1 <sup>Y</sup> 0.9	11.5		D5 <sub>c</sub>		870
C W	2.5-4.21				815
C W	10.0		B1		1006
<sup>C</sup> 1.55 <sup>W</sup> 0.1 <sup>Y</sup> 0.9	14.8		D5		870
<sup>C</sup> 1.45 <sup>W</sup> 0.1 <sup>Y</sup> 0.9	14.5		D5 <sub>c</sub>	•	870
с Y <sub>3</sub>				1.15	711
с Y <sub>3</sub>				1.4	863
с <sub>2</sub> ұ	3.75		Tet.		863
C <sub>1.55</sub> Y	6.0		D5 <sub>c</sub>		870
<sup>C</sup> 1.50 <sup>Y</sup>	6-8				870
<sup>C</sup> 1.45 <sup>Y</sup>	11.5		D5 <sub>c</sub>	•	870

.

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
C <sub>1.35</sub> Y	10.0		D5 <sub>c</sub>		870
C <sub>1.30</sub> Y	8.2		D5 <sub>c</sub>		870
C <sub>3</sub> Y <sub>2</sub>	6.0-11.5		D5 <sub>c</sub>		868
C <sub>2</sub> Y	3.88		Clla		784
$C_{1.35}Y_{0.8}Zn_{0.2}$				4.0	870
<sup>C</sup> 1.45 <sup>Y</sup> 0.9 <sup>Zr</sup> 0.1	13.0		D5 <sub>c</sub>		870
С <sub>2</sub> ұь				2.0	784
Ca H <sub>18</sub> N <sub>6</sub>				1.9	1010
Ca <sub>0.025-</sub> 03 <sup>Sr</sup> 0.975- <sup>Ti</sup> 0.30 0.70	0.50 to <0.05 (n=0.06-74.0 x 10 <sup>1</sup>	нғ <sup>19</sup> )			1005
Ca Pb <sub>3</sub>	0.65 <u>+</u> 0.4		L12		715
Ca $Pb_{3x}T_{3(1-x)}$	Max. at 3.3, 3.7		L12		715
Ca Si <sub>2</sub>	1.58	HF	с <sub>с</sub>		961
Ca Si <sub>2</sub>			C12	0.32	961
Ca Tl <sub>3</sub>	2.04		L12		715
Cd					933
Cd Cu				1.30	1009
<sup>Cd</sup> 0.72-0.07 <sup>Hg</sup> 0.28-0.93	1.3-3.3		Tet.		732
<sup>Cd</sup> 1-0.72 <sup>Hg</sup> 0-0.28	0.5-1.35		Hex.		732
<sup>Cd</sup> 0.06-0 <sup>Hg</sup> 0.94-1	4.09-4.15				732
<sup>Cd</sup> 0.02 <sup>Hg</sup> 0.98		HF			978
Cd <sub>0.015</sub> Hg <sub>0.985</sub>		HF			978
Cd <sub>0-0.06</sub> In <sub>1-0.94</sub> (quenched	d) 3.406-3.24 <b>5</b>		Tet,		728
Cd <sub>0.06-0.6</sub> In <sub>0.94-0.4</sub> (quer	nched) 3.55-3.00		Cub.		728
Cd Pb1-x	T <sub>c</sub> (-0.08)				861
Cd <sub>x</sub> Sn <sub>1-x</sub>	T <sub>c</sub> (-0.085)				804
Cd V <sub>3</sub>			A15	4.2	825
Ce Co <sub>2</sub>	0.53-1.44		C15		776
Ce Co <sub>2</sub>	1.5		C15		776

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Cel-xCoxRu2 T	(-1.0 <sup>K</sup> /mol	%)			946
Ce <sub>1-x</sub> Fe <sub>x</sub> Ru <sub>2</sub> T	(-9.5 <sup>K</sup> /mol	%)			946
Ce <sub>1-x</sub> Gd <sub>x</sub> Ru <sub>2</sub>	6.2 - ≈3.8				946
Ce In <sub>3</sub>			Ll <sub>2</sub>	0.07	715
CexIn La <sub>3-x</sub>					1012
<sup>Ce</sup> 0.001 <sup>La</sup> 0.999	3.10				915
Ce <sub>0.007</sub> La <sub>0.993</sub> (0-23 kbar)	4.7-6.2				1016
Ce <sub>0.013</sub> La <sub>0.887</sub> (0-12-22 kbar)	3.2-3.5-2.3	i	Hex.		1016
Ce <sub>0.013</sub> La <sub>0.887</sub> (0-12-23 kbar)	3.7-3.1-4.3	(as cast)			1016
Ce0.013La0.887 (0-12-~140 kban	c) 3.7-3.2-1	1.4			1016
Ce <sub>0.02</sub> La <sub>0.98</sub> (0-10-24 kbar)	2.6-<0.3-	3			1016
Ce <sub>0.16</sub> La <sub>0.84</sub> (27-110 kbar)	4-8.7				1016
Ce Lal-x					1012
<sup>Ce</sup> 1-0 <sup>La</sup> 0-1 <sup>Ru</sup> 2	6.2-6.3-<1.	4-4.1	C15		1026
<sup>Ce</sup> 0.6+0.3 <sup>La</sup> 0.4-0.7 <sup>Ru</sup> 2			C15	1.+4	1026
Cel-x <sup>Mn</sup> x <sup>Ru</sup> 2	T <sub>c</sub> '(-11.5 K/	mo1%)			946
Cel-x <sup>Ni</sup> x <sup>Ru</sup> 2	Τ <sub>c</sub> (-0.7 <sup>K</sup> /π	101%)			946
Ce Ru <sub>2</sub>	6.2				946
Ce Ru <sub>2</sub>	6.2		C15		1026
Ce Sn <sub>3</sub>			L12	0.07	715
Ce <sub>x</sub> Th <sub>1-x</sub>					886
Cexthl-x	1.36-~0.0	7			951
Ce0-0.09 <sup>Th</sup> 1-0.91	1.35 to <	0.5			1012
<sup>Co</sup> 0.02 <sup>Cu</sup> 0.98 <sup>Rh</sup> 2 <sup>S</sup> 4	~3.8		<sup>H1</sup> 1		984
Co <sub>2</sub> Cu S <sub>4</sub>			н1 <sub>1</sub>	0.05	984
CoxFel-xU6	3.85-2.4				920
Co Ge <sub>2</sub>				0.051	770
<sup>Co</sup> 0.5 <sup>Mn</sup> 0.5 <sup>U</sup> 6	2.55				920

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>Co</sup> 0.002 <sup>Mo</sup> 0.815 <sup>Re</sup> 0.185	5.8	HF			881
Co <sub>x</sub> Ni <sub>1-x</sub> U <sub>6</sub>	2.4-0.41				920
<sup>Co</sup> 0.5 <sup>Ni</sup> 0.5 <sup>V</sup> 3			A15	2.0	1001
<sup>Co</sup> 0.3 <sup>Ni</sup> 0.7 <sup>V</sup> 3			A15	2.0	1001
<sup>Co</sup> 0.5 <sup>Ni</sup> 0.5 <sup>Zr</sup> 2	3.1		C16		914
<sup>Co</sup> x <sup>Ni</sup> 1-x <sup>Zr</sup> 2	5.0-5.9-1.3-1.4		C16		914
<sup>Co</sup> 0.9 <sup>Rb</sup> 0.1 <sup>V</sup> 3			A15	2.0 -	1001
<sup>Co</sup> 0.5 <sup>Rh</sup> 0.5 <sup>V</sup> 3			A15	2.0	1001
<sup>Co</sup> 0.01 <sup>Ti</sup> 0.99				1.5	759
Co U <sub>6</sub>	2.4				920
<sup>Co</sup> 0.25 <sup>V</sup> 0.75			A15	0.015	948
co v <sub>3</sub>			A15	0.015	707
Co Zr <sub>2</sub>	5.0		C16		914
<sup>Co</sup> 0-0.1 <sup>Zr</sup> 1-0.9	Max., 3.7, 2.3				717
Cr					788
Cr				0.015	788
Cr <sub>0.008</sub> Cu Rh <sub>1.992</sub> S <sub>4</sub>	~3.9		<sup>H1</sup> 1		984
Cr0.75 <sup>Ga</sup> 0.25			A15	0.35	945#
Cr <sub>0.75</sub> Ge <sub>0.25</sub>			A15	1.2	945#
Cr <sub>3</sub> Ir	0.168	HF	A15		707
Cr <sub>0.835</sub> Ir <sub>0.165</sub>	0.77		A15		945#
Cr <sub>0.75</sub> Ir <sub>0.25</sub>	0.17		A15		945 <b>∜</b>
Cr <sub>3</sub> Ir	0.17		A15		1023
<sup>Cr</sup> 0.73-0.92 <sup>Mo</sup> 0.27-0.08				0.015	788
<sup>Cr</sup> 0.06-0.57 <sup>Mo</sup> 0.94-0.43	0.71-0.030				788
<sup>Cr</sup> 0.72 <sup>Os</sup> 0.28	3.86		A15		707
<sup>Cr</sup> 0.72 <sup>Os</sup> 0.28	3.95		A15		707
Cr <sub>0.72</sub> Os <sub>0.28</sub>	4.25		A15		945#

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oer	steds) Crystal Structure	T <sub>n</sub>	Ref.
<sup>Cr</sup> 0.72 <sup>0s</sup> 0.28	4.03		A15		707
Cr <sub>0.67</sub> 0s <sub>0.33</sub>	1.03		d8 <sub>b</sub>		70 <b>7</b>
Cr <sub>0.79</sub> <sup>Pt</sup> 0.21			A15	0.015	945 <b>#</b>
Cr <sub>0.915</sub> <sup>Pt</sup> 0.185			A15	1.2	945#
Cr <sub>0.79</sub> <sup>Pt</sup> 0.21			A15	0.015	707
Cr <sub>3</sub> Rh	0.07		A15		1023
Cr <sub>3</sub> Rh	0.072	HF	A15		707
<sup>Cr</sup> 0.75 <sup>Rh</sup> 0.25	0.07		A15		945#
Cr <sub>0.72</sub> <sup>Ru</sup> 0.28	3.42		A15		945 <b>#</b>
Cr <sub>0.72</sub> <sup>Ru</sup> 0.28	3.43		A15		707
Cr <sub>0,238</sub> Si <sub>0,262</sub>			A15	1.2	945#
Cr Si			A15	0.015	945#
Cr <sub>0.75</sub> Si <sub>0.25</sub>			A15	1.2	945#
Cr <sub>0.821</sub> Si <sub>0.179</sub>			A15	1.2	945#
Cr <sub>3</sub> Si				0.015	707
$Cr_{0.85}Ta_{0.15}$			A1	0.024	963
$Cr_v V_{1-v}$	1.3-5.1	HF	A2		441#
Cr <sub>0.1</sub> V <sub>0.9</sub>	3.21				788
$Cr_{0.58-0.945}V_{0.42-0.055}$				0.015	788
$Cr_{0,1-0,48}V_{0,9-0,52}$	3.21-0.10				788
Cs(V)(>~125 kbar)	~1.5				781
Cu					756
Cu					713#
<sup>Cu</sup> 0-60 <sup>w</sup> 70 <sup>Nb</sup> 100-40 <sup>w</sup> 70		HF			960
Cu_Pb1_v	7.2 <b>-~</b> 1.5 K				756 ⊽
Cu Rh <sub>2</sub> S <sub>4</sub>	4.80-4.65		H11		984
Cu Rh <sub>2-v</sub> S <sub>4</sub> Ti <sub>v</sub>	~3.0		H1,		984
Cu Rh <sub>2</sub> S <sub>4</sub>	4.35		H11		983

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Cu Rh <sub>2-1.5</sub> Se <sub>4</sub> Sn <sub>0-0.5</sub>	3.47-~0		H11		924
Cu Rh <sub>2</sub> Se <sub>4</sub>	3.47		H11		924
Cu Rh <sub>2-x</sub> Se <sub>4</sub> Sn <sub>x</sub>	3.7 to <0.05	0			714#
Cu Rh <sub>2</sub> Se <sub>4</sub>	3.49-3.45		H11		984
Cu Rh Se <sub>4</sub>	3.50		H11		983
Cu S <sub>4</sub> Ti <sub>2</sub>			H11	0.05	984
Cu S <sub>4</sub> V <sub>2</sub>	4.45-3.95		H11		984
<sup>Cu</sup> 0.810 <sup>Sb</sup> 0.190	0.045-0.070		Hex.		769
<sup>Cu</sup> 0.845 <sup>Sb</sup> 0.155	0.127-0.184		L2 <sub>1</sub>		769
<sup>Cu</sup> 0.844 <sup>Sb</sup> 0.156	0.067		A3		769
<sup>Cu</sup> 0.786 <sup>Sb</sup> 0.214	0.028-0.047		Hex.		769
<sup>Cu</sup> 0.76 <sup>Sb</sup> 0.24	0.037-0.041		Ortho.		769
<sup>Cu</sup> 0.676 <sup>Sb</sup> 0.324	0.085		C38		769
Cu Zn				1.30	1009
D <sub>0.018</sub> Nb <sub>0.982</sub>	~9.23				190
Fex <sup>Mn</sup> 1-x <sup>U</sup> 6	2.4-2.25-3.8	5			920
Fe0.0008 <sup>M0</sup> 0.725 <sup>Nb</sup> 0.061 <sup>Re</sup> 0.187		HF			881
Fe0.0008 <sup>M0</sup> 0.725 <sup>Nb</sup> 0.061 <sup>Re</sup> 0.187	1.85	HF			881
Fe_Mo_0.365 <sup>Re</sup> 0.135	2.1-6.1	HF			881
<sup>Fe</sup> 0.0006 <sup>Mo</sup> 0.865 <sup>Re</sup> 0.135		HF			881
Fe <sub>x</sub> <sup>Mo</sup> 0.87 <sup>Re</sup> 0.13		HF			982
Fe0.05 <sup>Nb</sup> 0.38 <sup>Ti</sup> 0.57	•	HF			905
<sup>Fe</sup> 0.75 <sup>Ni</sup> 0.25 <sup>U</sup> 6	1.4				9 <b>2</b> 0
Fe0.5 <sup>N1</sup> 0.5 <sup>U</sup> 6	2.3				920
<sup>Fe</sup> 0.25 <sup>N1</sup> 0.75 <sup>U</sup> 6	3,0				920
Fe Np <sub>6</sub>				0.5	920
Fe0.02 <sup>Re</sup> 0.98	1.60				712
Fe0.05-0.70 <sup>Ru</sup> 0.95-0.30				0.015	788

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>Fe</sup> 0.018-0.042 <sup>Ru</sup> 0.982-0.957	0.165-0.018				788
Fe <sub>0.02</sub> Sc <sub>0.05</sub> Zr <sub>0.93</sub>	0.35				744
Fe0.0005 <sup>Ti</sup> 0.9995	~0.42		Hex.		962
Fe U <sub>6</sub>					920#
Fe U <sub>6</sub>	3.85				920
Fe $U_6(3 \times 10^{12} \text{ neutrons}/_{\text{cm}^2\text{s}})$	ec, 1.6 -up)				907
Ga (Isotope study)	1.0845				938
Ga (4.2 K, warmed to 70 K)	6.5				779 <sup>♥</sup>
Ga (4.2 K)	8.4				779 <sup>V</sup>
Ga (II') (35 katm then to 0)	7.5				779
Ga (II)(>35 katm)	6.38				779
Ga					<b>77</b> 3 <sup>♥</sup>
Ga	1.0833				803
Ga (II)	6.24	620			<b>7</b> 91#
Ga (I)	1.08	59.3			<b>791</b> ∜
Ga (▲T <sub>c</sub> =10 <sup>-5</sup> K)	1.083				1003
<sup>Ga</sup> x <sup>Ge</sup> 1-x <sup>V</sup> 3	5.9-13.9		A1 5		894
Ga <sub>2</sub> La				1.4	863
Ga La				1.15	711
Ga <sub>3</sub> Lu	2.30		L12		715
Ga4 <sup>Mn</sup> x <sup>Mo</sup> 1-x	8.0-4.0	HF			753
Ga3Np2	1.35				927
Ga P (n=1.0 x $10^{19}$ )				0.051	770
Ga7Pt3				1.1	1008
Ga2Ta3			Tet.	0.1	927
Ga2Ta3			Tet.	0.1	927
Ga <sub>2</sub> Th	2.56				711
Ga V3	13.87		A15		1013
Ga V <sub>3</sub> (sintered tod)	14.1	HF			877

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Ga V3		HF			872
Ga V <sub>3</sub>	14.83	HF	A15		880#
<sup>Ga</sup> 0.30-0.03 <sup>V</sup> 0.70-0.97	2-13.7-10.0		A15		901
Ga V <sub>3</sub>					957
<sup>Ga</sup> 0.143 <sup>V</sup> 0.856 <sup>(~1% 0</sup> 2)			Cub.	4.2	958
Ga5 <sup>V</sup> 6				4.2	958
Ga V <sub>4.5</sub>	8.6	HF	A15		787
Ga V <sub>3</sub>	14.0	HF	A15		787
Ga <sub>2</sub> Y	1.68		Tet.		863
Ga Y				1.15	711
Ga <sub>3</sub> Zr <sub>5</sub>	3.85				711
$Ga_{3}Zr_{5}(Quenched)$	2.5-4.0				711
Ga2Zr3			Tet.	0.1	927
<sup>Gd</sup> 0.005 <sup>La</sup> 0.995	3.60				915
Gd Lal-x	3.9-2.8				947 <i>‡</i> /
<sup>Gd</sup> 0.014 <sup>La</sup> 0.986				2.0	812
<sup>Gd</sup> 0.021 <sup>La</sup> 0.979				2.0	812
Gd <sub>x</sub> Pb <sub>1-x</sub>					748 🛛
<sup>Gd</sup> 0-0.028 <sup>Y</sup> 1-0.972				2.0	812
Ge <sub>2</sub> La	2.24		C <sub>c</sub>		91 <i>6</i> #
Ge1.78 <sup>La</sup>	1.57		с <sub>с</sub>		<b>916</b> #
Ge1.78-2.0 <sup>La</sup>	1.57-2.24		с <sub>с</sub>		916#
Ge <sub>2</sub> La	2.2		с <sub>с</sub>		308#
Ge P (30-65 kbar, 400-900	0°C) 1.8-4.2		Tet.		891
Ge P <sub>5</sub>			Rhomb.	1.25	891
Ge P <sub>3</sub>			Rhomb.	1.25	891
Ge Sn (Two films)	T <sub>c</sub> (-0.08)				<b>9</b> 89⊽
Ge Te		HF			770

Material	т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Ge0.950 <sup>Te</sup>					813#
$Ge_{1.03}$ Te (n=1.52 x 10 <sup>21</sup> )	0.172				807#
Ge $Te_{1.02}(n=1.16 \times 10^{21})$					807 <i>‡</i> ⊧
Ge $Te_{1.01}(n=1.05 \times 10^{21})$					<b>807∦</b>
$Ge_{0.976}$ Te (n=8.6 x 10 <sup>20</sup> )	0.07				710
$Ge_{0.963}$ Te (n=9.3 x 10 <sup>20</sup> )	0.17				710
$Ge_{0.950}$ Te (n=11.8 x 10 <sup>20</sup> )	0.24				710
$Ge_{0.937}$ Te (n=15.4 x 10 <sup>20</sup> )	0.31				710
$Ge_{1.006}$ Te (n=7.5 x 10 <sup>20</sup> )				0.04	710
Ge2Th3			Tet.	0.1	927
Ge Tl (Two films)	T <sub>c</sub> '(+0.11)				989 <b>7</b>
Ge V <sub>3</sub>	6.104		A15		1013
Ge V <sub>3</sub> (13,000A)	6.7	HF			<b>7</b> 19 <sup>♥</sup>
<sup>Ge</sup> 0.96 <sup>V</sup> 3.04	5.9		A15		894
<sup>Ge</sup> 0.24 <sup>V</sup> 0.76	5.88		A15		792
Ge V <sub>3</sub> (220,000A)	6.7	HF			<b>7</b> 19 <sup>♥</sup>
Ge V <sub>3</sub>	6.9	HF			719
Ge V <sub>3</sub>	6.3-6.1		A15		1015
Ge1.62 <sup>Y</sup>	2.4		C <sub>c</sub>		808#
Ge Y				1.15	711
H <sub>12</sub> Li N <sub>4</sub>				1.9	1010
<sup>H</sup> 0.036 <sup>Nb</sup> 0.964	~9.22				190
Hf				0.015	942
<sup>Hf</sup> 0.91-0.33 <sup>Mo</sup> 0.09-0.67	2.1-2.9-1		Cub.		956
Hf Mo2	~1		Cub.		956
Hf Mo2			C36	0.05	956
Hf Mo2	0.07		C15		956
<sup>Hf</sup> 0.15 <sup>Nb</sup> 0.85	9.85				885

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Hf Nb1-x	9.22-9.85-6.5				885
Hfx <sup>Nb</sup> 1-x		HF	A15		441
Hf <sub>3</sub> Si <sub>2</sub>			Tet.	0.1	927
<sup>Hf</sup> 0.26-0.11 <sup>W</sup> 0.74-0.89				1.2	956
<sup>Hf</sup> 0.33 <sup>W</sup> 0.67				0.05	956
Hf W2			C15	0.35	956
<sup>Hf</sup> 0.92-0.66 <sup>W</sup> 0.08-0.34	2.3-2.8-2.5				956
$Hg_xIn_{0.02}T1-x$	T <sub>c</sub> '(-0.145)		Hex.		858
<sup>Hg</sup> x <sup>In</sup> 0.01 <sup>T1</sup> 1-x	T <sub>c</sub> '(-0.18)		Hex.		858
HgxPb1-x	T/(-0.085)				861
<sup>Hg</sup> x <sup>Sb</sup> 0.0008 <sup>T1</sup> 1-x	T <sub>c</sub> '(-0.12)		Hex.		858
Hg <sub>x</sub> Sb <sub>0,0004</sub> T1 <sub>1-x</sub>	T <sub>c</sub> '(-0.14)		Hex.		858
Hg Ti <sub>3</sub>	•		A15	0.35	980
Hg <sub>x</sub> T11-x	T <sub>c</sub> '(-0.14)		Hex.		858
<sup>Hg</sup> ≈0.0045 <sup>T1</sup> 0.9955 (0-24 kbar)	T <sub>c</sub> '(+0.05-0.12)				998
Hg <sub>≈0.009</sub> T1 <sub>0.991</sub> (0-25 katm	) $T_c'(-0.02 + 0.02)$	2 - 0.14)			998
Hg Zr <sub>3</sub>			A15	0.35	980
Hg <sub>3</sub> Zr	3.28 <u>+</u> 0.3				715
In	3.402				765
In	3.405 (cal)	285			749#
In (pressure study)	3.407	1 <b>92-27</b> 0			829
In	~4.5 max.				83 <b>7</b> ♥
In (200-200,000A)		270			888 <sup>V</sup>
In					932
In ( <sup>600-800A</sup> ) 3600A)	3.47 3.425				800♥
In	3.41	293			791 <b>#</b>
In (Pores: 65-250A)	3.68-4.17	RF			738
In (Pores: 70-250A)	3.4-4.2				986
In <sub>1-x</sub> Fe <sub>x</sub>					748⊽

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
In Hg	3.16				959
In <sub>3</sub> La	0.70		<sup>L1</sup> 2		715
In <sub>3(1-x)</sub> La Sn <sub>3x</sub>	Max. 1.2, 6.0		L <sup>1</sup> 2		765
In Lu <sub>3</sub>	0.24, 0.14		Ll <sub>2</sub>		715
In <sub>0.998</sub> <sup>Mn</sup> 0.002	3.129				765
In <sub>0.9995</sub> <sup>Mn</sup> 0.0005	3.281				765
In <sub>1-x</sub> <sup>Mn</sup> x	T <sub>c</sub> '(-0.13)				754
In <sub>1-x-y</sub> <sup>Mn</sup> x <sup>Pb</sup> y	T <sub>c</sub> '(-0.045)				754
In <sub>1-x-y</sub> <sup>Mn</sup> x <sup>Sn</sup> y	$T_{c}'(-0.025 + 0)$	.115)			754
<sup>In</sup> 0.0593 <sup>Pb</sup> 0.9407					745 <b>#</b>
In <sub>0.0176</sub> Pb <sub>0.9824</sub>					745#
In <sub>x</sub> <sup>Pb</sup> 1-x		HF			750 🗸
In <sub>0-0.65</sub> Pb <sub>1-0.35</sub>	7.2-6.05				861
In <sub>0.99</sub> Pb <sub>0.01</sub> (200-200,000A)		290			888 7
In <sub>0.063</sub> Pb <sub>0.937</sub>		HF			844
In0.18-0.89 <sup>Pb</sup> 0.82-0.11	t = 0.59-0.91	HF			949
In Pb					936
In <sub>0.035</sub> Pb <sub>0.965</sub>		HF			919
In <sub>0.6</sub> Pb <sub>0.4</sub>	6.36	HF			809
In1-0.89 <sup>Pb</sup> 0-0.11	3.367-4.85		Te <b>t.</b>		969
In <sub>0.961</sub> Pb <sub>0.039</sub>	3.64	HF			1025
In <sub>3(1-x)</sub> Pb <sub>3x</sub> Y	Max. 4.7,1.2		Ll <sub>2</sub>		715
In <sub>3</sub> Ru	2.68				711
In Sb (Metastable: 25 kbar)	1.85, 1.6-2.1		A5		761
In Sb (Metastable: 27 kbar)	1.89	~100			718#
In <sub>1-0</sub> Sb <sub>1-0</sub> Sn <sub>0-1</sub> (25 kbar)	1.8-3.7		A5		761
In Sb Sn	2.5		A5		761
In <sub>3</sub> Sb Te <sub>2</sub>	~0.9				1007

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
In Sc <sub>2</sub>			<sup>B8</sup> 2	4.2	853
In <sub>1-x</sub> Si <sub>x</sub> V <sub>3</sub>					824
In <sub>x</sub> Sn <sub>1-x</sub>					814#
In <sub>1-0.94</sub> Sn <sub>0-0.06</sub>	3.4-3.82				763⊽
In <sub>1-0.942</sub> <sup>Sn</sup> 0-0.058	3.4-3.9	275-360			763
In <sub>x</sub> Sn <sub>1-x</sub>		HF			750 <sup>♥</sup>
In <sub>0-0.06</sub> Sn <sub>1-0.94</sub>		HF			854♥
In <sub>x</sub> Sn <sub>1-x</sub>					912
In <sub>x</sub> Sn <sub>1-x</sub>		HF			<b>910</b> #
In <sub>1-x</sub> Sn <sub>x</sub>	3.44-3.90				799
$In_{3(1-x)}Sn_{3x}Th$	3.9 max.		Ll <sub>2</sub>		715
$In_{3(1-x)}Sn_{3x}Y$	1.5 max.		L12		715
In Te	2.2	800 <u>+</u> 50	B1		761
In Te					770
In <sub>3</sub> Th			L12	0.05	715
In <sub>x</sub> <sup>T1</sup> 1-x	T <sub>c</sub> '(+0.39)		Hex.		858
In <sub>3</sub> U .			L12	0.07	715
In V <sub>3</sub>	13.9		A15		825
In V <sub>3</sub>					824
In <sub>3</sub> Y	• 0.78 <u>+</u> 0.21		L12		715
In <sub>3</sub> Yb			L12	0.05	715
Ir					963#
Ir	0.11-0.10				963
Ir Mo <sub>3</sub>	8.11		A15		707
Ir0.82 <sup>M0</sup> 0.18	0.50-0.40				963
Ir <sub>0.9</sub> <sup>Mo</sup> 0.1	0.29				963 <b>#</b>
Ir <sub>0.953</sub> <sup>Mo</sup> 0.047	0.168-0.156				963
Ir <sub>0,973</sub> <sup>Mo</sup> 0.027	0.133-0.125				963
Ir <sub>0.987</sub> <sup>Mo</sup> 0.013	0.107-0.105				963

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds) Crystal Structure	Tn	Ref.
Ir Mo <sub>3</sub> Nb Pt (as cast)	5.82	A15		707
Ir Mo <sub>3</sub> Nb <sub>3</sub> Pt	6.13	A15		707
Ir <sub>0.1</sub> Nb <sub>0.9</sub>	2.3			592
Ir Nb3	1.3	A15		9 <b>22#</b>
Ir Nb3	1.76	A15		707
Ir <sub>0.9<sup>Nb</sup>0.1</sub>	0.060-0.049			963
Ir <sub>0.925</sub> Nb <sub>0.075</sub>	0.172-0.16			9634
Ir <sub>0.965</sub> Nb <sub>0.035</sub>	0.138-0.11			963
Ir <sub>0.98</sub> Nb <sub>0.02</sub>	0.115-0.082			963
Ir <sub>0.99<sup>Nb</sup>0.01</sub>	0.102-0.084			963
Ir <sub>0.9</sub> 0s <sub>0.1</sub>				963#
Ir <sub>0.7</sub> 0s <sub>0.3</sub>				<b>96</b> 3#
Ir <sub>0.65</sub> 0s <sub>0.35</sub>				963#
Ir <sub>0.6</sub> 0s <sub>0.4</sub>	0.73			963
Ir <sub>0.7</sub> 0s <sub>0.3</sub>	0.48-0.40			963#
Ir <sub>0.75</sub> 0s <sub>0.25</sub>	0.40-0.37			963
Ir <sub>0.1</sub> <sup>Os</sup> 0.2 <sup>Rh</sup> 0.7			0.015	963
Ir <sub>0.75</sub> 0s <sub>0.05</sub> <sup>Rh</sup> 0.2			0.015.	963
Ir <sub>0.55</sub> 0s <sub>0.15</sub> Rh <sub>0.3</sub>			0.015	963
Ir <sub>0.6</sub> 0s <sub>0.1</sub> Rh <sub>0.3</sub>			0.015	963
Ir0.76 <sup>Os</sup> 0.09 <sup>Rh</sup> 0.15		•	0.015	963
Ir <sub>0.54</sub> 0s <sub>0.1</sub> Rh <sub>0.36</sub>		•	0.015	963
Ir <sub>0.1</sub> <sup>Os</sup> 0.2 <sup>Rh</sup> 0.7		A1	0.014	963
Ir <sub>0.07</sub> 0s <sub>0.86</sub> Rh <sub>0.07</sub>	0.064-0.030			963
Ir <sub>0.088</sub> 0s <sub>0.825</sub> <sup>Rh</sup> 0.088	0.095-0.080			963
Ir <sub>0.1</sub> 0s <sub>0.8</sub> Rh <sub>0.1</sub>	0.140-0.070			963
Ir <sub>0.135</sub> 0s <sub>0.73</sub> <sup>Rh</sup> 0.135	0.22-0.20			963
Ir <sub>0.165</sub> 0s <sub>0.67</sub> Rh <sub>0.165</sub>	0.35-0.25			963

Material	T <sub>c</sub> (H)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Ir <sub>0.18</sub> 0s <sub>0.47</sub> <sup>Rh</sup> 0.35	0.55-0.48				963
Ir0.4 <sup>0s</sup> 0.3 <sup>Rh</sup> 0.3	0.37-0.28				963
Ir <sub>0.125</sub> 0s <sub>0.375</sub> <sup>Rh</sup> 0.5	0.46-0.3				963
Ir0.725 <sup>0s</sup> 0.175 <sup>Rh</sup> 0.1	0.16-0.13				963
Ir <sub>0.6</sub> <sup>0s</sup> <sub>0.2</sub> <sup>Rh</sup> <sub>0.2</sub>	0.22-0.15				963
Ir0.765 <sup>0s</sup> 0.085 <sup>Rh</sup> 0.15	0.096-0.075				963
Ir <sub>0.55</sub> 0s <sub>0.15</sub> Rh <sub>0.3</sub>	0.095-0.070				963
Ir <sub>0.1</sub> <sup>0s</sup> 0.3 <sup>Rh</sup> 0.6	0.21-0.15				963
Ir <sub>0.75</sub> 0s <sub>0.05</sub> <sup>Rh</sup> 0.2	0.055-0.047				963
Ir <sub>0.6</sub> 0s <sub>0.1</sub> Rh <sub>0.3</sub>	0.055-0.044				963
Ir <sub>0.1</sub> <sup>0s</sup> 0.25 <sup>Rh</sup> 0.65	0.10-0.07				963
Ir <sub>0.54</sub> 0s <sub>0.1</sub> Rh <sub>0.36</sub>	0.038-0.026				963
Ir <sub>0.125</sub> 0s <sub>0.2</sub> Rh <sub>0.675</sub>	0.05-0.03				963
Ir <sub>0.41</sub> 0s <sub>0.17</sub> Rh <sub>0.42</sub>	0.095-0.080				963
Ir <sub>0.49</sub> 0s <sub>0.21</sub> <sup>Rh</sup> 0.3	0.27-0.15				963
Ir <sub>0.56</sub> 0s <sub>0.24</sub> Rh <sub>0.2</sub>	0.28-0.25				963
Ir <sub>0.63</sub> 0s <sub>0.27</sub> <sup>Rh</sup> 0.1	0.4-0.3				963
Ir <sub>0.73</sub> 0s <sub>0.17</sub> Ru <sub>0.1</sub>	0.34-0.31				963
Ir0.825 <sup>0s</sup> 0.1 <sup>Ru</sup> 0.075	0.16-0.13				963
Ir <sub>0.8</sub> Pd <sub>0.2</sub>				0.015	963
Ir <sub>0.6</sub> Pd <sub>0.4</sub>				0.015	963
Ir <sub>0.3</sub> Pd <sub>0.7</sub>				0.015	963
Ir <sub>0.2</sub> Pd <sub>0.8</sub>				0.015	963
Ir <sub>0.88</sub> Pd <sub>0.12</sub>	0.035-0.022				963
Ir <sub>0.9</sub> Pd <sub>0.1</sub>	0.032				963
Ir <sub>0.91</sub> Pd <sub>0.09</sub>	0.047-0.033				963
Ir <sub>0.95</sub> Pd <sub>0.05</sub>	0.050-0.035				963
Ir0.96 <sup>Pd</sup> 0.04	0.069-0.057				<b>96</b> 3

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Ir <sub>0.1</sub> Pd <sub>0.9</sub>				0.015	963
Ir <sub>0.83</sub> Pd <sub>0.045</sub> Pt <sub>0.125</sub>	0.037-0.030				963
Ir0.2 <sup>Pd</sup> 0.2 <sup>Rh</sup> 0.6				0.015	963
Ir0.1 <sup>Pd</sup> 0.5 <sup>Rh</sup> 0.4				0.015	963
Ir0.5 <sup>Pd</sup> 0.2 <sup>Rh</sup> 0.3				0.015	963
Ir <sub>0.25</sub> <sup>Pd</sup> 0.5 <sup>Rh</sup> 0.25				0.015	963
Ir <sub>0.4</sub> Pd <sub>0.4</sub> Rh <sub>0.2</sub>				0.015	963
Ir <sub>0.02</sub> Pt <sub>0.98</sub>					963#
Ir0.04 <sup>Pt</sup> 0.96					963#
Ir <sub>0.1</sub> <sup>Pt</sup> 0.9					<b>9</b> 63 <b>#</b>
Ir <sub>0.8</sub> Pt <sub>0.2</sub>					963#
Ir <sub>0.8</sub> Pt <sub>0.2</sub>	0.046-0.032				963
Ir <sub>0.9</sub> Pt <sub>0.1</sub>	0.066-0.053				963
Ir0.3 <sup>Pt</sup> 0.2 <sup>Rh</sup> 0.5				0.015	963
Ir0.775 <sup>Pt</sup> 0.175 <sup>Rh</sup> 0.05	0.032-0.025				963
Ir0.72 <sup>Pt</sup> 0.08 <sup>Rh</sup> 0.20	0.030-0.025				963
Ir <sub>0.7</sub> <sup>Re</sup> 0.3	1.7-1.4				963
Ir <sub>0.80</sub> <sup>Re</sup> 0.20	0.66				963
Ir <sub>0.85</sub> <sup>Re</sup> 0.15	0.61-0.445				963
Ir <sub>0.9</sub> <sup>Re</sup> 0.1	0.34-0.28				963
Ir0.93 <sup>Re</sup> 0.07	0.220-0.197				963
Ir0.96 <sup>Re</sup> 0.04	0.142-0.130				963
Ir0.98 <sup>Re</sup> 0.02	0.112-0.109				963
Ir <sub>0.4</sub> Re <sub>0.1</sub> Rh <sub>0.5</sub>	0.08-0.06				963
Ir <sub>0.46</sub> <sup>Re</sup> 0.115 <sup>Rh</sup> 0.425	0.13-0.1				963
Ir <sub>0.56</sub> <sup>Re</sup> 0.14 <sup>Rh</sup> 0.3	0.25-0.17				963
Ir0.64 <sup>Re</sup> 0.16 <sup>Rh</sup> 0.2	0.55-0.4				963
Ir <sub>0.72</sub> <sup>Re</sup> 0.18 <sup>Rh</sup> 0.1	0.6-0.5				963

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Ir <sub>0.9</sub> <sup>Rh</sup> <sub>0.1</sub>				0.015	963
Ir <sub>0.8</sub> Rh <sub>0.2</sub>				0.015	963
Ir <sub>0.75</sub> <sup>Rh</sup> 0.25				0.015	963
Ir <sub>0.5</sub> <sup>Rh</sup> 0.5				0.015	963
Ir <sub>0.7</sub> <sup>Rh</sup> 0.3				0.015	963
Ir <sub>0.75</sub> <sup>Rh</sup> 0.25	0.026-0.020				963
Ir <sub>0.80</sub> <sup>Rh</sup> 0.20	0.03-0.02				963
Ir <sub>0.815</sub> <sup>Rh</sup> 0.185	0.028				963
Ir <sub>0.89</sub> <sup>Rh</sup> 0.11	0.06-0.05				963
Ir <sub>0.95</sub> <sup>Rh</sup> 0.05	0.075-0.055				963
$Ir_{0}$ $_{2}^{Rh}$ $_{5}^{Ru}$ $_{2}$				0.015	963
Iro Rho Ruo a	0.055-0.045				963
Ir <sub>0.7</sub> <sup>Rh</sup> 0.5 <sup>Ru</sup> 0.25	0.033-0.028				963
Ir <sub>0.7</sub> <sup>Rh</sup> <sub>0.2</sub> <sup>Ru</sup> <sub>0.1</sub>	0.05-0.04				963
Ir <sub>0.8</sub> <sup>Rh</sup> 0.15 <sup>Ru</sup> 0.05	0.064				963
Ir <sub>0,3</sub> <sup>Rh</sup> 0,5 <sup>Ru</sup> 0,2	0.02-0.01				963
Ir <sub>0.8</sub> <sup>Ru</sup> 0.2	0.13				963
Ir <sub>0.765</sub> <sup>Ru</sup> 0.235	0.14				963
Ir <sub>0.71</sub> <sup>Ru</sup> 0.29	0.18		A1		963
Ir <sub>0.845</sub> <sup>Ru</sup> 0.155	0.11				963
Ir <sub>0.89</sub> <sup>Ru</sup> 0.11	0.105				963
Ir <sub>0.925</sub> <sup>Ru</sup> 0.075	0.11				963
Ir <sub>0.9</sub> Ta <sub>0.1</sub>	0.067-0.050		A1		963
Ir <sub>0.925</sub> Ta <sub>0.075</sub>	0.125-0.11				963
Ir <sub>0.94</sub> Ta <sub>0.06</sub>	0.150				963
Ir <sub>0.97</sub> Ta <sub>0.03</sub>	0.127				963
Ir <sub>0.99</sub> Ta <sub>0.01</sub>	0.116-0.096				963
Ir0.10 <sup>T1</sup> 0.90	4.3		Cub.		717
Ir <sub>0.04</sub> Ti <sub>0.96</sub>	1.6		Cub,		717
<sup>Ir</sup> 0-0.135 <sup>Ti</sup> 1-0.865	3.9 max.				717

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Ir Ti <sub>3</sub>	4.63		A15		707
Ir Ti <sub>3</sub> (as cast)	4.18		A15		707
Ir <sub>0.37</sub> V <sub>0.63</sub>	1.71		A15		948#
Ir <sub>0.31</sub> V <sub>0.69</sub>	0.91		A15		948 <b>#</b>
Ir <sub>0,25</sub> V <sub>0,75</sub>			A15	0.015	948#
Ir V <sub>3</sub>			A15	0.015	707
Ir <sub>0.85</sub> <sup>V</sup> 0.15	0.26-0.123				963
Ir <sub>0.965</sub> V <sub>0.035</sub>	0.147-0.135				963
Ir <sub>0.98</sub> <b>v</b> <sub>0.02</sub>	0.115-0.082				963
Ir <sub>0.99</sub> v <sub>0.01</sub>	0.11-0.086				963
Ir0.85 <sup>W</sup> 0.15	0.41-0.25				963
Ir <sub>0.9</sub> <sup>W</sup> 0.1	0.23-0.20				963 <b>#</b>
Ir <sub>0.953</sub> <sup>W</sup> 0.047	0.162-0.147				963
Ir <sub>0.973</sub> <sup>W</sup> 0.027	0.125-0.123				963
Ir <sub>0.987</sub> <sup>W</sup> 0.013	0.107-0.105				963
Ir <sub>0-0.1</sub> <sup>Zr</sup> 1-0.9	Max., 5.4,3.3				717
$K_{0.1}^{0} 3^{3r}_{0.9}^{1a} 1.1^{1}_{0.9}_{(n=0.48 \times 10^{20})}$				0.051	770
La	<4.8-5.78				764
La	4.88	808	Al		747
La (95% Hex. Phase)	4.9		Hex.		806#
La (95% Cub. Phase)	6.0		A1		806#
La		HF			925
La (with SiO <sub>2</sub> and Nb)	4.9-1				923
La (0-17 kbar)	4.88-6.8		Hex.		1016
La	4.90				915
La	4.5		Hex.		812
La	5.6		A1		81 <i>2</i> #
La	4.9		Hex.		808#
La (23-40 kbar)	8.2-9.2		A1		729#

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
La (1-23 kbar)	5.2-8.2		Hex.		729
La (0-~140 kbar)	5.9-11.93				1016
La0.0103 <sup>Sr</sup> 0.99 <sup>Ti</sup>	$(n = 3.1 \times 10^{20})$			0.078	770
La In <sub>3</sub>	0.71		L12		768#
La Pb3	4.07		L12		<b>768</b> #
La Pb3	4.10		L12		715
La <sub>1-x</sub> Pb <sub>3</sub> Pr <sub>x</sub>	4.07-<0.3		L12		768#
La Pb3(1-x) <sup>Sn</sup> 3x	Max.6.0, Min.3.5		L12		715
La <sub>1-x</sub> Pb <sub>3</sub> Th <sub>x</sub>	Max.4.2, 5.6		Ll <sub>2</sub>		715
La Pb3x <sup>T1</sup> 3(1-x)			L12		715
La <sub>1-x</sub> Pr <sub>x</sub> T1 <sub>3</sub>	1.51-0.55		L12		768
La Ru	4.1		C15		1026
La S					730
La3S4	8.25		D73		730
La3Se4					770
La Si <sub>2</sub>	2.3		с <sub>с</sub>		8 <b>0</b> 8#
La5Sn3				1.4	863 <sup>.</sup>
La Sn <sub>3</sub>	6.55		Ll <sub>2</sub>		<b>768</b> #
La Sn <sub>3</sub>	6.02		Ll <sub>2</sub>		715
La <sub>1-x</sub> Sn <sub>3</sub> Pr <sub>x</sub>	6.55-<0.3		Ll <sub>2</sub>		768
La <sub>1-x</sub> Sn <sub>3</sub> Th <sub>x</sub>	6.3 max.		Ll <sub>2</sub>		715
La <sub>1-x</sub> Sn <sub>3</sub> Tm <sub>x</sub>	6.55-4.2		L12		768
La3Te4	3.75,2.45	HF	D73		1024
La TI3	1.51		Ll <sub>2</sub>		768#
La TI3	1.63		L12		715
La Tl <sub>3(1-x)</sub> <sup>Sn</sup> 3x	Max. 1.8,6.0		L12		715
La0.15 <sup>Y</sup> 0.85	0.1		Hex.		808#
La0.35 <sup>Y</sup> 0.65	0.4		Hex.		8 <b>08#</b>
La0.48 <sup>Y</sup> 0.52	1.0		Rhomb.		808#

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystel Structure	Tn	Ref.
$La_{0.60}Y_{0.40}$	1.3		Hex,		808#
La <sub>0.75</sub> Y <sub>0.25</sub>	2.0		Hex.		803 <b>#</b>
Lao 95Yo 15	2.7		Hex.		3 <b>0</b> 8#
0.05 0.15 Li				0.006	88 <b>7</b> #
Mg				0.006	8 <b>87</b> #
MnxPb1-x					748♥
<sup>Mn</sup> 0, 20 <sup>Ru</sup> 0, 80					788#
Mn <sub>x</sub> Ti <sub>1-x</sub>				1.2	759#
<sup>Mn</sup> 0.14 <sup>T1</sup> 0.86	2.55				759#
<sup>Mn</sup> 0.002 <sup>Ti</sup> 0.499 <sup>Zr</sup> 0.499				1.24	759
<sup>Mn</sup> 0.0043 <sup>Zn</sup> 0.9957					1030
Mn U <sub>6</sub>	2.4				920
Мо	0.916	86			1031
Mo (with SiO, and Y)	1.7-6.5-<1		A2		923
Mo (at 4.2 K)	4-6.7,<2.5				921⊽
Мо	0.91				788
Мо	0.49				<b>972#</b>
Mo N	12.0				815
Mo2N	5.0				815
MoxNb1-x	9.22-4.4				885
<sup>Mo</sup> 0-1 <sup>Nb</sup> 1-0					811#
Mo Nb1-x	t = 0.03	HF	A2		441
<sup>Mo</sup> 0.725 <sup>Nb</sup> 0.061 <sup>Re</sup> 0.187	5.0	HF			881
Mo <sub>3</sub> 0s	11.76		A15		707
Mo <sub>3</sub> Os	11.68		A15		707
Mo0.45-0Pt0.55-1			Cub.	1.0	845
Mo0.55-0.47 <sup>Pt</sup> 0.45-0.53			Ortho.	1.0	845
Mo0.65-0.49Pt 0.35-0.51			Hex.	1.0	845
Mo0.62-0.48 <sup>Pt</sup> 0.38-0.52			Hex.	1.0	845

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Mo <sub>0.72</sub> <sup>Pt</sup> 0.28	4.3-5.6		A15		845
Mo0-0.12 <sup>Pt</sup> 1-0.88			Cub	1.0	845
Mo <sub>4</sub> Pt	4.53		A15		707
Mo0.85 <sup>Pt</sup> 0.15	4.59		A15		707
Mo <sub>4</sub> Pt	4.56		A15		707
Mo Pt <sub>2</sub>			Ortho.	1.0	845
<sup>Mo</sup> 0.815 <sup>Re</sup> 0.185	8.27	HF			881
<sup>Mo</sup> 0.865 <sup>Re</sup> 0.135	6.1	HF			881
<sup>Mo</sup> 0.57 <sup>Re</sup> 0.43	14.0				592
<sup>Mo</sup> 0.16 <sup>T1</sup> 0.84	4.246	HF			805#
<sup>Mo</sup> 0-0.05 <sup>T1</sup> 1-0.95	<1.5-3.0				931#
<sup>Mo</sup> 0-0.25 <sup>T1</sup> 1-0.75	2.1-3.9-3.6				929
<sup>Mo</sup> 0.16 <sup>T1</sup> 0.84	4.10				740#
Mo <sub>0.006</sub> U <sub>0.994</sub> (0-11 kbar)	1.20, 1.46				879 <b>#</b>
<sup>Mo</sup> 0.03 <sup>U</sup> 0.97	1.02 <sub>5</sub> , 1.00 <sub>7</sub>				<b>879</b> #
<sup>Mo</sup> 0.05 <sup>U</sup> 0.95	0.382				<b>879</b> #
<sup>Mo</sup> 0.07 <sup>U</sup> 0.93	0.827				<b>879</b> #
<sup>Mo</sup> 0.003 <sup>U</sup> 0.997 <sup>(0, 9 kbar)</sup>	1.2, ~1.64				879#
Mo <sub>x</sub> V <sub>1-x</sub>			A2		441
<sup>Mo</sup> 0.5 <sup>V</sup> 0.5	0.11				788#
<sup>Mo</sup> 0.30 <sup>V</sup> 0.70	0.76				<b>788</b> #
<sup>Mo</sup> 0.15 <sup>V</sup> 0.85	2.28				<b>788</b> #
<sup>Mo</sup> 0.03-0.41 <sup>Zr</sup> 0.97-0.59	2.2-5.3-4.5		Cub.		956
Mo <sub>2</sub> Zr	4.6				956
Mo <sub>2</sub> Zr			C15	0.35	956
N <sub>x</sub> Nb <sub>1-x</sub> (Grain size,100-280	A) 6-17.3				819 <sup>⊽</sup>
N Nb		HF			873
N <sub>0.93</sub> Nb	15.85	HF	B1		880#

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
N <sub>0.92</sub> Nb	16.30	HF	B1		880#
<sup>N</sup> 0.0023 <sup>Nb</sup> 0.998	9.20				771⊽
N Nb (2800, 5700A)	12.8, 11.9				941⊽
N Nb	15.0				815
N Nb <sub>2</sub>	9.5				815
<sup>N</sup> 0.91 <sup>Nb</sup> 0.99 <sup>Ta</sup> 0.01	15.62	HF	B1		<b>880</b> #
<sup>N</sup> 0.91 <sup>Nb</sup> 0.974 <sup>Ta</sup> 0.026	15.09	HF	B1		880#
<sup>N</sup> 0.92 <sup>Nb</sup> 0.946 <sup>Ta</sup> 0.054	14.41	HF	B1		880#
<sup>N</sup> 0.91 <sup>Nb</sup> 0.82 <sup>Ta</sup> 0.18	10.9	HF	B1		880#
N Nb Ti		HE			839 7
<sup>N</sup> 0.85 <sup>Nb</sup> 0.66 <sup>T1</sup> 0.34	17.61	HF	B1		880#
<sup>N</sup> 0.88 <sup>Nb</sup> 0.256 <sup>T1</sup> 0.744	14.72	HF	B1		880#
<sup>N</sup> 0.90 <sup>Nb</sup> 0.114 <sup>T1</sup> 0.886	10.1	HF	B1		880#
N Nb Zr		HF			839 <sup>∇</sup>
<sup>N</sup> 0.74 <sup>Nb</sup> 0.9 <sup>Zr</sup> 0.1	14.42	HF	B1		880#
N0.76ND0.85 <sup>Zr</sup> 0.15	14.16	HF	B1		880#
<sup>N</sup> 0.85 <sup>Nb</sup> 0.75 <sup>Zr</sup> 0.25	12.96	HF	B1		880#
<sup>N</sup> 0.73 <sup>Nb</sup> 0.95 <sup>Zr</sup> 0.05	15.42	HF	B1		880#
N Ta <sub>2</sub>				4.2	906
N Ta	6.5 <u>+</u> 0.5		B1		906
N Ta			<sup>B</sup> h	4.2	906
Na Pb3	5.62		L <sup>1</sup> 2		715
Nb (270A)	9.1	HF			719 🗸
Nb	9.1	HF			995
Nb	9.18	2040			722
Nb	9.20 <u>+</u> 0.03	HF			994
Nb	9.2				819 ⊽
Nb	9.20	HF			994
Nb	9.20				721#
Nb	9.23				864#
Nb	9.23	HF			928#

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Nb	0.23	2040			722
NB	9.25 <u>+</u> 0.01	1970			743
Nb	9.28				913
Nb (245A)	9.3	HF			7197
Nb	9.4				1002#
Nb	9.46				771
Nb	9.45				1017
Nb				-	727
Nb					720#
Nb		HF			895
Nb		HF			1021
ND		HF			751
Nb (irradiated)		HF			832
Nb		HF			827
Nb (foils)		HF			883
Nb (4.2 K)(250, 400A)	6.2-8.1				921 <sup>V</sup>
Nb (300-7500A)	6.4-9	HF			913 <sup>⊽</sup>
Nb (37,000A)	10.0	HF			719⊽
<sup>Nb</sup> 1-x <sup>0</sup> x	t = 0.58	HF			441
<sup>Nb</sup> 0.993 <sup>0</sup> 0.007	8.7	HF			771
<sup>Nb</sup> 0.9916 <sup>0</sup> 0.0084					772
<sup>Nb</sup> 0.936 <sup>0</sup> 0.064	~9	HF			771
Nb 0 (200 ppm)					771
Nb O					771
<sup>Nb</sup> 0.985 <sup>0</sup> 0.0152	8.04	HF			771
Nb1-x <sup>0</sup> x		HF			944
Nb <sub>3</sub> Os	0.94		A15		1023
Nb <sub>3</sub> Os	0.94	HF	A15		707
Nb <sub>3</sub> Os	~0.5		A15		922#
Nb P S	7.5-12.5		Ortho.		892
Nb P Se			Ortho.	1.25	892
Nb Pb S3	2.62		Tet.		778#

Material	т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Nb0.67 <sup>Pb S</sup> 3	2.01, 2.00		Tet.		<b>795#</b>
Nb Pb S3	2.66		Tet.		795#
Nb <sub>1-x</sub> Pb S <sub>3</sub> Ta <sub>x</sub>	2.7-2.0-3.3				795
Nb0.9 <sup>Pd</sup> 0.1	3.5				592
Nb0.9 <sup>Pt</sup> 0.1	2.5				592
Nb <sub>3</sub> Pt	9.8		A15		922#
Nb <sub>3</sub> Pt	8.18		A15		707
<sup>Nb</sup> 0.9 <sup>Re</sup> 0.1	4.5				592
<sup>Nb</sup> 0.9 <sup>Rh</sup> 0.1	2.8				592
Nb S2	6.0				1027
Nb S2					810#
Nb S2	5.99,6.15-5.83		Hex.		778
Nb S2	5.4, 5.5				796#
Nb <sub>3</sub> Sb			A15	0.4	801
Nb Sb2				1.15	711
<sup>Nb</sup> 0.83 <sup>Sb</sup> 0.17	1.95, 2.0		A15		1002#
<sup>Nb</sup> 0.9-0.7 <sup>Sb</sup> 0.1-0.3	5.8-<0.5		A15		1002
Nb3SbxSul-x	18.05-16.25		A15		947
Nb0.50 <sup>Sb</sup> 0.25 <sup>T1</sup> 0.25	3.05		A15		1002#
Nb0.25 <sup>Sb</sup> 0.25 <sup>Ti</sup> 0.50	1.95, 2.05		A15		1002#
Nb~4-0 <sup>Sb</sup> Ti <sub>0-3</sub> (Quenched) (Annealed)	5.3-2-3-1.95 6.5-1.8-3.1-2		A15		1002#
Nb Se <sub>2</sub>	6.9				796#
<sup>Nb</sup> 0.339 <sup>Se</sup> 0.661	6.1	HF			996
Nb0.338 <sup>Se</sup> 0.662	6.75	HF			996
Nb Se <sub>2</sub>	7.0	HF			996
Nb Se <sub>2</sub>					992
Nb Se2(1-x) <sup>Te</sup> 2x	0.74-2.7				992
Nb Se <sub>2</sub> (1-x) <sup>Te</sup> 2x	7-7.18-3.0				992
Nb Se <sub>2</sub> (1-x) <sup>Te</sup> 2x		55			992

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
$Nb_3Sn (Fe_2Mn_{0.5}Zn_{0.5}O_4)$	14.7-17.0				831
Nb <sub>3</sub> Sn (Al <sub>2</sub> 0 <sub>3</sub> Powder)	17.7-18.1				831
Nb <sub>3</sub> Sn (Diffusion layer)	18.1	HF			877
Nb <sub>3</sub> Sn (Core wire)	18.04	HF	A15		880#
Nb <sub>3</sub> Sn (Clad)	18.00	HF	A15		880#
Nb <sub>3</sub> Sn (Multiwire)	18.21	HF	A15		880
Nb Sn <sub>2</sub>	2.68			•	964
Nb6Sn5	2.07				964
Nb <sub>3</sub> Sn	18.0	HF	A15		787
Nb <sub>3</sub> Sn			A15		816
Nb <sub>3</sub> Sn					970
Nb <sub>3</sub> Sn(0-22,500 kg/cm <sup>2</sup> )	17.5-14.3				977
Nb2.85 <sup>Sn Zr</sup> 0.15	18.07	HF	A15		880
Nb2.79 <sup>Sn Zr</sup> 0.21 (Clad)	17.98	HF	A15		880
Nb2.70 <sup>Sn Zr</sup> 0.30	18.01	HF	A15		880
Nb <sub>1-x</sub> Ta <sub>x</sub>					834
<sup>Nb</sup> 1-0.803 <sup>Ta</sup> 0-0.197	9.25-7				833
Nb0.803 <sup>Ta</sup> 0.197	7.50				864#
<sup>Nb</sup> 0.9378 <sup>Ta</sup> 0.0622	8.42	HF			864#
<sup>Nb</sup> 0.9575 <sup>Ta</sup> 0.0425	8.55	HF			864#
<sup>Nb</sup> 0.9844 <sup>Ta</sup> 0.0156	8.76	HF			864#
<sup>Nb</sup> 0.9913 <sup>Ta</sup> 0.0087	8.87	HF			864#
$Nb_{1-0}Ta_{0-1}$	9.18-4.33	HF			940#
<sup>Nb</sup> 0.96 <sup>Ta</sup> 0.04	8.87	HF			928 <b>#</b>
Nb1-0.6 <sup>Ta</sup> 0-0.4	9.23-6.56	HF			928#
Nb0.87 <sup>Ta</sup> 0.13	8.15	HF	В2		911
Nb0.79 <sup>Ta</sup> 0.21 (Clad)	7.51	HF	B2		911
Nb0.67 <sup>Ta</sup> 0.33	6.81	HF	В2		911

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oers	teds) Crystal Structure	T <sub>n</sub>	Ref.
<sup>Nb</sup> 0.54 <sup>Ta</sup> 0.46	6.25	HF	B2		911
Nb0.37 <sup>Ta</sup> 0.63	5.31	HF	B2		911
<sup>Nb</sup> 0.17 <sup>Ta</sup> 0.83	4.65	HF	B2		911
<sup>Nb</sup> 0.95 <sup>Ta</sup> 0.05	8.58		В2		911
<sup>Nb</sup> 0.44 <sup>Ta</sup> 0.56	5.85		B2		911
<sup>Nb</sup> 0.29 <sup>Ta</sup> 0.71	4.94		B2		911
Nb0.08 <sup>Ta</sup> 0.92	4.38		В2		911
Nb <sub>1-x</sub> Ta <sub>x</sub>		HF	A2		441
$Nb_{0.5}Ta_{0.5}$	6.25	1220			722
Nb~0.04 <sup>Ta</sup> ~0.96					981
Nb Ta Ti					860
Nb Te <sub>2</sub> (Solid (Vapor transport)	0.50-0.74 0.60-0.66				797
Nb Te2	0.6				796#
Nb3Te4	1.49				711
Nb Te2					992
<sup>Nb</sup> 0.55 <sup>Ti</sup> 0.45	9.4	HF			830
<sup>Nb</sup> 0.4 <sup>Ti</sup> 0.6		HF			830
<sup>Nb</sup> 0.22 <sup>Ti</sup> 0.78	7.8	HF			991
<sup>Nb</sup> 0.22 <sup>Ti</sup> 0.78	7.5	HF			991
<sup>Nb</sup> 0.36 <sup>Ti</sup> 0.64					<b>9</b> 91
<sup>Nb</sup> 0.56 <sup>Ti</sup> 0.44					818
Nb <sub>66w70</sub> Ti <sub>33w70</sub> (Impurities)	10.3				841
<sup>Nb</sup> 50 <sup>w</sup> 7 <sub>o</sub> <sup>Ti</sup> 50 <sup>w</sup> 7 <sub>o</sub>	9.3				841
<sup>Nb</sup> 0.44 <sup>Ti</sup> 0.56	8.99	HF			374
<sup>Nb</sup> 1-x <sup>Ti</sup> x	9.22-10.02-7.6				885
<sup>Nb</sup> 0.75 <sup>Ti</sup> 0.25	10.02				885
<sup>Nb</sup> 0.6 <sup>Ti</sup> 0.4	9.8 max.				592
<sup>Nb</sup> 0,25-1 <sup>Ti</sup> 0,75-0	7.2-9.7-9.2		Cub.		901

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Nb <sub>0.26</sub> Ti <sub>0.74</sub> (as cast)	8.15-7.31	······································			965
Nb <sub>0.20</sub> Ti <sub>0.80</sub> (as cast)	6.6-6.15	HF			965
Nb <sub>1-x</sub> Ti <sub>x</sub>	t, 1-0.98-1.0	HF	A2		441
<sup>Nb</sup> 0.63 <sup>T1</sup> 0.37	9.2				725
Nb0.44 <sup>T1</sup> 0.56	9.0				725
Nb0, 25 <sup>T1</sup> 0, 75	5.8-7				<b>999#</b>
Nb0.22 <sup>Ti</sup> 0.78	7.72				993
Nb0.22 <sup>T1</sup> 0.78	6.92				993
Nb0.48 <sup>T1</sup> 0.52		HF			968
Nb0, 33 <sup>T1</sup> 0, 67		HF			968
Nb0.75 <sup>T1</sup> 0.15 <sup>Zr</sup> 0.10	9.7	HF			830
Nb0.62 <sup>Ti</sup> 0.14 <sup>Zr</sup> 0.24	9.6				830
Nb0,41 <sup>Ti</sup> 0,23 <sup>Zr</sup> 0,36					830
Nb0.53 <sup>Ti</sup> 0.18 <sup>Zr</sup> 0.29	9.1				830
Nb0.57 <sup>Ti</sup> 0.33 <sup>Zr</sup> 0.10	9.6				830
Nb0.62 <sup>Ti</sup> 0.14 <sup>Zr</sup> 0.24	9.7	HF			830
Nb0.35 <sup>T1</sup> 0.15 <sup>Zr</sup> 0.50	8.6	HF			830
Nb0.43 <sup>Ti</sup> 0.27 <sup>Zr</sup> 0.30	8.6	HF			830
Nb0.48 <sup>T1</sup> 0.30 <sup>Zr</sup> 0.22	8.9	HF			830
Nb0.47 <sup>T1</sup> 0.48 <sup>Zr</sup> 0.05	8.7	HF			830
Nb0.52 <sup>Ti</sup> 0.16 <sup>Zr</sup> 0.32	9.4	HF			830
Nb0.65 <sup>T1</sup> 0.15 <sup>ZT</sup> 0.20	9.8	HF			830
Nb0.41 <sup>Ti</sup> 0.15 <sup>Zr</sup> 0.44	8.7	HF			830
Nb0.36 <sup>T1</sup> 0.56 <sup>Zr</sup> 0.08	10.05				965
Nb0.19 <sup>T1</sup> 0.51 <sup>Zr</sup> 0.30	10.05	HF			965
Nb0.19 <sup>Ti</sup> 0.74 <sup>Zr</sup> 0.07	9.1	HF			965
Nb0.22 <sup>Ti</sup> 0.25 <sup>Zr</sup> 0.53	9.30	HF			965
Nb0.21 <sup>T1</sup> 0.61 <sup>Zr</sup> 0.18	7.21				965

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Nb <sub>1-x</sub> V <sub>x</sub>	t, 0.47		A2		441
Nb1-x <sup>W</sup> x	t, 0.25	HF	A2		441
Nb0-1 <sup>Zr</sup> 1-0		HF			· 847
<sup>Nb</sup> 0.06-0.88 <sup>Zr</sup> 0.94-0.12	10-10.5				847
<sup>Nb</sup> 0.0125-0.6 <sup>Zr</sup> 0.9875-0.94	3.2-10.0				847
<sup>Nb</sup> 0-0.0125 <sup>Zr</sup> 1-0.9875	1.2-3.2		A3		847
Nb <sub>1-x</sub> Zr <sub>x</sub>	9.22-10.98-8	.7			885
<sup>Nb</sup> 0.65 <sup>Zr</sup> 0.35	10.98				885
<sup>Nb</sup> 1-0.75 <sup>Zr</sup> 0-0.25	t, 1.20	HF	A2		441
Nb Zr	10.8	HF			739
Nb Zr (0-3.8 katm)	<sup>T</sup> c↑				970
Nb <sub>0.25</sub> <sup>Zr</sup> 0.75	10.45 max.				971
Nb0.20 <sup>Zr</sup> 0.80	8.5 max.				971
<sup>Nb</sup> 0.75 <sup>Zr</sup> 0.25		HF			975
Nb0.20 <sup>Zr</sup> 0.80		HF			991
Ni U <sub>6</sub>	0.41				9 <b>2</b> 0
Ni0.20 <sup>V</sup> 0.80	0.57		A15		707
<sup>N1</sup> 0.20 <sup>V</sup> 0.80	0.57		A15		1023
<sup>N1</sup> 0.22 <sup>V</sup> 0.78	0.35		A15		948#
<sup>N1</sup> 0.225 <sup>V</sup> 0.775	0.30		A15		1023
<sup>N1</sup> 0.225 <sup>V</sup> 0.775	0.30		A15		707
Ni0.175 <sup>V</sup> 0.825	0.78		A15		1023
Ni0.175 <sup>V</sup> 0.825	0.78		A15		707
Ni Zr <sub>2</sub>	1.6		C16		914
$0_{3}^{Nb}$ Sr(n=2.7 x 10 <sup>21</sup> )				0.044	7 <b>7</b> 0
$0_3$ Sr Ti(n=2.2 x 10 <sup>20</sup> )	0.30				884
$0_3$ Sr Ti(n=2.5 x 10 <sup>19</sup> )	0.27				884
$0_{3}$ Sr Ti(n=6.3 x 10 <sup>19</sup> )	0.27				884

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
$O_3$ Sr Ti(n=2.7 x 10 <sup>19</sup> )	0.24				884
0 <sub>3</sub> Sr Ti(n=2.5 x 10 <sup>19</sup> )	0.185				884
$0_3$ Sr Ti(n=0.13-2.2 x 10 <sup>20</sup> )	<0.08-0.4-0.3				935
0 <sub>3</sub> Sr Ti		HF			770
$0_{3}$ Sr Ti(n=6.9 x 10 <sup>18</sup> to 5.5 x 10 <sup>20</sup> )	<0.05-0.295				709
0 <sub>3</sub> Sr Ti(n=1.7-23 x 10 <sup>19</sup> )	0.10-0.30	HF			1005
<sup>0</sup> x <sup>Ta</sup> 1-x	t, 0.72			•	441
0 <sub>1-x</sub> <sup>Ti</sup> 1-x□ <sub>x</sub> (0-90 kbar)	0.6-2.3		B1		835
O Ti	2.3				835
0, V <sub>1</sub> -x	t, 0.35				441
0s					<b>9</b> 63#
Os	0.67				972#
<sup>Os</sup> 0-0.12 <sup>Re</sup> 1-0.88 <sup>(0-20 kbar)</sup>	1.694-1.93-1	.79			952
<sup>Os</sup> 0.055 <sup>Re</sup> 0.945	1.93				952
<sup>Os</sup> 0.2 <sup>Rh</sup> 0.8				0.015	963
<sup>0s</sup> 0.5 <sup>V</sup> 0.5	5.15		A15		948#
<sup>0s</sup> 0.55 <sup>V</sup> 0.45	5.04		A15		70 <b>7</b>
<sup>Os</sup> 0,20-0,33 <sup>Zr</sup> 0,80-0.67	4.1-<2				955
$0s_{0,267}^{Zr}$ ,733			Cub.	1.2	955
P (>100 kbar)	4.7,5.3,6.1				775
P (170 kbar)	5.8	HF			786
P S Ta			Ortho.	1.25	892
$P_{2.65}Sn_4$ (n=2.2 x 10 <sup>22</sup> )	1.24-1.10				930
Pb		HF			752 <sup>♥</sup>
Pb					821⊽
Pb	~7.1				837⊽
Pb (3600A.)	7.7				941⊽
Pb (0, 3.445 kbar)	7.24, 7.11				926
Pb (II) (160 kbar)	3.6				904
Pb (0-110 kbar)	7.2-4.2				904

Material	Т <sub>с</sub> (К) Н	l <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Pb (II) (160 kbar)	3.55				780
Pb					773 <sup>⊽</sup>
Pb (2500-7000A)					735⊽
Pb (2000-6760A)		HF			985⊽
Pb Pt	7.2-~1.5				756⊽
Pb S <sub>3</sub> Ta	3.07		Tet.		778
Pb S <sub>3</sub> Ta	3.11, 3.07		Tet.		<b>778#</b>
Pb S <sub>3</sub> Ti			Tet.	0.05	778#
Pb S <sub>3</sub> Ti				0.05	795
<sup>Pb</sup> 1-x <sup>Sb</sup> x	T <sub>c</sub> '(+0.52)				861
Pb <sub>1-x</sub> Sn <sub>x</sub>	$T_{c}'(+0.08)$				861
<sup>Pb</sup> 0.10-0.18 <sup>Sn</sup> 0.90-0.82	5.6-7.2				900
Pb <sub>3</sub> Sr	1.85		Tet.		715
Pb Te $(n=5.0 \times 10^{20})$				0.009	770
Pb <sub>3</sub> Th	5.55		L12		715
<sup>Pb</sup> 1-x <sup>T1</sup> x	T <sub>c</sub> '(-0.15)				861
Pb0.965 <sup>T1</sup> 0.035 <sup>(0,3 katm)</sup>		HF			919
Pb T1					798 ⊽
Pb1-0 <sup>T1</sup> 0-1	7.22-<1.24-2.67	,			736
Pb0.99 <sup>T1</sup> 0.01		820, HF			979
Pb V <sub>3</sub>			A15	4.2	825
Pb <sub>3</sub> Y	4.72		L12		715
Pb <sub>3</sub> Yb	0.23 <u>+</u> 0.10		L12		715
Pd					963
Pd					9 <b>63</b> #
Pd0.4Pt0.1Rh0.5				0.015	963
Pd0.25Pt0.25Rh0.5				0.015	963
Pd0.75 <sup>Rh</sup> 0.25				0.015	963
Pd0.5Rh0.5				0.015	963

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
Pd Rh <sub>0.509</sub>					<b>96</b> 3#
Pd Rh <sub>0.409</sub>					96 <b>3</b> #
Pd Rh <sub>0.308</sub>					9 <b>63</b> #
Pd Rh0.015					<b>96</b> 3#
Pd Rh0.104					963 <b>#</b>
Pd Rh <sub>0.0537</sub>					963 <b>#</b>
Pd <sub>0.51</sub> Sb <sub>0.49</sub> (with <0.01 or twelve element	f 1,67-<0.3 nts)				9 <b>50</b> #
Pd <sub>0.49-0.52</sub> Sb <sub>0.51-0.48</sub>	1.67-1.44				95 <b>0</b> #
Pd Te2	1.45				1027
Pđ Th				1.15	711
<sup>Pd</sup> 0.25 <sup>V</sup> 0.75	0.08		A15		948#
Pd V <sub>3</sub>	0.082		A15		707
Pd V <sub>3</sub>			A15	0.35	980
Pd V <sub>3</sub>	0.08		A15		1023
Pd1-0.75 <sup>W</sup> 0-0.25			A1	0.2	846
Pd <sub>0.74-0.56</sub> <sup>W</sup> 0.26-0.44	0.1-1.6		A1		846
Pr <sub>x</sub> <sup>Th</sup> 1-x	1.37-0.3		Cub.		768
Pt					756 <sup>♥</sup>
Pt					963
Pt ph				0.015	963 <b>#</b>
$P_{0.2}^{Rn} 0.8$				0.015	963
$PC SD_2(n=3.7 \times 10^{-5})$	0.40			0.037	770
Pt0.15 <sup>Ta</sup> 0.85	0.40		A15		1023
Pt T1 <sub>3</sub>	0.48	HF	A15		707
Pt <sub>8</sub> Ti				1.15	711
Pt0.46 <sup>0</sup> 0.54				0.3	1018
Pt0.222 <sup>V</sup> 0.778	0.98		A15		948#
Pt0.25 <sup>V</sup> 0.75	3.20		A15		948#
$Pt_{0.28}v_{0.72}$	1.50		A15		948#

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structu	re <sup>T</sup> n	Ref.
Pt V <sub>3</sub> (as cast)	2.53		A15		707
Pt V <sub>3</sub> (800°C/1 hr.)	2.86		A15		707
Pt V <sub>3</sub> (1100°C/120hr./ quenched)	3.19		A15		707
Pt V <sub>3</sub>	2.61		A15		707
Pt <sub>0.29</sub> v <sub>0.71</sub>			A15	1.086	707
Pt <sub>0.27</sub> V <sub>0.73</sub>	1.72		A15		707
Pt <sub>0.25</sub> V <sub>0.75</sub>	3.27		A15		707
Pt <sub>0.23</sub> V <sub>0.77</sub>	3.25, 2.75		A15		707
Pt <sub>0.21</sub> V <sub>0.79</sub> (probably filaments)	1.76		A15		707
Pt1-0.73 <sup>W</sup> 0-0.27			A1	0.2	846
Pt0.72-0.33 <sup>W</sup> 0.28-0.67	0.2-3.0		A1		846
Rb (0-~150 kbar)				1.2	781
Re	1.694				952
Re	1.70				972#
Re Se <sub>2</sub>				1.15	711
Re Si <sub>2</sub>				1.15	712
Re0.2 <sup>Ta</sup> 0.8	0.21				713#
<sup>Re</sup> 0.15 <sup>Ta</sup> 0.85	0.75				713#
Re <sub>0.1</sub> Ta <sub>0.9</sub>	1.49	232			<b>713</b> #
<sup>Re</sup> 0.075 <sup>Ta</sup> 0.925	2.08	342			713#
<sup>Re</sup> 0.05 <sup>Ta</sup> 0.95	2.77	460			713#
<sup>Re</sup> 0.025 <sup>Ta</sup> 0.975	3.458	613			<b>713</b> #
<sup>Re</sup> 0.3 <sup>Ta</sup> 0.7				0.06	713#
<sup>Re</sup> 0.25 <sup>Ta</sup> 0.75				0.06	<b>713</b> #
Re0.4 <sup>Ta</sup> 0.6			I	Probably <0.06	71.3#
Re2Th	5.05				711
Rh					96 <b>3</b> #

Material	T <sub>h</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Rh <sub>1-x</sub> <sup>Ru</sup> x <sup>Se</sup> 2	4.5-<0.050				714#
<sup>Rh</sup> 0,005-0,03 <sup>Ti</sup> 0,995-0,97	1.8-3.2		A3		766
<sup>Rh</sup> 0.88 <sup>Ti</sup> 0.12	4.0		Cub.		766
<sup>Rh</sup> 0.04 <sup>Ti</sup> 0.96	2.0		Cub.		766
<sup>Rh</sup> 0.04 <sup>Ti</sup> 0.96	2.0		Cub.		717
<sup>Rh</sup> 0.12 <sup>Ti</sup> 0.88	4.0		Cub.		717
<sup>Rh</sup> 0-0,135 <sup>T1</sup> 1-0,865	4.3 max.				717
Rh <sub>0.25</sub> V <sub>0.75</sub>			A15	0.015	948#
Rh V <sub>2</sub>			A15	0.015	707
Rh Vo			A15	2.0	1001
Rh Zr	11.0		E9_		766
Rh	3.5-4.8		3 A3		766
""0.005-0.027 <sup>2-</sup> 0.995-0.973	5.0-11.0		Cuch		766
<sup>kn</sup> 0.035-0.09 <sup>2</sup> °0.965-0.91	5.0-11.0		Cub.		700
<sup>Rh</sup> 0.12 <sup>Zr</sup> 0.88	11.0		Cub.		76 <b>6</b>
Ru	0.48				920
Ru	0.493 <u>+</u> 0.001	5			816
Ru	0.47				9 <b>7</b> 2#
Ru Sb	1.27				711
Ru <sub>2</sub> Sc	2.24		C15		1026
Ru <sub>2</sub> Y	2.42		C15		1026
S <sub>2</sub> Ta	0.7		Hex.		1027
S <sub>2</sub> Ta	1.6, 1.5				796#
S <sub>2</sub> Ta	1.90, 1.99-1.	82	Hex.		778
S <sub>2</sub> Ta (Solid ) (Vapor transport)	1.3-2.1 0.6-0.8				797
sv <sub>3</sub>				1.15	711
Sb (III) (93 kbar)	3.52				902
Sb (85 kbar)	3.55				774
<sup>Sb</sup> x <sup>Sn</sup> 1-x	т (-0.034)				817
Sb Ta3	0.72-0.59		A15		1015
Sb Te $(n=5.0 \times 10^{20})$				0.051	770

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
<sup>Sb</sup> 0.12-0.31 <sup>Ti</sup> 0.88-0.69 (Quenched)	2.3-5.3-4.4		A15		1002
Sb <sub>x</sub> Ti <sub>1-x</sub> (Annealed)	2.0-6.5-5.8		A15		1002
Sb <sub>0.25</sub> Ti <sub>0.75</sub> (Annealed)	6.5, 5.7		A15		<b>1002</b> #
Sb0.25 <sup>T1</sup> 0.75	5.3, 5.0		A15		<b>1002</b> #
Sb Ti <sub>0-3</sub> V <sub>3-0</sub> (Quenched) (Annealed)	6.5-0.8 5.3-0.8		A15		1002
<sup>Sb</sup> x <sup>T1</sup> 1-x	T <sub>c</sub> '(+0.21)		Hex.		858
<sup>Sb</sup> 0.25 <sup>V</sup> 0.75			A15	1.0	<b>1002</b> #
Sc				0.032	744#
Sc <sub>0.01</sub> Zr <sub>0.99</sub>	0.32-0.25,0.1	7-0.12			744#
<sup>Sc</sup> 0.05 <sup>Zr</sup> 0.95	0.11-0.08				744∦
sc <sub>0.07</sub> zr <sub>0.93</sub>	0.08-0.04				744#
sc <sub>0.1</sub> Zr <sub>0.9</sub>				0.024	744#
Sc <sub>0.15</sub> Zr <sub>0.85</sub>				0.036	744#
Sc <sub>0.2</sub> Zr <sub>0.8</sub>				0.036	744#
<sup>Sc</sup> 0.25 <sup>Zr</sup> 0.75				?	744#
Sc <sub>0.4</sub> Zr <sub>0.6</sub>				0.04	744#
Sc <sub>0.5</sub> Zr <sub>0.5</sub>				0.022	744#
Sc <sub>0.8</sub> Zr <sub>0.2</sub>				?	744#
Se4Np3	1.61				711
Se <sub>2</sub> Ta	0.2				1027
Se <sub>2</sub> Ta	0.13-0.15				797
Se <sub>2</sub> Ta	0.16-0.22				797
Se <sub>2</sub> Ta	0.2				796#
Se <sub>2</sub> V <sub>1+x</sub>				0.05	797
Si <sub>2</sub> Sr			Cub.	0.32	961
si <sub>3</sub> sr <sub>2</sub>	~0.55		с <sub>с</sub>		961
si <sub>2</sub> Th <sub>3</sub>			Tet.	0.1	927

Material	т <sub>с</sub> (Н)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
Si <sub>2</sub> U <sub>3</sub>			Tet.	0.1	927
si V <sub>3</sub>	16.9	HF			877
Si V <sub>3</sub> (Wire core)	16.86	HF	A15		880#
Si V <sub>3</sub>	14.5		A15		890
Si V <sub>3</sub>	16.8	HF	A15		787
Si V <sub>3</sub>	14.85-~16.6	HF			716⊽
Si <sub>0,25</sub> V <sub>0,75</sub>	17.01		A15		707
Si <sub>0.20</sub> V <sub>0.80</sub>	7.51		A15		707
Si <sub>0,30</sub> V <sub>0,70</sub>	16.95		A15		70 <b>7</b>
Si <sub>0,25</sub> V <sub>0,75</sub>	16.65		A15		707
Si V <sub>3</sub> (Polycrystalline)	16.83		A15		1013
Si V <sub>3</sub> (Single crystal)	16.85		A15		1013
Si Y				1.15	711
Si <sub>1.90</sub> Y			Cc	0.1	808#
Si <sub>2</sub> Zr <sub>3</sub>			Tet.	0.1	927
Sn (11,000A)					757⊽
Sn					749#
Sn (1000-27,000A)		HF			<b>7</b> 50 <sup>♥</sup>
Sn (0-31.6 katm)	3.733	306			829
Sn (Up to ~200A)	~6 max.				837⊽
Sn (850,1580,3420A)	3.794,3.847,3.84	0			862⊽
Sn (III) (P=113 kbar)	5.30				780
Sn	3.724				804
Sn (II) (240, 270 kbar)		400,375			785
Sn (II)(125 kbar,160 kbar)	5.2, 4.85				785
Sn		305 <u>+</u> 5			785
Sn		_			814#
Sn (1400A)	3.84	HF			723⊽
Sn (1950A)	3.87	HF			723 ♥
Sn (2600A)	3.92	HF			723
Sn (Plus Au, Cu)					734 ♥
Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
------------------------------------------------	-------------------------------------------	---------------------------	----------------------	----------------	--------------
Sn (Whiskers, strained)	T_(+0.45)				974
Sn Te	·	HF			770
<sup>Sn</sup> 0.975 <sup>Te</sup> 1.000					813#
Sn Te(n=7.5-20 x 10 <sup>20</sup> )	0.34-0.214	HF			1022
Sn <sub>3</sub> Th	3.33		Ll <sub>2</sub>		715
<sup>Sn</sup> 0.65 <sup>T1</sup> 0.35	6-7.1	HF			900
sn <sub>3</sub> V <sub>2</sub>				1.15	711
Sn <sub>3</sub> Y <sub>5</sub>				1.4	863
Sn <sub>3</sub> Y <sub>5</sub>				1.15	711
Sn Y <sub>2</sub>				1.15	711
Sn <sub>0.91</sub> Zn <sub>0.09</sub> (Laminar	3.668-3.722				726
Sn Zr <sub>4</sub>	<b>0</b> .92-0.79		A15		1015
Sr				1.2	781
Та	4.31		B2		911
Та	4.463	831			713#
Ta (300,9850,1640A)	3.16,4.15,4.8	HF			719⊽
Ta Te <sub>2</sub>				0.05	797
Ta Te <sub>2</sub>				0.05	<b>796</b> #
<sup>Ta</sup> 0.52 <sup>Ti</sup> 0.48	7.86	HF			874
Ta <sub>1-x</sub> Ti <sub>x</sub>			A2		441
Ta <sub>x</sub> V <sub>1-x</sub>			A2		441
Tal-x <sup>W</sup> x	t, 0.12		A2		441
Ta <sub>l-x</sub> Zr <sub>x</sub>		HF	A2		441
Tc (0-15 kbar data given)	$8.00 \pm 0.01, \\ 7.924 \pm 0.01 \\ P =$	0			836
Тс	7.79 <u>+</u> 0.02				712
Тс	7.73				712
Te (III) (70 kbar)	4.28				909
Te (II)(43 kbar)(n=1-4 x	10 <sup>18</sup> ) 2.05				909
Te (IV) (84 kbar)	4.3				909
<sup>Te</sup> 3 <sup>T1</sup> 5					849

Material	T <sub>c</sub> (K)	H <sub>o</sub> (oersteds)	Crystal Structure	T <sub>n</sub>	Ref.
$Te_{3}Tl_{5}$ (n > 2 x 10 <sup>21</sup> )	2.20, 2.14	HF	Çub.		848
Te <sub>2</sub> V <sub>1+v</sub>				0.05	797
Th	1.374 <u>+</u> 0.001				80 <b>2</b> #
Th					791
Th T13	0.87		Ll <sub>2</sub>		715
<sup>Th</sup> 1-x <sup>Tm</sup> x	1.37-0.67				768
Th <sub>1-x</sub> U <sub>x</sub>	1.36-0.068				951
Ti			A3		759#
Ti (0-25 katm, T <sub>c</sub> 7)					997
Ti	0.39				<b>1002#</b>
Ti <sub>4</sub> T1			A15	0.35	980
<sup>Ti</sup> 0.80 <sup>V</sup> 0.20	3.65-3.37				838
<sup>Ti</sup> 0.6 <sup>V</sup> 0.4	7.0	HF			878
<sup>Ti</sup> 0.42 <sup>V</sup> 0.58	7.52	HF			874
Ti <sub>x</sub> V <sub>1-x</sub>	5.2-7.5	HF	A2		<b>441#</b>
<sup>Ti</sup> 0.5 <sup>Zr</sup> 0.5	1.60		A3		759#
T1		179 <u>+</u> 5	A1		760
T1 (0-27 katm)	T <sub>c</sub> ' (+0.02-0.25)				99 <b>8</b>
T1 V <sub>3</sub>	-		A1.5	4.2	825
T13Y	1.52		L12		715
Tl Zr <sub>4</sub>			A15	0.35	98 <b>0</b>
U (0-12 kbar)	1.2-2.1				879
U				0.6	80 <b>2</b> #
U (10 kbar)	2.3				7 24
U	1.0-0.5				724
V	4.68	HF			917#
V	5.06	HF			917#
V	5.17	HF			917∉
v	5.31				788#
V					727
V	5.379				742#
V	$5.414 \pm 0.01$				742#

Material	Т <sub>с</sub> (К)	H <sub>o</sub> (oersteds)	Crystal Structure	Tn	Ref.
v	5.30				<b>1002</b> #
V26W70Zr74W70	≈5.9	HF			678
<b>v</b> <sub>0.4</sub> <sup>Zr</sup> <sub>0.6</sub>	~7.8	HF			889
<b>v</b> <sub>0.6</sub> <sup>Zr</sup> <sub>0.4</sub>	8.3				889
v <sub>0.1-0.9</sub> <sup>2r</sup> 0.9-0.1	6.5-8.3-7.6	HF			889
W	0.0154	1.14			840#
W	0.0154	1.15			882#
W	0.0154	1.15			887#
W	~3				9 <b>21</b> ⊽
W <sub>x</sub> <sup>2r</sup> 1-x	2.9-3.9-2.0		Cub.		956
W <sub>2</sub> Zr	2.2-2.7				956
W <sub>2</sub> <sup>2</sup> r			C15	0.35	956
Y				0.006	781
Y (120-170 kbar)	~1.2-~2.7				781
Y (~160 kbar)	~2.7				781
Y					<b>81 2</b> #
Y	0.03		A3		808#
Zn (0-26.2 katm)	V0.76- V0.11	55-19			829
Zn					820#
Zn	~1.9 max.				837⊽
Zn (Isotope study)	0.85				1000
Zn <sub>2</sub> Zr (Ta impurity)			C15	0.1	741
Zr	0.53-0.51, 0.52	-0.51			744#
Zr (Isotope study)	0.487				97 <b>2</b> #
Zr	~1.5 (Extrap.)	Pseudo BCC			956

## HIGH MAGNETIC FIELD SUPERCONDUCTIVE MATERIALS AND SOME OF THEIR PROPERTIES

Table 3. High Magnetic Field Superconductive Materials and Some of Their Properties. (Note: All fields are quoted in kilo-oersteds. T<sub>obs</sub> indicates temperature of measurement in degrees Kelvin. See text for discussion of field nomenclature.)

Material	т <sub>с</sub>	H <sub>c1</sub>	н <sub>с</sub>	Hc2	H <sub>c3</sub>	Tobs	Ref.
A1				H1/H giv	en		8887
A1 <sub>2</sub> C Mo <sub>3</sub>	9.2			101		4.2	96 <b>6</b>
Al <sub>3-x</sub> Gd <sub>x</sub> La	2.2-6.16			1.3-13.6		0	918
A12.968 <sup>Gd</sup> 0.032 <sup>La</sup>	3.00			2.09		0	918
A12.966 <sup>Gd</sup> 0.034 <sup>La</sup>	2.05			1.30		0	918
A12.98 <sup>Gd</sup> 0.02 <sup>La</sup>	4.00			7.96		0	918
A12.988 <sup>Gd</sup> 0.012 <sup>La</sup>	5.00			13.55		0	918
A10.8 <sup>Ge</sup> 0.2 <sup>Nb</sup> 3	17.8-19.1 I	Data given					823
Al <sub>1-x</sub> <sup>Ge</sup> x <sup>Nb</sup> 3	20.7			<u>~</u> 200		14	876
A10.66 <sup>Ge</sup> 0.33 <sup>Nb</sup> 2.5	19.6-20.1			380 (Est	imated)	0	896
A10.75 <sup>Ge</sup> 0.25 <sup>Nb</sup> 3	18.5			420		4.2	789
A10.153 <sup>Ge</sup> 0.057 <sup>Nb</sup> 0.79				410		4.2	787
Al0.8 <sup>Ge</sup> 0.2 <sup>Nb</sup> 3	10.7			130		4.2	708⊽
Al La <sub>3</sub>	6.16			7.92		0	943
Al La <sub>3</sub>	6.16			11.57			918
A1 Nb3	17.14			246		0	880
Al Nb3	≈18.7			295		4.2	787
<sup>A1</sup> 0.0015 <sup>Sn</sup> 0.9985				0.0175		3.595	850
AuV <sub>3</sub>	2.55			~9		2.25	857
AuV <sub>3</sub>	2.980			22-37		0	707
AuV <sub>3</sub>	1.785			22-37		0	707
AuV <sub>3</sub>	0.86			22-37		0	707
BC Mo2	7.1			28		4.2	966

Material	Tc	H <sub>c1</sub>	Hc	H <sub>c2</sub>	H <sub>c3</sub>	Tobs	Ref.
Bay03Sr1-xTi	0.50	0.003	9			0	1005
Bi	6.55			11.75 (Upp	er)	0	973
Bi <sub>2</sub> K	3.57		Data				897
Bi0-0.56 <sup>Pb</sup> 1-0.44			grven	0.53-13.8		4.2	750,855
<sup>Bi</sup> 0.025-0.40 <sup>Pb</sup> 0.975-0.6	60	0.44- 0.105- 0.141	0.57-0.9	09 0.94-17.7	,	4.2	949
<sup>C</sup> 2.5 <sup>H</sup> 2.5 <sup>N</sup> 0.5 <sup>S</sup> 2 <sup>Ta</sup>	3.5	0.141		Data give	n		1027
C <sub>0.64</sub> Mo	8.0			47		4.2	966
C0.69 <sup>Mo</sup>	12.1			98		4.2	966
C <sub>0.52</sub> Ti	3.42			48		1.6	790
C <sub>0.46</sub> Ti	3.32			45		1.6	790
Ca <sub>x</sub> O <sub>3</sub> Sr <sub>1-x</sub> Ti	0.50	0.0019				0	1005
CaSi <sub>2</sub>	1.58			1.0		0.35	961
<sup>Cd</sup> 0.02 <sup>Hg</sup> 0.98				0.01	Data Given		978
<sup>Cd</sup> 0.015 <sup>Hg</sup> 0.985					Data Given		978
<sup>Co</sup> 0.002 <sup>Mo</sup> 0.815 <sup>Re</sup> 0.185	5.8			6.1		0	881
Cr <sub>3</sub> Ir	0.168			10.5		0	707
Cr <sub>3</sub> Rh	0.072			9.1		0	707
Cr <sub>x</sub> V <sub>1-x</sub>	1.3-5.1		Da	ta Given			441
<sup>Cu</sup> 0-60w/o <sup>Nb</sup> 100-40w/o			Da	ta Given			960
<sup>Fe</sup> 0.0008 <sup>Mo</sup> 0.725 <sup>Nb</sup> 0.061 <sup>Re</sup> 0.187	1.85			1.3		0	881
Fex <sup>Mo</sup> 0.865 <sup>Re</sup> 0.135	2.1-6.1			3.6-1.7		0	881
<sup>Fe</sup> 0.0006 <sup>Mo</sup> 0.865 <sup>Re</sup> 0.135			0.408	1.44		1.53	881
Fe <sub>x</sub> <sup>Mo</sup> 0.87 <sup>Re</sup> 0.13				1.7-3.1		5.55	982
<sup>Fe</sup> 0.05 <sup>Nb</sup> 0.38 <sup>T1</sup> 0.57				83 Max.		4.2	905

Material	T <sub>c</sub>	H <sub>c1</sub>	Hc	H <sub>c2</sub>	H <sub>c3</sub>	T <sub>obs</sub>	Ref.
Ga4 <sup>Mn</sup> x <sup>Mo</sup> 1-x	8.0-4.0	1		74-25		0	753
Ga V <sub>3</sub>	14.1			208		0	877
Ga V3				215		4.2	872
Ga V <sub>3</sub>	14.83			236		0	880
Ga V4.5	8.6			95		4.2	787
Ga V <sub>3</sub>	14.0			200		4.2	787
GeTe1.03	0.172			0.095		0	807,770
GeV3	6.7			73		1.3	719⊽
GeV <sub>3</sub>	6.7			51		1.3	719 <sup>⊽</sup>
GeV <sub>3</sub>	6.9			31		1.3	719
Hf <sub>x</sub> Nb <sub>1-x</sub>				I <sub>c</sub> Data given			441
In (In pores)	3.68-4.1	17		11.6-58.4			738
In <sub>0.063</sub> Pb <sub>0.937</sub>		0.43		2.3		1.2	844,7507
<sup>In</sup> 0.18-0.89 <sup>Pb</sup> 0.82-0.11		0.170	- 0.52- 0.052	3.0-4.1-0.15		4.2	949
<sup>In</sup> 0.35 <sup>Pb</sup> 0.965		0.6	0.85	1.75		0	919
In <sub>0.6</sub> Pb <sub>0.4</sub>	6.36	0.362 0.630		3.250		3.9 0	809
<sup>In</sup> 0.961 <sup>Pb</sup> 0.039	3.64	Data Given	Data	Data Given			1025
In <sub>x</sub> Sn <sub>1-x</sub>			01/01	Data Given			750 <sup>♥</sup> ,854 <sup>♥</sup> 910
La				Data Given			925
La3Te4	3.75 2.45	0.060 0.020		12.5 8		1.4 1.4	1024
<sup>Mo</sup> x <sup>Nb</sup> 1-x				I <sub>c</sub> Data Given			441
<sup>Mo</sup> 0.725 <sup>Nb</sup> 0.061 <sup>Re</sup> 0.187	5.0			2.65		0	881
<sup>Mo</sup> 0.815 <sup>Re</sup> 0.185	8.27			7.0		0	881
<sup>Mo</sup> 0.865 <sup>Re</sup> 0.135	6.1		0.471	1.57		4.2	881

Material	Tc	H <sub>c1</sub>	Hc	Hc2	H <sub>c3</sub>	Tobs	Ref.
<sup>Mo</sup> 0.16 <sup>T1</sup> 0.84	4.246	0.905		60-66 59-3		0 1,18	805
N <sub>0.93</sub> Nb	15.85			158		0	880,873
N <sub>0.92</sub> Nb	16.30			130		0	880
N0.91 <sup>Nb</sup> 0.99 <sup>Ta</sup> 0.01	15.62			135		0	880
N0.91 <sup>Nb</sup> 0.974 <sup>Ta</sup> 0.026	15.09			135		0	880
<sup>N</sup> 0.92 <sup>Nb</sup> 0.946 <sup>Ta</sup> 0.054	14.41			135		0	880
N0.91 <sup>Nb</sup> 0.82 <sup>Ta</sup> 0.18	10.9			100		0	880
N NB TI				>136		4.2	<b>83</b> 9 <sup>▽</sup>
N0.85 <sup>Nb</sup> 0.66 <sup>T1</sup> 0.34	17.61			119		0	880
<sup>N</sup> 0.88 <sup>Nb</sup> 0.256 <sup>T1</sup> 0.744	14.72			104		0	880
N0.90 <sup>Nb</sup> 0.114 <sup>T1</sup> 0.886	10.1			100		0	880
N Nb Zr				>136		4.2	8 <b>3</b> 9 <sup>⊽</sup>
<sup>'N</sup> 0.74 <sup>Nb</sup> 0.9 <sup>Zr</sup> 0.1	14.42			136		0	880
<sup>N</sup> 0.76 <sup>Nb</sup> 0.85 <sup>Zr</sup> 0.15	14.16			132		0	880
N0.85 <sup>Nb</sup> 0.75 <sup>Zr</sup> 0.25	12.96			116		0	880
<sup>N</sup> 0.73 <sup>Nb</sup> 0.95 <sup>Zr</sup> 0.05	15.42			146		0	880
ND				2.80 (Outgas: 4.70 (As prep	sed) pared)	4.2	895
Nb (Rods and tubes)				4.2		4.2	751
Nb (Irradiated)				2.5-4.3			832
Nb	9.1			53		1.3	719 <sup>▽</sup>
Nb	9.3			68		1.3	<b>7</b> 19 <sup>▽</sup>
Nb	6.4-9			>30		Various	913 <sup>▽</sup>
Nb	10.0			40		0	<b>719<sup>▽</sup></b>
ИР				3.87 H// [100 4.33 H// [111]	] 1 1	1.2	827
				4.02 11 [110			993

Nb (Foils)

Material	Tc	H <sub>c1</sub>	Н <sub>с</sub>	H <sub>c2</sub>	H <sub>c3</sub>	Tobs	Ref
Nb	9.1			3.82,	- h - m)		995
Nb	9 20	18		0.09 (at 10 h	19 2		00/ 1
Nb	9.20	1.8		4.00	8.1	0	994,1
Nb	9.23			4.20		0	928
Nb <sub>1-x</sub> <sup>0</sup> x				Data given			441
<sup>Nb</sup> 0.9926 <sup>0</sup> 0.0084				7.74	~ 13	4.2	772
<sup>Nb</sup> 0.993 <sup>0</sup> 0.007	8.78			7	11.1	4.2	771
NbO (200 ppm)					8.0 (cold worked) 8.5	4.2	771
<sup>Nb</sup> 0.985 <sup>0</sup> 0.0152	8.04			9.6	11.5	4.2	771
Nb <sub>1-x</sub> <sup>0</sup> x				Data given			944
Nb <sub>3</sub> Os	0.943			1.26		0	707
<sup>Nb</sup> 0.339 <sup>Se</sup> 0.661	6.1			Data given			996
<sup>Nb</sup> 0.338 <sup>Se</sup> 0.662	6.75			Data given.			996
NbSe2	7.0			Data given.			996
Nb <sub>3</sub> Sn (Layer on Nb core	e) 18.1			245		0	877
Nb <sub>3</sub> Sn (Core wire)	18.04			260		0	880
Nb <sub>3</sub> Sn (Clad)	18.00			260		0	880
Nb <sub>3</sub> Sn (multiwire)	18.21			280		0	880
Nb <sub>3</sub> Sn	18.0			235		4.2	787
Nb2.85 <sup>SnZr</sup> 0.15 (Clad)	18.07			260		0	880
Nb2.79 <sup>SnZr</sup> 0.21 (Clad)	17.98			260		0	880
Nb2.70 <sup>Sn Zr</sup> 0.30 (Clad)	18.01			260		0	880
<sup>Nb</sup> 0.9378 <sup>Ta</sup> 0.0622	8.42	1.12	1.89	5.56		0	864
<sup>Nb</sup> 0.9575 <sup>Ta</sup> 0.0425	8.55	1.37	1.98	5.30		0	864
Nb0.9844 <sup>Ta</sup> 0.0156	8.76	1.70	2.03	4.50		0	864
<sup>Nb</sup> 0.9913 <sup>Ta</sup> 0.0087	8.87	1.75	2.05	4.40		0	864
Nb1-0 <sup>Ta</sup> 0-1	9.18-4.	33		Data given.			940

Material	Tc	H <sub>c1</sub>	Hc	H <sub>c2</sub>	H <sub>c3</sub>	Tobs	Ref.
<sup>Nb</sup> 0.96 <sup>Ta</sup> 0.04	8.87			6.14		0	928
Nb1-0.6 <sup>Ta</sup> 0-0.4	9.23-6	56		4.2-9.2		0	928
<sup>Nb</sup> 0.87 <sup>Ta</sup> 0.13	8.15	0.91	1.69	7.08		0	911
<sup>Nb</sup> 0.79 <sup>Ta</sup> 0.21	7.51	0.83	1.65	7.93		0	911
<sup>Nb</sup> 0.67 <sup>Ta</sup> 0.33	6.81	0.55	1.37	8.73		0	911
<sup>Nb</sup> 0.54 <sup>Ta</sup> 0.46	6.25	0.48	1.27	8.60		0	911
Nb0.37 <sup>Ta</sup> 0.63	5.31	0.37	1.04	6.75		0	911
<sup>Nb</sup> 0.17 <sup>Ta</sup> 0.83	4.65	0.33	0.83	4.26		0	911
<sup>Nb</sup> 1-x <sup>Ta</sup> x				Data given.			441,981
<sup>Nb</sup> 0.55 <sup>Ti</sup> 0.45	9.4			108		4.2	830
Nb0.4 <sup>T1</sup> 0.6				107		4.2	830
<sup>Nb</sup> 0.21 <sup>Ti</sup> 0.79	7.8	1.125	3.572	77		4.2	991
<sup>Nb</sup> 0.20 <sup>T1</sup> 0.80	7.5	1.12	3.57	80		4.2	991
<sup>Nb</sup> 0.44 <sup>T1</sup> 0.56	8.99			Data given.			874
<sup>Nb</sup> 0.20 <sup>T1</sup> 0.80	6.6-6.1	5		Data given.			965,441
<sup>Nb</sup> 0.22 <sup>T1</sup> 0.78	6.92			30.1	45	5.54	993
<sup>Nb</sup> 0.48 <sup>Ti</sup> 0.52			I	c <sup>vs H</sup> given.			968
<sup>Nb</sup> 0.33 <sup>T1</sup> 0.67			I	c <sup>vs H</sup> given.			968
<sup>Nb</sup> 0.62 <sup>Ti</sup> 0.14 <sup>Zr</sup> 0.24	9.6			69		4.2	830
<sup>Nb</sup> 0.75 <sup>Ti</sup> 0.15 <sup>Zr</sup> 0.10	9.7			57		4.2	830
<sup>Nb</sup> 0.53 <sup>Ti</sup> 0.18 <sup>Zr</sup> 0.29	9.1 9.0			81 80 (after )	anneal)	4.2 4.2	830
<sup>Nb</sup> 0.57 <sup>Ti</sup> 0.33 <sup>Zr</sup> 0.10	9.6			78		4.2	830
Nb0.62 <sup>Ti</sup> 0.14 <sup>Zr</sup> 0.24	9.7			76		4.2	830

Material	Tc	H <sub>c1</sub>	Hc	H <sub>c2</sub>	H <sub>c3</sub>	Tobs	Ref.
<sup>Nb</sup> 0.35 <sup>T1</sup> 0.15 <sup>Zr</sup> 0.50	<b>8.</b> 6 9.3			79 77 (after	anneal)	4.2	830
<sup>Nb</sup> 0.43 <sup>T1</sup> 0.27 <sup>Zr</sup> 0.30	8.6 9.1			75 77 (after	anneal)	4.2 4.2	830
<sup>Nb</sup> 0.48 <sup>T1</sup> 0.30 <sup>Zr</sup> 0.22	8.9 9.0			78 80 (after	anneal)	4.2 4.2	830
Nb0.47 <sup>T1</sup> 0.48 <sup>Zr</sup> 0.05	8.7			89		4.2	830
<sup>Nb</sup> 0.52 <sup>Ti</sup> 0.16 <sup>Zr</sup> 0.32	9.4 9.5			71 72-(after	anneal)	4.2 4.2	830
<sup>Nb</sup> 0.65 <sup>Ti</sup> 0.15 <sup>Zr</sup> 0.20	9.8			65		4.2-	830
<sup>Nb</sup> 0.41 <sup>Ti</sup> 0.15 <sup>Zr</sup> 0.44	8.7 9.3			77 76 (after	anneal)	4.2 4.2	830
Nb0.19 <sup>Ti</sup> 0.51 <sup>Zr</sup> 0.30	10.05			I <sub>c</sub> vs H given			965
<sup>Nb</sup> 0.19 <sup>Ti</sup> 0.74 <sup>Zr</sup> 0.07	9.1 9.30			I <sub>c</sub> vs H given			965
Nb <sub>1-x</sub> W <sub>x</sub>				Data given			441
Nb0-1 <sup>Zr</sup> 1-0				<1-42-3		4.2	847
Nb <sub>1-x</sub> <sup>Zr</sup> x				Data given.			441
Nb Zr	10.8			92		0	<b>73</b> 9
<sup>Nb</sup> 0.75 <sup>Zr</sup> 0.25	(10.6) (11.1)			81.9 (Abrikos 83.4 (Gorkov)	sov)	0	9 <b>75</b>
<sup>Nb</sup> 0.20 <sup>2r</sup> 0.80		1.12	3.57	80		4.2	9 <b>91</b>
0 <sub>3</sub> Sr Ti							770
0 <sub>3</sub> sr Ti	0.30,0.25	0.0028	3			0	1005
P (170 k bar)	5.8-3.6			~4.8->10		0	786
РЪ				H <sub>c</sub> (  ) and H <sub>c</sub> given.	( <del>L</del> )	, i i i i i i i i i i i i i i i i i i i	752 <sup>∇</sup> ,985
<sup>Pb</sup> 0.965 <sup>T1</sup> 0.035		0.8	1.2	1.5		0	919
Pb Ti <sub>3</sub>	0.486			3.45		0	707
siv <sub>3</sub>	16.9			235		0	877
SiV <sub>3</sub> (Core wire)	16.86			230		0	880

Material	т <sub>с</sub>	Hcl	н <sub>с</sub>	H <sub>c2</sub>	H <sub>c3</sub>	Tobs	Ref.
siv <sub>3</sub>	16.8			228		4.2	787
siv <sub>3</sub>				~105		10	716 <sup>♥</sup>
Sn	3.84-3.92	2					723 <sup>V</sup> ,750 <sup>V</sup>
SnTe	0.034- 0.214	0.0005- 0.0019	0.001-	~0.005-0.09		0	770
<sup>Sn</sup> 0.65 <sup>T1</sup> 0.35	6-7.1		•	3.46		4.2	900
Та	3.16			26		1.3	719 <sup>∇</sup>
<sup>Ta</sup> 0.52 <sup>Ti</sup> 0.48	7.86			Data given.			874
Ta <sub>1-x</sub> Zr <sub>x</sub>				I <sub>c</sub> vs H given.			441
Te <sub>3</sub> T1 <sub>5</sub>	2.20			~1.7		1.2	848
<sup>T1</sup> 80w10 <sup>V</sup> 20w10	3.65-3.37			I <sub>c</sub> vs H given.			838
<sup>T1</sup> 0.6 <sup>V</sup> 0.4	7.0			86 109 110		4.2 2.18	878
<sup>T1</sup> 0.42 <sup>V</sup> 0.58	7.52			Data given.		110	874
Ti <sub>x</sub> V <sub>1-x</sub>	5.2-7.5			Data given.			441
V (Impure)	4.68 5.06 5.17	0.36 0.70 0.72	1.16 1.33 1.34	8.0 5.50 4.58		0 0 0	917 917 917
<sup>V</sup> 26w10 <sup>Zr</sup> 74w10	≈5.9	0.165 0.185 0.227 0.238				3.5 3.04 1.78 1.05	678
v <sub>0.4</sub> Zr <sub>0.6</sub>	~7.8			~110		4.2	889
v <sub>0.1-0.9</sub> <sup>Zr</sup> 0.9-0.1	6.5-8.3-			28-100-62		4.2	889

- 678. Echarri, A., Phys. Letters 20, 619 (1966).
- 707. Blaugher, R. D., Hein, R. E., Cox, J. E., Waterstrat, R. M., J. Low Temp. Phys. 1, 539 (1969).
- 708. Janocko, M. A., Gavaler, J. R., Hulm, J. K., Jones, C. K., J. Vac. Sci. Technol. 7, 127 (1970)
- 709. Koonce, C. S., Cohen, M. L, Schooley, J. F., Hosler, W. R., Pfeiffer, E. R., Phys. Rev. <u>163</u>, 380 (1967).
- 710. Hein, R. H., Gibson, J. W., Mazelsky, R., Miller, R. C., Hulm, J. K., Phys. Rev. Letters <u>12</u>, 320 (1964).
- 711. Bucher, E. and Staudenmann, I. L., Unpublished results, Univ. of Geneva .
- 712. Bucher, E. and Zambelli, A., Unpublished work, Univ. Geneva.
- 713. Mamiya, T., Nomura, K., Masuda, Y., J. Phys. Soc. JAP 28, 380 (1970).
- 714. VanMaaren, M. H., Harland, H. B., Havinga, E. E., Solid State Comm. 8, 1933 (1970).
- 715. Havinga, E. E., Damsma, H. and VanMaaren, J. Phys. Chem. Solids 31, 2653 (1970).
- 716. Hauser, J. J. and H. C. Theverer, Phys. Rev. 129, 103 (1963).
- 717. Raub, Ch.J. and Hull, G. W., Jr., Phys. Rev. 133, A932 (1964).
- 718. Stromberg, T. F. and Swenson, C. A., Phys. Rev. 134, A21 (1964).
- 719. Hauser, J. J. and Theuerer, H. C., Phys. Rev. 134, A198 (1964).
- 720. Van Der Hoeven, B. J. C., and Keesom, P. H., Phys. Rev. 134, A1320 (1964).
- 721. Leupold, H. A. and Boorse, H. A., Phys. Rev. 134, A1322 (1964).
- 722. McConville, T. and Serin, B., Phys. Rev. 140, All69 (1965).
- 723. Mydosh, J. and Meissner, H., Phys. Rev. 140, A1568 (1965).
- 724. Smith, T. F. and Gardner, W. E., Phys. Rev. 140, A1620 (1965).
- 725. Shapira, Y. and Neuringer, L. J., Phys. Rev. <u>140</u>, A1638 (1965).
- 726. Lutes, O. S., Clayton, D. A., Phys. Rev. 145, 218 (1966).
- 727. Gardner, W. E. and Smith, T. F., Phys. Rev. <u>144</u>, 233 (1966).
- 728. Merriam, M. F., Phys. Rev. 144, 300 (1966).
- 729. Smith, T. F. and Gardner, W. E., Phys. Rev. 146, 291 (1966).
- 730. Guthrie, G. L. and Palmer, R. L., Phys. Rev. <u>141</u>, 346 (1966).
- 731. Gibson, J. W. and Hein, R. A., Phys. Rev. <u>141</u>, 407 (1966).
- 732. Claeson, T., Luo, H. L. and Merriam, M. F., Phys. Rev. <u>141</u>, 412 (1966).
- 733. Hauser, J. J., Theuerer, H. C. and Werthamer, N. R., Phys. Rev. <u>142</u>, 118 (1966).
- 734. Duffy, R. J. and Meissner, H., Phys. Rev. <u>147</u>, 248 (1966).
- 735. Seidel, T. and Meissner, H., Phys. Rev. <u>147</u>, 272 (1966).
- 736. Claeson, T., Phys. Rev. <u>147</u>, 340 (1966).

- 737. Shier, J. S. and Ginsberg, D. M., Phys. Rev. <u>147</u>, 384 (1966).
- 738. Watson, J. H. P., Phys. Rev. 148, 223 (1966).
- 739. Neuringer, L. J. and Shapira, Y., Phys. Rev. <u>148</u>, 231 (1966).
- 740. Cape, J. A., Phys. Rev. 148, 257 (1966).
- 741. Falge, Jr., R. L. and Hein, R. A., Phys. Rev. 148, 940 (1966).
- 742. Radebaugh, R. and Keesom, P. H., Phys. Rev. 149, 209 and 217 (1966).
- 743. Finnemore, D. K., Stromberg, T. F. and Swenson, C. A., Phys. Rev. <u>149</u>, 231 (1966).
- 744. Jensen, M. A. and Maita, J. P., Phys. Rev. 149, 409 (1966).
- 745. Van Der Hoeven, Jr., B. J. C. and Keesom, P. H., Phys. Rev. 137, A103 (1965).
- 746. Joiner, W. C. H., Phys. Rev. 137, A112 (1965).
- 747. Finnemore, D. K., Johnson, D. L., Ostenson, J. E., Spedding, F. H., Beaudry, B. J., Phys. Rev. <u>137</u>, A550 (1965).
- 748. Woolf, M. A. and Reif, F., Phys. Rev. 137, A557 (1965).
- 749. O'Neal, H. R. and Phillips, N. E., Phys. Rev. 137, A748 (1965).
- 750. Burger, J. P., Deutscher, G., Guyon, E. and Martinet, A., Phys. Rev. <u>137</u>, A853 (1965).
- 751. Cline, H. E., Tedmon, C. S., Jr., and R. M. Rose, Phys. Rev. <u>137</u>, A1767 (1965).
- 752. Kratzig, E. and Keller, J., Phys. Stat. Sol. 42, 725 (1970).
- 753. Fischer, O., Jones, H., Bongi, G., Frei, C., Treyvaud, A., Phys. Rev. Letters 26, 305 (1971)
- 754. Merriam, M. F., Liu, S. H. and Seraphim, D. P., Phys. Rev. 136, A17 (1964).
- 755. Claiborne, L. T. and Morse, R. W., Phys. Rev. 136, A893 (1964).
- 756. Hauser, J. J., Theurerer, H. C. and Werthamer, N. R., Phys. Rev. <u>136</u>, A637 (1964).
- 757. Douglas, D. H., Jr. and Meservey, R., Phys. Rev. <u>135</u>, A19 (1964).
- 758. Meservey, R. and Douglass, D. H., Jr., Phys. Rev. <u>135</u>, A24 (1964).
- 759. Hake, R. R. and Cape, J. A., Phys. Rev. 135, A1151 (1964).
- 760. Saunders, G. A. and Lawson, A. W., Phys. Rev. 135, Al161 (1964).
- 761. Tittman, B. R., Darnell, A. J., Bommel, H. E. and Libby, W. R., Phys. Rev. <u>135</u>, A1460 (1964). Also see A1453.
- 762. Caplan, S. and Chanin, G., Phys. Rev. <u>138</u>, A1428 (1965).
- 763. Toxen, A. M., Burns, M. J. and Quinn, D. J., Phys. Rev. <u>138</u>, A1145 (1965).
- 764. Gardner, W. E. and Smith, T. F., Phys. Rev. 138, A484 (1965).
- 765. Martin, D. L., Phys. Rev. <u>138</u>, A464 (1965).
- 766. Raub, Ch. J. and Anderson, C. A., Z. Physik 175, 105 (1963).
- 767. Cooper, A. S., Corenzwit, E., Longinotti, L. D., Matthias, B. T. and Zachariasen, W. H., Proc. Nat. Acad. Sci. <u>67</u>, 313 (1970).
- 768. Bucher, E., Andres, K., Maita, J. P. and Hull, G. W., Jr., Helevtica Physica Acta <u>41</u>, 723 (1968).
- 769. Andres, K., Bucher, E., Maita, J. P. and Cooper, A. S., Phys. Letters <u>28A</u>, 67 (1968).

- 770. Hulm, J. K., Ashkin, M., Deis, D. W. and Jones, C. K., Prog. in Low Temp. Phys. 6, 205 (1970)
- 771. Desorbo, W., Phys. Rev. <u>134</u>, A1119 (1964).
- 772. Desorbo, W., Phys. Rev. 135, A1190 (1964).
- 773. Glover, R. E., III, Prog. in Low Temp. Phys. <u>6</u>, 291-332 (1970).
- 774. Wittig, J., J. Phys. Chem. Solids 30, 1407 (1969).
- 775. Wittig, J. and Matthias, B. T., Science 160, 994 (1968).
- 776. Luo, H. L., Maple, M. B., Harris, I. R. and Smith, T. F., Phys. Letters <u>27A</u>, 519 (1968).
- 777. Wittig, J. and Matthias, B. T., Phys. Rev. Letters <u>22</u>, 634 (1969).
- 778. Schmidt, L., Physics Letters 31A, 551 (1970).
- 779. Buckel, W. and Gey, W., Z. fur Phys. 176, 336 (1963).
- 780. Wittig, J., Z. Physik 195, 228 (1966).
- 781. Wittig, J., Phys. Rev. Letters 24, 812 (1970).
- 782. Fisk, Z. and Matthias, B. T., Science 165, 279 (1969).
- 783. Falge, R. L., Jr., Phys. Letters 24A, 579 (1967).
- 784. Giorgi, A. L., Szklarz, E. G., Krupka, M. C., Wallace, T. C. and Krikorian, N. H., Jour. Less Common Metals <u>14</u>, 247 (1968) (And private communication).
- 785. Brandt, N. B. and Berman, I. V., Zh. Eksp. Teor. Fiz., Pisma Red. <u>7</u>, 198 (1968), Trans: JETP Letters <u>7</u>, 152 (1968).
- 786. Berman, I. V. and Brandt, N. B., Soviet Phys. JETP Letters 7, 323 (1968).
- 787. Foner, S., McNiff, E. J., Jr., Matthias, B. T., Geballe, T. H., Willens, R. H. and Corenzwit, Phys. Letters <u>31A</u>, 349 (1970).
- 788. Andres, K., Bucher, E., Maita, J. P. and Sherwood, R. C., Phys. Rev. <u>178</u>, 702 (1969).
- 789. Yasukochi, K., Akihama, R. and Usui, N., Japan. J. Appl. Phys. 9, 845 (1970).
- 790. Klimashin, G. M., Neshpor, V. S., Nikitin, V. P., Novikov, V. I. and Shalyt, S. S., Zhetf Pis. Red. <u>12</u>, 147 (1970). Translation: JETP Letters <u>12</u>, 102 (1970).
- 791. Palmy, C., Olsen, J. L., Flach, R. and DeTrey, P., Coll. Inter. Du CNRS <u>188</u>, 95 (1970). (Grenoble Meeting 8-10 Sept. 1969).
- 792. Surikov, V. I. Borzhitskaya, M. K., Shtolts, A. K., Zagriazhsky, V. L. and Geld, P. V., Phys. Metals and Metallography (USSR).<u>30</u>, 1167 (1970).
- 793. Lawson, A. C., Jour. Less-Common Metals 23, 103 (1971).
- 794. Maple, M. B., Solid State Commun. 8, 1915 (1970).
- 795. Schmidt, L., McCarthy, S. L. and Maita, J. P., Solid State Commun. 8, 1513 (1970).
- 796. VanMaaren, M. H. and Harland, H. B., Physics Letters 29A, 571 (1969).
- 797. VanMaaren, M. H. and Schaeffer, G. M., Phys. Letters 24A, 645 (1967).
- 798. Tomasch, W. J., Phys. Rev. 139, A746 (1965).

- 799. Lindenfeld, P. and Rohrer, H., Phys. Rev. 139, A206 (1965).
- 800. Chardhari, R. D. and Brown, J. B., Phys. Rev. 139, A1482 (1965).
- Rothwarf, F., Schmitz, J. A., Dickson, C. C., Thiel, R. C., Boller, H. and Parthe, E., Phys. Rev. <u>152</u>, 341 (1966).
- 802. Gordon, J. E., Montgomery, H., Noer, R. J., Pickett, G. R. and Tobon, R., Phys. Rev. <u>152</u>, 432 (1966).
- 803. Gregory, W. D., Sheahen, T. P. and Cochran, J. R., Phys. Rev. 150, 315 (1966).
- 804. Gueths, J. E., Reynolds, C. A., and Mitchell, M. A., Phys. Rev. <u>150</u>, 346 (1966).
- 805. Barnes, L. J. and Hake, R. R., Am. Acad. Sci. Finnical A VI #210, 78 (1966).
- 806. Finnemore, D. K. and Johnson, D. L., Ref. 805, p. 84.
- 807. Goodman, B. B. and Marcucci, S. G., Ref. 805, p. 86.
- 808. Ohtsuka, T. and Satoh, T., Ref. 805, p. 92.
- 809. Otter, F. A., Jr. and Yntema, G. B., Ref. 805, p. 98.
- 810. Ukei, K. and Kanda, E., Ref. 805, p. 104.
- 811. Veal, B. W. and Hulm, J. K., Ref. 805, p. 108.
- 812. Bonnerot, J., Caroli, B. and Coqblin, B., Ref. 805, p. 120.
- 813. Finegold, L., Hulm, J. K., Mazelsky, R., Phillips, N. E. and Triplett, B. B., Ref. 805, p. 129.
- 814. Wilkes, W. R. and Mapother, D. E., Ref. 805, p. 135.
- 815. Samsonov, G. V. and Neshpor, V. S., J. Exptl. Theoret. Phys. (USSR) <u>30</u>, 1143 (1956). Trans: Sov. Phys. JETP <u>3</u>, 947 (1957).
- 816. Lazarev. B. G., Lazareva, L. S., Ovcharenko, O. N. and Matsakova, A. A., J. Exptl. Theoret. Phys. (USSR) <u>43</u>, 2309 (1962).
- 817. Lazarev, B. G., Lazareva, L. S. and Makarov, V. I., J. Exp. Theor. Phys. (USSR)43, 2311 (1962).
- 818. Neal, D. F., Barber, A. C., Woolcock, A. and Gidley, J.A.F., Acta Metal 19, 143 (1971).
- 819. Keskar, K. S., Yamashita, T. and Onodera, Y., Jap. J. of Applied Phys. 10, 370 (1971).
- 820. Mizutani, U., Jap. J. of Applied Phys. 10, 367 (1971).
- 821. Hauser, J. J., Hamann, D. R. and Kammlott, G. W., Phys. Rev. <u>B3</u>, 2211 (1971).
- 822. Cape, J. A. and Silvera, I. F., Phys. Rev. Letters 20, 326 (1968).
- 823. Ageev, N. V., Alekseevski, N. E., Mikhailov, N. N. and Shamrai, V. F., ZhETF Pisma <u>6</u>, 901 (1967), Trans: JETP Letters <u>6</u>, 329 (1967).
- 824. Alekseevski, N. E. and Mikhailov, N. N., Zh. ETF Pisma <u>6</u>, 584 (1967), Trans: JETP Letters <u>6</u>, 92 (1967).
- 825. Savitskii, E. M., Baron, V. V. and Efimov, Yu. V., Dokl. AN SSSR <u>171</u> (1966). Trans: Sov. Phys. Doklady <u>11</u>, 988 (1967).
- 826. Galkin, A. A. and Svistunov, V. M., Phys. Status Solidi 26, K55 (1968).
- 827. Gough, C. E., Solid State Commun. 6, 215 (1968).

- 828. Walmsley, D. G., Campbell, C. K. and Dynes, R. C., Can. J. Phys. <u>46</u>, 1129 (1968).
- 829. Berman, I. V., Brandt, N. B. and Ginzburg, N. I., Zh. Eksp. Teor. Fiz. <u>53</u>, 124 (1967), Trans: Sov. Phys. JETP <u>26</u>, 86 (1968).
- 830. Lazarev, B. G., Ovcharenko, O. N., Matsakova, A. A. and Volotskaya, V. G., Zh. Eksp. Teor. Fiz. <u>54</u>, 1031 (1968). Trans: Sov. Phys. JETP <u>27</u>, 549 (1968).
- 831. Sahm, P. R., Pruss, T. V. and Gandolfo, D. A., Trans. AIME <u>242</u>, 603 (1968).
- 832. Berndt, H., Kartascheff, N. and Wenzl, H., Z. Angew. Phys. 24, 305 (1968).
- 833. Ikushima, A., Mizusaki, T. and Odaka, T., Phys. Letters 26A, 582 (1968).
- 834. Ogasawara, T., Thesis (Nihon Univ. 1967).
- 835. Doyle, N. J., Hulm, J. K., Jones, C. K., Miller, R. C. and Taylor, A., Phys. Lett. <u>26A</u>, 604 (1968).
- 836. Chu, C. W., Gardner, W. E. and Smith, T. F., Phys. Letters <u>26A</u>, 627 (1968).
- 837. Strongin, M. and Kammerer, O. F., J. Appl. Phys. 39, 2509 (1968).
- 838. Vetrano, J. B., Guthrie, G. L., Kissinger, H. E., Brimhall, J. L. and Mastel, B., J. Appl. Phys. <u>39</u>, 2524 (1968).
- 839. Bell, H., Shy, Y. M., Anderson, D. E. and Toth, L. E., J. Appl. Phys. <u>39</u>, 2797 (1968).
- 840. Black, W. C., Jr., Phys. Rev. Letters 21, 28 (1968).
- 841. Leksina, I.Y.E., Motulevich, G. P., Fedotov, L. N. and Shubin, A. A., Fix. metal. metalloved. 23, 511 (1967), Trans: Phys. Metals Metallog. (USSR) 24, 116 (1968).
- 842. Cape, J. A. and Silvera, I. F., Phys. Letters 27A, 13 (1968).
- 843. Gordon, D. E. and Deaton, B. C., Phys. Letters 27A, 116 (1968).
- 844. Essmann, U. and Trauble, H., Phys. Letters 27A, 156 (1968).
- 845. Ocken, H. and VanVucht, J.H.N., J. Less-Common Metals 15, 193 (1968).
- 846. Luo, H. L., J. Less-Common Metals 15, 299 (1968).
- 847. Corsan, J. M., Williams, I., Catterall, J. A. and Cook, A. J., J. Less-Common Metals <u>15</u>, 437 (1968).
- 848. Juodakis, A. and Kannewurf, C. R., J. Appl. Phys. <u>39</u>, 3003 (1968).
- 849. Ishida, K., Masters Thesis, Northwestern Univ. (USA) (1968).
- 850. Sulkowski, C. and Mazur, J., Acta Phys. Polon. 33, 827 (1968).
- 851. Hasse, J. and Seiberth, J., Z. fur. Phys. 213, 79 (1968).
- 852. Baier, P., Z. fur Phys. 213, 89 (1968).
- 853. Hines, W. A. and Harris, I. R., Jour. of Phys. F Metal Physics 1, 93 (1971).
- 854. Davies, J.P.N., Robinson, G., and Tilley, D. R., J. Phys. (Proc. Phys. Soc.) <u>C1</u>, 699 (1968).
- 855. Voigt, H., Z. fur Phys. 213, 119 (1968).
- 856. Cheeke, J.D.N. and Ducla-Soares, E., Phys. Letters 27A, 264 (1968).
- 857. Ancher, L. J., Poulis, N. J., Wulffers, L.A.G.M. and Diemer, E.A.P., Physica 51, 605 (1971).
- 858. Ignateva, T. A., Makarov, V. I. and Tereshina, N. S., Zh. Eksp. Teor. Fiz. <u>54</u>, 1617 (1968), Trans: Soviet Physics JETP <u>27</u>, 865 (1968).
- 859. Hartsough, L. D., Zackay, V. F. and Parker, E. R., Appl. Phys. Letters 13, 68 (1968).
  - 82

- 860. Komata, T., Hasimoto, Y. and Hirata, I., Cryogenic Eng. (Tokyo) 3, 2-8 (1968).
- 861. Nembach, E., J. Phys. Chem. Solids 29, 1205 (1968).
- 862. Meissner, H. and Tholfsen, P., J. Low Temp. Phys. 4, 141 (1971).
- 863. Green, R. W., Thorland, E. O., Groat, J. and Legvold, S., J. Appl. Phys. 40, 3161 (1969).
- 864. Ikushima, A. and Mizusaki, T., J. Phys. Chem. Solids 30, 873 (1969).
- 865. Katzman, H., Donohue, T., Libby, W. F., Luo, H. L. and Huber, J. G., J. Phys. Chem. Solids <u>30</u>, 1609 (1969).
- 866. Wernick, J. H., Menth, A., Geballe, T. H., Hull, G., and Maita, J. P., J. Phys. Chem. Solids <u>30</u>, 1949 (1969).
- 867. Katzman, H., Donohue, T., Libby, W. F. and Luo, H. L., J. Phys. Chem. Solids <u>30</u>, 2794 (1969).
- 868. Krupka, M. C., Giorgi, A. L., Krikorian, N. H. and Szklarz, E. G., J. Less-Common Metals <u>17</u>, 91 (1969).
- 869. Giorgi, A. L., Szklarz, E. G., Krupka, M. C. and Krikorian, N. H., J. Less-Common Metals <u>17</u>, 121 (1969).
- 870. Krupka, M. C., Giorgi, A. L., Krikorian, N. H. and Szklarz, E. G., J. Less-Common Metals <u>19</u>, 113 (1969).
- 871. Krikorian, N. H., Giorgi, A. L., Szklarz, E. G. and Krupka, M. C., J. Less-Common Metals <u>19</u>, 253 (1969).
- 872. Tachikawa, K. and Iwasa, Y., Appl. Phys. Letters 16, 230 (1970).
- 873. Maxwell, E., Schwartz, B. B., Wizgall, H. and Hechler, K., J. Appl. Phys. 39, 2568 (1968).
- 874. Neuringer, L. J. and Shapira, Y., Phys. Rev. Letters 17, 81 (1966).
- 875. Sample, H. H., Gerber, J. A. Neuringer, L. J. and Kaufman, L. A., Phys. Letters <u>33A</u>, 119 (1970).
- 876. Foner, S., McNiff, E. J., Jr., Matthias, B. T. and Corenzwit, E., J. Appl. Phys. <u>40</u>, 2010 (1969).
- 877. Otto, G., Saur, E. and Wizgall, H., J. Low-Temp. Phys. 1, 19 (1969).
- 878. Hackett, W. H., Jr., Maxwell, E. and Kim, Y. B., Phys. Letters 24A, 663 (1967).
- 879. Gordon, J. E., Gardner, W. E., Smith, T. F., Chu, C. W. and Maple, M. B., Phys. Rev. <u>176</u>, 556 (1968).
- 880. Hechler, K., Horn, G., Otto, G. and Saur, E., J. Low Temp. Phys. 1, 29 (1969).
- 881. Hoenig, H. E. and Barth, N., J. Low Temp. Phys. 1, 355 (1969).
- 882. Black, W. C., Johnson, R. T. and Wheatley, J. C., J. Low Temp. Phys. 1, 641 (1969).
- 883. Huebener, R. P., Kampwirth, R. T. and Seher, A., J. Low Temp. Phys. 2, 113 (1970).
- 884. Pfeiffer, E. R. and Schooley, J. F., J. Low Temp. Phys. 2, 333 (1970).
- 885. Cadieu, F. J., J. Low Temp. Phys. 3, 393 (1970).
- 886. Huber, J. G. and Maple, M. B., J. Low Temp. Phys. 3, 537 (1970).
- 887. Thorp, T. L., Triplett, B. B., Brewer, W. D., Cohen, M. L., Phillips, N. E. Shirley, D. A., Templeton, J. E., Stark, R. W. and Schmidt, P. H., J. Low Temp. Phys. <u>3</u>, 589 (1970).

- 888. Brandt, B. L., Parks, R. D. and Chaudhari, R. D., J. Low Temp. Phys. 4, 41 (1971)
- 889. Yasohama, K. and Usui, N., Japan. J. Appl. Phys. 7, 1128 (1968).
- 890. Asada, T., Horiuchi, T. and Uchida, M., Japan. J. Appl. Phys. <u>8</u>, 958 (1969).
- 891. Donohue, P. C. and Young, H. S., J. Solid State Chem. <u>1</u>, 143 (1970).
- 892. Donohue, P. C. and Bierstedt, P. E., Inorg. Chem. <u>8</u>, 2690 (1969).
- 893. Newkirk, L. R. and Tsuei, C. C., Phys. Stat. Sol. <u>a4</u>, 387 (1971).
- 894. Kodess, B. N., Phys. Stat. Sol. <u>a4</u>, K109 (1971).
- 895. Karasik, V. R., Niselson, L. A., Petrusevich, I. V., Shalnikov, A. I. and Shebalin, I. Yu., Zh ETF Pis. Red. <u>8</u>, 479 (1968), Trans: JETP Letters <u>8</u>, 294 (1968).
- 896. Alekseevskii, N. E., Ageev, N. V., Mikhailov, N. N. and Shamrai, V. F., Zh. ETF Pis. Red. 9, 28 (1969), Trans: JETP Letters 9, 16 (1969).
- 897. Alekseevski, N. E., Zh. ETF Pis. Red. <u>9</u>, 571 (1969), Trans: JETP Letters <u>9</u>, 347 (1969).
- 898. Berman, I. V. and Brandt, N. B., Zh. ETF Pis. Red. <u>10</u>, 88 (1969), Trans: JETP Letters <u>10</u>, 55 (1969).
- 899. Alekseevski, N. E. and Tsebro, V. I., Zh. ETF Pis. Red. <u>10</u>, 181 (1969), Trans: JETP Letters <u>10</u>, 114 (1969).
- 900. Rabinkin, A. G. and Tonkov, E. Yu. Zh. ETF Pis. Red. <u>10</u>, 289 (1969), Trans: JETP Letters <u>10</u>, 183 (1969).
- 901. Golovashkin, A. I., Levchenko, I. S., Leksina, I. E., Motulevich, G. P. and Shubin, A. A., Pis. ma Zh. Eksp. Teor. Fiz. 10, 515 (1969).
- 902. Il'ina, M. A. and Itskevich, E. S., Zh. ETF Pis. Red. <u>11</u>, 26 (1970), Trans: JETP Letters <u>11</u>, 15 (1970).
- 903. Il'ina, M. A. and Itskevich. E. S., Zh. ETF Pis. Red. <u>11</u>, 328 (1970), Trans: JETP Letters <u>11</u>, 218 (1970).
- 904. Eichler, A. and Wittig, J., Z. angew. Phys. 25, 319 (1968).
- 905. Prokoshkin, A. F. and Puzei, I. M., Zh. ETF Pis. Red. <u>11</u>, 493 (1970), Trans: JETP Letters <u>11</u>, 336 (1970).
- 906. Boiko, L. G. and Popova, S. V., Zh. ETF. Pis. Red. <u>12</u>, 101 (1970), Trans: JETP Letters <u>12</u>, 70 (1970).
- 907. Voronova, I. V., Mikhailov, N. N. and Skvortsov, A. I. Zh. ETF Pis. Red. <u>12</u>, 209 (1970), Trans: JETP Letters <u>12</u>, 145 (1970).
- 908. Alekseevski, N. E., Zakosarenko, V. M. and Tsebro, V. I., JETP Letters 12, 157 (1970).
- 909. Il'ina, M. A. and Itskevich. E. S., Zh. ETF Pis. Red. <u>13</u>, 23 (1971), Trans: JETP Letters <u>13</u>, 15 (1971).
- 910. Aomine, T. and Shibuya, Y., J. Phys. Soc. Japan 25, 1289 (1968).
- 911. Ogasawara, T., Kubota, Y. and Yasukochi, K., J. Phys. Soc. Japan 25, 1307 (1968).
- 912. Aomine, T., J. Phys. Soc. Japan 25, 1585 (1968).
- 913. Asada, Y. and Nose, H., J. Phys. Soc. Japan 26, 347 (1969).
- 914. Yamaya, K., Sambongi, T. and Mitsui, T., J. Phys. Soc. Japan 26, 866 (1969).
- 915. Tsuda, N., J. Phys. Soc. Japan 27, 1075 (1969).

- 916. Satoh, T. and Asada, Y., J. Phys. Soc. Japan 27, 1463 (1969).
- 917. Usei, N., Ogasawara, T., Yasukochi, K. and Tomoda, S., J. Phys. Soc. Japan 27, 574 (1969).
- 918. Kuwasawa, Y., Sekizawa, K., Usui, N. and Yasukochi, K., J. Phys. Soc. Japan 27, 590 (1969).
- 919. Takata, M., J. Phys. Soc. Japan 27, 615 (1969).
- 920. Hill, H. H. and Matthias, B. T., Phys. Rev. <u>168</u>, 464 (1968).
- 921. Crow, J. E., Strongin, M., Thompson, R. S. and Kammerer, O. F., Phys. Letters 30A, 161 (1969).
- 922. Spitzli, P., Flukiger, R., Heiniger, F. and Muller, J., Phys. Letters 30A, 170 (1969).
- 923. Hanak, J. J., Gittleman, J. I., Pellicane, J. P. and Bozowski, S., Phys. Letters <u>30A</u>, 201 (1969).
- 924. VanMaaren, M. H. and Harland, H. B., Phys. Letters 30A, 204 (1969).
- 925. Takata, M., Phys. Letters 30A, 244 (1969).
- 926. Wu, T. M., Phys. Letters 30A, 347 (1969).
- 927. Havinga, E. E., VanMaaren, M. H. and Damsma, H., Phys. Letters 29A, 109 (1969).
- 928. Kimura, Y., Ohtsuka, T., Matsui, T. and Mizusaki, T., Phys. Letters 29A, 284 (1969).
- 929. Ho, J. C. and Collings, E. W., Phys. Letters 29A, 206 (1969).
- 930. VanMaaren, M. H., Phys. Letters 29A, 293 (1969).
- 931. Collings, E. W. and Ho, J. C., Phys. Letters 29A, 306 (1969).
- 932. Dummer, G., Phys. Letters 29A, 311 (1969).
- 933. Palmy, C., Phys. Letters 29A, 373 (1969).
- 934. Flukiger, R., Spitzli, P., Heiniger, F. and Muller, J., Phys. Letters 29A, 407 (1969).
- 935. Pfeiffer, E. R. and Schooley, J. J., Phys. Letters 29A, 589 (1969).
- 936. Ehrat, R. and Rinderer, L., Phys. Letters 29A, 712 (1969).
- 937. Leger, A. and Klein, J., Phys. Letters 28A, 751 (1969).
- 938. Fassnacht, R. E. and Dillinger, J. R., Phys. Letters <u>28A</u>, 741 (1969).
- 939. Sahm, P. R. and Pruss, T. V., Phys. Letters 28A, 707 (1969).
- 940. Corsam, J. M. and Cook. A. J., Phys. Letters 28A, 500 (1969).
- 941. Komenou, K., Yamashita, T. and Onodera, Y., Phys. Letters 28A, 335 (1968).
- 942. Cox, J. E., Phys. Letters 28A, 326 (1968).
- 943. Yasukochi, K., Kuwasawa, Y. and Sekizawa, K., Phys. Letters 28A, 12 (1968).
- 944. Jones, K. A. and Rose, R. M., Phys. Letters 27A, 412 (1968).
- 945. Flukiger, R., Heiniger, F., Junod, A., Muller, J. Spitzli, P. and Staudenmann, J. L., J. Phys. Chem. Solids <u>32</u>, 459 (1970).
- 946. Wilhelm, M. and Hillenbrand, B., J. Phys. Chem. Solids 31, 559 (1970).
- 947. Vieland, L. J., J. Phys. Chem. Solids 31, 1449 (1970).
- 948. Spitzli, P., Flukiger, R., Heiniger, F., Junod, A., Muller, J. and Staudenmann, J. L., J. Phys. Chem. Solids <u>31</u>, 1531 (1970).
- 949. Evetts, J. E. and Wade, J.M.A., J. Phys. Chem. Solids 31, 973 (1970).

- 950. Geballe, T. H., Matthias, B. T., Caroli, B., Corenzwit, E., Maita, J. P. and Hull, G. W., Phys. Rev. <u>169</u>, 457 (1968).
- 951. Huber, J. G. and Maple, M. B., Solid State Commun. 8, 1987 (1970).
- 952. Chu, C. W., Smith, T. F. and Gardner, W. E., Phys. Rev. Letters 20, 198 (1968).
- 953. Maple, M. B. and Smith, T. F., Solid State Commun. 7, 515 (1969).
- 954. Smith, T. F., Physics Letters 33A, 465 (1970).
- 955. McCarthy, S. L. and Schmidt, L., J. Less-Common Metals 23, 241 (1971).
- 956. Rapp, O., J. Less-Common Metals 21, 27 (1970).
- 957. Tachikawa, K. and Tanaka, Y., Jap. J. Appl. Phys. 5, 834 (1966) and 6, 782 (1967).
- 958. Fischer, J. J. and Probst, H. B., J. Less-Common Metals 9, 416 (1965).
- 959. Claeson, T. and Merriam, M. F., J. Less-Common Metals 11, 186 (1966).
- 960. Catterall, J. A. and Williams, I., J. Less-Common Metals 12, 258 (1967).
- 961. McWhan, D. B., Compton, V. B., Silverman, M. S., and Soulen, J. R., J. Less-Common Metals <u>12</u>, 75 (1967).
- 962. Raub, E., Raub, Ch.J., Roschel, E., Compton, V. B., Geballe, T. H. and Matthias, B. T., J. Less-Common Metals <u>12</u>, 36 (1967).
- 963. Andres, K. and Jensen, M. A., Phys. Rev. <u>165</u>, 533 (1968), also <u>165</u>, 545 (1968).
- 964. Charlesworth, J. P., Phys. Letters 21, 501 (1966).
- 965. Zwicker, U., Meier, T. and Roschel, E., J. Less-Common Metals 14, 253 (1968).
- 966. Toth, L. E. and Zbasnik, J., Acta Met. 16, 1177 (1968).
- 967. Toth, L. E., Ishikawa, M. and Chang, Y. A., Acta Met 16, 1183 (1968).
- 968. Pfeiffer, I. and Hillmann, H., Acta Met. 16, 1429 (1968).
- 969. Preece, C. M. and King, H. W., Acta Met. 17, 21 (1969).
- 970. Itskevich, E. S., Il'Ina, M. A. and Sukhoparov, V. A., J. Exptl. Theoret. Phys. (USSR) <u>45</u>, 1378 (1963, Trans: Sov. Phys. JETP <u>18</u>, 949 (1964).
- 971. Bychkov, Yu. F., Goncharov, I. N. and Khukhareva, I. S., J. Exptl. Theoret. Phys. (USSR) <u>48</u>, 818 (1965), Trans: Sov. Phys. JETP <u>21</u>, 543 (1965).
- 972. Bucher, E., Muller, J., Olsen, J. L. and Palmy, C., Phys. Letters <u>15</u>, 303 (1965).
- 973. Compy, E. M., Phys. Letters 18, 228 (1965).
- 974. Davis, J. H., Skove, M. J. and Stillwell, E. P., Solid State Commun. 4, 597 (1966).
- 975. Neuringer, L. J. and Shapira, Y., Solid State Commun. 2, 349 (1964).
- 976. DuChatenier, F. J. and Goedemoed, S. H., Phys. Letters 7, 108 (1963).
- 977. Buckel, W., Gey, W. and Wittig, J., Phys. Letters 11, 98 (1964).
- 978. Cardona, M. and Rosenblum, B., Phys. Letters 11, 112 (1964).
- 979. Rosenblum, B. and Cardona, M., Phys. Letters 9, 220 (1964).

- 980. Vielhaber, E. and Luo, H. L., Solid State Commun. 5, 221 (1967).
- 981. Lowell, J., Solid State Commun. 5, 323 (1967).
- 982. Barth, N., Hoening, H. E. and Fulde, P., Solid State Commun. 5, 459 (1967).
- 983. Robbins, M., Willens, R. H. and Miller, R. C., Solid State Commun. 5, 933 (1967).
- 984. VanMaaren, N. H., Schaeffer, G. M., and Lotgering, F. K., Phys. Letters 25A, 238 (1967).
- 985. Maldy, J., Santamaria, E. and Donadieu, L., Phys. Letters 25A, 318 (1967).
- 986. Watson, J.H.P., Phys. Letters 25A, 326 (1967).
- 987. VanReuth, E. C. and Poulis, N. J., Phys. Letters 25A, 390 (1967).
- 988. Colwell, J. H., Phys. Letters 25A, 623 (1967).
- 989. Naugle, D. G., Phys. Letters 25A, 688 (1967).
- 990. Glover, R. E., Phys. Letters 25A, 542 (1967).
- 991. Karasik, V. R. and Vereshchagin, V. G., Zh. Eksp. Teor. Fiz. <u>59</u>, 36 (1970), Trans: Sov. Phys. JETP <u>32</u>, 20 (1971).
- 992. Antonova, E. A., Kiseleva, K. V. and Medvedev, S. A., Zh. Eksp. Teor. Fiz. <u>59</u>, 54 (1970), Trans: Soviet Physics JETP <u>32</u>, 31 (1971).
- 993. Karasik, V. R., Vasilev, N. G. and Ershov, V. G., Zh. Eksp. Teor. Fiz. <u>59</u>, 790 (1970), Trans: Soviet Physics JETP <u>32</u>, 433 (1971).
- 994. Karasik, V. R. and Shebalin, I. Yu., Zh. Eksp. Teor. Fiz. <u>57</u>, 1973 (1969), Trans: Soviet Physics JETP <u>30</u>, 1068 (1970).
- 995. Brandt, N. B. and Papp, E., Zh. Eksp. Teor. Fiz. <u>57</u>, 1090 (1969), Trans: Soviet Physics JETP <u>30</u>, 595 (1970).
- 996. Antonova, E. A., Medvedev, S. A. and Shebalin, I. Yu., Zh. Eksp. Teor. Fiz. <u>57</u>, 329 (1969), Trans: Soviet Physics JETP <u>30</u>, 181 (1970).
- 997. Brandt, N. B. and Ginzburg, N. I., J. Exptl. Theoret. Phys. <u>49</u>, 1706 (1965), Trans: Soviet Phys. JETP <u>22</u>, 1167 (1966).
- 998. Brandt, N. B., Ginzburg, N. I., Ignateva, T. A., Lazerev, B. G., Lazareva, L. S. and Makarov, V. I., J. Exptl. Theoret. Phys. (USSR) <u>49</u>, 85 (1965), Trans: Soviet Physics JETP <u>22</u>, 61 (1966).
- 999. Sukharevskii, A. V., Alapina, A. V. and Dushechkin, Yu. A., Zh. Eksp. Teor. Fiz. <u>54</u>, 1675 (1968), Trans: Soviet Physics JETP <u>27</u>, 897 (1968).
- .000. Fassnacht, R. E. and Dillinger, J. R., Phys. Rev. Letters 17, 255 (1966).
- .001. Zegler, S. T. and Downey, J. W., Trans. AIME 227, 1407 (1963).
- .002. Junod, A., Heiniger, F., Muller, J. and Spitzli, P., Helvetia Phys. Acta 43, 59 (1970).
- .003. Gregory, W. D., Phys. Rev. <u>165</u>, 556 (1968).
- .004. Harris, E. P., and Mapother, D. E., Phys. Rev. <u>165</u>, 522 (1968).
- .005. Schooley, J. F., Frederikse, H.P.R., Hosler, W. R. and Pfeiffer, E. R., Phys. Rev. <u>159</u>, 301 (1967).

- 1006. Willens, R. H., Buehler, E. and Matthias, B. T., Phys. Rev. <u>159</u>, 327 (1967).
- 1007. Volger, J., Personal communication.
- 1008. Hulliger, F., Private communication.
- 1009. O'Boyle, D. R., Personal communication.
- 1010. McDonald, W. J., Personal communication.
- 1011. Menth, A., Wernick, J. H., Geballe, T. H., Hull, G. and Maita, J. P., Bull. Amer. Phys. Soc. <u>14</u>, 382 (1969).
- 1012. Maple, M. B., Huber, J. G. and Kim, K. S., Solid State Commun. 8, 981 (1970).
- 1013. Smith, T. F., Phys. Rev. Letters 25, 1483 (1970).
- 1014. Fisk, Z., Matthias, B. T. and Corenzwit, E., Proc. Nat. Acad. Sci. (USA) <u>64</u>, 1151 (1969).
- 1015. Luo, H. L., Vielhaber, E. and Corenzwit, E., Z. Phys. 230, 443 (1970).
- 1016. Maple, M. B., Wittig, J. and Kim, K. S., Phys. Rev. Letters 23, 1375 (1969).
- 1017. Webb, G. W., Phys. Rev. <u>181</u>, 1127 (1969).
- 1018. Matthias, B. T., Chu, C. W., Corenzwit, E. and Wohlleben, D., Proc. Nat. Acad. Sci. (USA) 64, 459 (1969).
- 1019. Arrhenius, G., Corenzwit, E., Fitzgerald, R., Hull, G. W., Jr., Luo, H. L., Matthias, B. T. and Zachariasen, W. H., Proc. Nat. Acad. Sci. (USA) <u>61</u>, 621 (1968).
- 1020. Engelhardt, J. J., Phys. Rev. <u>179</u>, 452 (1969).
- 1021. Webb, G. W., Solid State Commun. 6, 33 (1968).
- 1022. Hein, R. A. and Meijer, P.H.E., Phys. Rev. <u>179</u>, 497 (1969).
- 1023. Hein, R. A., Cox, J. E., Blaugher, R. D. and Waterstrat, R. M., Solid State Commun. 7, 381 (1969).
- 1024. Zhuze, V. P., Shalyt, S. S., Noskin, V. A. and Sergeeva, V. M., Zh. ETF Pis'ma <u>3</u>, 217 (1966).
- 1025. Noto, K., Sci. Rep. Ritu A20, 129 (1968).
- 1026. Hillenbrand, B. and Wilhelm, M., Phys. Letters 33A, 61 (1970).
- 1027. Gamble, F. R., Disalvo, F. J., Klemm, R. A. and Geballe, T. H., Science 168, 568 (1970).
- 1028. Alekseevskii, N. E., Tsebro, V. I. and Filippovich. E. I., Zh. ETF. Pis. Red. <u>13</u>, 247 (1971).
- 1030. Collings, E. W., Hedgcock, F. T. and Muto, Y., Phys. Rev. <u>134</u>, A1521 (1964).
- 1031. D'Yakov, I. G. and Shvets, A. D., J. Exptl. Theoret. Phys. <u>49</u>, 1091 (1965), Trans: Soviet Physics JETP <u>22</u>, 759 (1966).

REVIEW ARTICLES AND BOOKS ON SUPERCONDUCTIVITY

Onnes, H., Kamerlingh, Commun. Kamerlingh Onnes Lab. 13, Supplement 34b (1913-14). Crommelin, C. A., Physik. Zeitschr. 21, 274, 300, 331 (1920). Meissner, W., Metallwirtschaft 15, 289 (1930). Schultze, A., Z. Ver. duet. Ing. 74, 149-52 (1930). Bates, L. F., Science Progress 24, 565-72, (1930). Meissner, W., Metallwirtschaft 10, 289, 310 (1931). DeHaas, W. J. and Voogd, J., Commun. Kamerlingh Onnes Lab. 20, Supplement 73a (1932). Clusius, K., Zeits. Elektrochem. 38, 312-26 (1932). Meissner, W., Erg. Der Exakt. Naturw. 11, 219 (1932). McLennan, J. C., Nature 130, 879 (1932). McLennan, J. C., Pharm. J. 128, 470 (1932). Kikoin, I. and Lazarev, B., J. Tech. Phys. (USSR) 3, 237-54 (1933). Meissner, W., Physik. Zeitschr. 35, 931 (1934). Tammann, G., Z. Metallkunde 26, 61 (1934). Burton, E. F. (Ed.), "The Phenomenon of Superconductivity," Univ. of Toronto Press, Toronto (1934). McLennan, J. C., Reports on Prog. in Physics 1, 206 (1934). McLennan, J. C., Roy. Soc. Proc. 152A, 1-46 (1935). Meissner, W., "Handbuch der Experimental Physik XI," Part 2, 204-262 (1935). Smith, H. G. and Whilhelm, J. O., Rev. Mod. Phys. 7, 237 (1935). Darrow, K. K., Rev. Sci. Instr. 7, 124 (1936). Ruhemann, M. and Ruhemann, B., "Low Temperature Physics," Cambridge Univ. Press (1937). Steiner, K. and Grassmann, P., "Supraleitung," Vieweg und Sohn, Brunswick (1937). Silsbee, F. B., J. Wash. Acad. Sci. 27, 225-44 (1937). Shoenberg, D., "Superconductivity," Cambridge Univ. Press (1938). Shoenberg, D., Uspekhi Fiz. Nauk. 19, 448-91; 20, 1-28 (1938). Jackson, L. C., Reports on Prog. in Physics 5, 335-44 (1939). Burton, E. F., Grayson Smith, H., and Whilhelm, J. O., "Phenomena at the Temperature of Liquid Helium," Reinhold Publishing Corp., New York, pp. 87-123 (1940). Casimir, H.B.G., Nederland. Tijdschr. Natuurkunde 8, 113-23 (1941). Laue, M. Von, Ber. 75B, 1427-32 (1942). Laue, M. Von, Physik. Z. 43, 274-84 (1942). Mendelssohn, K., Reports on Prog. in Physics 10, 358-77 (1944-45). Itterbeek, A. van, Soc. Roy. belge ing. ind., Mem. Ser. B 1, 47-51 (1945).

- Justi, E., Naturwiss. 33, 292-7, 329-33 (1946).
- Ginsburg, V. L., "Superconductivity," Academy of Science USSR, Moscow, Leningrad (1946).
- Hewlett, C. W., G.E. Rev. <u>49</u>, 19-25 (1946).

Andronikashvili, E. L. and Tumanov, K. A., Uspekhi Fiz. Nauk. 33, 469-532 (1947).

- Justi, E., "Leitfahigkeit und Leitungsmechanismus fester Stoffe," Gottingen, Vandenhoeck and Ruprecht, pp. 187-270 (1948).
- Laue, M. Von, Ann. Physik. 3, 40-2 (1948).
- Meissner, W. and Schubert, G. V., Fiat Rev. German Science (1939-46); Physics of Solids Pt. II, 143-62 (1948).
- Gorter, C. J., Physica 15, 55-64 (1949).

Mendelssohn, K., Reports on Prog. in Physics 12, 270-290 (1948-49).

- Vick, F. A., Science Progress 37, 268-74 (1949).
- Wexler, A., Research, Lond. 3, 534 (1950).
- Shoenberg, D., Nuovo Cimento 10, Ser. IX, 459-89 (1953).
- Unknown, Physica 19, 745-54 (1953).
- Eisenstein, J., Rev. Mod. Phys. 26, 277 (1954).
- Buckel, W., Naturwiss. 42, 451 (1955).
- Serin, B., Handbuch Der Physik, Band XV Kaltephysik II, Springer-Verlag, Berlin, pp. 210-73 (1956).
- Zavaritskii, N. V., Priroda 45, 37-44 (1956).
- Wexler, A., Metal. Progr. 69, 89 (1956).
- Abrikosov, A. A., Vestnik Akademii Nauk SSSR #4, 30-36 (1958).
- Boorse, H. A., Amer. Jour. of Physics 27, 47 (1959).
- Buckel, W., Metall. 13, 814 (1959).
- Cooper, L. N., Amer. Jour. of Physics 28, 91 (1960).
- Schoenberg, D., "Superconductivity," (2nd Ed., 1960 Printing), Cambridge Univ. Press (1960); (1st Ed., 1938; 2nd Ed. 1952).
- Bardeen, J. and Schrieffer, J. R., Prog. in Low Temp. Phys. Vol. III.

Kropschot, R. H. and Arp, V., Cryogenics 2, 1 (1961).

- Jones, W. H., Milford, F. J. and Fawcett, S. L., J. of Metals <u>14</u>, 836 (1962). Also Battelle Technical Review, (Sept. 1962).
- Tanenbaum, M. and Wright, W. V. (Ed.), "Superconductors," John Wiley & Sons, New York (1962).
- Bardeen, J., "Critical Fields and Currents in Superconductors," Rev. Modern Phys. 34, 667 (1962)
- Bowen, D. H., "Effects of Pressure", in <u>High Pressure Physics and Chemistry, Vol. 1</u>, R. S. Bradley (Ed.), Academic Press, London, New York, pp. 355-73 (1963).
- Bardeen, J., "Superconductivity" in <u>Advances in Materials Research in the NATO Nations</u>, MacMillan, New York, pp. 281-90 (1963).
- Matthias, B. T., Geballe, T. H. and Compton, V. B. "Superconductivity (Compounds)", Rev. Mod. Phys. <u>35</u>, 1 (1963).

- Geballe, T. H. and Matthias, B. T., "Superconductivity" in <u>Annual Review of Physical Chemistry</u> Vol. 14, pp. 141-160 (1963).
- Anderson, D. E., "Superconductivity" in <u>Magnetic Materials Digest 1964</u>, M. W. Lads, Philadelphia, pp. 196-217 (1964).
- "Proc. Inter. Conf. on Science of Superconductivity, Hamilton, N. Y., Aug. 1963", Rev. Mod. Phys. <u>36</u> (1964).
- Lynton, E. A., "Superconductivity," Metheun & Co., London; John Wiley & Sons, New York (1964). 2nd and 3rd Editions have issued.
- Yasukochi, K. and Ogasawara, T., Metal Physics (Tokyo) 10, 137, 197 (1964).
- Livingston, J. D. and Schadler, H. W., "The Effect of Metallurgical Variables on Superconducting Properties." Progress in Materials Science <u>12</u>, 183-287 (1964).
- Klose, von W., "Harte Supraleiter," Natur wissenschaften 51, 180-186 (1964).
- Abrikosov, A. A., "The Present State of the Theory of Superconductivity," Usp. Fiz. Nauk <u>87</u>, 125-42 (1965); Soviet Physics Uspekhi <u>8</u>, 710 (1966).

F. Block, "Some Remarks on the Theory of Superconductivity," Physics Today 19, 27 (May) (1966).

- deGennes, P. G., "Superconductivity of Metals and Alloys" (Theory), Frontiers in Physics, Benjamin, New York (1966).
- Ralls, K. M. and Wulff, J., "The Electronic Structure of Transition Metal-Interstitial Atom Alloy Superconductors," J. Less Common Metals <u>11</u>, 127-34 (1966).
- Roberts, B. W., "Superconductive Properties" in <u>Intermetallic Compounds</u>, Edited by J. H. Westbrook, John Wiley and Sons, New York, pp. 581-613 (1967).
- Savitskii, E. M. and Baron, V. V., Editors "Physics and Metallurgy of Superconductors", Proc. 2nd and 3rd Conf. on Metallurgy, Physical Chemistry and Metal Physics of Superconductors, Moscow, May 1965 and May 1966, Translation: (Consultants Bureau, New York, London, 1970).
- Goodman, B. B., "Type II Superconductors", Repts. Progress in Physics 29 (Part 2), 445-487 (1966).
- Heaton, J. W., "High Field, High Current Superconductors", Sci. Progr. (Oxford) 54, 27-40 (1966).
- Douglas, D. H., Jr. and Falicov, L. M., "The Superconducting Energy Gap", Prog. in Low Temp. Phys. 4, 97-193 (1964).
- Chester, P. F., "Superconducting Magnets", Repts. Progr. Phys. 30, Part II, p. 561 (1967).
- Kuper, C. G., An Introduction to the Theory of Superconductivity, Clarendon Press, Oxford (1968).
- Ginzburg, V. L., "The Problem of High Temperature Superconductivity" Contemp. Phys. 9, 355-374 (1968).
- Alekseevskii, N. E., "New Superconductors", Usp. Fiz. Nauk <u>95</u>, 253-266 (1968), Trans: Soviet Physics Uspekhi 11, 403 (1968).
- Ginzburg, V. L., "The Problem of High Temperature Superconductivity," Usp. Fiz. Nauk <u>95</u>, 91-110 (1968) Muller, J., "Supraleitende Materialen" in <u>Vortrage Uber Supraleitung</u>, (Birkauser, Basel and Stuttgart, 1968), pp. 95-116.
- Fishlock, D., Editor, "A Guide to Superconductivity", (American Elsevier: New York 1969).

Parks, R. D., Editor "Superconductivity", Vols. I and II (Marcel Dekker: New York 1969).

Matthias, B. T., Amer. Scientist <u>58</u>, 80 (1970) "Superconductivity and the Periodic System"

Glover, R. E., III "Superconductivity Above the Transition Temperature", Prog. in Low Temp. Physics <u>6</u>, 291-332 (1970).

Hulm, J. K., Ashkin, M., Deis, D. W. and Jones, C. K., "Superconductivity in Semiconductors and Semi-metals", Prog. in Low Temp. Physics Vol. VI, Chap. 5, pp. 205-242 (1970).

Boughton, R. I., Olsen, J. L. and Palmy, C., "Pressure Effects in Superconductors", Prog. in Low Temp. Physics <u>6</u>, 163-203 (1970).

Weis, O., "The Physical Properties of Superconductive Metals", Chemiker-Zeitung 95, 168 (1971).

FORM NBS-114A (1-71)				
U.S. DEPT. OF COMM. BIBLIOGRAPHIC DATA SHEET	1. PUBLICATION OR REPORT NO. NBS-TN-724	2. Gov't Accession No.	3. Recipient's	s Accession No.
4. TITLE AND SUBTITLE			5. Publicatio	on Date
		4	June 1	972
Properties of	Selected Superconductive Ma	iterials	6. Performing	Organization Code
			wit criokasning	organization code
7. AUTHOR(S) B. W. Roberts			8. Performing	Organization
9. PERFORMING ORGANIZAT	ION NAME AND ADDRESS		10. Project/1	ask/Work Unit No.
NATIONAL BU		C N		
DEPARTMENT	r of commerce		II. Contract/	Grant No.
WASHINGION	, D.C. 20234		NBS 32	-70-5
12. Sponsoring Organization Nat	me and Address	•••••	13. Type of B	eport & Period
			Covered	opoir a r ciiou
			NA	
Same as	3 No. 9		14 Sponsoria	e Agency Code
and the second second				6 g,
15. SUPPLEMENTARY NOTES			1	
Supersedes and	extends NBS Technical N	ote 482		
16. ABSTRACT (A 200-word or	less factual summary of most significant	information. If docume	nt includes a s	ignificant
bibliography or literature su	rvey, mention it here.)			0
This is a non	critical compilation of dat	a on superconduc	ctive mater	hais with
the exception	of data on the elements the	at has been extr	racted from	a portion
of the litera	ture published up to early	1971. The prope	erties conc	cerned are
composition,	critical temperature, criti	cal magnetic fie	elds, cryst	callographic
data, and the	a lowest temperature tested	for materials sp	pecifically	explored
for supercond	Juctivity. The compilation	also includes, t	bibliograph	ny, general
reference rev	view articles and a special	tabulation of h	igh magneti	ic field
superconducto	ors.			
17. KEY WORDS (Alphabetical	order, separated by semicolons)		1 fields	witical
Bibliography	; compilation of data; compo	sition; critica	r Tiela; C	ricicai ivity
temperature;	crystallographic data; low	temperature; su	perconduct	1 V I L Y .
18. AVAILABILITY STATEME	NT	19. SECURIT	Y CLASS	21. NO. OF PAGES
		(THIS RE	PORT	100
XX UNLIMITED.				100
		UNCL AS	SIFIED	
FOR OFFICIAL D	STRIBUTION. DO NOT RELEASE	20. SECURIT	TY CLASS	22. Price
IO NTIS.		(THIS P)	IGE/	\$1.00
		LINCLAS	SIFLED	<b>\$ x</b> , 00
		UNCLAS	STIED	
				USCOMM-DC 66244-P71





# NBS TECHNICAL PUBLICATIONS

### PERIODICALS

JOURNAL OF RESEARCH reports National Bureau of Standards research and development in physics, mathematics, and chemistry. Comprehensive scientific papers give complete details of the work, including laboratory data, experimental procedures, and theoretical and mathematical analyses. Illustrated with photographs, drawings, and charts. Includes listings of other NBS papers as issued.

Published in two sections, available separately:

## • Physics and Chemistry

Papers of interest primarily to scientists working in these fields. This section covers a broad range of physical and chemical research, with major emphasis on standards of physical measurement, fundamental constants, and properties of matter. Issued six times a year. Annual subscription: Domestic, \$9.50; \$2.25 additional for foreign mailing.

## • Mathematical Sciences

Studies and compilations designed mainly for the mathematician and theoretical physicist. Topics in mathematical statistics, theory of experiment design, numerical analysis, theoretical physics and chemistry, logical design and programming of computers and computer systems. Short numerical tables. Issued quarterly. Annual subscription: Domestic, \$5.00; \$1.25 additional for foreign mailing.

## **TECHNICAL NEWS BULLETIN**

The best single source of information concerning the Bureau's measurement, research, developmental, cooperative, and publication activities, this monthly publication is designed for the industry-oriented individual whose daily work involves intimate contact with science and technology—for engineers, chemists, physicists, research managers, product-development managers, and company executives. Includes listing of all NBS papers as issued. Annual subscription: Domestic, \$3.00; \$1.00 additional for foreign mailing.

## **Bibliographic Subscription Services**

The following current-awareness and literaturesurvey bibliographies are issued periodically by the Bureau: Cryogenic Data Center Current Awareness Service (weekly), Liquefied Natural Gas (quarterly), Superconducting Devices and Materials (quarterly), and Electromagnetic Metrology Current Awareness Service (monthly). Available only from NBS Boulder Laboratories. Ordering and cost information may be obtained from the Program Information Office, National Bureau of Standards, Boulder, Colorado 80302.

#### **NONPERIODICALS**

Applied Mathematics Series. Mathematical tables, manuals, and studies.

Building Science Series. Research results, test methods, and performance criteria of building materials, components, systems, and structures.

Handbooks. Recommended codes of engineering and industrial practice (including safety codes) developed in cooperation with interested industries, professional organizations, and regulatory bodies.

**Special Publications.** Proceedings of NBS conferences, bibliographies, annual reports, wall charts, pamphlets, etc.

**Monographs.** Major contributions to the technical literature on various subjects related to the Bureau's scientific and technical activities.

National Standard Reference Data Series. NSRDS provides quantitative data on the physical and chemical properties of materials, compiled from the world's literature and critically evaluated.

**Product Standards.** Provide requirements for sizes, types, quality, and methods for testing various industrial products. These standards are developed cooperatively with interested Government and industry groups and provide the basis for common understanding of product characteristics for both buyers and sellers. Their use is voluntary.

**Technical Notes.** This series consists of communications and reports (covering both other-agency and NBS-sponsored work) of limited or transitory interest.

Federal Information Processing Standards Publications. This series is the official publication within the Federal Government for information on standards adopted and promulgated under the Public Law 89–306, and Bureau of the Budget Circular A–86 entitled, Standardization of Data Elements and Codes in Data Systems.

**Consumer Information Series.** Practical information, based on NBS research and experience, covering areas of interest to the consumer. Easily understandable language and illustrations provide useful background knowledge for shopping in today's technological marketplace.

## CATALOGS OF NBS PUBLICATIONS

NBS Special Publication 305, Publications of the NBS. 1966-1967. When ordering, include Catalog No. C13.10:305. Price \$2.00; 50 cents additional for foreign mailing.

**NBS Special Publication 305, Supplement 1, Publications of the NBS, 1968-1969.** When ordering, include Catalog No. C13.10:305/Suppl. 1. Price \$4.50; \$1.25 additional for foreign mailing.

NBS Special Publication 305, Supplement 2, Publications of the NBS, 1970. When ordering, include Catalog No. C13.10:305/Suppl. 2. Price \$3.25; 85 cents additional for foreign mailing.

Order NBS publications (except Bibliographic Subscription Services) from: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

## U.S. DEPARTMENT OF COMMERCE National Bureau of Standards Washington, D.C. 20234

DFFICIAL BUSINESS

Penalty for Private Use, \$300

PDSTAGE AND FEES PAID U.S. DEPARTMENT DF COMMERCE 215

