



NBS TECHNICAL NOTE 825

1974 Supplement

U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

Properties of Selected Superconductive Materials

QC
100
.U5753
1974
c.2

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards¹ 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 Institute 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 — Mechanics — Heat — Optical Physics — Nuclear Sciences² — Applied Radiation² — Quantum Electronics³ — Electromagnetics³ — Time and Frequency³ — Laboratory Astrophysics³ — Cryogenics³.

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 consists of a Center for Building Technology and the following divisions and offices:

Engineering and Product Standards — Weights and Measures — Invention and Innovation — Product Evaluation Technology — Electronic Technology — Technical Analysis — Measurement Engineering — Structures, Materials, and Life Safety⁴ — Building Environment⁴ — Technical Evaluation and Application⁴ — Fire Technology.

THE INSTITUTE 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 Institute consists of the following divisions:

Computer Services — Systems and Software — Computer Systems Engineering — Information 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. The Office consists of the following organizational units:

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

¹ Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

² Part of the Center for Radiation Research.

³ Located at Boulder, Colorado 80302.

⁴ Part of the Center for Building Technology.

MAY 14 1974

Properties of Selected Superconductive Materials—1974 Supplement

B. W. Roberts

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

(Extends NBS Technical Note 724)



U.S. DEPARTMENT OF COMMERCE, Frederick B. Dent, *Secretary*
NATIONAL BUREAU OF STANDARDS, Richard W. Roberts, *Director*

Issued April 1974

National Bureau of Standards Technical Note 825

Nat. Bur. Stand. (U.S.), Tech. Note 825, 1974 Supplement, 88 pages (Apr. 1974)

CODEN: NBTNAE

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1974

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
(Order by SD Catalog No. C13.46:825). Price \$1.25 .

TABLE OF CONTENTS

	Page
Introduction.....	1
Background.....	1
General Properties of Superconductors.....	2
High Field Superconductivity.....	4
New Developments in Superconductive Materials.....	4
Metallurgical Aspects of Sample Preparation.....	8
Notes Concerning the Data Tables.....	9
Table 1. Selected Properties of the Superconductive Elements.....	10
Table 2. Tabulation of Superconductive Materials (Also see Table 3).....	14
Table 3. Superconductive Materials with Organic Constituents.....	55
Table 4. High Magnetic Field (Type II) Superconductive Materials and Some of Their Properties.....	58
Bibliography.....	65
Review Articles and Books With Emphasis On Superconductive Materials.....	80

SUPPLEMENT, 1974

B. W. Roberts

This report includes data on additional superconductive materials extracted from a portion of the world literature up to mid-1973. The data presented are new values and have not been selected or compared to values (except for selected values of the elements) previously assembled by the Superconductive Materials Data Center. The properties included are composition, critical temperature, critical magnetic field, crystal structure and the results of negative experiments. Special tabulations of high magnetic field materials with Type II behavior and materials with organic components are included. All entries are keyed to the literature and a list of reviews centered on superconductive materials is included.

Key words: Bibliography; composition; critical fields; critical temperature; crystallographic data; data compilation; low temperature; superconductive materials; superconductivity.

INTRODUCTION

This Technical Note extends the data set on superconductive materials published in *Progress in Cryogenics*, Vol. IV, 1964, pp. 160-231^{*}, and National Bureau of Standards Technical Notes 482 (Issued May 1969) and 724 (Issued June 1972). Because the world activity in the study of superconductive materials has continued at a high rate, several hundred references are in hand for future perusal and inclusion.

It is hoped that users of these data on superconductive materials will inform the author on needed corrections, deletions and additional information which may include heretofore unpublished results to be referenced under the contributor's name and institution.

BACKGROUND

Over sixty years of research on the phenomena of superconductivity has led to an impressive current world activity aimed at further understanding as well as technical and industrial utilization. This effort has produced a technology employed by many technical concerns. Some of the latest developments include superconductive coils capable of producing magnetic fields approaching 20 Tesla.^{**} Superconductive magnets with precise and homogeneous fields and with selective spacial configurations which are readily produced including some field gradient patterns impossible to form with normal state conductors. 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 coils. A direct current

[†]This work has been partially supported by the NBS Office of Standard Reference Data under Contract 3-35717.

^{*}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.

^{**}Hybrid magnets composed of superconductive coils with regular magnetic material cores are planned for 25 Tesla fields.

transformer has been produced utilizing a special arrangement of superconductive thin films for tunneling. A dc superconductive motor of 3250 hp has been operated successfully for water pumping and a 150 hp superconductive generator constructed.

A 5 MW ac electrical generator with the cooled superconductive elements on the rotor has been constructed.

In the area of propulsion application the detailed design of a 3000 hp dc motor and generator is under way with an eye in the future on a 40,000 hp motor and related 20,000 hp generator.

Recent significant technical achievements utilizing superconductivity have included a prototype simulated rail car made in Japan weighing over 2000 kg levitated to a height of 10 cm by superconductive magnets reacting against conducting coils. The car has been accelerated to a velocity of 50 km/hr. It now appears that the use of superconductive coils to produce the strong magnetic fields required for levitation is feasible and that the major technical problem will be in the development of methods for positional control of the train cars at high speeds.

The Josephson quantum effects are being exploited in various high precision voltage-current devices and in the definition of the standard volt.

Superconductive magnet systems have become common items in laboratories and advance technology centers throughout the world.

The influx of new literature covering new superconductive materials continues unabated. The recent 13th International Conference on Low Temperature Physics at Boulder, Colorado included about 170 papers on the science of superconductive phenomena and materials and the prior conference in Japan presented a like number. Also, additional large technical meetings focusing on applications, such as the applied superconductivity conference* recently held at Annapolis, are regularly scheduled.

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 4×10^{-25} ohm-m, while the lowest resistivity observed in metals is of the order of 10^{-15} 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^{17} times less resistive.

The temperature interval, T_C , over which the transition between the normal and superconductive states take place, may be of the order of as little as 2×10^{-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).

* Proceedings of the 1972 Applied Superconductivity Conference (May 1-3, 1972, Annapolis, Md.) (IEEE, Order Dept., 345 East 47 Street, N.Y., N.Y. 10017).

** 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.

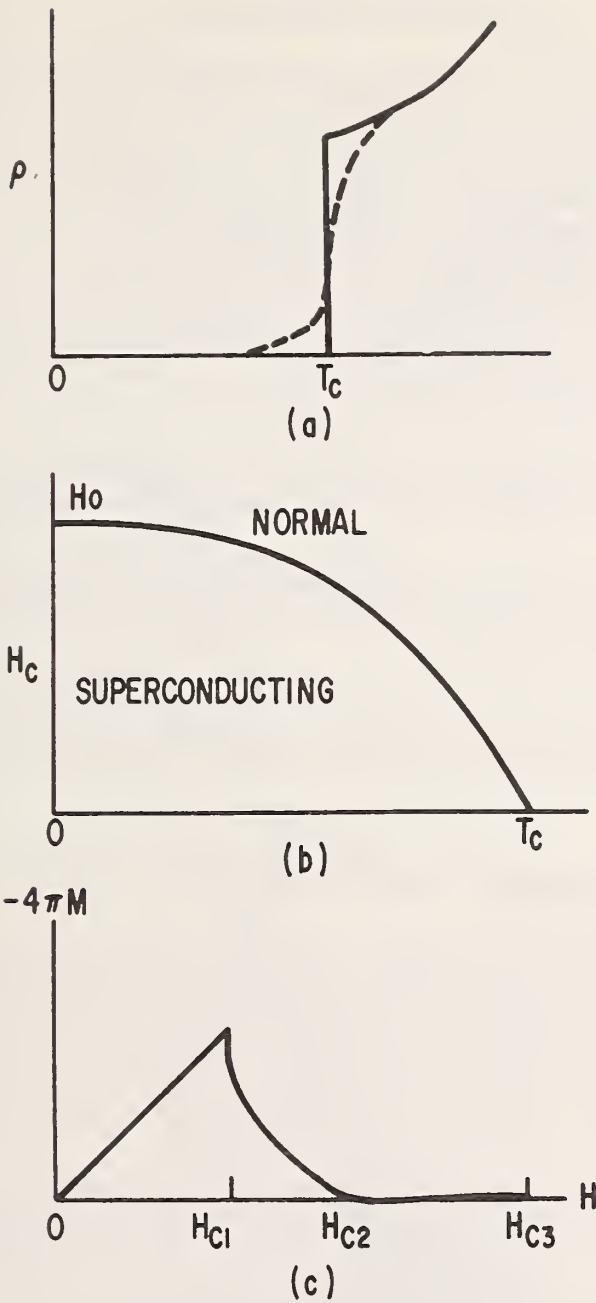


Figure 1. Physical properties of superconductors. (a) Resistivity versus temperature for a pure and perfect lattice (solid line). Impure and/or, imperfect lattice (dashed line). (b) Magnetic field-temperature dependence for Type I or "soft" superconductors. (c) Schematic magnetization curve for "hard"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

HIGH FIELD SUPERCONDUCTIVITY

The discovery of the large current-carrying capability of Nb₃Sn 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 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 state" is found in which quantized flux lines or vortices create lines of normal conductor in a superconductive matrix. The volume of the normal state is proportional to $-4\pi M$ in the "mixed state" region. Thus at H_{c2} the fluxon density has become so great as to drive the interior volume of the superconductive body completely normal. Between H_{c2} and H_{c3} the superconductor has a sheath of current-carrying superconductive material at the body surface, and above H_{c3} the normal state exists. With several types of careful measurement, it is possible to determine H_{c1}, H_{c2}, and H_{c3}. Table IV 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.

NEW DEVELOPMENTS IN SUPERCONDUCTIVE MATERIALS

Among superconductive material highlights for 1971-1973 must be included the definitive jump in the highest available critical temperature of known superconductors. John R. Gavalier has reported (Appl. Phys. Letters, Oct. 15, 1973)⁴ that he has prepared, by sputtering techniques, thin films (microns) of Nb-Ge alloy near the composition Nb₃Ge with an onset critical temperature of 22.3°K. The films are deposited on hot substrates at 700-900°C. This is the first superconductive material with a critical temperature substantially above the boiling point of liquid hydrogen and consequently has already engendered considerable technological interest. Gavalier attributes the high critical temperatures of the films "to the formation of a more nearly perfect stoichiometric Nb₃Ge compound than was previously obtainable."

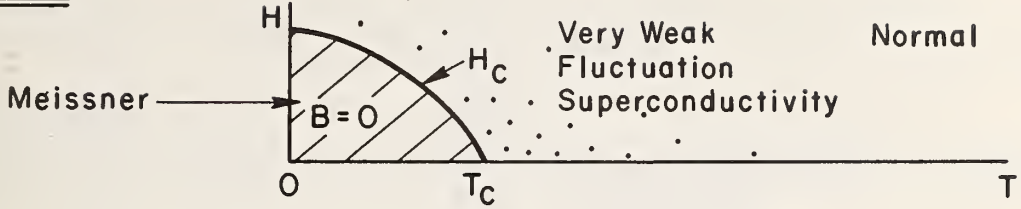
Shortly later, L. R. Testardi reported (Symposium on Superconductivity and Lattice Instabilities, Gatlinburg, Sept. 1973, Unpublished) that he had attained an onset critical temperature of 23.2°K, by following a somewhat different path of sputtering onto a very hot substrate. This critical temperature is just over 10% higher than those of the Nb₃(Al, Ge) alloys which had held the highest temperature position.

An intense peak of interest has centered on tiny organic crystals of TTF/TCNQ (tetrathiofulvalene/tetracyano-p-quinodimethane) which has the largest maximum electrical conductivity of any known organic compound ($\sigma_{\max} = 1.47 \times 10^4 \text{ ohm}^{-1} \text{ cm}^{-1}$ at 66°K). (See Ferraris et al., J. Amer. Chem. Soc. 95, 948 (1973).) L. B. Coleman, et al. (Solid State Commun. 12, 1125 (1973)) has reported extraordinary conductivity maxima in TTF/TCNQ single crystals near approximately 60°K which at first sight suggested the onset of superconductive fluctuations just above a Peierls instability. The latter report continues to be investigated because of difficulty in reproducing the experimental results routinely and interpretation of the mechanisms producing the maxima. (For recent discussion, see W. D. Metz, Science 180, 1041 (1973) and G. B. Lubkin, Physics Today 26, 17 (1973).

* Appl. Phys. Letters 23, 480 (1973).

PHASE DIAGRAM

Type I:



Type II:

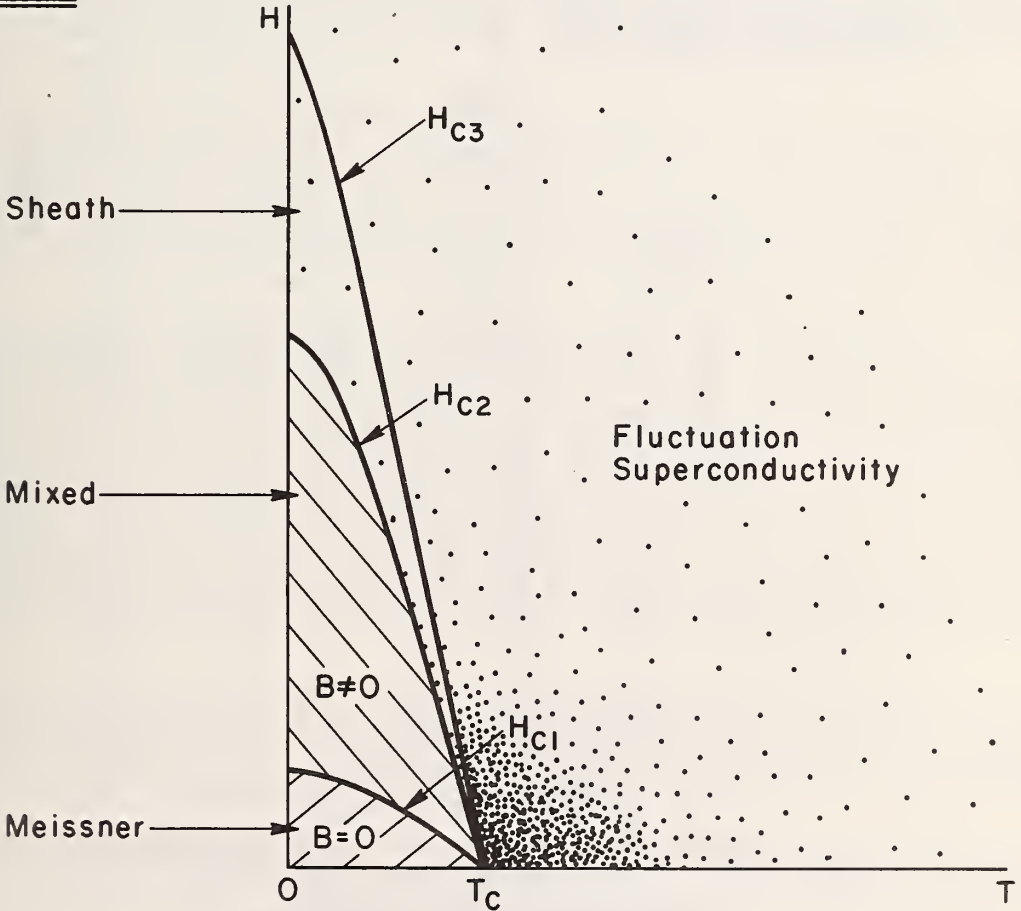


Figure 2. H-T phase diagram representation of Type I and Type II superconductors with locations for fluctuation superconductivity indicated. (R. R. Hake, personal communication and J. Applied Phys 40, 5148 (1969). "The Thermodynamics of Type I and Type II Superconductors.")

An interesting development with an A15 crystal type cubic structure alloy found to be superconductive many years ago in the 12.5 - 14.5K range is Nb₃Ga. Careful metallurgical preparation and annealing sequences recently discovered (G.W. Webb, *et al.*, *Solid State Commun.* 9, 1769 (1971)) have raised the onset critical temperature to 20.3K. It is of interest to note the location of this new value for Nb₃Ga and the Nb₃Ge thin film critical temperatures on the electron/atom ratio plot as shown in Fig. 3. Will a 25°K critical temperature be attained at the 4.7 electron/atom peak position?

The first high critical temperature superconductive oxide has been reported (D. C. Johnston, *et al.*, *Mat. Res. Bull.* 8, 777 (1973)) with a critical temperature as high as 13.7°K (onset). The composition is Li_{1-x}Ti_{2-x}O₄ and is one of approximately 200 known spinel (H1₁) compounds of which only three other examples have been found superconductive with critical temperatures below 4.8°K.

An interesting observation of the superconductive state in Pd-Ag alloys charged with D or H by ion implantation has been reported by Buckel and Stritzker (*Phys. Letters* 43A, 403 (1973)). The gas constituents are introduced at 4.2°K and are localized in a very thin surface layer. Critical temperatures as high as 16°K have been found for about 20 atom percent Ag in Pd with the D implanted surface layer.

The element lutetium was discovered to be superconductive at ~0.5K at a pressure of 125-150 kbar (J. Wittig, *et al.*, to be published in *Proceedings, LT13*) and in Hafnium at ~0.22K at 150 kbar (C. Probst and J. Wittig, to be published in *Proceedings, LT13*). These demonstrations of the presence of the superconductive state are important in outlining the theoretical chemistry and solid state properties of the early transition elements including lanthanum.

Among new moderately high critical temperature superconductors reported recently have been Mo_{5.1}Pb_{0.9}S₆ at 13.2 - 12.5K and Li_{0.1-0.3}Ti_{1.1}S₂ at over 13K with "onset" temperatures as high as 15K. Both compound families are outside the cubic structure system. The former is rhombohedral (B. T. Matthias, *et al.*, *Science* 175, 1465 (1972)) and the latter hexagonal (H. E. Barz, *et al.*, *Science* 175, 884 (1972)). Both systems are ternary and contain elements not found to be superconductive in elemental form and both systems are three-dimensional crystalline materials and show no strong evidence of layering tendencies. It is interesting to note that the (Y, Th)₂C₃ system (see TN 724), which gives maximum T_c of 17K, is a ternary with a novel structure, although of the cubic system.

An important new effort towards calibration and the standardization of techniques and temperatures for the measurement of superconductive critical temperatures is the work at the National Bureau of Standards by R. J. Soulen, Jr. and J. H. Colwell (*J. Low Temp. Phys.* 5, 325 (1971)) and J. F. Schooley and R. J. Soulen, Jr. (*Proc. 12th Intern. Conf. on Low Temp. Phys.* [Academic Press of Japan, Tokyo, 1971] and the XIII Inter. Congress of Refrigeration, pp. 192-198). They have carefully measured, compared and tested the reproducibility and width of the critical temperature of Pb, In, Al, Zn and Cd for thermometric fixed points as well as having looked very carefully at the equivalence of the transition temperature when measured by the three techniques: (1) Electrical resistance, (2) magnetic susceptibility and (3) heat-capacity measurements. In the case of well-annealed polycrystalline and pure (99.999%) indium they find that the midpoints of each type transition are identical to within 0.1 mK. Arrangements have been made to provide cryogenic experimenters with samples and devices through the NBS Office of Standard Reference Materials. (Ask* for NBS Special Publication 260-44, "Preparation and Use of Superconductive Fixed Point Devices SRM 767.")

A central topic in the search for the criteria of high critical temperature superconductive materials has been the association of "instabilities" with most above average critical temperature superconductors. The instabilities may be characterized as incipient phase changes above or near the critical temperatures. (See AIP Conf. Proc. No. 4, "Superconductivity in d- and f- Band Metals," New York, 1972, B. T. Matthias, p. 367 and J. C. Phillips, *Phys. Rev. Letters*, 26, 543 (1971).)

The general relevance and widespread evidence for lattice instabilities became evident at the Symposium on Superconductivity and Lattice Instabilities in Gatlinburg (Sept. 1973) which drew over 190 participants from 80 U. S. institutions and seven additional countries.

*Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. (Order by SD Catalog No. C13.10:260-44.) Price 75 cents.

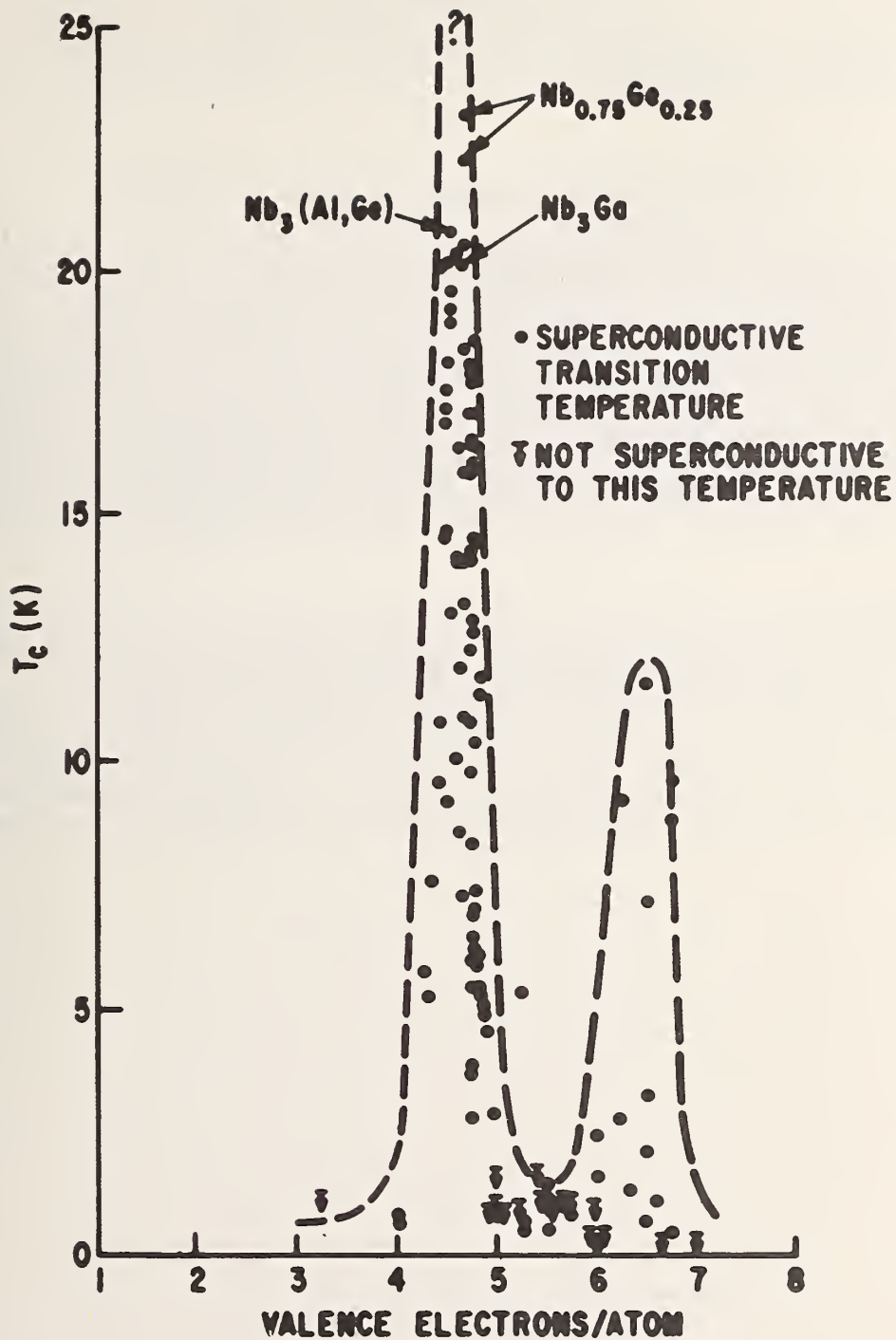


Figure 3. Superconductive critical temperature versus valence electron/atom ratio for A15 or "B-W" type compounds. The uppermost points for $Nb_{0.75}Ge_{0.25}$ sputtered films are onset critical temperatures.

The past two years has included not only the above briefly mentioned but substantial advances in superconductive materials, but also the naming of the Nobel Prize winners for the development of the BCS. theory. The winners' Nobel lectures are now published: Prof. J. Bardeen, in *Physics Today* 26, 41 (1973); Prof. L.N. Cooper, *Physics Today* 26, 31 (1973) and Prof. J.R. Schrieffer, *Physics Today* 26, 23 (1973). The 1973 Nobel prizes for physics have recently been awarded to Drs. Ivar Giaever and B.D. Josephson for their work on superconductive tunneling.

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 of 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.

Acknowledgments

We acknowledge the helpful suggestions, corrections and submission of reprints and data from the following: M.B. Robin, J.E. Cox, Robert Reich, E. Bucher, J. Wittig, R.E. Emstrom, F.E. Wang, W.O. Gentry, E.E. Havinga, K. Gschneidner, Jr., M.S. Lubell, B.T. Matthias, S. Foner, J.R. Gavaler, S. Methfessel, B. Stritzker, E.M. Savitskii, A. Junod, L.R. Testardi, A.G. Shepelev, D. Schneider, C. Rizzuto, J.F. Schooley, R.H. Hammond, and C.J. Raub and others inadvertently omitted.

Continued excellent assistance by Miss Vera Chase of our library staff is acknowledged and the help and patience of Mrs. Joan Wolfe and Miss Helen Wilford in report preparation is much appreciated.

NOTES CONCERNING THE DATA TABLES

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_n without discovery of a transition. All compositions are denoted on an atomic basis, i. e., AB, AB₂ or AB₃ for compositions, unless noted. Solid solutions or odd compositions may be denoted as A_zB_{1-z}, or A_zB. A series of three or more alloys is indicated as A_xB_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 is indicative of a new facet in superconductive materials; the metallic or inorganic superconductor combined most often with an intercalated or layered organic substance. These special materials exhibit three-dimensional superconductivity and high anisotropic high magnetic field properties.

Table 4 lists high magnetic field superconductors.

A bibliography of review articles concerned primarily with the experimental and material aspects of superconductivity is appended.

SELECTED PROPERTIES OF THE SUPERCONDUCTIVE ELEMENTS

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

Element	T_c (K)	H_0 (oersteds) ¹	θ_D (K)	ν (mJmole ⁻¹ deg.K ²)
Al	1.175	104.93	420	1.35
Be	0.026			0.21
Cd	0.518, 0.52	29.6	209	0.688
Ga	1.0833	59.3	325	0.60
Ga (β)	5.90, 6.2	560		
Ga (ν)	7.62	950, HF*		
Ga (δ)	7.85	815		
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 (α)	4.88	808, 798	142	10.0, 11.3
La (β)	6.00	1,096	139	11.3
Mo	0.916	90, 98	460	1.83
Nb	9.25	1970, HF	277, 238	7.80
Os	0.655	65	500	2.35
Pa	1.4			
Pb	7.23	803	96.3	3.0
Re	1.697	188, 211	415	2.35
Ru	0.493	66	580	3.0
Sb	2.6-2.7**	HF		
Sn	3.721	305	195	1.78
Ta	4.47	831	258	6.15
Tc	7.73, 7.78	1410, HF	411	4.84, 6.28
Th	1.39	159.1	165	4.31
Ti	0.39	56, 100	429, 412	3.32
Tl	2.332, 2.39	181	78.5	1.47

Note: Symbols explained on pages 13 and 14.

(Table 1 cont'd)

Element	T_c (K)	H_o (oersteds) ¹	θ_D (K) †	γ (mJmole ⁻¹ deg.K ²)
V	5.43, 5.31	1100, 1400, HF	382	9.82
W	0.0154	1.15	550	0.90
Zn	0.875	55	319.7	0.633
Zr	0.53	47	290	2.78
Zr (u)	0.65			

Thin Films Condensed at Various Temperatures

Al	1.18-~5.7	HF
Be	~03, -9.6	HF
	with KCl 6.5-10.6	HF
	with Zn etio-porphyrin	
	10.2	
Bi	~2-~5, 6.11, 6.154, 6.173	
Cd	0.53-0.91	
Ga	6.4-6.8, 7.4-8.4, 8.56	
In	3.43-4.5	
	in glass pores	
	3.68-4.17	HF
La	5.0-6.74	
Mo	3.3-3.8, 4-6.7	
Nb	6.2-10.1	HF
Pb	~2 - 7.7	
Re	~7	
Sn	3.6, 3.84-6.0	
Ta	<1.7-4.25, 3.16-4.8	HF
Ti	1.3	
Tl	2.64	
V	5.14-6.02	
W	<1.0-4.1	
Zn	0.77-1.48	

DATA FOR ELEMENTS STUDIED UNDER PRESSURE (Table 1 Cont'd)

Element	T_c (K)	Pressure ²
As	0.31-0.5	220-140 kbar
	0.2-0.25	~140-100 kbar
Ba II	~1.3	55 kbar
	III	85-88 kbar
	III	> 140 kbar
Bi II	3.916, 3.90, 3.86	25, 25.2, 26.8 katm
	III	~37 kbar, 27-28.4 katm
	IV	43, 43-62 kbar
	V	81 kbar
	VI	90, 92-101 kbar
	Ce	1.7
Cs	~1.5	> ~125 kbar
Ga II	6.24, 6.38	≥ 35 katm
	II'	≥ 35 katm Then $P \rightarrow 0$
Ge	4.85 - 5.4; 5.35	~120 kbar; 115 kbar
La	~5.5-11.93	0 to ~140 kbar
P	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	6.7; 7.1	120 kbar
Sn II	5.2	125 kbar
	4.85	160 kbar
	III	113 kbar

(Table 1 Cont'd.)

Element	T_c (K)	Pressure ²
Te II	2.05	43 kbar
	3.4	50 kbar
	III	70 kbar
	IV	84 kbar
Tl (CUB)	1.45	35 kbar
	(HEX)	35 kbar
U	2.3	10 kbar
Y	~1.2,~2.7	120-170 kbar

ISDN 01

† For another data set see Mendelssohn, K., Cryophysics, p. 178 (Interscience, New York, 1960) and Gschneidner, K. A., Jr. in Solid State Physics 16, 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).

HF* See Table 4 for additional data on H_{c1} , H_{c2} and H_{c3} .

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

²To convert "katm" to "newton/meter²", multiply by 1.013×10^8 .
To convert "kbar" to "newton/meter²", multiply by 1×10^8 .

Table 2. TABULATION OF SUPERCONDUCTIVE MATERIALS

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

Symbols used:

T_n	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 4 on high field magnetic properties.
∇	On material or reference indicates a thin film study.
$T'_c(-----)$	Denotes incremental changes in T_c from T_c of pure metal. For example, $T'_c(+0.05)$ denotes that two or more measurements have been made by adding a small amount of alloying element to a metal to form a dilute alloy (or mixture) and in so doing the T_c has been raised by 0.05K. The entry $T'_c(-0.3 \text{ K/a}\%)$ would indicate two or more measurements in which the critical temperature decreased 0.3K per atomic percent of alloying element added.
n	Number of carriers in superconductive semiconductive materials
#	Electronic specific heat (γ) and/or Debye θ data given.

KEY TO CRYSTAL STRUCTURE TYPES FOUND IN TABLE 2

"Strukturbericht" Type*	Example	Class
A1	Cu	Cubic, f.c.
A2	W	Cubic, b.c.
A3	Mg	Hexagonal, close packed
A4	Diamond	Cubic, f.c.
A5	White Sn	Tetragonal, b.c.
A6	In	Tetragonal, b.c. (f.c. cell usually used)
A7	As	Rhombohedral
A8	Se	Trigonal
A10	Hg	Rhombohedral
A12	α -Mn	Cubic, b.c.
A13	β -Mn	Cubic
A15	β -W	Cubic
B1	NaCl	Cubic, f.c.
B2	CsCl	Cubic
B3	ZnS	Cubic
B4	ZnS	Hexagonal
B8 ₁	NiAs	Hexagonal
B8 ₂	Ni ₂ In	Hexagonal
B10	PbO	Tetragonal
B11	γ -CuTi	Tetragonal
B17	PtS	Tetragonal
B18	CuS	Hexagonal
B20	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.

KEY TO CRYSTAL STRUCTURE TYPES FOUND IN TABLE 2

"Strukturbericht" Type *	Example	Class
B31	MnP	Ortho-rhombic
B32	NaTl	Cubic, f.c.
B34	PdS	Tetragonal
B _f	δ-CrB	Ortho-rhombic
B _g	MoB	Tetragonal, b.c.
B _h	WC	Hexagonal
B _i	γ'-MoC	Hexagonal
C1	CaF ₂	Cubic, f.c.
C1 _b	MgAgAs	Cubic, f.c.
C2	FeS ₂	Cubic
C6	CdI ₂	Trigonal
C11b	MoSi ₂	Tetragonal, b.c.
C12	CaSi ₂	Rhombohedral
C14	MgZn ₂	Hexagonal
C15	Cu ₂ Mg	Cubic, f.c.
C15 _b	AuBe ₅	Cubic
C16	CuAl ₂	Tetragonal, b.c.
C18	FeS ₂	Ortho-rhombic
C22	Fe ₂ P	Trigonal
C23	PbCl ₂	Ortho-rhombic
C32	AlB ₂	Hexagonal
C36	MgNi ₂	Hexagonal
C37	Co ₂ Si	Ortho-rhombic
C49	ZrSi ₂	Ortho-rhombic

KEY TO CRYSTAL STRUCTURE TYPES FOUND IN TABLE 2

"Strukturbericht" Type*	Example	Class
C54	TiSi ₂	Ortho-rhombic
C _c	Si ₂ Th	Tetragonal, b.c.
DO ₃	BiF ₃	Cubic, f.c.
DO ₁₁	Fe ₃ C	Ortho-rhombic
DO ₁₈	Na ₃ As	Hexagonal
DO ₁₉	Ni ₃ Sn	Hexagonal
DO ₂₀	NiAl ₃	Ortho-rhombic
DO ₂₂	TiAl ₃	Tetragonal
DO _e	Ni ₃ P	Tetragonal, b.c.
D1 ₃	Al ₄ Ba	Tetragonal, b.c.
D1 _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
D5 _c	Pu ₂ C ₃	Cubic
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.
D8 ₃	Cu ₉ Al ₄	Cubic
D8 ₈	Mn ₅ Si ₃	Hexagonal
D8 _b	CrFe	Tetragonal

KEY TO CRYSTAL STRUCTURE TYPES FOUND IN TABLE 2

"Strukturbericht" Type*	Example	Class
D8 ₁	Mo ₂ B ₅	Rhombohedral
D10 ₂	Fe ₃ Th ₇	Hexagonal
E2 ₁	CaTiO ₃	Cubic
E9 ₃	Fe ₃ W ₃ C	Cubic, f.c.
H1 ₁	Al ₂ MgO ₄	Cubic, f.c.
L1 ₀	CuAu	Tetragonal
L1 ₂	Cu ₃ Au	Cubic
L'2 _b	ThH ₂	Tetragonal, b.c.
L'3	Fe ₂ N	Hexagonal

TABLE 2. TABULATION OF SUPERCONDUCTIVE MATERIALS (INCLUDING PROVEN NON-SUPERCONDUCTORS) WITH CRITICAL TEMPERATURES AND FIELDS, CRYSTAL STRUCTURE DATA WHERE DETERMINED, AND REFERENCES. (SEE IV-1 FOR SYMBOLS)

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref.
Ag Al _x					1235v
Ag ₁₋₀ Al ₀₋₁ Th ₂	2.2-0.1		C16		1377
Ag _{0.01} Be _{0.99}				0.45	1057
Ag _{0.05} Be _{0.95}				0.45	1057
Ag ₇ F ₂ H O ₈	1.0-1.5				1146
Ag ₇ F _{0.25} N _{0.75} O _{10.25}	1.04				1146
Ag _{0.45} Ge _{0.55} (Deposited ~4K)	1.2				1179v
Ag Ge (200-600A)	1.2				1082v
Ag In ₂	2.11		C16		1377
Ag _x Mn _y Sn _{0.97-x-y} Te	1.85-1.3, (n = 3.5 x 10 ²¹) 1.8-1.1, (n = 2.8 x 10 ²¹) 1.7-0.5 (n = 2.2 x 10 ²¹) <0.044 (y = >1000 ppm)		B1		1246
Ag _{0.10} Mn _y Sn _{0.97-y} Te	2.0-1.3		B1		1246
Ag Mo ₄ S ₅	8.3				1193#
Ag _{1.2} Mo _{4.8} S ₆	8.9-8.4		Rhomb		1163
Ag ₂ Pd ₃ S	1.13 ± 0.02K		A13		1221
Ag ₁₋₀ Pd ₀₋₁ Th ₂	2.1-2.3-1.1-1.3-0.7		C16		1377
Ag _{0.05} Rh _{0.04} Ti _{0.91}	1.95				1060
Ag _x Sn _{0.97-x} Te (n = 10 ²¹ ± 0.12-1.1°K (sintered) 8 x 10 ²¹ 0.2-2°K (as cast))			B1		1246
Ag Th ₂	2.19		C16		1377
Al (See Table 3)					
Al (2000-35A)	1.18-2.16				1194v
Al (~500A)	2.6-2.7				1134
Al _{99.999}	1.16				1061#
Al (<100A; Deposited 105K)	2.45				1062v
Al (15 - 85A)	3-4.6-3.7				1259v
Al					1267
Al (<40-1000A)	3.74-<1.26	HF			1294v
Al (2000-40A)	1.25-2.16°K				1302v
Al	1.180				1357
Al _{0.95} B _{0.05} Nb ₃	19.1		A15		1360
Al _{1-y} B _y Nb ₃	18-19.1-18.5 (aged) 16.3-17-11 (as cast)		A15		1360

¹See comment bottom page 2.

Material	T_c (K)	H_0 (oersteds) ¹	Crystal Structure	T_n	Ref.
$Al_{1-y}Be_yNb_3$	17.3-19.6-13 (aged) 16.5-18-13 (as cast)		A15		1360
$Al_{0.95}Be_{0.05}Nb_3$	19.6		A15		1360
$Al_{1-x}Cr_x$	$T_c'(-0.115)$				1357
$Al_{2.06}Cu$	0.65		C16		1377
Al Cu (750A, alternate layers)	2.6-3.45				1134v
$Al_{1-x}Fe_x$	$T_c'(-0.055)$				1357
$Al_{0.5}Ga_{0.5}Nb_3$	19.0	HF			1339
$Al_{1-0}Ga_{0-1}V_3$	11.5-9-12.0		A15, A2		1369
$Al_{1-x}Ga_xNb_3$ (Annealed)	18.3-18.7-16.1		A15		1072
$Al_{0.1}Ga_{0.9}V_3$	13.9, 14.9		A15		1073
$Al_{0.3}Ga_{0.7}V_3$	13.9		A15		1073
$Al_{0.5}Ga_{0.5}V_3$	12.9		A15		1073
$Al Gd_{0-0.009}La_{3-x}$	5.97-<1	HF			1364
$Al_2Gd_{0-0.004}La_{1-0.996}$	3.20-1.52	HF			1262
$Al Gd_{0-0.009}La_{3-2.991}$	6.0-<1.0				1170
$Al_2Gd_xLa_{1-x}$	3.24-0.5		C15		1111
Al Ge (Evaporated, 77K)	5.5				1120v
$Al_{0.65}Ge_{0.35}Hf_{3-0}Nb_{0-3}$	~3-6-4-20				1173
Al Ge Nb ₃	10-17.5				1276v
$Al_{0.16}Ge_{0.05}Nb_{0.79}$	20.7	HF			1339
$Al_{1-y}Ge_yNb_{1-x}Ta_x$	18.5-11		A15		1360
$Al_{0.75}Ge_{0.25}Nb_3$	18.3-14.0, 13.3-11.7				1164
$Al_{0.8}Ge_{0.2}Nb_3$	16.0	HF			1174v
$Al_{1-x}Ge_xNb_3$					1079
$Al_{1-x}Ge_xNb_3$ (Annealed) $x=0-0.62$	18.4-19.9-13.7		A15		1072
$Al_{0.85}Ge_{0.15}Nb_{2.85}Ta_{0.15}$	20.5		A15		1360
$Al_{1-0.6}Ge_{0-0.4}Nb_{2.85}Ta_{0.15}$	19.5-20.5-18.5 (aged)		A15		1360
$Al_{1-x}Ge_xTh_2$	0.2-<0.1		C16		1377
$Al_{0.65}Ge_{0.35}Nb_{0-3}Ti_{3-0}$	<3-6-4-20				1173
$Al_{0.65}Ge_{0.35}Nb_{0-3}Zr_{3-0}$	<1.5-10-5-20 (annealed) <1.5-6-5-18.7 (as cast)				1173
$Al_{1-0}Ge_{0-1}V_3$	~12-12.5-6		A15, A2		1369

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref.
Al _{0.7} Ge _{0.3} V ₃			A15	2.0	1073
Al _{1-x} In _x Nb ₃ (x=0-0.33)	18.4-16.0		A15		1072
Al _{0.046} In _{0.151} Sn _{0.803}	4.38 (Unannealed) 3.652 (Annealed)				1201
Al ₂ La	3.26				1314
Al _{0.11} Mg _{0.89}				0.013	1340
Al _{1-x} Mn _x	T _c ' (-0.11)				1357
Al N	Data given				1195∇
Al N O(24-117A)	Data given				1195
Al Nb ₃	18.8				1215#
Al Nb ₃	9.3-16.6				1276∇
Al Nb ₃	18.6	HF			1339
Al Nb ₃	18.3 (Annealed) 17.4 (As cast)		A15		1176#
Al Nb ₃	17.7-15.5, 13.6-11.8				1164
Al Nb ₃	18.22 (Max.)				1066
Al Nb ₃					1079
Al Nb ₃	17.4, 17.6				1101
Al _{0.25} Nb _{0.75}	18.3				1064
Al Nb ₃	18.1	HF			1075
Al _{0.5} Nb _{0.5} Sn _{0.5}	≈ 15.3				1236
Al ₁₋₀ Nb ₃ Sn ₀₋₁	17.2-15.3-18.2		A15		1236
Al _{0-0.1} Nb ₃ Sn _{1-0.9}	17.9-18.58-18.1		A15		1115
Al Nb Sn	17.45		A15		1115
Al _{1-x} Nb ₃ Sn _x	18.4-15.7-18 (Annealed)		A15		1072
Al Nb _{2.1} V _{0.9}	12.5 (13.4 Annealed)		A15		1073
Al Nb _{2.7} V _{0.3}	15.4 (16.7 Annealed)		A15		1073
Al O(15 - 190A)	1.81-2.188				1224∇
Al Sb (~125 kbar)	2.8				1104
Al ₁₋₀ Si ₀₋₁ V ₃	~10-16.5		A15, A2		1369
Al _{0.1} Si _{0.9} V ₃	15.1 (16.1 Annealed)		A15		1073
Al _{0.2} Si _{0.8} V ₃	13.6 (15.7 Annealed)		A15		1073
Al _{0.152} Sn _{0.848}	3.675 (Unannealed) 3.690 (Annealed)				1201
Al Sn (1100A Alternate layers)	4.6-5.6				1134∇

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref.
$Al_{1-0}Sn_{0-1}V_3$	~5.5-6-4		A15, A2		1369
Al_3Th	0.2		D019		1373
$Al Th_2$	0.09		C16		1377
$Al_3Th_{1-0.8}Y_{0-0.2}$			D019	0.05	1373
$Al_{1-x}Ti_x$	$T'_c(-0.04)$				1357
$Al_{1-x}V_x$	$T'_c(-0.08)$				1357
$Al V_3$ (Deposited ~400°C)	9.6		A15		1363v
$Al V_3$			A2	3.0	1369
Al_2Yb			C15	0.06	1372
$Al Zn_2Zr$			L1 ₂	0.08	1372
$As_{0.25}Se_{0.75}Y$	0.72-0.78		B1		1219
$Au_{0.03}Be_{0.97}$	1.80		Hex		1057
$Au_{0.06}Be_{0.94}$	1.29(1.44 quenched)		Hex		1057
$Au_{0.08}Be_{0.92}$	1.31		Hex		1057
$Au_{0.15}Be_{0.85}$ (slow cool)	0.91				1057
$Au_{0.15}Be_{0.85}$ (arc melted)	2.79		Hex		1057
$Au_{0.3-0.75}Ge_{0.7-0.25}$ (200-600A)	2.7-3.6-2.3				1082v
$Au_{0.25-0.80}Ge_{0.75-0.20}$ (Deposited ~4K)	2.7-3.6-2.2				1179v
$Au_{0.5}Ge_{0.5}$ (Deposited ~4K)	3.6				1179v
$Au Na_2$			C16	0.06	1377
$Au Pb_2$	3.10		C16		1377
$Au_{0.1-0.7}Pb_{0.9-0.3}$	7.2-1.5				1100v
$Au_{1-0}Pb_2Pd_{0-1}$	3.2-3.9-2.7-3.5-3		C16		1377
$Au_{0.30}Pd_{0.033}Te_{0.666}$	2.6		Cub		1116
$Au_{0.167}Pd_{0.166}Te_{0.667}$	4.6		Cub		1116
$Au_{.05}Rh_{.04}Ti_{.91}$	3.0				1060
$Au_{0.25}Sb_{0.75}$	6.7		Cub		1116
$Au Th_2$	3.65		C16		1377
$Au V_3$ (Various heat treatments)	2.97, 1.84, 1.56, ~1		A15		1088
$Au V_3$	<0.015-3.22	HF	A15		1160
$B Co_2$			C16	0.06	1377

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
B Fe ₂			C16	0.06	1377
B Mn ₂			C16	0.06	1377
B Mo ₂	5.07		C16		1377
B Mo ₂	5.85				1105
B Mo ₂ (1-x)Re _{2x}	5.1-4.3-5.3-5		C16		1377
B ₃ Mo ₆ S ₈ Sn (Composition approximate)	15.0				1309
B Mo _{1.5} Ta _{0.5}	1.81		C16		1377
B Mo _{1.75} Ta _{0.25}	3.05		C16		1377
B _x N _{1-x} Nb					1238
B _x N _{1-x} V					1238
B Ni ₂			C16	0.07	1377
B Re ₂ (1-x)W _{2x}	4.2-6-3.2		C16		1377
B Ta ₂			C16	0.06	1377
B Ta _{1.5} W _{0.5}	0.25		C16		1377
B Ta _{1.25} W _{0.75}			C16	0.06	1377
B Ta ₂₋₀ W ₀₋₂	<0.2-0.4-<0.2-3.2		C16(x ≥ 0.6)		1377
B W ₂	3.18				1105
B W ₂	3.22		C16		1377
Ba				0.017	1214
Ba				0.014	1233
Ba Hg	2.32-2.29		B2		1232
Ba _{0.1} Pb ₃ Sr _{0.9}	1.75		Tet		1372
Be (~90A)	~ 9				1327▽
Be (condensed) (10K; 260A)	9.6				1178▽
Be _{0.958} Co _{0.042}	2.44		A2		1057
Be _{0.944} Co _{0.056}	2.48		A2		1057
Be _{0.944} Co _{0.056}			D8 ₂	0.45	1057
Be ₂₁ Co ₅				0.45	1057
Be _{0.92} Cu _{0.08}	0.84		A2		1057
Be _{0.89} Cu _{0.11}	1.11		A2		1057
Be _{0.89} Cu _{0.11}	0.44				1057
Be _{0.858} Cu _{0.142}	0.56		A2		1057

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Be _{0.95} Fe _{0.05}				0.45	1057
Be _{0.977} Fe _{0.023}				0.45	1057
Be _{0.95} Ir _{0.05}				0.45	1057
Be ₂₁ Ni ₅	0.72, 0.78		D8 ₂		1057
Be _{0.96} Ni _{0.04}	0.76				1057
Be _{0.934} Ni _{0.066}	0.88 (0.66 slow cool)				1057
Be _{0.9} Ni _{0.1}	0.58				1057
Be _{0.9} Ni _{0.1}	2.38, 2.45		A2		1057
Be _{0.95} Os _{0.05}	0.57				1057
Be _{0.95} Pd _{0.05}				0.45	1057
Be _{0.95} Pt _{0.05}				0.45	1057
Be _{0.95} Re _{0.05}	9.5				1057
Be _{0.95} Rh _{0.05}				0.45	1057
Be _{0.95} Ru _{0.05}	1.48				1057
Be Ta ₂			C16	0.06	1377
Bi (Condensed at 2K)	6.1				1218▽
Bi (Ne, Xe) Dep. 10K	5.8				1229▽
Bi (~15-15A)	~2-~5°				1259▽
Bi					1264
Bi (0-30 kbar)	~7 (Bi III) ~4, 8.0-8.2				1282
Bi (~1100A; condensed 1.5K)	6.11				1136▽
Bi _{60w/o} Cd _{40w/o}	0.53				1204
Bi In ₂	5.6	870 ± 10			1198 #
Bi _x In					1235 ▽
Bi _{0.025} In _{0.975} (0-18 kbar)	4.07 - 3.47				1247
Bi ₃ In ₅	~4.2				1112
Bi _{0.02} In _{0.98}	3.83				1121
Bi _{0.0108} In _{0.9892} (2000A)		HF			1089▽
Bi _{0.0043} In _{0.9957} (2000A)					1089▽
Bi Li	2.455		L1 ₀		1351
Bi _x Pb					1235 ▽
Bi _{0.3} Pb _{0.7}	8.63	HF			1318

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$Bi_{0.4}Pb_{0.6}$ (In porous glass)		HF			1319
$Bi_{0-0.565}Pb_{1-0.435}$		HF			1288
$Bi_{0.56}Pb_{0.44}$ (32A, porous glass)					1045
$Bi_{0.4}Pb_{0.6}$ (32A, porous glass)					1045
$Bi_{0.3}Pb_{0.7}$ (32A, porous glass)					1045
$Bi_{0.1}Pb_{0.9}$	Some data				1126v
$Bi_{0-0.11}Pb_{1-0.89}$	T_c' (+0.39)				1133
$Bi_{0-0.02}Pb_{1-0.98}$	T_c' (+0.07)				1165
$Bi_{25-63w/o}Pb_{75-37w/o}$					1102
$Bi_{0-0.025}Pb_{1-0.975}Tl_{0-0.025}$	$T_c'(-0.01+0.02)$				1165
$Bi_{0-0.4}Pb_{1-0}Tl_{0-1}$	7.36-1.2		Cub		1308
$Bi_{0.6}Sn_{0.4}$ (25 katm, metastable)	7.0				1091
Bi Sn (25 katm, metastable)	7.88				1084
$Bi_{0.5}Sn_{0.5}$ (25 katm, metastable)	7.2		Mono		1091
$Bi_{0.4}Sn_{0.6}$ (25 katm, metastable)	7.34				1091
$Bi_{0.009}Sn_{0.991}$	3.700				1153
$Bi_{0.005}Sn_{0.995}$ (2000A)					1089v
Bi_2Te_3 ($n = 1.5 \times 10^8$)				≈ 2	1280
Bi_2Te_3 (70 - 100 kbar) ($n = 1.5 \times 10^8$)	4.3-3.6				1280
Bi_2Te_3 (65-75 kbar) ($n = 1.5 \times 10^8$)	1.6-3.0				1280
Bi_2Te_3 ($n = 1.5 \times 10^8$) (80 kbar)	2.85				1280
Bi Te_2Tl ($n=6 \times 10^{20}$)	0.14		Rhomb		1139
$Bi_{0.55-0.62}Tl_{0.45-0.38}$	5.6-6.0				1264
$C_3Ce_{0.2}Th_{1.8}$			$D5_c$	4	1222
$C_3Dy_{0.2}Th_{1.8}$	Magnetic		$D5_c$		1222
$C_3Dy_{0.4}Th$	Magnetic		$D5_c$		1222
$C_3Er Th$	4.6		$D5_c$		1222
$C_3Er_{1.2}Th_{0.8}$	Magnetic		$D5_c$		1222
$C_3Er_{1.4}Th_{0.6}$	Magnetic		$D5_c$		1222
$C_3Er_{1.6}Th_{0.4}$	Magnetic		$D5_c$		1222
$C_3Er_{0.1}Th_{1.9}$	6.8		$D5_c$		1222

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
C ₃ Er _{1.8} Th _{0.2}	Magnetic		D5 ₅		1222
C ₃ Er _{0.2} Th _{1.8}	8.2		D5 _c		1222
C ₃ Er _{0.4} Th _{1.6}	8.2		D5 _c		1222
C ₃ Er _{0.6} Th _{1.4}	8.1		D5 _c		1222
C ₃ Er _{0.8} Th _{1.2}	7.0		D5 _c		1222
C ₃ Gd _{0.2} Th _{1.8}	Magnetic		D5 _c		1222
C Hf	Magnetic		D5 _c		1238
C _{0.1-0.35} Hf N _{0.9-0.65}	8.5-4.9				1238
C ₀₋₁ Hf ₀₋₁ N ₁₋₀ Nb ₁₋₀	14.9-15.5-12.7		B1		1238
C ₃ Ho _{0.8} Th _{1.2}	Magnetic		D5 _c		1222
C ₃ Ho _{0.6} Th _{1.4}	5.2		D5 _c		1222
C ₃ Ho _{0.4} Th _{1.6}	5.5		D5 _c		1222
C ₃ Ho _{0.2} Th _{1.8}	5.4		D5 _c		1222
C ₂ La				3.9	1148
C _{1.58} La	9.6		Cub		1148
C _{1.35} La	11.0		Cub		1148
C _{1.3} La	4.8		Cub		1148
C _{1.3} La	8.3		Cub		1148
C _{1.45} La _{0.1} Th _{0.9}	10.2		Cub		1148
C _{1.45} La _{0.3} Th _{0.7}	13.4		Cub		1148
C _{1.45} La _{0.5} Th _{0.5}	14.2		Cub		1148
C _{1.5} La _{0.8} Th _{0.2}	14.1		Cub		1148
C _{1.35} La _{0.9} Th _{0.1}	13.7 (11.3 annealed)		Cub		1148
C _{1.3-1.6} La _{0.9} Th _{0.1}	12.7-12.9		Cub		1148
C _{1.2-1.6} La _{0.8} Th _{0.2}	10.6-14.3		Cub		1148
C _{1.3-1.5} La _{0.7} Th _{0.3}	12.3-13.2		Cub		1148
C _{1.45} La _{0.3} Th _{0.7}				3.9	1148
C _{1.45} La _{0.5} Th _{0.5}	11.1				1148
C _{1.45} La _{0.1} Th _{0.9}				3.9	1148
C _{1.6} La _{0.7} Th _{0.3}				3.9	1148
C _{1.8} La _{0.8} Th _{0.2}				3.9	1148
C ₃ Lu _{0.8} Th _{1.2}	11.6		D5 _c		1222

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
C ₃ Lu _{0.6} Th _{1.4}	11.7		D5 _c		1222
C ₃ Lu _{0.4} Th _{1.6}	10.9		D5 _c		1222
C ₃ Lu _{0.2} Th _{1.8}	10.3		D5 _c		1222
C _{1-x} Mo			Hex		1132
C _{1-x} Mo					1132
C Mo	14.3		Cub		1036
C Mo		HF	Hex		1098
C Mo ₂			Ortho		1132
C Mo ₂			Hex		1132
C Mo ₂	3.45-5.8		Hex		1132
C Mo ₂			Ortho		1132
C Mo _{~2}	3.45	HF	Hex		1098
C ₁₋₀ Mg ₂₋₀ Re ₀₋₁	2.8-5-1.8		Hex		1366
C _{0.5} N _x Nb	14.5-17.8				1234
C _{0.3} N _x Nb	14-17.8				1234
C _{0.2} N _x Nb	13-17.5				1234
C _{0.1} N _x Nb	11-17-16				1234
C _{0.3} N _{0.7} Nb	17.8				1234
C _{0.026} N _{0.974} Nb	17.2-17.3				1234
C ₀₋₁ N ₁₋₀ Nb		HF	B1		1038
C N Nb		HF			1038
C _{0.25} N _{0.75} Nb _{0.85} Ti _x Zr _{0.15-x}	17.7-15.5				1238
C _{0.25} N _{0.75} Nb _{1-x} Zr _x	17.6-11.5				1238
C _{0.25} N _{0.75} Nb _{1-x} V _x	17.6-6.3				1238
C _w N _x Nb _y Ti _z	> 17.5				1238
C _{0.15} N _{0.85} Nb _{0.85} Ti _x Zr _{0.15-x}	17.5-14.7				1238
C _{0.25} N _{0.75} Nb _{1-x} Ti _x	17.6-18				1238
C _{0.25} N _{0.75} Nb _{1-x} Ti _x	17.6-17.8-16				1238
C _{0.75-0.70} N _{0.25-0.30} Nb _{0.75-0.70} Ti _{0.25-0.30}					1238
C ₀₋₁ N ₁₋₀ Nb ₀₋₁ V ₁₋₀	8.7-8.8-<2.3-11.1		B1		1238
C ₀₋₁ N ₁₋₀ Nb ₁₋₀ Zr _{0.1}	14.9-16.3-14.3		B1		1238
C ₁₋₀ N ₀₋₁ Nb ₀₋₁ Ti ₁₋₀	14.9-17.8-<2.5		B1		1238

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
C ₀₋₁ N ₁₋₀ Nb ₀₋₁ V ₁₋₀	14.9-<2.5		B1		1238
C ₀₋₁ N ₁₋₀ Nb ₁₋₀ Ta ₀₋₁	14.9-16.5-10.2		B1		1238
C ₀₋₁ N ₁₋₀ Nb ₁₋₀	14.9-18.0-11		B1		1238
C _{0.25} N _{0.75} Hf _x Nb _{1-x}	17.6-8.5				1238
C _{0.25} N _{0.75} Hf _x Nb _{1-x}	17.6-12.8				1238
C ₀₋₁ N ₁₋₀ Ta ₀₋₁ V ₁₋₀	8.7-<2.3-10.0				1238
C ₀₋₁ N ₁₋₀ Ti ₀₋₁ V ₁₋₀	8.7-<2.3				1238
C ₀₋₁ N ₁₋₀ V	8.7-9.7-<2.3				1238
C Nb		HF			1035
C Nb	>11	HF			1038
C Nb					1238 , 1035
C Nb	7; (11 Annealed); >11	HF			1244 , 1038
C _x Nb _{1-x}	<2.5-9.6				1345v
C Nb _{0.9-0.5} V _{0.1-0.5}	5.7-<~2				1238
C ₃ Nd _{0.2} Th _{1.8}			D5 _c	4	1222
C ₃ Pr _{0.2} Th _{1.8}			D5 _c	4	1222
C ₃ Pr _{0.4} Th _{1.6}			D5 _c	4	1222
C ₃ Sc _{1.4} Th _{0.6}	5.4				1222
C ₃ Sc _{0.8} Th _{1.2}	6.0		D5 _c		1222
C ₃ Sc ₁ Th ₁	7.1		D5 _c		1222
C ₃ Sc _{0.8} Th _{1.2}	7.1		D5 _c		1222
C ₃ Sc _{0.6} Th _{1.4}	7.2		D5 _c		1222
C ₃ Sc _{0.4} Th _{1.6}	6.8		D5 _c		1222
C ₃ Sc _{0.2} Th _{1.8}	6.7		D5 _c		1222
C Ta					1238
C Ta	10	HF			1244
C ₃ Tb _{0.2} Th _{1.8}	Magnetic		D5 _c		1222
C _x Th _{1-x}	T' _c (-0.095)	Data given			1291
C _{1.45} Th			Cub	3.9	1148
C _{1.45} Th	4.1		Cub		1148
C Th				3.9	1148
C Ti					1238

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
C Ti _{0.4-0.7} V _{0.6-0.3}				~ 2	1238
C V					1238
C _{0.87-0.76} V					1332 #
C _{0.87} V				0.03	1114
C _{0.84} V				0.03	1114
C _{0.81} V				0.03	1114
C _{0.76} V				0.03	1114
C W ₂	2.85-3.05		Hex		1223
C W ₂	3.05-3.35		Hex		1223
C W ₂	2.4-4.05		Ortho		1223
C W ₂	3.1-3.90		Ortho		1223
C _{0.55} W _{0.45}	8.1		Al		1036
C _{0.50} W _{0.50}	10.0		Al		1036
C _{0.46} W _{0.54}	9.0		Al		1036
C W			B _h	0.3	1037
C W ₂	3.0		Hex		1132
C W ₂	3.6		L' ₃		1036
C Zr					1238
Ca (99.5%)				0.017	1214
Ca				0.014	1233
Ca Hg	1.6-<1.25		B2		1232
Ca Hg ₃	1.6-1.3				1232
Ca Hg ₅	1.7-1.5				1232
Ca Pb ₃	0.84		L1 ₂		1245
Ca _{0.6} Pb ₃ Sr _{0.4}	1.16		Tet		1245
Ca _{0.55-0} Pb ₃ Sr _{0.45-1}	1.47-1.88		Tet		1245
Ca _{1-0.7} Pb ₃ Sr _{0-0.3}	0.08-1.0		L1 ₂		1245
Ca Sr _{0-0.3} Pb ₃	0.08-1.0		L1 ₂		1245
Cd	0.52				1166#
Cd					1267
Cd (Deposited <2K)	0.79-0.91(disordered) 0.53-0.59(annealed)				1310▽
Cd	0.52		A3		1340#
Cd _x In _{1-x}					1184#
Cd _{0-0.045} In _{1-0.955}	T'_c (-0.17)				1086,1090

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$Cd_{0.50}Mg_{0.50}$			Ortho	0.015	1340#
$Cd_{0.60}Mg_{0.40}$	0.016		Ortho		1340#
$Cd_{0.70}Mg_{0.30}$	0.105				1340#
$Cd_{0.75}Mg_{0.25}$	0.160		Hex		1340#
$Cd_{0.80}Mg_{0.20}$	0.185		Hex		1340#
$Cd_{0.86}Mg_{0.14}$	0.145		Hex		1340#
$Cd_{0.90}Mg_{0.10}$	0.138				1340#
$Cd_{0.96}Mg_{0.04}$	0.24				1340#
$Cd_{1-0.6}Mg_{0-0.4}$	0.52-0.138-0.185-0.016				1340
$Cd_{0.20}Mg_{0.80}$			Hex	0.015	1340#
$Cd_{0.40}Mg_{0.60}$				0.015	1340#
$CdMo_5S_6$	2.4-2.3		0.5-Rhomb		1163
$Cd_{0-0.025}Pb_{1-0.975}$	$T'_c(-0.07)$				1165
Cd_xTl_{1-x}	Data given				1108
Cd_xTl_{1-x}	$T'_c(-0.027)$	Data given			1095
$Cd_{0.2}Zn_{0.8}$	0.628				1052
$Cd_{0.02}Zn_{0.98}$	0.675				
$Cd_{0.002}Zn_{0.998}$	0.780				1052
$Ce_{0-0.1}InLa_{3-2.9}$	9.45-<1	HF			1228
$Ce_{0.04-0.08}InLa_{2.96-2.92}$	7.2-2.2(0.23 kbar)				1137
$Ce_{0-0.021}La_{1-0.979}$	4.5-2.7	HF			1265
$Ce_{0-0.02}La_{1-0.98}$	4.87-2.4	HF			1358
$Ce_{0-0.02}La_{1-0.98}$	6-2.9				1358
$Ce_{0.01}La_{0.99}$	3.82	730			1365
$CeOs_2$			C14		1375
$Ce_{1-0.80}Tb_{0-0.20}Ru_2$	6.2-6.4-2.4				1113
$Co_{0.98}Cr_{0.02}U$	$T'_c(\sim+0.05)$				1181
$Co_{0.98}Fe_{0.02}U$	$T'_c(+0.1)$				1181
$Co_{1-0}Fe_{0-1}Zr_2$	5.0-0.2		C16		1377
$Co_{0-0.06}Ga_4Mo_{1-0.94}$	8.0-6.5				1295
$Co_{0.98}Mn_{0.02}U$	$T'_c(+0.2)$				1181
$Co_{0.92}Mn_{0.08}U_6$	~ 2.2				1181

Material	T_c (K)	H_0 (oersteds) ¹	Crystal Structure	T_n	Ref
$Co_{0.975}Mo_{0.025}U$	$T_c' (-0.35)$				1181
$Co_{0.98}Ni_{0.02}U$	$T_c' (\sim -0.05)$				1181
$Co_xO_yPb_{1-x-y}$ (500-700A)	7.2-~2				1053v
$Co_{0-0.005}Pb_{1-0.97}$ (500-700A)	7.2-4.4				1053v
$Co_{0.05}Rh_{0.04}Ti_{0.91}$	4.0				1060
$Co_{0.97}Rh_{0.03}U$	$T_c' (-0.4)$				1181
$Co_{0.96}Mo_{0.04}U_6$	~1.5				1181
$Co_{1-0}Ni_{0-1}Ta_2$	1.2-0.6		C16		1377
$Co_{0.85}Ni_{0.15}Zr_2$	6.0		C16		1355
$Co_{0-1}Ni_{1-0}Zr_2$	5-6.0-1.5-1.6		C16		1355
$Co_{1-0}Ni_{0-1}Zr_2$	5.1-5.9-1.1-1.6		C16		1377
$Co_{0.94}Rh_{0.06}U_6$	~2.0				1181
$Co Sc_2$			C16	0.07	1377
$Co Sc_{0.125}Zr_{1.875}$	2.89		C16		1372
$Co Sn_2$			C16	0.07	1377
$Co_{0.02}Sn_{0.98}Ta_3$	4.1	HF			1362
$Co Ta_2$	0.82		C16		1377
$Co Ta_{1.75}Zr_{0.25}$	0.90		C16		1377
$Co U$	~1.5				1181
$Co U_6$	~2.2				1181
$Co Zr_2$	5.0		C16		1355
$Co Zr_2$	5.0		C16		1377
$Cr_{0-0.6}HF V_{2-1.4}$	9.2-9.9-9.4				1323
$Cr_xO_yPb_{1-x-y}$ (500-700A)	7.2-2.4				1053v
$Cr_{0-0.008}Pb_{1-0.992}$ (500-700A)	7.2-~3				1053v
$Cr_xPd_{1-x}Sb$	1.66-<0.1				1296
$Cr_{0.62-0.77}Re_{0.38-0.23}$	4.10-1.3				1096#
$Cr_{0.38}Re_{0.62}$	4.10 (3.37 Calorimetric)				1096#
$Cr_{0.05}Rh_{0.04}Ti_{0.91}$	3.75				1060
$Cr_{0.103-0.244}Ti_{0.897-0.756}$	3.85-4.45-3.6		Cub		1289
$Cr_{0.15}Ti_{0.85}$	Various vs Anneals				1290
Cs_xO_3W					1080

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Cr _{0-0.5} V _{2-1.5} Zr	8.5-8.7-8.2				1323
Cr _x Zn _{1-x}	0.85-<0.037	HF			1322
Cs _x F _{x+y} Li _y O _{3-x-y} W	3.4-2.0	HF			1242
Cs _x F _x O _{3-x} W	4.5-1.4	HF			1242
Cs _x O ₃ W					1080
Cu					1055
Cr Ge (Deposited ~4K)	1.8-3.3-1.8				1179▽
Cu _{0.5} Ge _{0.5} (Deposited ~4K)	3.3				1179▽
Cu _{.38-.70} Ge _{.62-.30} (200-600K)	1.8-3.3-2.0				1082▽
Cu ₄ K S ₃	1.4		Tet		1374
Cu _{1.5} Mo _{4.5} S ₆	10.9-10.8		Rhomb		1163
Cu ₃ Na ₂ S ₃	0.3				1374
Cu _{1-x} Ni _x Zr ₂	1.7 (Max.)		C16(x ≥ 0.6)		1377
Cu _{0.1} Pb _{0.9} (Deposited 2K)	6.5				1218▽
Cu ₄ Rb S ₃			Tet	0.05	1374
Cu _{0.05} Rh _{0.04} Ti _{0.91}	2.5				1060
Cu S	1.651 ± 0.005				1354
Cu S ₂	1.56		C2		1130
Cu _{0.1} Sn _{0.9} (Deposited 2K)	6.8				1218▽
Cu Th ₂	3.44		C16		1377
D _{3.61} Th	~2-8.35				1187
Eu _{0.012} La _{0.988}	2.15				1324
F _{0.12} K _{0.1} Li _{0.02} O _{2.88} W	1.1				1242
F _x K _x O _{3-x} W	1.9-2.1-0.8				1242
F _{x+y} Li _y O _{3-x-y} Rb _x W	4.0-2.1	HF			1242
F _x O _{3-x} Rb _x W	3.7-0.9	HF			1242
Fe _{0-0.08} Ga ₄ Mo _{1-0.92}	8.0-<1				1295
Fe _{0-0.04} Ga ₄ Mo _{1-0.96}	8.0-4.2	HF			1295
Fe Ge ₂			C16	0.07	1377
Fe ₀₋₁ Ni ₀₋₁ Zr ₂	0.3-2.5-1.6		C16		1377
Fe _{0-.011} Pb _{1-.989} (500- 700A)	7.2-2.7				1053▽
Fe _{0.05} Rh _{0.04} Ti _{0.91}	3.9				1060
Fe Sn ₂			C16	0.07	1377

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Fe Sn (Superimposed)	3.15-1.5				1141∇
Fe U ₆					1152
Fe Zr ₂	0.17		C16		1377
Ga (Deposited 10K)	8.3				1229∇
Ga (P)	5.90				1263#
Ga					1267
Ga (Deposited 4.2K)	6.6				1327∇
Ga (Deposited 4.2K)	8.5				1327∇
Ga (Deposited Low Temp)	6.4-6.8, 7.4-8.2				1171∇
Ga (Condensed 1.5K; ~1000A)	8.56				1136∇
Ga (P)	6.4				1122∇
Ga (∇) (Supercooled)	6.9	950			1047
Ga (<100A)	6.72				1062∇
Ga (P) (GaII)	6.0	560			1046
Ga (δ) (Supercooled)	7.85	815			1048
Ga (∇)	7.9				1122∇
Ga _{1-x} Ge _x Nb ₃	16.05-12.2		A15		1072
Ga ₁₋₀ Ge ₀₋₁ V ₃	12-14-6.05		A15		1369
Ga _{0.8} Ge _{0.2} V ₃	13.6		A15		1073
Ga Hf ₂	0.21		C16		1377
Ga _{0.8} In _{0.2} V ₃	<12, 12.7 (annealed)		A15		1073
Ga _{0.03} Mg _{0.97}				0.013	1340
Ga ₄ Mn _{0-0.01} Mo _{1-0.99}	8-4.0	HF			1295
Ga ₄ Mn _{0-0.012} Mo _{1-0.988}	8-1				1295
Ga ₄ Mo	8.0	HF			1295
Ga ₄ Mo _{1-0.96} Nb _{0-0.04}	8.0	HF			1295
Ga ₄ Mo _{1-0.96} Nb _{0-0.04}	8.0-8.0				1295
Ga ₄ Mo _{1-0.96} Ru _{0-0.04}	8-7.7				1295
Ga _{0.19} Nb _{0.81}	13.3	HF			1339
Ga _{0.245} Nb _{0.755}	20.2	HF	A15		1339
Ga _{0.30} Nb _{0.70}	16.3	HF			1339
Ga _{0.32} Nb _{0.68}	20.2	HF			1339
Ga Nb ₃	15.5-12.1, 11.5-10.0				1164
Ga Nb ₃					1066
Ga _{0.37} Nb _{0.63}			Tet	6.0	1190

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$Ga_{0.32}Nb_{0.68}$	20.3		A15		1190
$Ga_{0.24}Nb_{0.76}$	20.3		A15		1190
$Ga_{0.215-0.32}Nb_{0.785-0.68}$	20.3-11.0				1190
$Ga_xNb_3Sn_{1-x}$ (annealed)	18.0-18.3-16.1		A15		1072
$Ga Nb_{2.4}V_{0.6}$	12.5, (13.0 annealed)		A15		1073
$Ga Nb_{1.5}V_{1.5}$			A15	12	1073
$Ga_{0.9}Si_{0.1}V_3$	13.7, (14.7 annealed)		A15		1073
$Ga_{0.8}Si_{0.2}V_3$ (annealed)	14.8		A15		1073
$Ga_{0-0.3}Si_{1-0.7}V_3$	16.95-12.0, 17.0-13.3		A15		1073, 1369
$Ga_{1-0}Sn_{0-1}V_3$	12-3.8		A15		1369
$Ga Th_2$			C16	0.06	1377
$Ga_{0.265}V_{0.74}$	15.4 annealed, 14.2 as cast		A15		1343
$Ga_{0.192}V_{0.81}$	9.40, (9.10 as cast)				1343
$Ga_{0.243}V_{0.76}$	15.2, (13.6 as cast)		A15		1343
$Ga V_3$	12.0		A15		1369
$Ga V_3$	14.6-12.3, 11.2-9.9				1164
$Ga V_3$	14.4	HF			1075
$Ga V_3$	13.65, (14.5 annealed)		A15		1073
Ga_3V					1066
$Ga Zr_2$	0.38		C16		1377
$Gd_xIn La_{3-x}$	8.5-2.7	HF			1125
$Gd_xIn La_{3-x}$			L1 ₂		1065
$Gd_{0-0.006}La_{1-0.994}$	4.5-2.3	HF			1265
$Gd_{0-0.007}La_{1-0.993}$	6-3.2				1358
$Gd_{0-0.005}La_{1-0.995}$	4.87-2.5				1358
$Gd_{0.08}La_{0.92}Sn_3$	4.3	HF			1329
$Gd_{0.067}La_{0.933}Sn_3$	4.6	HF			1329
$Gd_xLa_{1-x}Sn_3$	6.4-<1		L1 ₂		1131
$Gd_{0.002}Th_{0.998}$	0.714	73			1123
$Gd_{0.001}Th_{0.999}$	1.107	123			1123
Ge (115 kbar)	5.35				1068#
Ge Hf ₂			C16	0.05	1377
$Ge_xNb_3Sn_{1-x}$ (annealed)	18.0-18.1-13.2		A15		1072

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$Ge_{0.1}Si_{0.9}V_3$	14.4, (16.4 annealed)		A15		1073
$Ge_{1-0}Si_{0-1}V_3$	6.05-16.5 (Annealed)		A15		1369
$Ge_{1-0}Sn_{0-1}V_3$	6.05-3.8-<3.8		A15		1369
$GeTh_2$			C15	0.07	1377
GeV_3	6.05		A15		1369
GeV_3	5.9-6.2, 6.35-6.25				1164
$H_{0-0.147}Nb_{1-0.853}$	9.30-6.75		Cub		1208
H_xNb_3Sn	4.2-18.2+		A15		1077
$H_xNi_{0.05}Pd$	3-<1.5				1311
$H_xNi_{0.015}Pd$	5.5-<1.5				1311
$H_{0.73}Pd$				1.25	1311
$H_{0.81}Pd$	2.5-<1.5				1311
$H_{0.87}Pd$	4.3-1.7				1311
$H_{3.63}Th$	~2-8.35				1187
$H_{3.6-3.65}Th$	8.05-8.35	HF			1117
$H_{0.32}V_{0.68}$				4.2	1144
Hf (100-700A)				1.3	1273v
Hf_2Ir			$E9_3$	1.6	1299
$HfMo_{0-0.44}V_{2-1.56}$	9.2-9.3-8.8				1323
Hf N					1238
$Hf_{0-1}N Nb_{1-0}$	14.6-5.3	HF	B1		1203
$Hf_{0.1-0.5}Nb_{0.5}$ or 0.7		HF			1092
$HfNb_{0-0.5}V_{2-1.5}$	9.2-10-9.5				1323
$Hf_{0.36}Nb_{0.62}Zr_{0.02}$	7.75 (Quenched)				1334
$Hf_{0.36}Nb_{0.62}Zr_{0.02}$	8.1 (aged)				1334
Hf_2Ni	0.87		C16		1377
$HfRe_2$	5.2		C14		1149
Hf_2Rh	2.02		$E9_3$		1299
Hf_2Rh	1.98		$E9_3$		1058
$HfRh$	1.73				1058
$Hf_{0.99-0.80}Rh_{0.01-0.20}$	1.3-1.98 (annealed)				1058
$Hf_{0.99-0.80}Rh_{0.01-0.20}$	1.7-2.4-1.98 (quenched)				1058

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Hf _{0.05} Rh _{0.04} Ti _{0.91}	1.7				1060
Hf ₂ Si			C16	0.07	1377
Hf Ta _{0-0.5} V _{1-1.5}	9.2-9.4-9.0				1323
Hf Tc ₂	5.6		C14		1149
Hf V ₂	9.2				1323
Hf V _{2.3}	9.2		C15		1189
Hf V ₂		HF	C15		1189#
Hf ₁₋₀ V ₂ Zr ₀₋₁	9.2-10.05-8.5				1323
Hf _{0.5} V ₂ Zr _{0.5}	10.1		C15		1189#
Hg (HgBr ₂ added) _{0.12}	3.96-4.06-1.7				1083∇
Hg					1250#
Hg					1267
Hg (In asbestos)					1281
Hg (In asbestos)	4.3	HF			1284
Hg (In NaX Zeolite)					1285
Hg (∞)					1067
Hg In	T'_c (-0.07 + 0.03)				1090
Hg _{1-x} In _x	T'_c (-)				1097
Hg Mg ₂	0.48- <u>0.43</u> -0.37				1232
Hg ₂ Mg ₅			Complex	0.3	1232
Hg Mg ₃	0.16		DO ₁₈		1232
Hg ₃ Mg ₅	0.48- <u>0.44</u> -0.33		D8 ₈		1232
Hg Mg	1.39-1.34		B2		1232
Hg ₂ Mg	4.0-3.4		C11b		1232
Hg _{0-0.03} Pb _{1-0.97}	T'_c (-0.06)				1165
Hg _{0.8-0} Sn _{0.2-1}	4.5-5.1-3.7				1304
Hg _{0.1} Sn _{0.99}	3.646				1153
Hg _x Sn _y Tl					1108
Hg _x Tl _{1-x}					1108
Hg _x Tl _{1-x}	T'_c (-0.029)				1095
Hg _{1-x} Zn _x	T'_c (-)				1097
In	3.40	283			1140#
In	3.39	264			1074#
In (<100A)	4.13				1062∇

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
In (See Table 3)					
In (1000-100A)	3.5-3.9				1207v
In					1267
In		HF			1268v
In	3.50-3.05				1278v
In (150A particles)	3.7				1349
$In_{0-1}Hg_{1-0}$	3.2-4.6 (quenched) 3.15-4.17 (annealed)				1049
In La ₃	9.45				1137
In La ₃ (Quenched)	9.0				1065
In La ₃	9.2	HF			1125
In ₃ La			L1 ₂	1.0	1240
$In_{0-0.22}La_{1-0.78}Sn_3$	6.5-<1				1183
$In_{0.18}Mg_{0.82}$			Hex	0.013	1340#
$In_xNb_3Sn_{1-x}$ (x=0-0.33)	18-18.05-15.1		A15		1072
$In_{0.03-0.21}Pb_{0.97-0.79}$	7.15-6.90				1225
$In_{0.30-0.80}Pb_{0.70-0.20}$	6.78-5.53	815-610			1260
$In_{0.087}Pb_{0.913}$	7.035, 7.042				1269
$In_{1-0.9}Pb_{0-0.1}$	3.39-4.32	264-442			1074#
$In_{1-0.87}Pb_{0-0.13}$		280-565, HF			1029, 1269, 1074
$In_{0.96-0.90}Pb_{0.04-0.10}$		HF			1074
$In_{0.955}Pb_{0.045}$	3.69	HF			1140#
$In_{0.95}Pb_{0.05}$	3.73				1140#
$In_{0.945}Pb_{0.055}$	3.83				1140#
$In_{0.22}Pb_{0.57}Sn_{0.21}$		HF			1041
$In_{0-0.11}Pb_{1-0.89}$	T'_c (-0.2)				1133
$In_{0-0.028}Pb_{1-0.972}$	T'_c (-0.085)				1165
In_xPb_{1-x}	Data given				1126v
In Sb	~3.4	HF	Ortho		1129
In Sb (II)	2.0		Tet		1202
In Sb (III)	4.1 (37, 52 kbar)				1202
$In_{0.25}Sb_{0.75}$	4.1		Cub		1116
$In_{0-0.035}Sb_{0-0.035}Sn_{1-0.93}$	0.372-3.66-3.74				1050
$In_{0.2}Si_{0.8}V_3$	16.2, (16.8 annealed)		A15		1073

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
In _{0.017-0.075} Sn _{0.983-0.925}	3.620-4.885				1201
In _x Sn					1235v
In _{1-0.9} Sn _{0-0.1}					1258#
In _{0.06-0.01} Sn _{0.94-0.99}	3.645-3.625- 3.64	HF			1050
In _{1-x} Sn _x					1184#
In Th ₂			C16	0.07	1377
In ₁₋₀ Tl ₀₋₁	3.40-3.2-2.52- 3.64-2.33				1270v
In _{1-0.96} Tl _{0-0.04}	3.40-3.27		Tet		1155
In _{0.96-0.71} Tl _{0.04-0.29}	3.27-3.19		Tet		1155
In _{0.73-0.63} Tl _{0.27-0.37}		HF			1155
In _{0-0.45} Tl _{1-0.55} (quenched)	2.9-4.0-2.4				1156
In _{0.1-0.45} Tl _{0.90-0.55}	2.9-3.7-2.5				1156
In _x Tl _{1-x}					1108
Ir Mo (Disordered)	~1.85		A3		1039
Ir Mo	8.8		B19		1039
Ir _{1.15} Nb _{0.85}	4.6		Ortho		1299
Ir _{1.05} Nb _{0.95}	4.75		L1 _o		1299
Ir _{2.76} Nb Pt _{0.24}			L1 ₂	1.6	1299
Ir _{2.55} Nb Pt _{0.45}			Hex	1.6	1299
Ir _{0.45} Nb Pt _{2.55}			DO ₁₉	1.6	1299
Ir ₀₋₁ Re ₁₋₀ (Deposited 4.2K)	7.5-<1.7				1325v
Ir _{1-0.58} Rh _{0-0.42}	0.103-0.005		A1		1118
Ir _{0.05} Rh _{0.04} Ti _{0.91}	4.0				1060
Ir V			L1 _o	1.36	1299
Ir V			Ortho	1.6	1299
Ir ₃ V			L1 ₂	4.2	1299
K _{~0.9} Mo O ₃				1.3	1212
K _{~0.5} Mo O ₃	4.2		Tet		1212
K _{~0.3} O ₃ Re	3.6		Hex		1212
K _{~0.9} O ₃ Re				1.3	1212
K _x O ₃ W			Hex		1080
La (11,000-26,000K)	5.06-5.50				1255v
La		HF			1265

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
La (ε)	4.87				1358
La	6.0		Al		1361
La	4.82	1350			1365
La	6.00	1096	Al		1158#
La	6.0		Al		1182#
La (1% rare earths)	T _c ' (+0.2+3.4)				1143
La	4.9		Hex		1182#
La	4.87	798	Hex		1158#
La _{0.91-0.951} Lu _{0.09-0.049}	3.28,4.37				1255▽
La _{0.98} Lu _{0.02}	4.643	HF	Hex		1271
La _{0.98} Lu _{0.0115} Tb _{0.0085}	2.582	HF	Hex		1271
La _{0.98} Lu _{0.01} Tb _{0.01}	2.108	HF	Hex		1271
La Os ₂	5.9		C14		1375
La Os ₂	~ 9		C15		1376
La Pb ₃	4.05		L1 ₂		1240
La _{3-2.25} Pr _{0-0.75}	8.95-1.24		Cub		1154#
La ₃ S ₄	8.06		D7 ₃		1370#
La ₂ S ₃	(Five transitions vs. pressure, temperature)		Cub		1279
La S	0.84		B1		1370#
La S ₂			Cub	?	1370
La ₃₋₂ Se ₄₋₃ (n = 5.5-1 x 10 ²¹)	10-1		D7 ₃		1292
La Se	1.02		B1		1370#
La ₃ Se ₄	7.8		D7 ₃		1370#
La Si _{1.75}			Ortho	1.2	1353
La Si _{1.82}			C _c	1.2	1353
La Si ₂			Ortho	1.2	1353
La Si ₂	2.3		C _c		1353
La Sn ₃	6.45		L1 ₂		1240
La Sn ₃	6.41	Data given	L1 ₂		1329
La Sn ₃	≈ 6.4		L1 ₂		1131
La _{0.9} Sn ₃ Th _{0.1}	~7				1329
La _{0.92} Sn ₃ Tm _{0.08}	5.2	HF			1329
La _{0.84} Sn ₃ Tm _{0.16}	3.3	HF			1329
La Te	1.48		B1		1370 #

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
La ₃ Te ₄	5.3		D7 ₃		1370#
La ₀₋₁ Th ₁₋₀	1.28-6.0		Cub		1361#
La ₀₋₁ Th ₁₋₀	1.28-6.0		Al		1182#
La Tl ₃	1.57		L1 ₂		1240
La ₃ Tl (ordered)	8.95		Cub		1154
La _{0.15} Y _{0.85}			Hex	0.1	1350#
La _{0.35} Y _{0.65}	0.4		Hex		1350#
La _{0.48} Y _{0.52}	1.0		α - Sm		1350#
La _{1-0.6} Y _{0-0.4}	4.9-1.3		α - La		1350#
La _{1-0.6} Y _{0-0.4}	4.9-1.3		Hex		1182#
La _{0.48} Y _{0.52}	1.0		(Like α-Sm)		1182#
La _{0.35} Y _{0.65}	0.4		A3		1182#
La _{0.15} Y _{0.85}			A3	0.1	1182#
La _{2.4} Y _{0.6} S ₄	4.77		D7 ₃		1370#
La _{2.4} Y _{0.6} Se ₄	3.92		D7 ₃		1370#
La _{2.4} Y _{0.6} Te ₄			D7 ₃	1.7	1370#
Li S				1.0	1191
Li Ti				1.0	1191
Li _{1.0-1.5} S Ti	2.0 (incomplete)				1191
Li _{0.5-1.0} S ₂ Ti _{1.1}			Tet	1.12	1191
Li _{0.1-0.3} S ₂ Ti _{1.1}	10-13		Hex		1191
Li _{1.33-0.8} Ti _{1.67-2.2} O ₄	1.5-13.7		H1 ₁		1305
Lu S	0.8-1.1		B1		1219
Lu Se	0.44-0.56		B1		1219
Lu Te			B1	0.35	1219
Mg					1166#
Mg	(Predicts T _c = 0.012)				1213#
Mg				0.017	1214
Mg				0.014	1233
Mg			A3	0.004	1340#
Mg _{0.9} Mo _{5.1} S ₆	2.5-2.4		Rhomb		1163
Mg _{0.93} Pb _{0.07}				0.013	1340
Mg _{0.97} Sn _{0.03}				0.013	1340

Material	T _c (K)	H ₀ (oersteds)	Crystal Structure	T _n	Ref
Mg _{0.85} Tl _{0.15}				0.013	1340
Mg _{0.97} Zn _{0.03}				0.013	1340
Mn _x O _x Pb _{1-x} (500-700A)	7.2-1.9				1053▽
Mn _x Pb _{1-x}	(T _c decreases)				1054▽
Mn _x Pb _{1-x}					1085▽
Mn _x Pd _{1-x} Sb	1.66-<0.1				1296
Mn _{0.05} Rh _{0.04} Ti _{0.91}	2.4				1060
Mn Sn ₂			C16	0.07	1377
Mn _x Sn _{1-x}					1085▽
Mn _y Sn _{0.97} Te	0.187-<0.040				1246
Mn U ₆					1152
Mn _x Zn _{1-x}	0.85-0.12	HF			1322
Mo					1267
Mo (>6000-21,000A)	3.3-3.8				1274▽
Mo	0.899,0.906	98			1159
Mo Na _{~0.9} O ₃				1.3	1212
Mo Nb		Data given			1298
Mo Nb (Pressure Study)					1081
Mo _{0.15} Nb _{0.85}	5.30	Data given			1298
Mo _{0.2} Nb _{0.8}	4.24	Data given			1298
Mo _{0.1} Nb _{0.9}	6.38	Data given			1298
Mo _{0.05} Nb _{0.95}	7.84	Data given			1298
Mo ₀₋₁ Nb ₁₋₀ (Deposited 4.2K)	6-9				1325▽
Mo _{0.05} Nb _{0.95}	8.0				1157#
Mo _{~0.2} Nb _{~0.8}	4.22	HF			1103
Mo _{~0.15} Nb _{~0.85}	5.30	HF			1103
Mo _{~0.1} Nb _{~0.9}	6.38	HF			1103
Mo _{~0.05} Nb _{~0.95}	7.84	HF			1103
Mo ₆ Pb _{0.92} S _{7.5}	15.2		Rhomb		1309
Mo _{5.1} Pb _{0.9} S ₆	13.2-12.5		Rhomb		1163
Mo _{3.4} Pt _{0.6}	8.8		A15		1231
Mo _{0-0.01} Re _{1-0.999}	1.69-1.70				1257
Mo _{0.38} Re _{0.62} (5000-190,000A)	~9-15				1320▽

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Mo ₁₋₀ Re ₀₋₁ (Deposited 4.2K)	9-9.5-7.5				1325▽
Mo _{0.66} Re _{0.34}	11.8	HF			1331#
Mo _{0.52} Re _{0.48} (annealed)		HF			1151
Mo _{0.52} Re _{0.48}		HF			1151
Mo ₁₋₀ Ru ₀₋₁ (Deposited 4.2K)	9-9.5-<1.7				1325▽
Mo ₃ S Se ₃	3.4		Rhomb		1309
Mo ₃ S ₂ Se ₂	3.3		Rhomb		1309
Mo ₃ Se ₄	6.3		Rhomb		1309
Mo ₅ S ₆ Sn	11.3-10.9		Rhomb		1163
Mo ₅ S ₆ Sn	10.9				1193#
Mo ₅ S ₆ Zn	3.0-2.7		Rhomb		1163
Mo _{0.1} Ti _{0.9}					1188#
Mo _{0.05} Rh _{0.04} Ti _{0.91}	3.3				1060
Mo _{0.6} Ru _{0.4}	8.7		Hex		1033
Mo _{0.15} U _{0.85}					1152
Mo _{0.16-0.20} U _{0.84-0.20}	2.113-2.133				1252
Mo _{0-0.5} V _{2-1.5} Zr	8.5-9.1-8.4				1323
N Hf ₀₋₁ Nb ₁₋₀					1238
N Nb	16		Cub		1196
N _{0-.186} Nb _{1-.814}	9.30-8.58		Cub		1208
N Nb		HF			1234
N Nb	2-15.75				1275▽
N Nb	~15	HF	B1		1038
N Nb	16.17-15.48				1107
N Nb	15.95				1079
N Nb	15.0	HF			1044
N _{0.93} Nb (Diffusion wires)	16.5				1070
N _{0.93} Nb		HF			1070
N _{0.85-1.04} Nb	14.3-16.5-15.7				1070
N Nb (2400A)	14.7	HF			1174▽
N Nb	17.3,15.25	HF			1175▽
N _{0.998} Nb _{0.002}	17.2-17.3				1234

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
N _{0.91} Nb _{1-0.75} Ta _{0-0.25}	16.5-11.3		Cub		1070
N Nb ₁₋₀ Ti ₀₋₁	14.6-16.5-4.4	HF	B1		1203
N Nb _{~0.5} Ti _{~0.5}	~15.5	HF			1044
N _{0.85-0.95} Nb _{1-0.12} Ti _{0-0.88}	16.2-17.8-10.5		Cub		1070
N Nb _{0.7} Ti _{0.3-x} Zr _x	17-12.5				1238
N Nb ₁₋₀ Ti ₀₋₁					1238
N _x Nb _y Ti _{1-x-y}	15.5-~17-5	HF			1344▽
N _{0.92-0.7-0.93} Nb _{1-0.34} / Zr _{0-0.66}	16.4-10.5		Cub		1070
N Nb ₁₋₀ V ₀₋₁	14.6-2-8		B1		1203
N Nb ₁₋₀ V ₀₋₁					1238
N Nb ₁₋₀ Zr ₀₋₁					1238
N _x Nb _y Zr _{1-x-y}	~15-9	HF			1344▽
N Ti					1238
N V					1238
N Zr					1238
Na _{~0.9} O ₃ Re			Tet	1.3	1212
Na _x O ₃ W	0.55				1080
Na _{0.084} Pb _{0.916}		HF			1312
Na _{0.07} Pb _{0.93}		550, HF			1312
Nb					1197
Nb(4,000-12,000A)	8.20 + .05 8.97, 9.16, 9.81				1199▽
Nb (1500-2000A)	8.2-10.1				1206▽
Nb	9.30		A2		1208
Nb	9.21				1209
Nb					1248
Nb (100-1000A)	7.5-9.3				1293▽
Nb					1326 #
Nb (0-2000A)	9.6-6				1328▽
Nb (Deposited 700)	9.3				1345▽
Nb (Deformed)					1347
Nb		HF			1316

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Nb	9.25	HF			1211
Nb	9.20	HF			1298
Nb (440-1050A)	7.02-8.6	HF			1251v
Nb	9.21	HF			1237
Nb	9.21	HF			1300
Nb	9.23	HF			1359
Nb	9.20	HF			1099#
Nb		HF			1142
Nb		HF			1135
Nb	9.25				1157#
Nb	8.68	HF			1087#
Nb	9.2		A2		1147
Nb _{1-0.875} O _{0-0.125}	9.30-7.85		Cub		1208
Nb Os _{0.42} Pt _{2.58}			DO ₁₉	1.6	1299
Nb Pt			B19	1.39	1299
Nb Pt ₂			Ortho	1.46	1299
Nb Pt _{1.8} Ru _{1.2}			Hex	1.6	1299
Nb Pt _{2.58} Ru _{0.42}			DO ₁₉	1.6	1299
Nb _{0.65} Pt ₃ Zr _{0.35}			DO ₁₉	1.6	1299
Nb _{0.45} Pt ₃ Zr _{2.55}			Hex	1.6	1299
Nb Rh ₃			L1 ₂	1.43	1299
Nb _{1.3} Rh _{2.7}			Hex		1299
Nb _{0.75} Rh _{1.25}	2.7		Mono		1299
Nb _{0.85} Rh _{1.15}	3.00		B19		1299
Nb _{0.9} Rh _{1.1}	3.07		Ortho		1299
Nb _{0.96} Rh _{1.04}	3.76		L1 ₀		1299
Nb _{0.05} Rh _{0.04} Ti _{0.91}	2.4				1060
Nb S ₂ (See Table 3)		HF			
Nb S ₂	6.0		Hex		1192
Nb S ₃ Sn	2.75		Tet		1150#
Nb S ₂	5.9				1266
Nb ₃ Sb ₀₋₁ Sn ₁₋₀	18.2-<4.2				1236
Nb ₃ Sb _{0-0.3} Sn _{1-0.7}	18.2-15.8		A15		1236
Nb ₃ Sb _{0.3-0.8} Sn _{0.7-0.2}	15.8-<4.2		A15, s		1236
Nb ₃ Sb _{0.8-0} Sn _{0.2-1}			A15	4.2	1236
Nb Se ₂	7.0	HF			1262
Nb Se ₂	7.1				1266
Nb Se ₂ (0-60 kbar)	6.4-8.8		Hex		1283
Nb Se ₂ (60-100 kbar)	8.9-8.4				1283

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Nb Se ₂	6.95				1317
Nb Se ₂ (0-17 kbar)	6.9-8.5				1321
Nb Se ₂	6.8		Hex		1094
Nb _{0.317-0.343} Se _{0.683-0.657}	7.0-6.8, 6.8-4.1, 6.8-2.2		Hex		1094
Nb Se ₃ Sn	3.02		Tet		1150#
Nb ₆ Sn ₅	<2.8				1210
Nb ₃ Sn	18.2		A15		1236
Nb ₃ Sn (See Table 3)		HF			
Nb ₃ Sn	18.25-17.7, 13.9-11.8				1164
Nb _{0.9-0.6} Sn _{0.1-0.4}	17.9 (maximum)				1066
Nb _{0.75-0.84} Sn _{0.25-0.16}					1093
Nb Sn ₃			Tet		1063
Nb ₃ Sn (Pressure Study)	18.02				1079
Nb ₃ Sn	18.0	HF			1075
Nb ₃ Sn			A15		1239
Nb ₃ Sn	18.0	5350	A15		1253#
Nb ₃ Sn	17.83		A15		1346#
Nb _{0.75} Sn _{0.25}	18.2				1064
Nb _{0.8} Sn _{0.2}	16.7				1064
Nb _x Sn _{1-x}					1059
Nb _x Sn _{1-x}					1056
Nb ₃ Sn					1051
Nb ₃ Sn					1040#
Nb ₃ Sn		HF			1034
Nb _{0.75-0.82} Sn _{0.25-0.18}	18.31-8.2 (vapor deposited)	HF	A15		1167
Nb _(1-x) Sn ₃ Ta _{3x}	17.9-18.1-14.3				1066
Nb _(1-x) Sn ₃ Ti _{3x}	17.9 (maximum)				1066
Nb _(1-x) Sn ₃ V _{3x}	17.9 (maximum)				1066
Nb _(1-x) Sn ₃ Zr _{3x}	17.9 (maximum)				1066
Nb _{~0.2} Ta _{~0.8}	4.64	HF			1103
Nb _{~0.05} Ta _{~0.95}	4.55	HF			1103

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Nb ₁₋₀ Ta ₀₋₁	9.18-4.33	150-61.2 ($\frac{10^3 \text{ Amp}}{\text{m}}$)			1307#
Nb _{0-0.16} Ta _{1-0.84}	4.480-4.465-4.670	795,882, HF			1356
Nb _{0.016} Ta _{0.984}		HF			1356
Nb _{0.025} Ta _{0.975}	4.465	800, HF			1356
Nb _{0.04} Ta _{0.96}	4.47	817, HF			1356
Nb _{0.05} Ta _{0.95}		HF			1330
Nb _{0.08} Ta _{0.92}	4.540	882, HF			1356
Nb _{0.16} Ta _{0.84}		HF			1356
Nb _{0.97} Tc _{0.03}	7.6				1147
Nb _{0.93} Tc _{0.07}	7.0		A2		1147
Nb _{0.69} Tc _{0.31}			A2	2.0	1147
Nb _{0.42} Tc _{0.58}	10.9		A12, A2		1147
Nb _{0.24} Tc _{0.76}	12.9		A12		1147
Nb _{0.06} Tc _{0.94}			A3		1147
Nb _{0.03} Tc _{0.97}	12.8		A3		1147
Nb _{0.05} Ti _{0.95}	9.38	HF			1216
Nb _{0.75} Ti _{0.25}	9.93	HF			1241
Nb _{0.75} Ti _{0.25}	9.8	HF			1371#
Nb _{0.9} Ti _{0.1}	9.2	HF			1371#
Nb _{0.90} Ti _{0.10}	9.61	HF			1241
Nb _{0.95} Ti _{0.05}	9.41	HF			1241
Nb _{0.95} Ti _{0.05}	9.2	HF			1371#
Nb _x Ti _{1-x}	9-10.3-~5				1344v
Nb _{0.15} Ti _{0.40} Zr _{0.45}		HF		(A 2)	1205
Nb _{0.18-0.22} U _{0.82-0.78}	2.009-2.025			(A 2)	1252
Nb ₁₋₀ V ₀₋₁	5.17-4.03-9.18	106.3-76.2-150 ($\frac{10^3 \text{ Amp}}{\text{m}}$)			1307#
Nb _{0-0.5} V _{2-1.5} Zr	8.5-9.7-9.2				1323
Nb Zr (3000-4000A)	1.6-9.3	HF			1275v
Nb Zr (Pressure study)	10.75	HF			1301
Nb _{0.68} Zr _{0.32}	10.55 (10.05 before draw down)				1313
Nb ₀₋₁ Zr ₁₋₀ (Deposited 4.2K)	3-6				1325v
Nb _{0.38} Zr _{0.62}	8.7				1157#
Nb _{0.75} Zr _{0.25}	11.0				1157#
Nb Zr					1081

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Nb _{0.60} Zr _{0.40}	10.58-10.05-10.75				1333
Nb _x Zr _{1-x}	9-~11.5-6				1344▽
Nb _{0.85} Zr _{0.15}	10.8				1352#
Nb _{1-0.75} Zr _{0-0.25}	9.2-10.8-8.3				1352#
Ni _{0.05} Rh _{0.04} Ti _{0.91}	3.5				1060
Ni Ta ₂	0.90		C16		1377
Ni Zr ₂	1.6		C16		1355
Ni Zr ₂	1.58		C16		1377
O _(.1) Pb _{0.9} Si _(.1) (Dep. 4.2K)	6.5				1218▽
O ₃ Rb _x W	1.97-1.88		Hex		1080
O ₃ Rb _x W	6.40-6.14, 6.55-5.45, 2.74-2.36	HF			1080
O ₃ Rb _{0.26-0.33} W	1.6-2.0				1186
O ₂ Re				1.3	1212
O ₂ Re				1.3	1212
O _{1.24} Ti	2.0				1272
O _{0.85-1.25} Ti	<1.3-2.0				1272
O _{0.86-0.91} Ti				1.3	1272
Os _{0-0.08} Re _{1-0.92}	1.69-1.93-1.88				1257
Os ₁₅ Rh _{0.5}	0.09		Hex		1368
Os _{0.38-0.33} Rh _{0.62-0.67}	0.095-0.018		A1		1118
Os _{0.05} Rh _{0.04} Ti _{0.91}	3.5				1060
O ₃ Sr Ti (Pressure study)					1127
P _{0.4} S _{0.6} Y			B1	0.36	1219
Pb (~15-100's A)	~2-7.2				1259▽
Pb (Deposited at 2K)	7.2				1218▽
Pb					1250#
Pb					1267
Pb(900, 3300A)	7.26, 7.23	HF			1268▽
Pb		HF			1287
Pb (<100A)	7.22				1062▽
Pb (500-12,000A)		Data given			1124▽
Pb Mo ₆ S ₇	11.1				1193#
Pb Pd ₃			L1 ₂	0.10	1372
Pb ₂ Pd	3.01		C16		1377

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$Pb_2Pd_{0-1}Rh_{1-0}$	1.4-2.0-1.7-3.0		C16		1377
$Pb_{2-0}Pd_{1-0}Tl_{0-2}$	3.0-1.3		C16		1377
$Pb_{1.9}Rh$	1.32		C16		1377
$Pb_{1-0.99}Sb_{0-0.01}$	T'_c (+0.10)				1165
$Pb_{1-0.95}Sb_{0-0.05}$	T'_c (+0.62)				1133
$Pb_{0.01}Sn_{0.99}$	3.752				1153
$Pb_{1-0.97}Sn_{0-0.03}$	T'_c (+0.04)				1165
$Pb_{1-0.95}Sn_{0-0.05}$	T'_c (+0.07)				1133
Pb_3Sr	1.8		Tet		1245
$Pb Te$	>10 (Onset)				1341
$Pb_{0.73}Tl_{0.27}$	6.43	760, HF			1200
$Pb_{0.53-0.47}Tl_{0.47-0.53}$	5.637-5.312				1297
$Pb_{1-0}Tl_{0-1}$	~6.3-2.3-2.9-2.4				1348
$Pb_{1-0.98}Tl_{0-0.02}$	T'_c (-0.07)				1165
$Pb_{1-0.89}Tl_{0-0.11}$	T'_c (-0.28)				1133
Pb_xTl_{1-x}	Data given				1126 ^v
Pb_xTl_{1-x}	Data given				1108
$Pd_{0.5}Rh_{7.5}Zr_{16}$	9.85		C16		1372
$Pd Rh_7Zr_{16}$	8.56		C16		1372
$Pd_{0.05}Rh_{0.04}Ti_{0.91}$	3.7				1060
$Pd_{1.5}Ru_{1.5}Ta$			L1 ₂	0.10	1372
$Pd_{0.49-0.52}Sb_{0.51-0.48}$	1.66; 1.67-1.42				1296 #
$Pd Sb$ (with additions)					1296
$Pd Sb$	1.66				1296 #
$Pd_{0.165}Sb_{0.835}$	4.9		Cub		1116
Pd_4Th			L1 ₂	0.10	1372
$Pd Th_2$	0.75		C16		1377
$Pd Tl_2$	1.32		C16		1377
$Pt_{0.05}Rh_{0.04}Ti_{0.91}$	4.3				1060
Pt_2Ta			Ortho	1.6	1299
$Pt Tl_2$	1.58		C16		1377
Pt_3V			L1 ₂	0.07	1372
$Pt_{0.25}V_{0.75}$	2.91, (3.62 annealed)		A15		1177

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Pt _{0.21-0.33} V _{0.79-0.67}	2.41-2.91-0.199 (quenched) 3.45-3.62-0.208 (annealed)		A15		1177
Pt _{0.19-0.33} V _{0.81-0.67}	2.35-3.015-0.199 (quenched) 2.4-3.620-0.225 (annealed)		A15		1177
Re	1.69				1220
Re	1.700	211			1243 #
Re	1.70				1254
Re	1.695				1257
Re (125-4600A)	2.5-4.9 4.6-5.5				1274∇
Re _{0.05} Rh _{0.04} Ti _{0.91}	2.3				1060
Re _x Ta _{1-x} (Dep. 4.2K)	3.8-7				1325∇
Re ₁₋₀ Tc ₀₋₁	(1.699)-2.75-8.35		Hex		1303
Re ₂ Th	5.0		C14		1149
Re _{1-0.999} W _{0-0.01}	1.69-1.725				1257
Re ₀₋₁ W ₁₋₀ (Dep. 4.2K)	3.5-7.5				1325∇
Re ₂ Zr	6.4		C14		1149
Rh	0.0002 (Extrapolation)				1118
Rh _{1-0.55} Ru _{0-0.45} Se ₄	4.3-<0.05		C2		1185#
Rh _{0.55-0} Ru _{0.45-1} Se ₄				<0.05	1185
Rh _{0.04} Ru _{0.05} Ti _{0.91}	3.5				1060
Rh _{7.75} Ru _{0.25} Zr ₁₆	10.8		C16		1372
Rh _{7.5} Ru _{0.5} Zr ₁₆	10.6		C16		1372
Rh ₇ Ru Zr ₁₆	10.1		C16		1372
Rh _{0.04} Sc _{0.05} Ti _{0.91}	1.3				1060
Rh Sn ₂	0.60		C16		1377
Rh ₂ Ta			C37	1.39	1299
Rh _{0.04} Ta _{0.05} Ti _{0.91}	2.3				1060
Rh Ti ₂				1.2	1071
Rh _{0.91} Ti _{0.09}	2.0				1060
Rh _{0.1} Ti _{0.9}	4.0		Cub		1071#
Rh _{0.08} Ti _{0.92}	3.5		Cub		1071#
Rh _{0.06} Ti _{0.94}	2.6		Cub		1071#
Rh _{0.04} Ti _{0.96}	2.0				1060
Rh _{0.03} Ti _{0.97}	~1.0		Cub		1071#
Rh _{0.02} Ti _{0.98}	1.7		Hex		1071#

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Rh _{0.01} Ti _{0.99}	~0.9		Hex		1071#
Rh _{0-0.03} Ti _{1-0.97}	0.79-1.79-1.34				1109#
Rh _{.91} Ti _{.04} V _{.05}	2.9				1060
Rh _{.91} Ti _{.04} W _{.05}	3.4				1060
Rh _{.91} Ti _{.04} Y _{.05}	1.4				1060
Rh _{.91} Ti _{.04} Zr _{.05}	1.8				1060
Rh Zr ₂	11.1		C16		1377
Rh _{0.08} Zr _{0.92}	6.1				1061#
Rh _{0.03-0.08} Zr _{0.97-0.92}	3.1-6.1				1061#
Rh _{0.03} Zr _{0.97}	3.1				1061#
Rh _{0.01-0.025} Zr _{0.99-0.975}	2-4				1061#
Ru ₂ Sc	2.24		C14		1026
Ru _{0.49} V _{0.51}				0.4	1119
Ru _{0.452} V _{0.548}	4.0				1119
Ru _{0.40} V _{0.60}	≤ 1.0				1119
Ru ₂ Y	2.42		C14		1026
S Sc			B1	0.33	1219
S Se Ta	3.7	HF			1262
S _{0.8} Se _{1.2} Ta	3.9	HF			1262
S _{1.2} Se _{0.8} Ta	3.9	HF			1262
S ₃ Sn Ta	2.90		Tet		1150#
S ₂ Ta (See Table 3)					
S ₂ Ta	0.8, (1.0-1.8 after deintercalation)		Hex		1128
S ₂ Ta	~0.8		Hex		1192
S Ti				1.0	1191
S Y	1.3-1.9		B1		1219
Sb Te ₂ Tl			Rhomb	0.015	1139
Sb ₂ Ti			C16	0.07	1377
Sb ₂ V			C16	0.06	1377
Sc Se			B1	0.33	1219
Se Y	2.3-2.5		B1		1219
S ₃ Y ₃			Ortho	0.35	1370#
Si (120 kbar)	6.70				1068#

Material	T_c (K)	H_0 (oersteds) ¹	Crystal Structure	T_n	Ref
$Si_{1-0}Sn_{0-1}V_3$	16.5-<3.8-3.8		A15		1369
$Si Ta_{1.86}$			C16	0.10	1377
$Si V_3$	16.95 (17.0 annealed)		A15		1073
$Si_x V_{1-x}$					1059
$Si_{.25}V_{.75}$	17.0				1064
$Si V_3$	17.0-15.7, 10.4,8.9				1064
$Si V_3$					1217#
$Si_{0.205-0.245}V_{0.795-0.755}$	8.5-16		A15		1286
$Si V_3$	16.8, 16.1				1315#
$Si V_3$ (Pressure study)			A15, Tet		1342
$Si V_3$	16.5		A15		1369
SiV_3					1066
$Si_{\sim 3}V$	16.9		A15		1110
$Si V_3$	16.8, 16.9 (optical measurement)				1101
$Si V_3$	16.85				1079
$Si V_3$	16.9	HF			1075
$Si Zr_2$			C16	0.06	1377
Sn =(Deposited 2K)	4.5				1218v
Sn (Deposited 2K)	3.6				1218v
Sn (Ne, Xe)	4.5				1229v
Sn (~15-40A)	4.2-5:9-4.5				1259v
Sn					1267
Sn(Whiskers)(1% strain)	4.0(3.5,0 strain)	390(350)			1335
Sn(5400-10,400A)	3.88	HF			1268v
Sn	3.721				580
Sn	3.720				1153
Sn					1043
Sn (Sn S,Tl ₂ Se)					1069v
Sn (<100 A)	4.5				1062v
Sn Ta ₃	5.6	HF			1362
$Sn_{1-0.997}Tl_{0-0.003}$	T'_c (-0.052)				1032
$Sn_x Tl_{1-x}$					1108
$Sn V_3$	3.8		A15		1369

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref
Sr (99.5%)				0.017	1214
Ta (9000-1100A)	4.45, 4.51				1199v
Ta	4.48				1209
Ta					1230
Ta					1248
Ta (215-110,000A)	<1.7-4.25				1249v
Ta					1267
Ta _{1-0.3} Ti _{0-0.70}	4.48-8.8-7.2				1209
Ta _{0.68-0.46} Ti _{0.32-0.54}	8.02-8.26 (annealed) 8.28-9.05 (cold worked)				1209
Ta ₁₋₀ V ₀₋₁	4.33-2.73-5.17	61.2-45.6- 106.3(10 ³ Amp/m)			1307#
Ta _{0-0.5} V _{2-1.5} Zr	8.5-9.3-8.8				1323
Ta ₁₋₀ W ₀₋₁ (Dep. 4.2K)	1.6-3.5				1325v
Tc (99.75)	8.35				1336
Tc	7.73	1410, HF			1161#
Tc	7.78	HF			1138
Tc		HF			1180
Tc	7.9		A3		1147
Tc	7.46	HF			1180#
Tc	7.77				1161
Tc _{0.44} Th _{0.56}	5.3		C14		1149
Tc _{0.95} V _{0.05}	10.99	HF			1138
Tc _{0.90} V _{0.10}	11.32	HF			1138
Tc _{0.80} V _{0.20}	11.24	HF			1138
Tc _{0.75} V _{0.25}	11.24, ~7.6	HF			1138
Tc _{0.7} V _{0.3}	8.82	HF			1138
Tc _{0.70} V _{0.30}	6.41	HF			1138
Tc _{0.65} V _{0.35}	4.49	HF			1138
Tc _{0.6} V _{0.4}	4.17				1138
Tc _{0.5-0.2} V _{0.5-0.8}				1.39	1138
Tc _{0.1} V _{0.9}	1.50				1138
Tc _{0.15-1} W _{0.85-0}	3.3-10.4-8.35				1337
Tc ₂ Zr	7.6		C14		1149
Te				0.05	1277
Te (50 kbar)	3.4				1172
Te Y	1.5-2.05		B1		1219
Th					1267

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
Th	1.37	Data given			1291
Th	1.28		Al		1361#
Th	1.28		Al		1182#
Th	1.390	159.1			1123#
Th _{1-.997} U _{0-0.003}	1.37-0.5				1226
Th _{0.99925} U _{0.00075}	0.785				1227#
Th _{0.99866} U _{0.00134}					1227 #
Th _{0.4-0} Y _{0.6-1}			Hex	1.2	1361
Th _{1-0.65} Y _{0-0.35}	1.28-1.64-1.53		Cub		1361 #
Th _{1-0.65} Y _{0-0.35}	1.28-1.64-1.53		Al		1182#
Th _{0.4-0} Y _{0.6-1}			A3	1.2	1182#
Th ₂ Zn	0.67		C16		1377
Ti (100-7000A)				1.3	1273∇
Ti					1071#
Ti					1061#
Ti _{0.5} Zr _{0.5}	1.65				1061#
Tl (Ne, Xe)	2.6				1229∇
Tl					1267
Tl	1.75 (Extrapolation for assumed phase)	(Al)			1308
Tl	2.397	176			1378
Tl (F)	2.332	181			1378
Tl	3.0 (extrapolated)		(Al)		1156
Tl	2.49 (extrapolated)		(Al)		1155
Tl					1145
Tl (<100 A)	2.64				1062∇
Tl (S, TlCl, Tl ₂ Se)					1069∇
Tl _{1-0.7} Sb _{0-0.3}	2.905-~5.3-4.198	HF			1378
Tl _{0.9988} Zn _{0.0012}	T_c' (+~0.002)				1095
Tl _{1-x} Zn	Data given				1108
U	≈ 2.1 (Hypothetical γ phase)				1252
U					1152
V (5000, 11,000)	5.14, 6.02				1199∇
V	5.46				1248
V	5.43	1408, HF			1162
V		HF			1106
V _{0.06-0.09} Zr _{0.94-0.91}	7.0-<4.2				1306
V ₂ Zr	4.2				1306
V ₂ Zr	8.5		Ortho		1323

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref
$V_{2.3}Zr$	8.6		C15		1189
V_2Zr			C15		1189
W (O_2 content varies)	<1.0-3.2		A15		1042∇
Y			A3	0.08	1182#
Y			Hex	0.08	1350#
Y				0.08	1361#
Y				0.005	1367
$Y_{0.5-0}Zr_{0.5-1}$ (Dep. 4.2K)	1.5-3				1325∇
Yb			A1	1.0	1338#
Yb			A3	0.015	1338#
Zn					1256
Zn					1267
Zn (Deposited <2K)	0.31-1.48 (disordered) 0.77-0.84 (annealed)				1310∇
Zn					1061#
Zr					1061#
Zr (100-7000A)	~ 1.3 (>500A)				1273∇

TABLE 3. SUPERCONDUCTIVE MATERIALS WITH ORGANIC CONSTITUENTS

Material	T _c (K)	H _o (oersteds) ¹	Crystal Structure	T _n	Ref.
Al (tetracyanoquinodimethan) Codeposited	1.9-3.7 (annealed) 2.7-5.24 (unannealed)				1078v
In (anthraquinone) (~5000 A)	3.4-4.6				1076v
Nb S ₂ (ammonia)	2.0		Hex.		1192
NbS ₂ (aniline)	4.0		Hex.		1192
Nb ₃ Sn (carbon dioxide) (carbon monoxide) (methane) (nitrogen) (oxygen)		HF			1168
Nb S ₂ (s-collidine) _{0.17}	3.5		Hex.		1192
Nb ₃ Sn (ammonium) (boron trichloride) (ethane) (hydrogen sulfide) (nitrogen oxide) (propane)		HF			1169
Nb S ₂ (pyridine) _{0.5}	4.0		Hex.		1192
Nb S ₂ (tributylphosphine) _{0.125}	3.5		Hex.		1192
S SeTa (pyridine)	1.5	HF			1262
S ₂ Ta (2-aminopyridine) _{0.53}	3.25		Hex.		1128
S ₂ Ta (4-aminopyridine) _{0.51}	3.40		Hex.		1128
S ₂ Ta (ammonia)	4.2		Hex.		1192
S ₂ Ta (ammonia)	4.2		Hex.		1192
S ₂ Ta (ammonium acetate)	2.0		Hex.		1192
S ₂ Ta (ammonium hydroxide)	3.3		Hex.		1192
S ₂ Ta (amylamine)	2.2				1192
S ₂ Ta (aniline)	3.1		Hex.		1192
S ₂ Ta (aniline) _{0.75}	3.1		Hex.		1192
S ₂ Ta (butylamine)	2.5		Hex.		1192

Material	T_c (K)	H_o (oersteds) ¹	Crystal Structure	T_n	Ref.
S_2Ta (butyramide)	3.1		Hex.		1192
S_2Ta (cesium hydroxide)	3.8		Hex.		1192
S_2Ta (s-collidine) _{0.17}	2.0		Hex.		1192
S_2Ta (2,6-diaminopyridine) _{0.53}	3.50		Hex.		1128
S_2Ta (2-dimethylaminopyridine) _{0.32}	3.15		Hex.		1128
S_2Ta (4-dimethylamino-pyridine) _{0.34}	2.30		Hex.		1128
S_2Ta (N,N-dimethylaniline)	4.3		Hex.		1192
S_2Ta (2,6-dimethylpyridine) _{0.20}	2.15		Hex.		1128
S_2Ta (4,4'-dipyridyl)	2.5		Hex.		1192
S_2Ta (ethylamine)	3.3		Hex.		1192
S_2Ta (2-ethylpyridine) _{0.29}	3.0		Hex.		1128
S_2Ta (3-ethylpyridine) _{0.29}	4.50		Hex.		1128
S_2Ta (4-ethylpyridine) _{0.33}	2.95		Hex.		1128
S_2Ta (hexanamide)	3.1		Hex.		1192
S_2Ta (hydrazine)	4.7		Hex.		1192
S_2Ta (2-isopropylpyridine) _{0.25}	3.80		Hex.		1128
S_2Ta (4-isopropylpyridine) _{0.28}	2.82		Hex.		1128
S_2Ta (isoquinoline)	2.5		Hex.		1192
S_2Ta (lithium hydroxide)	4.5		Hex.		1192
S_2Ta (methylamine)	4.2		Hex.		1192
S_2Ta (2-methylpyridine) _{0.34}	2.95		Hex.		1128
S_2Ta (3-methylpyridine) _{0.33}	2.95		Hex.		1128
S_2Ta (4-methylpyridine) _{0.33}	2.70		Hex.		1128
S_2Ta (octadecylamine)	3.0		Hex.		1192
S_2Ta (pentadecylamine)	2.8		Hex.		1192
S_2Ta (p-phenylenediamine)	3.3		Hex.		1192
S_2Ta (p-phenylenediamine) _{0.25}	2.9		Hex.		1192

Material	T _c (K)	H ₀ (oersteds) ¹	Crystal Structure	T _n	Ref.
S ₂ Ta (2-phenylpyridine) _{0.255}	3.15		Hex.		1128
S ₂ Ta (4-phenylpyridine) _{0.26}	1.6		Hex.		1128
S ₂ Ta (potassium formate)	4.7		Hex.		1192
S ₂ Ta (potassium hydroxide)	5.3		Hex.		1192
S ₂ Ta (propylamine)	3.0		Hex.		1192
S ₂ Ta (4-propylpyridine) _{0.25}	2.75		Hex.		1128
S ₂ Ta (2-propylpyridine) _{0.245}	2.85		Hex.		1128
S ₂ Ta (pyridine) _{0.5}	3.5		Hex.		1192
S ₂ Ta (pyridine) _{0.5}	3.55		Hex		1128
S ₂ Ta (pyridine) _{0.5}	3.25	HF			1262
S ₂ Ta (pyridine-N-oxide)	2.5		Hex		1192
S ₂ Ta (pyridinium chloride)	3.1		Hex.		1192
S ₂ Ta (quinoline)	2.8		Hex.		1192
S ₂ Ta (rubidium hydroxide)	4.3		Hex.		1192
S ₂ Ta (septadecylamine)	2.7		Hex.		1192
S ₂ Ta (sodium hydroxide)	4.8		Hex.		1192
S ₂ Ta (stearamide)	3.1		Hex.		1192
S ₂ Ta (tetradecylamine)	2.4		Hex.		1192
S ₂ Ta (N, N', N', N'-tetramethyl-p-phenylenediamine)	2.9		Hex.		1192
S ₂ Ta (thiobenzamide)	3.3		Hex.		1192
S ₂ Ta (tributylamine)	3.0		Hex.		1192
S ₂ Ta (tributylphosphine) _{0.125}	2.0		Hex.		1192
S ₂ Ta (tridecylamine)	2.5		Hex.		1192
S ₂ Ta (2,4,6-trimethylpyridine) _{0.165}	1.95		Hex.		1128
S ₂ Ta (triton B)	5.0		Hex.		1192
S ₂ Ta (valeramide)	2.9		Hex.		1192
S ₂ Ta _{0.8} W _{0.2} (s-collidine) _{0.17}	2.0		Hex.		1192
S ₂ Ta _{0.3} W _{0.7} (s-collidine) _{0.17}				~ 0.4	1192
S ₂ Ti (ammonia)			Hex.	0.3	1192
S ₂ Ti (aniline)			Hex.	0.3	1192
S ₂ Ti (s-collidine) _{0.17}			Hex.	0.3	1192
S ₂ Ti (pyridine) _{0.5}			Hex.	0.3	1192
S ₂ Ti (tributylphosphine) _{0.125}			Hex.	0.3	1192
S ₂ Zr (ammonia)			Hex.	0.3	1192

TABLE 4. HIGH MAGNETIC FIELD (TYPE II) SUPERCONDUCTIVE MATERIALS AND SOME OF THEIR PROPERTIES

(Note: All fields are quoted in kilo-oersteds. T_{obs} indicates temperature of measurement in degrees Kelvin)

Material	T_c	H_{c1}	H_c	H_{c2}	H_{c3}	T_{obs}	Ref.
Al (<40-1000A)	3.74-<1.26			$I > 12$ " > 23		0 0	1294v
$\text{Al}_{0.5}\text{Ga}_{0.5}\text{Nb}_3$	19.0			310 316		4.2 0	1339
$\text{AlGd}_{0-0.009}\text{La}_{3-x}$	5.97-<1			27		0	1364
$\text{Al}_2\text{Gd}_{0-0.004}\text{La}_{1-0.996}$	3.20-1.52			3.2-0.45		0	1262
$\text{Al}_{0.16}\text{Ge}_{0.05}\text{Nb}_{0.79}$	20.7			410 439		0	1339
$\text{Al}_{0.8}\text{Ge}_{0.2}\text{Nb}_3$ (5000A.)	16.0			>210		4.2	1174v
Al Nb_3	18.1			Data given			1075
Al Nb_3	18.6			295 330		4.2 0	1339
Au V_3	<0.015-3.22			Data given			1160
$\text{Bi}_{0.0108}\text{In}_{0.9892}$ (2000A.)				Data given			1089v
$\text{Bi}_{0.0043}\text{In}_{0.9957}$ (2000A.)							1089v
$\text{Bi}_{0.56}\text{Pb}_{0.44}$ (Porous glass; 32A)				178 113		0 4.2	1045
$\text{Bi}_{0.4}\text{Pb}_{0.6}$ (Porous glass; 32A)				186 125		0	1045
$\text{Bi}_{0.3}\text{Pb}_{0.7}$ (Porous glass; 32A)				95		4.5	1045
$\text{Bi}_{25-63}\text{W}_{70}\text{Pb}_{75-37}\text{W}_{70}$				I_c vs H given			1102
$\text{Bi}_{0.3}\text{Pb}_{0.7}$	8.63			35		0	1318
$\text{Bi}_{0.4}\text{Pb}_{0.6}$ (porous glass)				110,96		4.2	1319
$\text{Bi}_{0-0.565}\text{Pb}_{1-0.435}$				0.6->16	0-<15	?	1288
$\text{Bi}_{0.6}\text{Sn}_{0.4}$ (metastable)	7.0			4.50		4.2	1091
$\text{Bi}_{0.5}\text{Sn}_{0.5}$ (metastable)	7.2			4.7		4.2	1091
$\text{Bi}_{0.4}\text{Sn}_{0.6}$ (metastable)	7.34			5.35		4.2	1091
$\text{Bi}_{0.005}\text{Sn}_{0.995}$ (2000A)				Data given			1089v
$\text{Bi Te}_2\text{Tl}$ ($n = 6 \times 10^{20}$)	0.14			0.010		0	1139

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
C _{~0.5} Mo _{~0.5}				52		4.2	1098
C Mo _{~2}				30		4.2	
				8 (after 1400°C, ½ hour)		4.2	
C ₀₋₁ N ₀₋₁ Nb				80-125-13		4.2	1038
C N Nb				67		4.2	1038
C Nb	>11°K			13		4.2	1038
C Nb				7		4.2	1244
				11 (annealed)		4.2	
C Ta	10			1.6		4.2	1244
				4.4 (annealed)			
Ce _{0-0.1} In La _{3-2.9}	9.45-<1			71-0		0	1228
Ce _{0-0.021} La _{1-0.979}	4.5-2.7			Data given			1265
Ce _{0-0.02} La _{1-0.98}	4.87-2.4	0.33- 0.14	0.80- 0.32	Data given		0	1358
Co _{0.02} Sn _{0.98} Ta ₃	4.1			Data given			1362
Cr _x Zn _{1-x}	0.85-<0.037			Data given			1322
Cs _x F _{x+y} Li _y O _{3-x-y} W	3.4-2.0			6.9-4.3		0	1242
Cs _x F _x O _{3-x} W	4.5-1.4(x=0.08- 0.30)			9.0-4.0		0	1242
F _{x+y} Li _y O _{3-x-y} Rb _x W	4.0-2.1			6.2-4.8		0	1242
F _x O _{3-x} Rb _x W	3.7-0.9(x=0.08- 0.30)			8-9.4-5.9		0	1242
Fe _{0-0.04} Ga ₄ Mo _{1-0.96}	8.0-4.2			74-37		0	1295
Ga ₄ Mn _{0-0.01} Mo _{1-0.99}	8-4.0			74-25		0	1295
Ga ₄ Mo	8.0			73.7		0	1295
Ga ₄ Mo _{1-0.96} Nb _{0-0.04}	8.0			74-78		0	1295
Ga _{0.19} Nb _{0.81}	13.3			133		4.2	1339
Ga _{0.245} Nb _{0.755}	20.2			341(calcula- ted)		0	1339
Ga _{0.30} Nb _{0.70}	16.3			199		4.2	1339
				220(calcula- ted)		0	
Ga _{0.32} Nb _{0.68}	20.2			336		4.2	1339

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
Ga V ₃	14.4			Data given			1075
Gd _x In La _{3-x}							
where x = 0.0064	8.5			52		2	1125
0.0148	7.9			40		2	
0.0340	6.8			14		2	
0.0396	6.0			5.4-7.4-0 (vs. T _{obs})			
0.0496	5.0			2.8-3.6-0			
0.0596	4.3			1.7-2.1-0			
0.0640	3.4			1.0-1.05-0			
0.0732	2.7			0.6		0.3	
Gd _{0-0.006} La _{1-0.994}	4.5-2.3			Data given			1265
Gd _{0.08} La _{0.92} Sn ₃	4.3			0.60		0	1329
Gd _{0.067} La _{0.933} Sn ₃	4.6			0.70		0	1329
Hf _{0.1} Nb ₁₋₀	14.6-5.3			135-10		4.2	1203
H _{3.6-3.65} Th	8.05-8.35			25-30		1.1	1117
Hf _{0.1-0.5} Nb _{0.5} or 0.7Ti _{0.06-0.30} Zr _{0.06-0.30}				Data given			1092
Hf V ₂				200		4.2	1189
Hf _{0.5} V ₂ Zr _{0.5}	10.1			~230		4.2	1189
Hg (in asbestos)	4.3			30->70		0	1284
In				Data given			1268
In La ₃	9.2			61		2	1125
In _{1-0.87} Pb _{0-0.13}			280-565	Data Given			1029
In _{0.96-0.90} Pb _{0.04-0.10}		0.11-0.10	0.10-0.18	0.11-0.39	0.23-0.77	T/T _c =0.8	1074
In _{0.955} Pb _{0.045}	3.69	0.311	0.353	0.431		0	1140
In _{0.95} Pb _{0.05}	3.73	0.318	0.375	0.492		0	1140
In _{0.945} Pb _{0.055}	3.83	0.303	0.386	0.602		0	1140
In _{0.22} Pb _{0.57} Sn _{0.21}				4.8		2.0	1041
In Sb	~3.4			Data given			1129

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
In _{0.06-0.01} Sn _{0.94-0.99}	3.645-3.625- 3.64			Data given			1050
In _{0.73-0.63} Tl _{0.27-0.37}				0.275-0.350		2.15	1055
La				8-10.8		1.4	1265
La _{0.98} Lu _{0.02}	4.643				11.5	0	1271
La _{0.98} Lu _{0.0115} Tb _{0.0085}	2.582				1.38	0	1271
La _{0.98} Lu _{0.01} Tb _{0.01}	2.108				0.82	0	1271
La _{0.92} Sn ₃ Tm _{0.08}	5.2			Data given			1329
La _{0.84} Sn ₃ Tm _{0.16}	3.3			Data given			1329
Mn _x Zn _{1-x}	0.85-0.12			Data given			1322
Mo _{~0.2} Nb _{~0.8}	4.22	0.15	0.50	2.99		2.39	1103
Mo _{~0.15} Nb _{~0.85}	5.30	0.16	0.46	2.47		3.77	1103
Mo _{~0.1} Nb _{~0.9}	6.38	0.29	0.785	4.14		3.78	1103
Mo _{~0.05} Nb _{~0.95}	7.84	0.49	1.07	4.265		4.17	1103
Mo _{0.52} Re _{0.48} (Annealed)		0.613		16.2		1.16	1151
(Unannealed)		0.836		20.1		5.40 1.94	
Mo _{0.66} Re _{0.34}	11.8	0.381		11.34		4.2	1331
N Nb (with O ₂)				118-132		4.2	1234
NNb	15.0			~250		0	1044
N _{0.93} Nb		0.008				15.8	1070
N Nb (2400A)	14.7			>250		4.2	1174▽
N Nb. (Reactive sputtering)	17.3			~200		4.2	1175▽
N Nb _{~0.5} Ti _{~0.5}	~15.5			~250		0	1044
N Nb ₁₋₀ Ti ₋₁	14.6-16.5-4.4			135-145-5		4.2	1203
N _x Nb _y Ti _{1-x-y}	15.5-~17-5			<200		4.2	1344▽
N _x Nb _y Zr _{1-x-y}	~15-9			~200			1344▽
Na _{0.084} Pb _{0.916}				Data Given			1312

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
Nb				Data given			1316
Nb (RRR 16,500)	9.25			H _{c3} /H _{c2} given			1211
Nb	9.20			Data given			1298
Nb (440,1050A)	7.02-8.6	0.011-19		20-32			1251
Nb(RRR 100-830)	9.21			2.77-3.8 (vs purity and orientation)		4.2	1237
Nb(RRR 100)	9.21			3.92-4.16 (vs orientation)		1.5	1300
Nb (RRR ~1000)	9.23			4.035		0	1359
Nb				// [111] ,4.44		0	1142
				// [110] ,4.17		0	
				// [001] ,4.02		0	
Nb	8.68			~8			1087, 1135
Nb	9.20	1.85		3.9		0	1099
Nb S ₂ (See Table 3, V-1)							
Nb Se ₂	7.0			⊥ 22,20		4.2	1262
				// 74,71		4.2	
Nb ₃ Sn (See Table 3, V-1)							
Nb ₃ Sn	18.0			Data given			1075, 1034
Nb _{0.75-0.82} Sn _{0.25-0.18} (Vapor deposit)	18.31-8.2			225		4.2	1167
Nb _{~0.2} Ta _{~0.8}	4.64	0.1				4.19	1103
Nb _{~0.05} Ta _{~0.95}	4.55	0.08				4.19	1103
Nb _{0-0.16} Ta _{1-0.84}	4.480-4.465-4.670	Data Given	0.795-0.882	Data Given			1356
Nb _{0.016} Ta _{0.984}				0.847		0	1356
Nb _{0.025} Ta _{0.975}	4.465	0.773	0.800	0.99		0	1356
Nb _{0.04} Ta _{0.96}	4.470	0.772	0.817	1.17		0	1356
Nb _{0.05} Ta _{0.95} (deformed)					0.23-0.39	4.19	1330
Nb _{0.08} Ta _{0.92}	4.540	0.768	0.882	1.78		0	1356
Nb _{0.16} Ta _{0.84}				2.98		0	1356
Nb _{0.05} Ti _{0.95}	9.38			19.1		0	1216

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
Nb _{0.75} Ti _{0.25}	9.93	0.35		90.5		0	1241
Nb _{0.75} Ti _{0.25}	9.8			100 73		0 4.2	1371
Nb _{0.9} Ti _{0.1}	9.2			37 36		0 4.2	1371
Nb _{0.90} Ti _{0.10}	9.61	0.50		35		0	1241
Nb _{0.95} Ti _{0.05}	9.41	0.675		18		0	1241
Nb _{0.95} Ti _{0.05}	9.2			19.5 16.5		0 4.2	1371
Nb _{0.15} Ti _{0.40} Zr _{0.45}				I _c data given			1205
Nb Zr (3000-4000 A)	1.6-9.3			I _c data given			1275
Nb Zr	10.75			H _{c2} changes with P			1301
O ₃ Rb _x W	6.40-6.14 6.55-5.45 2.84-2.36			Data given		4.19	1080
Pb (900-3300 A)	7.26			Data given			1268▽
Pb					Data given		1287
S Se Ta	3.7			⊥ 9,11 // 54,74		2.2 2.2	1262
S _{0.8} Se _{1.2} Ta	3.9			⊥ 10.4 ⊥ 6.7 // 45		2.34 2.9 2.9	1262
S _{1.2} Se _{0.8} Ta	3.9			⊥ 12,13 // 75,92		2.34 2.34	1262
S Se Ta (Pyridine)	1.5			⊥ 2.6 // 19.1		1.1 1.1	1262
S ₂ Ta (Pyridine) _{0.5}	3.25			⊥ 4.9 ⊥ 1.4 // >150 // > 66		1.4 2.0 1.4 2.0	1262
Sn (5400, 10,400 A)	3.88-3.90			Data given			1268▽
Sn Ta ₃	5.6			Data given			1362

Material	T _c	H _{c1}	H _c	H _{c2}	H _{c3}	T _{obs}	Ref.
Si V ₃	16.9			Data given			1075
Tc		1.02	1.55	4.17		0	1180
Tc (<10 $\bar{1}0$ >sample)	7.46	1.16	1.55	3.12		0	1180
Tc	7.78			2.33		0	1138
Tc	7.73		1.41	2.46		0	1161
Tc _{0.95} V _{0.05}	10.99			35.5		0	1138
Tc _{0.90} V _{0.10}	11.32			43.3		0	1138
Tc _{0.80} V _{0.20}	11.24			42.3		0	1138
Tc _{0.75} V _{0.25} (Lower annealing temp.)	11.07			23.7		0	1138
Tc _{0.75} V _{0.25}	11.24			34.8		0	1138
Tc _{0.7} V _{0.3} (Lower annealing temp.)	8.82			14.0		0	1138
Tc _{0.7} V _{0.3}	6.41			31.7		0	1138
Tc _{0.65} V _{0.35}	4.49			21.4		0	1138
Tl _{1-0.7} Sb _{0-0.3}	2.905--5.3- 4.198	0.18-0.46- 0.29		0.86--7.3- 3.9		0	1378
V	5.43		1.408	2.68		0	1162, 1106
V ₂ Zr				103		4.2	1189

BIBLIOGRAPHY

1029. Trojnar, E., Makiej, B. and Sikora, A., Acta Phys. Polon. 34, 311 (1968).
1032. Sulkowski, C. and Mazur, J., Acta Phys. Polon. A38, 761 (1970).
1033. Moss, M., Smith, D. L., and Lefever, R. A., Appl. Phys. Letters 5, 120 (1964).
1034. Montgomery, D. B. and Sampson, W., Appl. Phys. Letters 6, 108 (1965).
1035. Piper, J., Appl. Phys. Letters 6, 183 (1965).
1036. Willens, R. H. and Buehler, E.
1037. Geballe, T. H. and Hull, G. W., Jr., Quoted in Reference 1036.
1038. Pessall, N., Jones, C. K., Johansen, H. A. and Hulm, J. K., Appl. Phys. Letters 7, 38 (1965).
1039. Sadagopan, E. R., Pollard, E. R., Giessen, B. C. and Gatos, H. C., Appl. Phys. Letters 7, 72 (1965).
1040. Hancox, R., Appl. Phys. Letters 7, 138 (1965).
1041. Livingston, J. D., Appl. Phys. Letters 8, 319 (1966).
1042. ▽ Basavaiah, S. and Pollack, S. R., Appl. Phys. Letters 12, 259 (1968).
1043. Reich, R. and Renucci, L., C. R. Acad. Sc. (Paris) 260, 545; 1178, 1408 (1965).
1044. Gavaler, J. R., Deis, D. W., Hulm, J. K. and Jones, C. K., Appl. Phys. Letters 15, 329 (1969).
1045. Watson, J.H.P., Appl. Phys. Letters 16, 428 (1970).
1046. Bosio, L., Defrain, A., Keyston, J. and Vallier, J., C. R. Acad. Sc. (Paris) 261, 5431 (1965).
1047. Bosio, L., Cortes, R., Defrain, A., and Epelboin, I., C. R. Acad. Sci. (Paris) 264B, 1592 (1967).
1048. Bosio, L., Cortes, R., Defrain, A. and Epelboin, I., C. R. Acad. Sc. (Paris) 268B, 1314 (1969).
1049. Merriam, M. F. and Jensen, M. A., Cryogenics 2, 301 (1962).
1050. Wipf, S. L., Cryogenics 3, 225 (1963).
1051. Desorbo, W., Cryogenics 4, 218 (1964).
1052. Ackerman, C. C., Allen, L. D. and Overton, W. C., Cryogenics 9, 63 (1969).
1053. ▽ Wassermann, E., Z. Phys. 187, 369 (1965).
1054. ▽ Korn, D., Z. Phys. 187, 463 (1965).
1055. Moormann, W., Z. Phys. 197, 136 (1966).

1056. Rinderer, L., Saur, E. and Wurm, J., Z. Phys. 174, 405 (1963).
1057. Olsen, C. E., Matthias, B. T. and Hill, H. H., Z. Phys. 200, 7 (1967).
1058. Wuhl, H., Z. Phys. 197, 276 (1966).
1059. Saur, E. and Voepel, C., Z. Phys. 176, 474 (1963).
1060. Raub, Ch. J., Z. Phys. 178, 216 (1964).
1061. Dummer, G., Z. Phys. 186, 249 (1965).
- 1062.∇ Ruhl, W., Z. Phys. 186, 190 (1965).
1063. Mailfert, R., Batterman, B. W., and Hanak, J. J., Phys. Letters 24A, 315 (1967).
1064. Meyer, G., Z. Phys. 189, 199 (1966).
1065. Crow, J. E. and Parks, R. D., Phys. Letters 21, 378 (1966).
1066. Kunz, W. and Saur, E., Z. Physik 189, 401 (1966).
1067. Fechner, D. and Hasse, J., Z. Physik 195, 380 (1966).
1068. Wittig, J., Z. Physik 195, 215 (1966).
- 1069.∇ Hilsch, P. and Naugle, D. G., Z. Phys. 201, 1 (1967).
1070. Horn, G. and Saur, E., Z. Phys. 210, 70 (1968).
1071. Dummer, G. and Oftedal, E., Z. Phys. 208, 238 (1968).
1072. Otto, G., Z. Phys. 215, 323 (1968).
1073. Otto, G., Z. Phys. 218, 52 (1969).
1074. Gygax, S., Phys. kondens. Materie 4, 207 (1965).
1075. Meyer, G., Z. Phys. 219, 397 (1969).
- 1076.∇ Meunier, F., Burger, J. P., Deutscher, G. and Guyon, E., Phys. Letters 26A, 309 (1968).
1077. Sahm, P. R., Phys. Letters 26A, 459 (1968).
- 1078.∇ Gamble, F. R. and McConnell, H. M., Phys. Letters 26A, 162 (1968).
1079. Neubauer, H., Z. Physik 226, 211 (1969).
1080. Remeika, J. P., Geballe, T. H., Matthias, B. T., Cooper, A. S., Hull, G. W. and Kelly, E. M., Phys. Letters 24A, 565 (1967).
1081. Gey, W., Z. Physik 229, 85 (1969).
- 1082.∇ Stritzker, B. and Wuhl, H., Z. Phys. 243, 361 (1971).

- 1083.▽ Buck, V., Hilsch, R. and Korn, D., Z. Phys. 242, 1 (1971).
1084. Ponyatovskii, E. G. and Rabin'kin, A. G., ZhETF Pis'ma 6, 471 (1967).
- 1085.▽ Buckel, W., Dietrich, M., Heim, G. and Kessler, J., Z. Phys. 245, 283 (1971).
1086. Makarov, V. I. and Volynskii, I. Ya., ZhETC Pis'ma 4, 369 (1966).
1087. DaSilva, J. F., VanDuykeren, N.W.J. and Dokoupil, Z., Physica 32, 1253 (1966).
1088. VanReuth, E. C., Schoep, G. K., Klaassen, T. O. and Poulis, N. J., Physica 37, 476 (1967).
- 1089.▽ Burton, R., Cryogenics 6, 257 (1966).
1090. Makarov, V. I. and Volynskiy, I.Y.A., Fiz. Metal metalloved. 25, 1122 (1968); Translation: Phys. Metals Metallography 25, No. 6, 166 (1968).
1091. Zakharov, A. I. and Rabin'kin, A. G., Fiz. metal. metalloved 26, 921 (1968); Translation: Phys. Metals and Metallography 26, No. 5, 146 (1968).
1092. Rayerskiy, I. K., Stepanov, N. V., Skryabina, M. A., DuBrovin, A. V., Alekseevskii, N. E. and Ivanov, O. S., Fiz. Metal. metalloved. 27, 235 (1969); Translation: The Physics of Metals and Metallography 27, (June) 42 (1970).
1093. Potapov, N. N., Fiz. metal. metalloved. 27, 257 (1969); Translation: Phys. Metals and Metallography 27, (June) 63 (1970).
1094. Antonova, Ye. A., Kiseleva, K. V. and Medvedev, S. A., Fiz. metal. metalloved 27, 441 (1969).
1095. Sulkowski, C., Mazur, J. and Zacharko, W., Acta Physica Polonica A41, 483 (1972).
1096. Muheim, J. and Muller, J., Phys. kondens. Materie 2, 377 (1964).
1097. Sulkowski, C. and Mazur, J., Acta Physica Polonica A37, 317 (1970).
1098. Morton, N., Cryogenics 8, 30 (1968).
1099. French, R. A., Cryogenics 8, 301 (1968).
- 1100.▽ Leder, L. B., Cryogenics 8, 364 (1968).
1101. King, H. W. and Pollock, J. T. A., Cryogenics 7, 209 (1967).
1102. Litomisky, M. and Sirovatka, J., Cryogenics 7, 40 (1967).
1103. French, R. A., Lowell, J. and Mendelssohn, K., Cryogenics 7, 83 (1967).
1104. Wittig, J., Science 155, 685 (1967).
1105. Englehardt, J. J., Webb, G. W. and Matthias, B. T., Science 155, 191 (1967).
1106. French, R. A., Phys. Letters 23, 59 (1966).
1107. Sadagopan, V., Gatos, H. C., Hechler, K. and Saur, E., Z. Physik 225, 231 (1969).
1108. Hasse, J. and Reichert, V., Z. Physik 221, 471 (1969).
1109. Danner, S. and Dummer, G., Z. Physik 222, 243 (1969).

1110. Finlayson, T. R., Vance, E. R. and Rachinger, W. A., Phys. Letters 26A, 474 (1968).
1111. Maple, M. B., Phys. Letters 26A, 513 (1968).
1112. Cruceanu, E., Hering, E. and Schwarz, H., Phys. Letters 32A, 295 (1970).
1113. Hillenbrand, B. and Wilhelm, M., Phys. Letters 31A, 448 (1970).
1114. Bloom, D. W., Finegold, L., Lye, R. G., Radebaugh, R. and Siegwarth, J. D., Phys. Letters 33A, 137 (1970).
1115. Vieland, L. J. and Wicklund, A. W., Phys. Letters 34A, 43 (1971).
1116. Tsuei, C. C., Yen, H. and Duwez, P., Phys. Letters 34A, 80 (1971).
1117. Satterthwaite, C. B. and Toepke, I. L, Phys. Rev. Letters 25, 741 (1970).
1118. Mota, A. C., Black, W. C., Brewster, P. M., Lawson, A. C., Fitzgerald, R. W. and Bishop, J. H., Phys. Letters 34A, 160 (1971).
1119. Testardi, L. R., Phys. Letters 35A, 117 (1971).
1120. ▽ Deutscher, G., Farges, J. P., Meunier, F. and Nedellec, P., Phys. Letters A35, 265 (1971).
1121. Cardona, M., Fischer, G. and Rosenblum, B., Phys. Rev. Letters 12, 101 (1964).
1122. ▽ Cohen, R. W., Abeles, B. and Weisbarth, G. S., Phys. Rev. Letters 18, 336 (1967).
1123. Decker, W. R., Peterson, D. T. and Finnemore, D. K., Phys. Rev. Letters 18, 899 (1967).
1124. ▽ Cody, G. D. and Miller, R. E., Phys. Rev. Letters 16, 697 (1966).
1125. Crow, J. E., Guertin, R. P. and Parks, R. D., Phys. Rev. Letters 19, 77 (1967).
1126. ▽ Adler, J. G., Jackson, J. E. and Will, T. A., Phys. Letters 24A, 407 (1967). (also see Wu, T. M., in Phys. Rev. Letters 19, 508 (1967)).
1127. Pfeiffer, E. R. and Schooley, J. F., Phys. Rev. Letters 19, 783 (1967).
1128. Gamble, F. R., Osiecki, J. H. and DiSalvo, F. J., Jour. Chem. Phys. 55, 3525 (1971).
1129. McWhan, D. B. and Marezio, M., Jour. Chem. Phys. 45, 2508 (1966).
1130. Munson, R. A., DeSorbo, W. and Kouvel, J. S., Jour Chem. Phys. 47, 1769 (1967).
1131. Toxen, A. M., Kwok, P. C. and Gambino, R. J., Phys. Rev. Letters 21, 792 (1968).
1132. Morton, N., James, B. W., Wostenholm, G. H., Pomfret, D. G., Davies, M. R. and Dykins, J. L., Jour Less-Common Metals 25, 97 (1971).
1133. Sato, M., Kumasaka, N. and Mitani, M., J. Phys. Soc. Japan 21, 1617 (1966).
1134. ▽ Strongin, M., Kammerer, O. F., Crow, J. E., Parks, R. D., Douglass, D. H., Jr., and Jensen, M. A., Phys. Rev. Letters 21, 1320 (1968).
1135. Finnemore, D. K. and Ostenson, J. E., Phys. Rev. Letters 22, 188 (1969).
1136. ▽ Chen, T. T., Chen, J. T., Leslie, J. D. and Smith, H.J.T., Phys. Rev. Letters 22, 526 (1969).

1137. Maple, M. B. and Kim, K. S., Phys. Rev. Letters 23, 118 (1969).
1138. Koch, C. C., Kernohan, R. H. and Sekula, S. T., J. Applied Phys. 38, 4359 (1967)
1139. Hein, R. A. and Swiggard, E. M., Phys. Rev. Letters 24, 53 (1970).
1140. Noto, K., Muto, Y. and Fukuroi, T., J. Phys. Soc. Japan 21, 2122 (1966).
- 1141.▽ Tsuya, H., J. Phys. Soc. Japan 20, 1734 (1965).
1142. Williamson, S. J. and Valby, L. E., Phys. Rev. Letters 24, 1061 (1970).
1143. Sugawara, T. and Eguchi, H., J. Phys. Soc. Japan 21, 725 (1966).
1144. Westlake, D. G. and Ockers, S. T., Phys. Rev. Letters 25, 1618 (1970).
1145. Gey, W., Phys. Rev. 153, 422 (1967).
1146. Gossard, A. C., Hindermann, D. K., Robin, M. B., Kuebler, N. A. and Geballe, T. H., J. Am. Chem. Soc. 89, 7121 (1967).
1147. Giorgi, A. L. and Szklarz, E. G., J. Less-Common Metals 20, 173 (1970).
1148. Giorgi, A. L., Szklarz, E. G., Krikorian, N. H. and Krupka, M. C., J. Less-Common Metals 22, 131 (1970).
1149. Giorgi, A. L. and Szklarz, E. G., J. Less-Common Metals 22, 246 (1970).
1150. VanMaaren, M. H., Phys. Letters 40A, 353 (1972).
1151. Lerner, E., Daunt, J. G. and Maxwell, E., Phys. Rev. 153, 487 (1967).
1152. Gardner, W. E. and Smith, T. F., Phys. Rev. 154, 309 (1967).
1153. Pearson, G. J., Ulbrich, C. W., Gueths, J. E., Mitchell, M. A. and Reynolds, C. A., Phys. Rev. 154, 329 (1967).
1154. Bucher, E., Maita, J. P. and Cooper, A. S., Phys. Rev. B6, 2709 (1972).
1155. Merriam, M. F., Hagen, J. and Luo, H. L., Phys. Rev. 154, 424 (1967).
1156. Luo, H. L. and Willens, R. H., Phys. Rev. 154, 436 (1967).
1157. Cappelletti, R. L., Ginsberg, D. M. and Hulm, J. K., Phys. Rev. 158, 340 (1967).
1158. Johnson, D. L. and Finnemore, D. K., Phys. Rev. 158, 376 (1967).
1159. Mallon, R. G. and Rorschach, J. R. H.E., Phys. Rev. 158, 418 (1967).
1160. Hein, R. A., Cox, J. E., Blaughner, R. D., Waterstrat, R. M. and Van Reuth, E. C., Physica 55, 523 (1971).
1161. Sekula, S. T. and Kernohan, R. H., Phys. Rev. 155, 364 (1967).
1162. Sekula, S. T. and Kernohan, R. H., Phys. Rev. B5, 904 (1972).

1163. Matthias, B. T., Marezio, M., Corenzwit, E., Cooper, A. S., and Barz, H. E., Science 175, 1465 (1972).
1164. Matthias, B. T., Corenzwit, E., Cooper, A. S. and Longinotti, L. D., Proc. Nat. Acad. Sci. (USA) 68, 56 (1971).
1165. Gamari-seale, H. and Coles, B. R., Proc. Phys. Soc. 86, 1199 (1965).
1166. Martin, D. L., Proc. Phys. Soc. 78, 1482 (1961).
1167. Enstrom, R. E., Hanak, J. J. and Cullen, G. W., RCA Review 31, 702 (1970).
1168. Enstrom, R. E., Hanak, J. J., Appert, J. R. and Strater, K., J. Electrochem. Soc. 119, 743 (1972).
1169. Enstrom, R. E. and Appert, J. R., J. Appl. Phys. 43, 1915 (1972).
1170. Aoi, T., Mamiya, T., Iwahashi, K. and Masuda, Y., Proc. 12th Inter. Conf. on Low Temp. Phys., Ed. E. Kanda, (KEIGAKU Pub. Co., Tokyo, 1971), p. 247.
1171. Aoki, R., Kawaguchi, T., Hatada, K. and Kawamura, N., Ref. 1170, p. 263.
1172. Nakajima, T., Kanda, E. and Ohki, Y., Ref. 1170, p. 293.
1173. Cadieu, F. J. and Douglass, D. H., Jr., Ref. 1170, p. 323.
1174. ▽ Hulm, J. K., Gavalier, J. R., Janocko, M. A., Patterson, A. and Jones, C. K., Ref. 1170, p. 325.
1175. ▽ Saito, Y., Anayama, T., Onodera, Y., Yamashita, T., Konenou, K. and Muto, Y., Ref. 1170, p. 329.
1176. Heiniger, F., Flukiger, R., Junod, A., Muller, J., Spitzli, P. and Staudenmann, J.L., Ref. 1170, p. 331.
1177. Cox, J. E., Hein, R. A. and Waterstrat, R. M., Ref. 1170, p. 333 and personal communication.
1178. ▽ Glover, R. E., Baumann, F. and Moser, S., Ref. 1170, p. 337.
1179. ▽ Stritzker, B. and Wuhl, H., Ref. 1170, p. 339
1180. Kostorz, G. and Mihailovich, S., Ref. 1170, p. 341.
1181. Coles, B. R., Ref. 1170, p. 345.
1182. Satoh, T. and Kumagai, K., Ref. 1170, p. 347.
1183. Toxen, A. M. and Gambino, R. J., Ref. 1170, p. 347.
1184. Phillips, N. E., Brock, J.C.F., Lambert, M. H. and Merriam, M. F., Ref. 1170, p. 353.
1185. VanMaaren, M. H., Harland, H. B. and Havinga, E. E., Ref. 1170, p. 357.

1186. Shanks, H. R. and Danielson, G. C., Ref. 1170, p. 359.
1187. Satterthwaite, C. B. and Toepke, I. L., Ref. 1170, p. 365.
1188. Ho, J. C., Boyd, J. D. and Collings, E. W., Ref. 1170, p. 366.
1189. Inque, K. and Tachikawa, K., Ref. 1170, p. 483.
1190. Webb, G. W., Vieland, L. J., Miller, R. E. and Wicklund, A., Solid State Communications 9, 1769 (1971).
1191. Barz, H. E., Cooper, A. S., Corenzwit, E., Marezio, M., Matthias, B. T. and Schmidt, P. H., Science 175, 884 (1972).
1192. Gamble, F. R. Osiecki, J. H., Cais, M., Pisharody, R., DiSalvo, F. J. and Geballe, T. H., Science 174, 493 (1971). Also personal communication, F. J. DiSalvo.
1193. Viswanathan, R. and Lawson, A. C., Science 177, 267 (1972).
1194. ▽ Cherney, O.A.E. and Shewchun, J., Can. J. Phys. 47, 1101 (1969).
1195. Shimshick, E. J. and McConnell, H. M., J. Amer. Chem. Soc. 91, 1854 (1969)
1196. Courtney, T. H., Reintjes, J., and Wulff, J., J. Appl. Phys. 36, 660 (1965)
1197. Tedmon, C. S., Jr., Rose, R. M. and Wulff, J., J. Appl. Phys. 36, 829 (1965)
1198. Saunders, G. A. and Lawson, A. W., J. Appl. Phys. 35, 3322 (1964)
1199. ▽ Neugebauer, C. A. and Ekvall, R. A., J. Appl. Phys. 35, 547 (1963)
1200. Sekula, S. T. and Kernohan, R. H., J. Appl. Phys. 36, 2895 (1965)
1201. Joiner, W.C.H., J. Appl. Phys. 36, 3895 (1965)
1202. Banus, M. D. and Levine, M. C., J. Appl. Phys. 38, 2042 (1967)
1203. Yen, C. M., Toth, L. E., Shy, Y. M., Anderson, D. E. and Rosner, L. G., J. Appl. Phys. 38, 2268 (1967)
1204. Fassnacht, R. E. and Dillinger, J. R., J. Appl. Phys. 38, 3667 (1967)
1205. Doi, T., Ishida, F. and Kawabe, U., J. Appl. Phys. 38, 3811 (1967)
1206. ▽ Sosniak, J. and Hull, G. W., Jr., J. Appl. Phys. 38, 4390 (1967).
1207. ▽ Vogel, H. E. and Garland, M. M., J. Appl. Phys. 38, 5116 (1967)
1208. Wiseman, C. D., J. Appl. Phys. 37, 3599 (1966)
1209. Colling, D. A., Ralls, K. M. and Wulff, J., J. Appl. Phys. 37, 4750 (1966)
1210. Enstrom, R. E., J. Appl. Phys. 37, 4880 (1966)
1211. Webb, G. W., Solid State Commun. 6, 33 (1968)

1212. Sleight, A. W., Bither, T. A. and Bierstedt, P. E., Solid State Commun. 7, 299 (1969)
1213. Allen, P. B. and Cohen, M. L., Solid State Commun. 7, 677 (1969)
1214. Falge, R. L., Jr., Wolcott, N. M., Hein, R. A., Cox, J. E. and Gibson, J. W., Bull. Am. Phys. Soc. II 13, 730 (1968)
1215. Willens, R. H., Geballe, T. H., Gossard, A. C., Maita, J. P., Menth, A., Hull, G. W., Jr., and Soden, R. R., Solid State Commun. 7, 837 (1969)
1216. Kroeger, D. M., Solid State Commun. 7, 843 (1969)
1217. Brock, J.C.F., Solid State Commun. 7, 1789 (1969)
- 1218.▽ Knorr, K. and Barth, N., Solid State Commun. 8, 1085 (1970)
1219. Hulliger, F. and Hull, G. W., Jr. Solid State Commun. 8, 1379 (1970)
1220. Robinson, D. A. and Levy, M., Solid State Commun. 8, 1443 (1970)
1221. Khan, H. R., Trunk, H., Raub, Ch.J., Fertig, W. A. and Lawson, A. C., J. Less-Common Metals 30, 167 (1973)
1222. Krupka, M. C., Giorgi, A. L. and Szklarz, E. G., J. Less-Common Metals 30, 217 (1973)
1223. Morton, N., James, B. W. Wostenholm, G. H., and Hepburn, D.C.B., J. Less-Common Metals 29, 423 (1972)
1224. Strongin, M., Dickey, J. M. and Crow, J. E., Solid State Commun. 8, 1647 (1970)
1225. Gupta, A. K., Wolf, S. and Chandrasekhar, B. S., Solid State Commun. 10, 57 (1972)
1226. Maple, M. B., Huber, J. G., Coles, B. R. and Lawson, A. C., J. Low Temp. Phys. 3, 137 (1970).
1227. Luengo, C. A., Cotignola, J. M., Sereni, J. G., Sweedler, A. R., Maple, M. B., and Huber, J. G., Solid State Commun. 10, 459 (1972)
1228. Jones, H., Fischer, O., Bonghi, G. and Treyvaud, A., Solid State Commun. 10, 927 (1972)
- 1229.▽ Felsch, W. and Glover, R. E., III, Solid State Commun. 10, 1033 (1972)
1230. Buchanan, J., Chang, G. K. and Serin, B., J. Phys. Chem. Solids 26, 1183 (1965)
1231. Sadagopan, V., Gatos, H. C. and Giessen, B. C., J. Phys. Chem. Solids 26, 1687 (1965).
1232. Claeson, T. and Luo, H. L., J. Phys. Chem. Solids 27, 1081 (1966)
1233. Andres, K., Quoted in 1232.
1234. Williams, M. W., Ralls, K. M. and Pickus, M. R., J. Phys. Chem. Solids 28, 333 (1967).
- 1235.▽ Deutscher, G., J. Phys. Chem. Solids 28, 741 (1967).

1236. Bachner, F. J., Goodenough, J. B. and Gatos, H. C., J. Phys. Chem. Solids 28, 889 (1967)
1237. Tsuda, N. and Suzuki, T., J. Phys. Chem. Solids 28, 2487 (1967).
1238. Pessall, N., Gold, R. E. and Johansen, H. A., J. Phys. Chem. Solids 29, 19 (1968)
1239. Hanak, J. J. and Berman, H. S., Supplement to Physics and Chemistry of Solids, p. 249 (1967).
1240. Gambino, R. J., Stemple, N. R. and Toxen, A. M., J. Phys. Chem. Solids 29, 295 (1968)
1241. Lubell, M. S. and Kernohan, R. H., J. Phys. Chem. Solids 32, 1531 (1971)
1242. Hubble, F. F., Gulick, J. M. and Moulton, W. G., J. Phys. Chem. Solids 32, 2345 (1971)
1243. Smith, D. R. and Keesom, P. H., Phys. Rev. B1, 188 (1970)
1244. Narlikar, A. V. and Dew-Hughes, D., J. of Mat. Sci. 2, 496 (1967)
1245. Damsma, H. and Havinga, E. E., J. Phys. Chem. Solids 34, 813 (1973) & private commun.
1246. Mathur, M. P., Deis, D. W., Jones, C. K. and Carr, W. J., Jr., J. Phys. Chem. Solids 34, 183 (1973)
1247. Papp, E., J. Phys. F: Metal Phys. 2, 306 (1972)
1248. Smith, T. F., J. Phys. F: Metal Phys. 2, 946 (1972)
1249. ▽ Hauser, J. J. and Theverer, H. C., Rev. Modern Phys. 36, 80 (1964)
1250. Phillips, N. E., Lambert, M. H. and Gardner, W. R., Rev. Moder Phys. 36, 131 (1964)
1251. ▽ London, H. and Clarke, G. R., Rev. Mod. Phys. 36, 320 (1964)
1252. Hill, H. H., White, R. W., Lindsay, J.D.G., Fowler, R. D. and Matthias, B. T., Phys. Rev. 163, 356 (1967)
1253. Vieland, L. J. and Wicklund, A. W., Phys. Rev. 166, 424 (1968)
1254. Maxwell, E., Strongin, M. and Reed, T. B., Phys. Rev. 166, 457 (1968)
1255. Edelstein, A. S., Phys. Rev. 164, 510 (1967)
1256. Fassnacht, R. E. and Dillinger, J. R., Phys. Rev. 164, 565 (1967)
1257. Chu, C. W., Smith, T. F. and Gardner, W. E., Phys. Rev. B1, 214 (1970)
1258. White, H. W. and McCollum, D. C., Phys. Rev. B1, 552 (1970)
1259. ▽ Strongin, M., Thompson, R. S., Kammerer, O. F. and Crow, J. E., Phys. Rev. B1, 1078 (1970)
1260. Rao, C. T., Dubeck, L. W. and Rothwarf, F., Phys. Rev. B7, 1866 (1973)

1261. Davidov, D., Chelkowski, A., Rettori, C., Orbach, R. and Maple, M. B., Phys. Rev. B7, 1029 (1973)
1262. Morris, R. C. and Coleman, R. V., Phys. Rev. B7, 991 (1973)
1263. Parr, H. and Feder, J., Phys. Rev. B7, 166 (1973)
1264. Gordon, D. E. and Deaton, B. C., Phys. Rev. B6, 2982 (1972)
1265. Chaikin, P. M. and Mihalisin, T. W., Phys. Rev. B6, 839 (1972)
1266. Jones, R. E., Jr., Shanks, H. R. and Finnemore, D. K., Phys. Rev. B6, 835 (1972)
1267. Gubser, D. V., Phys. Rev. 6B, 827 (1972)
- 1268.▽ Cody, G. D. and Miller, R. E., Phys. Rev. B5, 1834 (1972)
1269. Rollins, R. W., Cappelletti, R. L. and FearDay, J. H., Phys. Rev. B2, 105 (1970)
- 1270.▽ Dynes, R. C., Phys. Rev. B2, 644 (1970)
1271. Williams, L. J., Decker, W. R. and Finnemore, D. K., Phys. Rev. B2, 1287 (1970)
1272. Banus, M. D., Mat. Res. Bull. 3, 723 (1968)
- 1273.▽ Friebertshauser, P. E. and McCamont, J. W., J. Vac. Sci. Tech. 5, 180 (1968) Paper 8-2
- 1274.▽ Frieberthauser, P. E. and Notarys, H. A., J. Vac. Sci. Tech. 7, 485 (1971)
- 1275.▽ Spitzer, H. J., J. Vac. Sci. Tech. 7, 537 (1970)
- 1276.▽ Isao, A., Noguchi, T., Uchida, Y. and Kono, A., J. Vac. Sci. Tech. 7, 557 (1970)
1277. Noskin, V. A., Farbshtein, I. I. and Shalyt, S. S., Fiz. Tverdogo Tela 10, 1112 (1968) Translation Sov. Phys.-Solid State 10, 881 (1968)
- 1278.▽ Komnik, Yu. F., Yatsuk, L. A., Andrievskii, V. V., Man'Kovskii, K. K. and Pilipenko, V. V., Fiz. Tverdogo Tela 13, 1779 (1971); translation Sov. Phys.-Solid State 13, 1486 (1971)
1279. Vereshchagin, L. F., Evdokimova, V. V. and Novokshonov, V. I., Fiz. Tverdogo Tela 13, 2474 (1971); Translation, Sov. Phys.-Solid State 13, 2074 (1972).
1280. Il'ina, M. A. and Itskevich, E. S., Fiz. Tverdogo Tela 13, 2496 (1971); translation Sov. Phys.-Solid State 13, 2098 (1972)
1281. Bogomolov, V. N., Krivosheev, U. K. and Kumzerov, Yu. A., Fiz. Tverdogo Tela 13, 3720 (1971); Translation, Sov. Phys.-Solid State 13, 3148 (1972)
1282. Il'ina, M. A. and Itskevich, E. S., Fiz. Tverdogo Tela 14, 395 (1972); translation Sov. Phys.-Solid State 14, 328 (1972)

1283. Il'ina, M. A., Itskevich, E. S. and Kalyuzhnaya, G. A., Fiz. Tverdogo Tela 14, 515 (1972); Translation, Sov. Phys.-Solid State 14, 428 (1972)
1284. Bogomolov, V. N. and Krivosheev, V.K., Fiz. Tverdogo Tela 14, 1238 (1972); Translation, Sov. Phys.-Solid State 14, 1059 (1972)
1285. Bogomolov, V. N., Fiz. Tverdogo Tela 14, 1575 (1972); Sov. Phys.-Solid State 14, 1361 (1972)
1286. Kopetskii, Ch. V., Kodess, B. N. and Marchenko, V. A., Fiz. Tverdogo Tela 14, 1804 (1972); Translation, Sov. Phys.-Solid State 14, 1556 (1972)
1287. Fischer, G., Phys. Rev. Letters 20, 268 (1968)
1288. Malseed, C. and Rachinger, W. A., Scripta Metallurgica 3, 139 (1969)
1289. Luhman, T. S., Taggart, R. and Polonis, D. H., Scripta Metallurgica 3, 777 (1969)
1290. Luhman, T. S., Taggart, R. and Polonis, D. H., Scripta Metallurgica 4, 611 (1970)
1291. Anderson, J. W., Peterson, D. T. and Finnemore, D. K., Phys. Rev. 179, 472 (1969)
1292. Holtzberg, F., Seiden, P. E. and VonMolnar, S., Phys. Rev. 168, 408 (1968)
1293. ▽ Kircher, C. J., Phys. Rev. 168, 437 (1968)
1294. ▽ Cohen, R. W. and Abeles, B., Phys. Rev. 168, 444 (1968)
1295. Fischer, Ø. H., Helvetia Physica Acta 45, 331 (1972).
1296. Geballe, T. H., Matthias, B. T., Caroli, B., Corenzwit, E., Maita, J. P. and Hull, G. W., Phys. Rev. 169, 457 (1968)
1297. Nembach, E., Phys. Rev. 172, 425 (1968)
1298. French, R. A. and Lowell, J., Phys. Rev. 173, 504 (1968)
1299. Sadagopan, V. and Gatos, H. C., Phys. stat. sol. 13, 423 (1966)
1300. Farrell, D. E., Chandrasekhar, B. S. and Huang, S., Phys. Rev. 176, 562 (1968)
1301. Brandt, N. B. and Papp, E., Zh. Eksp. Teor. Fiz. 55, 2160 (1968); Translation, Sov. Phys. JETP 28, 1144 (1968)
1302. ▽ Chubov, P. N., Eremenko, V. V. and Pilipenko, Yu. A., Zh. Eksp. Teor. Fiz. 55, 752 (1968); Translation, Sov. Phys. JETP 28, 389 (1969).
1303. Niemiec, J. and Trojnar, E., Phys. Stat. Sol. 17, K89 (1966)
1304. Claeson, T., Phys. Stat. Sol. 25, K95 (1968)
1305. Johnston, D. C., Prakash, H., Zacharaisen, W. H., Viswanathan, R., Mat. Res. Bull. 8, 777 (1973)

1306. Pollock, J.T.A., Shull, R. and Gatos, H. C., Phys. Stat. Sol. 42, 251 (1970)
1307. Corsan, J. M. and Cook, A. J., Phys. Stat. Sol. 40, 657 (1970)
1308. Claeson, T., Munkby, L. and Wingbro, T., Phys. Stat. Sol. 42, 321 (1970)
1309. Marezio, M., Dernier, P. D., Remeika, J. P., Corenzwit, E., and Matthias, B. T., Mat. Res. Bull. 8, 657 (1973)
1310. ▽ Granquist, C. G. and Claeson, T., Phys. Stat. Sol. A11, K113 (1972) ^D
1311. Skoskiewicz, T., Phys. Stat. Sol. A11, K123 (1972)
1312. Schultz, L. and Freyhardt, H., Phys. Stat. Sol. 13, 145 (1972)
1313. Finlayson, T. R. and Milne, I., Solid State Commun. 9, 1339 (1971)
1314. Riblet, G. and Winzer, K., Solid State Commun. 9, 1663 (1971)
1315. Viswanathan, R. and Luo, H., Solid State Commun. 9, 1733 (1971)
1316. Indovina, P. L., Matzev, M., Onori, S. and Tabet, E., Solid State Commun. 9, 1759 (1971)
1317. Clayman, B. P. and Frindt, R. F., Solid State Commun. 9, 1881 (1971)
1318. Adler, J. G. and Chen, T. T., Solid State Commun. 9, 1961 (1971) ^I
1319. Watson, J.H.P. and Hawk, R. M., Solid State Commun. 9, 1993 (1971)
1320. Testardi, L. R., Hauser, J. J. and Read, M. H., Solid State Commun. 9, 1829 (1971)
1321. Jerome, D., Solid State Commun. 9, 2183 (1971)
1322. Vaccarone, R., Morozzodella Rocca, A., Pilot, A., Vivaldi, F. and Rizzuot, C., Solid State Commun. 12, 885 (1973)
1323. Inoue, K. and Tachikawa, K., Japan. J. Appl. Phys. 12, 161 (1973)
1324. Steiner, P., Gumprecht, D. and Hufner, S., Phys. Rev. Letters 30, 1132 (1973)
1325. ▽ Collver, M. M. and Hammond, R. H., Phys. Rev. Letters 30, 92 (1973) ^E
1326. Sellers, G. J., Anderson, A. C. and Birnbaum, H. K., Phys. Letters 44A, 173 (1973)
1327. ▽ Lazarev, B. G., Kuz'menko, V. M., Sudovtsov, A. I., and Mel'nikov, V. I., Fiz. Metal. metalloved. 32, 52 (1971); translation, the Physics of Metals and Metallography 32, (No. 1) 49 (1971) ^T
1328. Osipov, K. A., Orlov, A. F., Dmitriyev, V. P., Ivanovskaya, G. F. and Lozinskiy, Yu. N., Fiz. Metal. metalloved. 32, 878 (1971) translation, The Physics of Metals and Metallography 32, (No. 4) 210 (1971)

1329. Guertin, R. P., Crow, J. E., Sweedler, A. R. and Foner, S., Solid State Commun. 13, 25 (1973)
1330. Lowell, J., Phil. Mag. 16, 581 (1967)
1331. Echarri, A., Witcomb, M. J., Dew-Hughes, D. and Narlikar, A. V., Phil. Mag. 18, 1089 (1968)
1332. Lowndes, D. H., Jr., Finegold, L. and Lye, R. G., Phil. Mag. 21, 245 (1970)
1333. Finlayson, T. R. and Milne, I., Phil. Mag. 25, 1291 (1972)
1334. Koch, C. C. and Carpenter, R. W., Phil. Mag. 25, 303 (1972)
1335. Rothberg, B. D., Phil. Mag. 25, 1473 (1972)
1336. Trojnar, E., Bazan, C. and Niemiec, J., Bull. L'Acad. Polonaise des Sci. (Serie. des sciences chimiques) 13, 481 (1965)
1337. Trojnar, E. and Niemiec, J., Bull. L'Acad. Polonaise des Sci. (Serie des sciences chimiques) 14, 565 (1966)
1338. Bucher, E., Schmidt, P. H., Jayaraman, A., Andres, K., Maita, J. P., Nassau, K. and Dernier, P. D., Phys. Rev. B2, 3911 (1970)
1339. Foner, S., McNiff, E. J., Jr., Webb, G. W., Vieland, L. J., Miller, R. E. and Wicklund, A., Phys. Letters 38A, 323 (1972)
1340. Bucher, E., Heine, V., Andres, K., Maita, J. P. and Cooper, A. S., Phys. Rev. B6, 103 (1972)
1341. Lasbley, A., Granger, R. and Rolland, S., C. R. Acad. Sci. Paris 276B, 665 (1973)
1342. Takashima, T., Japan. J. Appl. Phys. 12, 781 (1973)
1343. Koch, C. C., J. Phys. Chem. Solids 34, 1445 (1973)
- 1344.▽ Gavalier, J. R., Janocko, M. A. and Jones, C. K., J. Vac. Sci. Technol. 10, 17 (1973)
- 1345.▽ Spitzer, H. J., J. Vac. Sci. Technol. 10, 20 (1973)
1346. Viswanathan, R. and Johnston, D. C., Mat. Res. Bull. 8, 589 (1973)
1347. Hill, D. C. and Rose, R. M., Metall. Trans. 2, 1433 (1971)
1348. Gamari-Seale, H., J. Phys. Soc. Japan 23, 898 (1967)
1349. Matsuo, S., Hayashi, S. and Noguchi, S., J. Phys. Soc. Japan 31, 1593 (1971)
1350. Satoh, T. and Ohtsuka, T., J. Phys. Soc. Japan 23, 9 (1967)
1351. Sambongi, T., J. Phys. Soc. Japan 30, 294 (1971)

1352. Masuda, Y., Nishioka, M., and Watanabe, N., J. Phys. Soc. Japan 22, 238 (1967)
1353. Satoh, T. and Asada, Y., J. Phys. Soc. Japan 28, 263 (1970)
1354. Nakajima, T., Isino, M. and Kanda, E., J. Phys. Soc. Japan 28, 369 (1970)
1355. Yamaya, K., Sambongi, T. and Mitsui, T., J. Phys. Soc. Japan 29, 879 (1970)
1356. Kubota, Y., Ogasawara, T. and Yasukochi, K., J. Phys. Soc. Japan 29, 1209 (1970)
1357. Aoki, R. and Ohtsuka, T.
1358. Sugawara, T. and Eguchi, H., J. Phys. Soc. Japan 23, 965 (1967)
1359. Ohtsuka, T. and Takano, N., J. Phys. Soc. Japan 23, 983 (1967)
1360. Kawabe, U., Kudo, M. and Fukase, S., J. Phys. Soc. Japan 35, 108 (1973)
1361. Satoh, T. and Kumagai, K., J. Phys. Soc. Japan 34, 391 (1973)
1362. Wada, S. and Asayama, K., J. Phys. Soc. Japan 34, 1168 (1973)
1363. Hartsough, L. D. and Hammond, R. H., Solid State Commun. 9, 885 (1971)
1364. Mamiya, T., Aoi, T., Iwahashi, K. and Masuda, Y., J. Phys. Soc. Japan 31, 485 (1971) and 31, 1661 (1971)
1365. Takata, M. and Oshida, S., J. Phys. Soc. Japan 30, 1640 (1971)
1366. Raub, Ch.J., Mons, W. and Lawson, A. C., J. Less-Common Metals 26, 319 (1972)
1367. Black, W. C. and Mota, A. C., Private communication quoted in Ref. 1366.
1368. Mota, A. C., Private communication quoted in Ref. 1366.
1369. Roschel, E. and Raub, Ch.J., Metall 26, 29 (1972)
1370. Bucher, E., Andres, K., and DiSalvo, F. J., Lecture 4th International Transition Metal Compound Conference, Geneva, April 9-13, 1973 and personal communication.
1371. Lubell, M. S. and Kroeger, D. M., Advances in Cryogenic Eng. 14, 123 (1969)
1372. Havinga, E. E., Private communication (For preparation see (Havinga E. E., et al. J. Less-Common Metals 27, 169 (1972))
1373. VanMaaren, M. H., Buschow, K.H.J. and VanDaal, H. J., Solid State Commun. 9, 1981 (1971)
1374. VanMaaren, M. H., Private communication, 1973 (Preparation: W. Rudorff et al., Z. Amorg. Allgem. Chem. 269, 141 (1952))
1375. Lawson, A. C., J. Less-Common Metals 32, 173 (1973)

1376. Matthias, B. T., Private communication (1973) quoted in Ref. 1375.
1377. Havinga, E. E., Damsma, H. and Hokkeling, P., J. Less-Common Metals 27, 169 (1972)
also H, D, and with Kanis, J. M., J. Less-Common Metals 27, 281 (1972)
1378. Gentry, W. O., Master of Science Thesis, 1964, Univ. of Ill., Urbana, Illinois.

- 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).
- Schulze, A., Z. Ver. deut. 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 Wilhelm, 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 Wilhelm, 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.* 49, 19-25 (1946).
- Andronikashvili, E. L. and Tumanov, K. A., *Uspekhi Fiz. Nauk.* 33, 469-532 (1947).
- Justi, E., "Leitfähigkeit 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).
- Gorter, C. J., *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 Kältephysik 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* 14, 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 *High Pressure Physics and Chemistry, Vol. I*, R. S. Bradley (Ed.), Academic Press, London, New York, pp. 355-73 (1963).
- Bardeen, J., "Superconductivity," in *Advances in Materials Research in the NATO Nations*, MacMillan, New York, pp. 281-90 (1963).
- Matthias, B. T., Geballe, T.H. and Compton, V. B., "Superconductivity (Compounds)," *Rev. Mod. Phys.* 35, 1 (1963).
- Geballe, T.H. and Matthias, B. T., "Superconductivity," in *Annual Review of Physical Chemistry, Vol. 14*, pp. 141-160 (1963).
- Anderson, D. E., "Superconductivity," in *Magnetic Materials Digest 1964*, M. W. Lads, Philadelphia, pp. 196-217 (1964).
- "Proc. Inter. Conf. on Science of Superconductivity, Hamilton, N. Y., Aug. 1963," *Rev. Mod. Phys.* 36, (1964).
- Lynton, E. A., "Superconductivity," Methuen & Co., London; John Wiley & Sons, New York (1964). Three 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* 12, 183-287 (1964).
- Klose, von W., "Harte Supraleiter," *Naturwissenschaften* 51, 180-186 (1964).
- Ginsburg, D. M., "Resource Letter Scy-1 on Superconductivity." (Outlines areas of Research with selected papers), *Am. J. Phys.* 32, 85 (1964).
- Klein, R. and Schneider, D., "Supraleitung" in *Leitungsmechanismus und Energieumwandlung in Festkörpern*, E. Justi (Editor), Vandenhoeck and Ruprecht, Göttingen, pp. 236-335 (1965).
- Abrikosov, A. A., "The Present State of the Theory of Superconductivity," *Usp. Fiz. Nauk* 87, 125-42 (1965); *Soviet Physics Uspekhi* 8, 710 (1966).
- Block, F., "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* 11, 127-34 (1966).
- Roberts, B. W., "Superconductive Properties" in *Intermetallic Compounds*, 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* 95, 253-266 (1968), Trans: Soviet Physics *Uspekhi* 11, 403 (1968).
- Ginzburg, V. L., "The Problem of High Temperature Superconductivity," *Usp. Fiz. Nauk* 95, 91-110 (1968).
- Muller, J., "Supraleitende Materialien" in *Vortrage Uber Supraleitung*, (Birkhauser, 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).
- Builova, N. M. and Sandomirskii, V. B., *Usp. Fiz. Nauk* 97, 119 (1969); Translation Soviet Physics *Uspekhi* 12, 64 (1969).
- Matthias, B. T., *Amer. Scientist* 58, 80 (1970).
"Superconductivity and the Periodic System."
- Glover, R. E., III, "Superconductivity Above the Transition Temperature," *Prog. in Low Temp. Physics* 6, 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* 6, 163-203 (1970).
- Ginsburg, D. M., "Resource Letter Scy-2 on Superconductivity," (Outlines areas of research with selected papers) *Am. J. Phys.* 38, 949 (1970).
- Brandt, N. B. and Ginzburg, N. I., "Superconductivity at High Pressure," *Scientific American*, 224, 83-95 (April) (1971).
- Echarri, A. and Spadoni, M., "Superconducting Nb₃Sn: A Review," *Cryogenics* 11, 274-84 (1971).
- Weis, O., "The Physical Properties of Superconductive Metals," *Chemiker-Zeitung* 95, 168 (1971).
- Livingston, J. D., "Superconductivity and Superconducting Materials," (A Review) *Canadian Metallurgical Quarterly* 11, 285-293 (1972).
- Douglas, D. H., Editor, "Superconductivity in d- and f- Band Metals," AIP Conf. Proc. Number 4. (Amer. Inst. Physics, New York, 1972).
- Savitskii, E. M. and Efimov, J. V., *Monatshefte fur Chemie* 103, 270-287 (1972).
"Supraleitende metallische verbindungen und ihre Legierungen."
- "Superconductive metals and alloys," *Sverkhprovodiashchie splavy i soedineniia*, Izdatel'stvo(marhka), Moskva 1972, 205 p.
- Matthias, B. T., "La Supraconductivité à haute température," *LaRecherche* 33, 319-326 (1973).

U.S. DEPT. OF COMM. BIBLIOGRAPHIC DATA SHEET	1. PUBLICATION OR REPORT NO. NBS TN-825	2. Gov't Accession No.	3. Recipient's Accession No.
4. TITLE AND SUBTITLE Properties of Selected Superconductive Materials-- Supplement, 1974		5. Publication Date April 1974	
		6. Performing Organization Code	
7. AUTHOR(S) B.W. Roberts		8. Performing Organ. Report No.	
9. PERFORMING ORGANIZATION NAME AND ADDRESS NATIONAL BUREAU OF STANDARDS DEPARTMENT OF COMMERCE WASHINGTON, D.C. 20234		10. Project/Task/Work Unit No.	
		11. Contract/Grant No. 3-35717 NBS	
12. Sponsoring Organization Name and Complete Address (Street, City, State, ZIP) Same as No. 9.		13. Type of Report & Period Covered Final	
		14. Sponsoring Agency Code	
15. SUPPLEMENTARY NOTES			
16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.) This report includes data on additional superconductive materials extracted from a portion of the world literature up to mid-1973. The data presented are new values and have not been selected or compared to values (except for selected values of the elements) previously assembled by the Superconductive Materials Data Center. The properties included are composition, critical temperature, critical magnetic field, crystal structure and the results of negative experiments. Special tabulations of high magnetic field materials with Type II behavior and materials with organic components are included. All entries are keyed to the literature and a list of reviews centered on superconductive materials is included.			
17. KEY WORDS (six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons) Bibliography; composition; critical fields; critical temperature; crystallographic data; data compilation; low temperature; superconductive materials; superconductivity.			
18. AVAILABILITY <input checked="" type="checkbox"/> Unlimited <input type="checkbox"/> For Official Distribution. Do Not Release to NTIS <input type="checkbox"/> Order From Sup. of Doc., U.S. Government Printing Office Washington, D.C. 20402, SD Cat. No. C13-46:825 <input type="checkbox"/> Order From National Technical Information Service (NTIS) Springfield, Virginia 22151		19. SECURITY CLASS (THIS REPORT) UNCLASSIFIED	21. NO. OF PAGES 88
		20. SECURITY CLASS (THIS PAGE) UNCLASSIFIED	22. Price \$1.25

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 (Section A)

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, \$17.00; Foreign, \$21.25.

• Mathematical Sciences (Section B)

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, \$9.00; Foreign, \$11.25.

DIMENSIONS, NBS

The best single source of information concerning the Bureau's measurement, research, developmental, cooperative, and publication activities, this monthly publication is designed for the layman and also 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. Annual subscription: Domestic, \$6.50; Foreign, \$8.25.

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.

BIBLIOGRAPHIC SUBSCRIPTION SERVICES

The following current-awareness and literature-survey bibliographies are issued periodically by the Bureau:

Cryogenic Data Center Current Awareness Service (Publications and Reports of Interest in Cryogenics). A literature survey issued weekly. Annual subscription: Domestic, \$20.00; foreign, \$25.00.

Liquefied Natural Gas. A literature survey issued quarterly. Annual subscription: \$20.00.

Superconducting Devices and Materials. A literature survey issued quarterly. Annual subscription: \$20.00. Send subscription orders and remittances for the preceding bibliographic services to the U.S. Department of Commerce, National Technical Information Service, Springfield, Va. 22151.

Electromagnetic Metrology Current Awareness Service (Abstracts of Selected Articles on Measurement Techniques and Standards of Electromagnetic Quantities from D-C to Millimeter-Wave Frequencies). Issued monthly. Annual subscription: \$100.00 (Special rates for multi-subscriptions). Send subscription order and remittance to the Electromagnetic Metrology Information Center, Electromagnetics Division, National Bureau of Standards, Boulder, Colo. 80302.

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

OFFICIAL BUSINESS

Penalty for Private Use, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-215

