Inorganic Reactions and Methods Cumulative Index

Volumes 1-18

Part 2
Compound Indexes

Founding Editor

J.J. Zuckerman

Editors

A.P. Hagen
A.D. Norman
J.D. Atwood

WILEY-VCH

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Preface to the Series

Inorganic Reactions and Methods constitutes a closed-end series of books designed to present the state of the art of synthetic inorganic chemistry in an unprecedented manner. So far, access to knowledge in inorganic chemistry has been provided almost exclusively using the elements or classes of compounds as starting points. In the first 18 volumes of **Inorganic Reactions and Methods**, it is bond formation and type of reaction that form the basis of classification.

This new route of access has required new approaches. Rather than sewing together a collection of review articles, a framework has had to be designed that reflects the creative potential of the science and is hoped to stimulate its further development by identifying areas of research that are most likely to be fruitful.

The reaction volumes describe methods by which bonds between the elements can be formed. The work opens with hydrogen making a bond to itself in H_2 and proceeds through the formation of bonds between hydrogen and the halogens, the groups headed by oxygen, nitrogen, carbon, boron, beryllium, and lithium to the formation of bonds between hydrogen and the transition and inner-transition metals and elements of group zero. This pattern is repeated across the periodic system until all possible combinations of the elements have been treated. This plan allows most reaction topics to be included in the sequence where appropriate. Reaction types that do not arise from the systematics of the plan are brought together in the concluding chapters on oxidative addition and reductive elimination, insertions and their reverse, electron transfer and electrochemistry, photochemical and other energized reactions, oligomerization and polymerization, inorganic and bioinorganic catalysis, and the formation of intercalation compounds and ceramics.

The project has engaged a large number of the most able inorganic chemists as Editorial Advisors creating overall policy, as Editorial Consultants designing detailed plans for the subsections of the work, and as authors whose expertise has been crucial for the quality of the treatment. The conception of the series and the details of its technical realization were the subject of careful planning for several years. The distinguished chemists who form the Editorial Advisory Board have devoted themselves to this exercise, reflecting the great importance of the project.

It was a consequence of the systematics of the overall plan that publication of a volume had to await delivery of its very last contribution. Thus was the defect side of the genius of the system revealed as the excruciating process of extracting the rate-limiting manuscripts began. Intense editorial effort was required in order to bring forth the work in a timely way. The production process had to be designed so that the insertion of new material was possible up to the very last stage, enabling authors to update their pieces with the latest developments. The publisher supported

the cost of a computerized bibliographic search of the literature and a second one for updating.

Each contribution has been subjected to an intensive process of scientific and linguistic editing in order to homogenize the numerous individual pieces, as well as to provide the highest practicable density of information. This had several important consequences. First, virtually all semblances of the authors' individual styles have been excised. Second, it was learned during the editorial process that greater economy of language could be achieved by dropping conventionally employed modifiers (such as very) and eliminating italics used for emphasis, quotation marks around nonquoted words, or parentheses around phrases, the result being a gain in clarity and readability. Because the series focuses on the chemistry rather than the chemical literature, the need to tell who has reported what, how and when can be considered of secondary importance. This has made it possible to bring all sentences describing experiments into the present tense. Information on who published what is still to be found in the reference lists. A further consequence is that authors have been burdened neither with identifying leading practitioners, nor with attributing priority for discovery, a job that taxes even the talents of professional historians of science. The authors' task then devolved to one of describing inorganic chemical reactions, with emphasis on synthetic utility, yield, economy, availability of starting materials, purity of product, specificity, side reactions, etc.

The elimination of the names of people from the text is by far the most controversial feature. Chemistry is plagued by the use of nondescriptive names in place of more expository terms. We have everything from Abegg's rule, Adkin's catalyst, Admiralty brass, Alfven number, the Amadori rearrangement, and Adurssov oxidation to the Zdanovskii law, Zeeman effect, Zincke cleavage, and Zinin reduction. Even well-practiced chemists cannot define these terms precisely except for their own areas of specialty, and no single source exists to serve as a guide. Despite these arguments, the attempt to replace names of people by more descriptive phrases was met in many cases by a warmly negative reaction by our colleague authors, notwithstanding the obvious improvements wrought in terms of lucidity, freedom from obscurity and obfuscation and, especially, ease of access to information by the outsider or student.

Further steps toward universality are taken by the replacement of element and compound names wherever possible by symbols and formulas, and by adding to data in older units their recalculated SI equivalents. The usefulness of the reference sections has been increased by giving journal-title abbreviations according to the *Chemical Abstracts Service Source Index*, by listing in each reference all of its authors and by accompanying references to patents and journals that may be difficult to access by their *Chemical Abstracts* citations. Mathematical signs and common abbreviations are employed to help condense prose and a glossary of the latter is provided in each volume. Dangerous or potentially dangerous procedures are highlighted in safety notes printed in boldface type.

The organization of the material should become readily apparent from an examination of the headings listed in the table of contents. Combining the words constituting the headings, starting with the major heading (one digit) and continuing

through the major chapter heading (two digits), division heading (three digits), section heading (four digits) to the subsection heading (five digits), reveals at once the subject of a "slice" of the plan. Each slice is a self-contained unit. It includes its own list of references and provides definitions of unusual terms that may be used in it. The reader, therefore, through the table of contents alone, can in most instances quickly reach the desired material and derive the information wanted.

In addition, there is for each volume an author index (derived from the lists of references) and a subject index that lists compound classes, methods, techniques, apparatus, effects, and other phenomena. An index of empirical formulas is also provided. Here in each formula the element symbols are arranged in alphabetical order except that C, or C and H if present, always come first. Moreover, each empirical formula is permuted successively. Each permuted formula is placed in its alphabetical position and cross referenced to the original formula. Therefore, the number of appearances that an empirical formula makes in the index equals the number of its elements. By this procedure all compounds containing a given element come together in one place in the index. Each original empirical formula is followed by a linearized structural formula and keywords describing the context in which the compound is discussed. All indexes refer the user to subsection rather than page number.

Because the choice of designations of groups in the periodic table is currently in a state of flux, it was decided to conform to the practice of several leading inorganic texts. To avoid confusion an appropriately labeled periodic table is printed on the back endpaper.

Finally, and most important, an enormous debt of gratitude toward all our authors is to be recorded. These experts were asked to prepare brief summaries of their knowledge, ordered in logical sequence by our plan. In addition, they often involved themselves in improving the original conception by recommending further refinements and elaborations. The plan of the work as it is being published can truly be said to be the product of the labors of the advisors and consultants on the editorial side as well as the authors who were able to augment more general knowledge with their own detailed information and ideas. Because of the unusually strict requirements of the series, authors had to not only compose their pieces to fit within narrowly constrained limits of space, format, and scope, but, also, after delivery to a short deadline, were expected to stand by while an intrusive editorial process homogenized their own prose styles out of existence and shrank the length of their expositions. These long-suffering colleagues had then to endure the wait for the very last manuscript scheduled for their volume to be delivered so that their work could be published, often after a further diligent search of the literature to insure that the latest discoveries were being cited and that claims for facts now proved false were eliminated. To these co-workers (270 for the reaction volumes alone), from whom so much was demanded but who continued to place their knowledge and talents unstintingly at the disposal of the project, we dedicate this series.

J.J. ZUCKERMAN
Norman, Oklahoma
July 4, 1985

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Inorganic Reactions and Methods Cumulative Index

Volumes 1-18

Part 2
Compound Indexes

Compound Index

This index lists individual, fully specified compositions of matter that are mentioned in the text. It is an index of empirical formulas, ordered according to the following system: the elements within a given formula occur in alphabetical sequence except for C, or C and H if present, which always come first. The formulas are ordered alphanumerically without exception.

Whenever an empirical formula does not show how the elements are combined in groups, it is followed by a linearized structural formula, which reveals the connectivity of other compound(s) underlying the empirical formula and serves to distinguish substances which are identical in composition but differ in the arrangement of elements. The empirical formulas are followed by keywords. They describe the context in which the compounds represented by the empirical formulas are discussed. Volume numbers are indicated by **boldface**. Section numbers direct the reader to relevant sections in the respective volumes.

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BaAg
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$Ba[AgF_4]$
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$AgBaF_5$
$Ba[AgF_5]$
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$Ba_2[AgF_6]$
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$Ag[SO_3F]_2$
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AgF_3
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AgF_3K
$K[AgF_3]$
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AgF_3NO
$[NO][AgF_3]$
Formation: **4**, 2.8.1

AgF_3Rb
$Rb[AgF_3]$
Formation: **4**, 2.8.1

AgF_3Zn
$Ag[ZnF_3]$
Formation: **4**, 2.11.2.3

AgF_4Hg
$Hg[AgF_4]$
Formation: **4**, 2.8.1

AgF_4K
$K[AgF_4]$
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AgF_4K_2
$K_2[AgF_4]$
Formation: **4**, 2.8.1

AgF_4Na
$Na[AgF_4]$
Formation: **4**, 2.8.4.1

AgF_4O_2
$[O_2][AgF_4]$
Decomposition: **4**, 2.8.3.1.2
Formation: **4**, 2.8.4.1

AgF_4Rb
$Rb[AgF_4]$
Formation: **4**, 2.8.4.1

AgF_4Rb_2
$Rb_2[AgF_4]$
Formation: **4**, 2.8.1

AgF_4Sr
$Sr[AgF_4]$
Formation: **4**, 2.8.1

AgF_5
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AgF_6P
$Ag[PF_6]$
Chloride abstraction: **12**, 5.8.2.16.3
Fluorination agent: **3**, 2.5.12.3.4
Reaction with chlorocarbene complexes: **12**, 5.8.2.16.1
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AgF_6Sb
$Ag[SbF_6]$
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Ag[GaH_4]
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$[Ag(NH_3)_2]I$
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Reaction with RAg: **11**, 5.6.4.3
Reaction with alkynes: **11**, 5.6.4.3
Reaction with $SbPh_3$: **8**, 4.7.4.1
Used to form $[At(C_5H_5N)_2]NO_3$: **3**, 2.4.1

AgN_2NaO_4
$Na[Ag(NO_2)_2]$
Formation: **8**, 4.7.2.9.1 (table)

AgN_2P_2
$Ag(PN)_2$
Formation: **8**, 4.7.3.6

AgO
Formation: **6**, 3.7.2.1.1
Reduction by H_2: **1**, 1.4.2.5.1

AgO
$[Ag^{I}Ag^{III}O_2]$
Formation from $[Ag(OH)_4]^-$ and KOH: **6**, 3.7.2.7.2

AgO_2
Matrix isolation: **6**, 3.7.2.8

AgO_2
$Ag(\eta^2\text{-}O_2)$(matrix-isolated species)
Formation: **6**, 3.7.2.1.1

AgO_4
Matrix isolation: **6**, 3.7.2.8

AgP
Formation: **8**, 4.7.3.1 (table)

AgP_2
Formation: **8**, 4.7.3.1 (table)

AgP_3
Formation: **8**, 4.7.3.1 (table)

AgPd
Pd-Ag
Reaction with H_2: **2**, 1.9.1

AgSSi
Ag-SiS
Matrix isolation: **6**, 3.7.2.8

AgS_8^{3-}
$[Ag(S_4)_2]^{3-}$
Formation: **6**, 3.7.3.6

AgS_9^-
Formation: **6**, 3.7.3.6

AgSr
SrAg
Formation: **13**, 7.3.3.1.4

Ag_2
Formation: **13**, 8.2.2.1.1

$Ag_2Au_3Cl_{17}H_{24}N_6$
$[NH_4]_6[Ag_2Au_3Cl_{17}]$
Structure: **4**, 2.8.4.2

Ag_2Ca
$CaAg_2$
Formation: **13**, 7.3.3.1.3
Reaction with H_2: **2**, 1.9.2

Ag_2CaH
$CaAg_2H$
Formation: **2**, 1.9.2

Ag_2ClF
Formation of double salt: **3**, 2.5.12.3.3

Ag_2CsI_3
$Cs[Ag_2I_3]$
Structure: **4**, 2.8.1

Ag_2CuO
Ag_2O—Cu
Catalyst: **9**, 5.2.7.2.2

Ag_2F
By cathodic reduction of AgF solution: **4**, 2.8.1
Decomposition: **4**, 2.8.1
Formation: **4**, 2.8.2
From reaction of AgF with Ag: **4**, 2.8.1

Structure: **4**, 2.8.1

Ag_2FH_2IO
$Ag_2IF \cdot H_2O$
Formation: **4**, 2.8.11.1

Ag_2F_6Si
$Ag_2[SiF_6]$
Fluorination agent: **3**, 2.5.12.3.4

$Ag_2H_{12}N_4O_4S$
$[Ag(NH_3)_2]_2[SO_4]$
Formation: **8**, 4.7.2.1.1

$Ag_2H_{16}I_4O_8Sr$
$[Sr(H_2O)_8][AgI_2]_2$
Formation: **4**, 2.8.1
Structure: **4**, 2.8.1

Ag_2HgI_4
Formation: **4**, 2.8.2
Reaction with $Mo(CO)_6$, $W(CO)_6$: **4**, 2.9.15.1.1

$Ag_2N_2O_2$
$Ag_2[ON{=}NO]$
Formation: **7**, 4.2.2.1.3

Ag_2Na
$NaAg_2$
Formation: **13**, 7.3.1.1.2, 7.3.1.2

Ag_2O
Formation: **6**, 3.7.2.1.1
Reaction with X_2: **4**, 2.8.11.1
Reactions with hydrohalic acids: **4**, 2.8.11.1
Reaction with F_2: **4**, 2.8.8.2
Reduction by H_2: **1**, 1.4.2.5.1
Starting material: **6**, 3.7.4.4.1

Ag_2O_4S
Ag_2SO_4
Reduction by H_2: **1**, 1.4.2.5.2
Stabilizer: **1**, 1.4.4.1.1

Ag_2O_4Se
Ag_2SeO_4
Formation: **6**, 3.7.4.4.2

Ag_2O_4Te
Ag_2TeO_4
Formation: **6**, 3.7.4.4.2

$Ag_2O_7Tl_4$
$Ag_2[Tl_4O_7]$
Formation: **5**, 3.5.3.3.3

$Ag_2P_2S_6$
Formation: **5**, 3.3.6.1

Ag_2P_3
Formation: **8**, 4.7.3.1 (table)

Ag_2S
Catalyst: **1**, 1.4.2.6.3, 1.4.6.1.2
Exchange reaction: **6**, 3.7.4.2.1
Formation: **6**, 3.7.3.1.1
Formation: **6**, 3.7.3.6
Formation from reaction of $AgOP(O)(OR)_2$ with CS_2: **5**, 3.3.5.5.1
Formation from Ag and SO_2: **6**, 3.7.2.6.1
Reaction medium: **1**, 1.4.10.2.2
Reaction with AgX: **4**, 2.9.14.2
Reduction by H_2: **1**, 1.4.2.6.1
S_2O formation: **5**, 3.2.3.2.4
Solubility: **6**, 3.7.3.2
α-Ag_2S
Catalyst: **1**, 1.4.2.2.3

Ag_2SO_4
Formation from Ag and SO_2: **6**, 3.7.2.6.1

$Ag_2S_{12}^{2-}$
$[Ag_2(S_6)_2]^{2-}$
Formation: **6**, 3.7.3.6

$Ag_2S_{20}^{4-}$
Formation: **6**, 3.7.3.6

Ag_2Se
Formation: **6**, 3.7.4.1.1, 3.7.4.2.1, 3.7.4.3.1
Reaction with acid: **1**, 1.4.4.3.1
Reduction by H_2: **1**, 1.4.2.7.1

Ag_2Sr
$SrAg_2$
Formation: **13**, 7.3.3.1.4

Ag_2Sr_3
Sr_3Ag_2
Formation: **13**, 7.3.3.1.4

Ag_2Te
Formation: **6**, 3.7.4.1.2, 3.7.4.1.3, 3.7.4.2.1, 3.7.4.3.1, 3.7.4.4.1
Formation from polychalcogenide: **6**, 3.7.4.6.2.1
Reaction with AgX: **4**, 2.9.14.2

Ag_3
Formation: **13**, 8.2.2.1.1

Ag_3AsO_4
Formation: **5**, 3.3.8.3.1

Ag_3Ba_2
Ba_2Ag_3
Formation: **13**, 7.3.3.1.5

Ag_3Ba_4
Ba_4Ag_3
Formation: **13**, 7.3.3.1.5

Ag_3Ca_5
Ca_5Ag_3
Formation: **13**, 7.3.3.1.3

Ag_3Cu_2
Formation: **13**, 8.2.2.1.1

$Ag_3H_{18}N_7O_6Se_2$
$[Ag(NH_3)_2]_3[O_3SeNSeO_3]$
Formation: **5**, 3.3.4.4

Ag_3Li_{10}
$Li_{10}Ag_3$
Formation: **13**, 7.3.1.2

Ag_3NO_6Te
$Ag_2TeO_3 \cdot AgNO_3$
Formation: **6**, 3.7.4.2.1

Ag_3Sn
Formation: **11**, 5.6.2

Ag_3Sr_7
Sr_7Ag_3
Formation: **13**, 7.3.3.1.4

Ag_4
Formation: **13**, 8.2.2.1.1

Ag_4Ba
$BaAg_4$
Formation: **13**, 7.3.3.1.5

Ag_4Cu
Formation: **13**, 8.2.2.1.1
Ag_4I_5Rb
$Rb[Ag_4I_5]$
Formation: **4**, 2.8.1
Silver ion resistivity of polycrystalline material: **18**, 17.3.7
Structure: **4**, 2.8.1
Ag_4Li_9
Li_9Ag_4
Formation: **13**, 7.3.1.2
$Ag_4O_5Tl_2$
$Ag_4[Tl_2O_5]$
Formation: **5**, 3.5.3.3.3
$Ag_4O_{10}P_4$
$Ag_4[O_2POP(O)_2P(O)_2OPO_2]$
Formation: **7**, 4.2.2.2.4
$Ag_4O_{11}Tl_6$
$Ag_4[Tl_6O_{11}]$
Formation: **5**, 3.5.3.3.3
$Ag_4P_2Se_6$
Formation: **5**, 3.3.7.1
Ag_5
Formation: **13**, 8.2.2.1.1
Ag_5Ba
$BaAg_5$
Formation: **13**, 7.3.3.1.5
Ag_5Ba_3
Ba_3Ag_5
Formation: **13**, 7.3.3.1.5
Ag_5S_3
Formation: **6**, 3.7.3.6
Ag_5Sr
$SrAg_5$
Formation: **13**, 7.3.3.1.4
Ag_6
Formation: **13**, 8.2.2.1.2
Ag_6S_4
Formation: **6**, 3.7.3.6
Ag_7Ca_2
Ca_2Ag_7
Formation: **13**, 7.3.3.1.3
$Ag_7F_2HO_8$
$[Ag_7O_8][HF_2]$
Electrolytic formation from AgF solution: **4**, 2.8.1
Structure: **4**, 2.8.1
$Ag_7F_5H_5I_2O_{25}$
$Ag_7I_2F_5 2.5\ H_2O$
Formation: **4**, 2.8.11.1
Ag_7S_4
Formation: **6**, 3.7.3.6
Ag_7Te_4
Ag-Te system: **6**, 3.7.4.1.2
Ag_8Ca_3
Ca_3Ag_8
Formation: **13**, 7.3.3.1.3
Ag_9Ca_2
Ca_2Ag_9
Formation: **13**, 7.3.3.1.3
$Ag_{11}Te_7$
Formation: **6**, 3.7.4.2.1
Ag_xNbS_2
Formation by thermal and electrochemical intercalation: **6**, 3.11.6.1.2
Intercalate ion ordering: **6**, 3.11.6.1.2
Ag_xS_2Ta
Ag_xTaS_2
Formation by thermal and electrochemical intercalation: **6**, 3.11.6.1.2
Intercalate ion ordering: **6**, 3.11.6.1.2
Ag_xS_2Ti
Ag_xTiS_2
Formation by thermal and electrochemical intercalation: **6**, 3.11.6.1.2
Intercalate ion ordering: **6**, 3.11.6.1.2
$Al_{0.16}Na_{0.84}O_{1.66}Si_{0.45}Zr_{0.05}$
$Na_{0.84}Al_{0.16}Zr_{0.05}Si_{0.45}O_{1.66}$
Corrosion resistant composition: **18**, 17.3.7.2.2
NASIGLAS: **18**, 17.3.7
Sodium ion resistivity: **18**, 17.3.7, 17.3.7.2, 17.3.7.2.2
$Al_{0.5}B_{0.05}Hf_{0.45}$
$B_{0.05}Al_{0.5}Hf_{0.45}$
Crystal chemistry: **13**, 6.7.2.1
Al
Catalyst for reaction of $H_2$with Mg metal: **2**, 1.8.3.2
Electrode: **1**, 1.4.2.1.2
Formation: **1**, 1.2.3 Formation of H_2 from hydrogen halides: 1.2.4.1
Formation of pure: **10**, 5.3.3.5.3
Formation of H_2 from NH systems: **1**, 1.2.4.4
Formation of H_2 from OH systems: **1**, 1.2.4.2
Formation of H_2 from SH and SeH systems: **1**, 1.2.4.3
Preparation of borazines: **17**, 15.2.5.1.1
Reaction with AlX_3: **13**, 6.2.2.1
Reaction with elemental S, Se, Te: **13**, 6.2.3
Reaction with C_6H_6/BX_3: **10**, 5.3.2.3.3
Reaction with $Cu(O_2CR)_2$: **5**, 3.5.3.2.4
Reaction with HCl: **1**, 1.4.2.2.3, 1.4.4.3.3
Reaction with H_2O, OH^-: **5**, 3.5.3.2.4
Reaction with HgX_2, PbX_2, Cu_2X_2, AgX: **4**, 2.6.3.3
Reaction with $Hg(GeR_3)_2$: **10**, 5.3.13.2
Rcaction with $Hg(SiR_3)_2$: **10**, 5.3.8.3
Reaction with $Hg(SnR_3)_2$: **10**, 5.3.18.2
Reaction with NH_3: **8**, 4.10.2.2.2
Reaction with K_2SiF_6: **9**, 5.2.3.1.2
Reaction with RX: **4**, 2.6.3.2, **10**, 5.3.3.2.2
Reaction with HX: **4**, 2.6.3.1
Reaction with R_2Hg: **10**, 5.3.3.2.3
Reaction with R_3SiCl: **10**, 5.3.8.4
Reaction with F_3C: **10**, 5.3.3.2.2
Reaction with H_2 and R_3Al: **10**, 5.3.3.2.1
Reaction with S_8: **5**, 3.3.6.4.1

Reaction with Sb metal: **7**, 4.5.2
Reaction with N_2: **7**, 4.5.2
Reaction with elemental phosphorus: **7**, 4.5.2
Reaction with X_2: **4**, 2.6.2.1
Reducing agent for R_3PbX: **9**, 5.2.6.4.1
Reducing agent: **9**, 5.2.6.1.2
Reduction of alkali-metal plumbates: **2**, 1.6.3.5
Reduction of triorganochlorostannanes: **2**, 1.6.3.4.1
Reduction of R_3PbCl: **9**, 5.2.6.5
Reaction with Sb: **8**, 4.10.2.5
$(Al,Hf)_9(Al,Mo)_4B$
$B(Al,Hf)_9(Al,Mo_4)$
Crystal chemistry: **13**, 6.7.2.1

AlAs
Formation: **7**, 4.5.3.2, 4.5.1.2.2
Hydrolysis: **5**, 3.5.3.6.1
Physical properties: **8**, 4.10.2.1.1 (table), 4.10.2.4.1

$AlAs_4H_8Li$
$Li[Al(AsH_2)_4]$
Hydrolysis to AsH_3: **2**, 1.5.3.3.3
Reaction with R_3SiX, R_3GeX: **4**, 2.6.9.3
Reaction with R_3SnBr: **4**, 2.6.9.3

$AlBH_4Na$
$Na[AlBH_4]$
Reduction of $(C_2H_5O)_4Si$: **2**, 1.6.5.2.2

AlBMo
B(Al,Mo)
Crystal chemistry: **13**, 6.7.2.2
BAlMo
Crystal chemistry: **13**, 6.7.2.2

AlB_2
Crystal structure: **13**, 6.7.2.3, 6.7.2.4
Preparation: **13**, 6.7.3.2, 6.7.3.5

AlB_2Cr_2
B_2AlCr_2
Crystal chemistry: **13**, 6.7.2.2

AlB_2Fe_2
B_2AlFe_2
Crystal chemistry: **13**, 6.7.2.2

AlB_2Mn_2
B_2AlMn_2
Crystal chemistry: **13**, 6.7.2.2

AlB_3H_{12}
$Al(BH_4)_3$
Explosion in moist O_2: **5**, 3.5.5.1.1
Formation: **2**, 1.7.3.2, 1.7.5.1, 1.7.5.2 **4**, 2.6.5.3
Formation of H_2 from: **1**, 1.2.3.1, 1.2.3.2
Reaction with H_2O: **5**, 3.5.3.1.1
Reaction with NH_3: **7**, 4.5.5.1, 4.5.5.2
Reaction with N_2H_4: **7**, 4.5.5.2
Reaction with $(C_2H_5O)_4Si$: **2**, 1.6.5.2.2
Reaction with C_2H_4: **2**, 1.6.5.1.4
Reaction with chlorosilanes: **2**, 1.6.5.2.1
Reduction of $(C_2H_5O)_3CH$: **2**, 1.6.5.1.2

$AlB_3H_{15}N$
$Al(BH_4)_3 \cdot NH_3$
Formation: **7**, 4.5.5.2

$AlB_3H_{16}N_2$
$Al(BH_4)_3 \cdot N_2H_4$
Formation: **7**, 4.5.5.2

$AlB_3H_{18}N_2$
$Al(BH_4)_3 \cdot 2NH_3$
Formation: **7**, 4.5.5.1

$AlB_3H_{28}N_8$
$Al(BH_4)_3 \cdot 4N_2H_4$
Formation: **7**, 4.5.5.2

$AlB_3H_{30}N_6$
$[Al(NH_3)_6][BH_4]_3$
Formation: **7**, 4.5.5.1, 4.5.5.2

AlB_4Cr_3
B_4AlCr_3
Crystal chemistry: **13**, 6.7.2.2

AlB_4Lu
B_4AlLu
Crystal chemistry: **13**, 6.7.2.3

AlB_4Yb
B_4AlYb
Crystal chemistry: **13**, 6.7.2.3

AlB_6Yb_2
B_6AlYb_2
Crystal chemistry: **13**, 6.7.2.3

AlB_{12}
Crystal structure: **13**, 6.7.2.4
Preparation: **13**, 6.7.3.5

$AlB_{14}Mg$
$MgAlB_{14}$
Crystal structure and lattice parameters: **13**, 6.7.2.4.5

AlBr
Formation: **4**, 2.6.14.1

$AlBrH_2$
AlH_2Br
Formation: **4**, 2.6.5.3

AlBrO
AlOBr
Formation: **5**, 3.5.5.3.1, 3.5.6.3.1
Reaction with O_2: **5**, 3.5.5.2.1

AlBrS
AlSBr
Formation: **4**, 2.6.7.3
Reaction with O_2: **5**, 3.5.5.3.1

AlBrSe
AlSeBr
Formation: **4**, 2.6.7.3
Reaction with O_2: **5**, 3.5.5.3.1

AlBrTe
AlTeBr
Formation: **4**, 2.6.7.3

$AlBr_2H$
$AlHBr_2$
Formation: **4**, 2.6.5.3

$AlBr_2H_3OSi$
$H_3SiOAlBr_2$
Formation: **3**, 2.5.8.1.5 **5**, 3.5.8.2

$AlBr_3$
Activation of Al metal: **10**, 5.3.3.2.2

Catalyst: **1**, 1.2.2.1
Catalyst in reaction of C_6H_6 and CO: **16**, 14.6.1.4
Catalyst in DBr exchange with C_6H_6: **2**, 1.6.7.2.1
Formation: **4**, 2.6.2.1, 2.6.6.2, 2.6.7.3
Hydrolysis: **1**, 1.3.4.3
Hydrolysis with D_2O: **1**, 1.3.6
Reaction with elemental Al: **13**, 6.2.2.1
Reaction with heterocarbene complexes: **12**, 5.8.2.16.1
Reaction with AlH_3: **4**, 2.6.5.3
Reaction with Al_2Y_3: **4**, 2.6.7.3
Reaction with As_2O_3: **5**, 3.5.6.3.1
Reaction with BF_3: **4**, 2.6.12.2
Reaction with CX_4: **3**, 2.5.2
Reaction with H_2O: **5**, 3.5.3.2.1
Reaction with MO: **4**, 2.9.4.8
Reaction with M—C bonds: **10**, 5.3.3.3.1
Reaction with NH_4F: **4**, 2.6.12.3
Reaction with N_2O_5: **5**, 3.5.6.1.4
Reaction with O_2: **5**, 3.5.5.2.1
Reaction with RCO_2H: **5**, 3.5.3.2.3
Reaction with ROH: **5**, 3.5.3.2.2
Reaction with RX: **3**, 2.5.12.1.3
Reaction with sulfur halides: **3**, 2.3.12.1.2
Reaction with R_3SiX: **3**, 2.5.12.1.3
Reaction with $(R_3Si)_2O$, R_3SiOR: **3**, 2.5.8.1.5
Reaction with R_2Sn: **3**, 2.5.15.4
Reaction with CX_4: **3**, 2.5.3.2
Redistribution: **10**, 5.3.3.3.2

$AlCa_2FeO_5$
Ca_2FeAlO_5
Structure: **6**, 3.10.3.2.1.4

AlCl
Formation: **4**, 2.6.14.1, **13**, 6.2.2.1

$AlClH_2$
AlH_2Cl
Formation: **4**, 2.6.5.3
Formation of H_2 from: **1**, 1.2.2.5

$AlClH_3Li$
$Li[AlH_3Cl]$
Formation: **4**, 2.6.5.3

AlClO
AlOCl
Formation: **4**, 2.6.7.1, **5**, 3.5.5.2.1, 3.5.5.2.3 **5**, 3.5.5.3.1, 3.5.6.3.1, 3.5.6.3.2

$AlClO_4$
$Ag[ClO_4]$
Reaction with $[(CH_3)_2N]_3PO$: **6**, 3.7.2.4.1

AlClS
AlSCl
Formation: **4**, 2.6.7.3, 2.6.1
Hydrolysis: **1**, 1.4.6.2.1
Reaction with O_2: **5**, 3.5.5.3.1
Reaction with X_2: **4**, 2.6.7.1

AlClSe
AlSeCl
Formation: **4**, 2.6.7.3
Reaction with O_2: **5**, 3.5.5.3.1

AlClT
AlTCl
Formation: **4**, 2.6.1

AlClTe
AlTeCl
Formation: **4**, 2.6.7.3

$AlCl_2H$
$AlHCl_2$
Formation: **4**, 2.6.5.3
Formation of H_2 from: **1**, 1.2.2.5

$AlCl_2H_3OSi$
$H_3SiOAlCl_2$
Formation: **3**, 2.5.8.1.5 **5**, 3.5.8.2

$AlCl_3$
Activation of Al metal: **10**, 5.3.3.2.2
Al-pyrazine formation: **14**, 11.6.6
Benzene alkylation co-catalyst: **16**, 14.6.6.4
Catalysis of DBr exchange with C_6H_6: **2**, 1.6.7.2.1
Catalysis of NaH-$SiCl_4$ reductions: **2**, 1.6.4.2.1
Catalysis of redistribution reactions: **2**, 1.6.4.3.1
Catalyst: **1**, 1.4.3.2.1, **9**, 5.2.7.6.3, 5.2.7.6.4, **10**, 5.3.2.3.3 **14**, 10.2.3.4.2
Catalyst for alkylation of polyboranes: **10**, 5.3.2.7.2
Catalyst for polymerization of R_2SiX_2: **17**, 15.2.14.2.2
Catalyst for reaction of RCl: **7**, 4.4.3.1.1
Catalyst in acylation: **4**, 2.8.23.4
Catalyst in reaction of C_6H_6 and CO: **16**, 14.6.1.4
Chelation with trisacyl complexes: **12**, 5.8.2.8.5
Complex with KCl: **10**, 5.3.3.3.2
Formation: **4**, 2.6.2.1, 2.6.3.1, 2.6.3.2, 2.6.3.3, 2.6.6.2, 2.6.6.3, 2.6.6.4, 2.6.7.1, 2.6.7.3, 2.6.8.1, 2.6.8.2
Halogenation reagent: **4**, 2.9.12.5
Hydrolysis: **1**, 1.3.4.2
Hydrolysis by H_2O: **18**, 17.2.5.2.2
Metathesis: **4**, 2.6.12.1
Polyborane rearrangement catalyst: **10**, 5.3.2.7.6
Reaction with $[AlR_4]^-$: **10**, 5.3.3.3.2
Reaction with elemental Al: **13**, 6.2.2.1
Reaction with heterocarbene complexes: **12**, 5.8.2.16.1
Reaction with AlH_3: **4**, 2.6.5.3
Reaction with Al_2S_3: **1**, 1.4.6.2.1
Reaction with Al_2Y_3: **4**, 2.6.7.3
Reaction with As_2O_3: **5**, 3.5.6.3.1
Reaction with BX_3: **4**, 2.6.12.2
Reaction with BF_3: **4**, 2.6.12.2
Reaction with CdS: **4**, 2.8.16.2
Reaction with H_2O: **5**, 3.5.3.2.1
Reaction with H_2SO_4: **5**, 3.5.3.2.3
Reaction with H_2 and CO_2: **18**, 17.2.5.5.2
Hydrocyanation promoter: **16**, 14.4.6.1 (table)

SiSr
Formation: **12**, 5.10.3.1
$SiSr_2$
Formation: **12**, 5.10.3.1
$SiTa_2$
Ta_2Si
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
$SiTa_3$
Ta_3Si
STructure: **12**, 5.10.3.2.1
$SiTa_4$
Ta_4Si
Structure: **12**, 5.10.3.2.1
SiTb
TbSi
Structure: **12**, 5.10.3.2.2
SiTe
Formation: **5**, 3.4.2.3.1
$SiTe_2$
Formation: **5**, 3.4.2.3.1
Hydrolysis: **1**, 1.4.6.3.4
SiTh
ThSi
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3.2.2
SiTi
TiSi
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
$SiTi_3$
Ti_3Si
Structure: **12**, 5.10.3.2.1
SiU
USi
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3, 5.10.3.2.2
SiU
U_3Si
Structure: **12**, 5.10.3, 5.10.3.2.2
SiV_2
V_2Si
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
SiV_3
V_3Si
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
SiW_3
W_3Si
Structure: **12**, 5.10.3.2.1
SiY
YSi
Structure: **12**, 5.10.3.2.1
SiYb
YbSi
Structure: **12**, 5.10.3.2.2
SiZr
ZrSi
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
$SiZr_2$
Zr_2Si
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
$SiZr_3$
Zr_3Si
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
$SiZr_4$
Zr_4Si
Formation: **12**, 5.10.3.2.1
Si_2Sm
$SmSi_2$
Structure: **12**, 5.10.3.2.2
Si_2Sr
$SrSi_2$
Formation: **12**, 5.10.3.1
Si_2Ta
$TaSi_2$
Structure and H: $\Delta H_f°$.**12**, 10.3.2.1
Si_2Tb
$TbSi_2$
Structure: **12**, 5.10.3.2.2
Si_2Th
$ThSi_2$
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3, 5.10.3.2.2
Si_2Th_3
Th_3Si_2
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3, 5.10.3.2.2
Si_2Ti
$TiSi_2$
Structure: **12**, 5.10.3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_2TiV
$TiVSi_2$
Structure: **12**, 5.10.3.3
Si_2U
USi_2
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3, 5.10.3.2.2
Si_2U_3
U_3Si_2
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3, 5.10.3.2.2
Si_2V
VSi_2
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_2W
WSi_2
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_2W_3
W_3Si_2
Structure: **12**, 5.10.3.2.1
Si_2Y
YSi_2
Structure: **12**, 5.10.3.2.1
Si_2Yb
$YbSi_2$
Structure: **12**, 5.10.3.2.2
Si_2Zr
Zr_3Si_2
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1

Si_2Zr_3
Zr_3Si_2
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_3Sm_5
Sm_5Si_3
Structure: **12**, 5.10.3.2.2
Si_3Sr_3
Sr_3Si_3
Formation: **12**, 5.10.3.1
Si_3Tb_5
Tb_5Si_3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_3Tb_5
Tb_5Si_3
Structure: **12**, 5.10.3.2.2
Si_3Ti_5
Ti_5Si_3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_3U
USi_3
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3.2.2
Si_3V_5
V_5Si_3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_3W_5
W_5Si_3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_3Y_5
Y_5Si_3
Structure: **12**, 5.10.3.2.1
Si_3Yb_5
Yb_5Si_3
Structure: **12**, 5.10.3.2.2
Si_3Zr_4
Zr_4Si_3
Formation: **12**, 5.10.3.2.1
Si_3Zr_5
Zr_5Si_3
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_4Sm_5
Sm_5Si_4
Structure: **12**, 5.10.3.2.2
Si_4Tb_5
Tb_5Si_4
Structure: **12**, 5.10.3.2.2
Si_4Ti_5
Ti_5Si_4
Formation: **12**, 5.10.3.2.1
Si_4V_5
V_5Si_4
Formation: **12**, 5.10.3.2.1
Si_4Y_5
Y_5Si_4
Structure: **12**, 5.10.3.2.1
Si_4Zr_5
Zr_5Si_4
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_5Tb_3
Tb_3Si_5
Structure: **12**, 5.10.3.2.2
Si_5Th_3
Th_3Si_5
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3.2.2
Si_5U_3
U_3Si_5
Formation and $\Delta H_f°$: **12**, 5.10.3.2.1
Structure: **12**, 5.10.3.2.2
Si_5Y_3
Y_3Si_5
Structure: **12**, 5.10.3.2.1
Si_5Zr_6
Zr_6Si_5
Structure and $\Delta H_f°$: **12**, 5.10.3.2.1
Si_7Sr_4
Sr_4Si_7
Formation: **12**, 5.10.3.1
Sm
Reaction with HX: **4**, 2.9.14.1.1
Reaction with O_2: **6**, 3.8.2.1.1
Reaction with 1-hexyne: **2**, 1.10.5.3
Sn
Allotropes: **9**, 5.2.5.1.4
Bioalkylation of: **16**, 14.8.2.3.5, 14.8.2.4
By-product of technical Pb: **9**, 5.2.6.1.1
Catalyst: **9**, 5.2.7.2.1
Electrode: **1** 1.4.2.1.2
Formation of H_2 from OH system: **1**, 1.2.4.2
Formation of H_2 from PH and AsH systems: **1**, 1.2.4.5
Formation of H_2 from SH and SeH systems: **1**, 1.2.4.5
Hydrogenation promoter: **16**, 14.3.4.4.1
Reaction with elemental K: **17**, 16.2.3
Reaction with elemental S: **5**, 3.4.2.2.4
Reaction with Be, Mg, Ca, Sr and Ba metals: **10**, 5.4.6.1
Reaction with HCl: **1**, 1.4.2.2.3
Reaction with H_2O: **1**, 1.2.7.5.2
Reaction with O_2: **5**, 3.4.2.1.4
Reaction with RI: **9**, 5.2.9.2
Reaction with RX: **3**, 2.5.3.3.3 **9**, 5.2.9.2.1, 5.2.9.2.2, 5.2.9.2.3
Reaction with RHgX: **3**, 2.5.3.2
Reaction with HX: **3**, 2.5.15.4, 2.5.3.1
Reaction with X_2: **3**, 2.5.2
Reaction with hydrogen: **2**, 1.6.2.4
Use as reducing agent: **4**, 2.9.13.2
Use in industrial reduction of nitro compounds: **2**, 1.5.6.1
SnSr
SrSn
Formation: **10**, 5.4.6.1
$SnSr_2$
Sr_2Sn
Formation: **10**, 5.4.6.1

SnTe
Formation: **5**, 3.4.2.3.3
Sn_2
Reaction with O_2: **5**, 3.4.2.1.4
Sn_3Sr
$SrSn_3$
Formation: **10**, 5.4.6.1
Sn_3Sr_5
Sr_5Sn_3
Formation: **10**, 5.4.6.1
Sn_4Sr
$SrSN_4$
Formation: **10**, 5.4.6.1
Sn_5Sr
$SrSn_5$
Formation: **10**, 5.4.6.1
Sr
Co-condensation with RX: **10**, 5.4.3.2.1
Reaction with HX: **4**, 2.7.3.1
Reaction with H_2: **2**, 1.8.3, 1.8.3.3
Reaction with N_2: **8**, 4.6.2
Reaction with PbR_4: **10**, 5.4.7.2.3
Reaction with Pb metals: **10**, 5.4.7.1.1
Reaction with RX: **10**, 5.4.3.2.1
Reaction with R_2Hg, R_2Zn: **10**, 5.4.3.2.2
Reaction with R_6Ge_2: **10**, 5.4.5.6
Reaction with R_6Si_2: **10**, 5.4.4.6
Reaction with Sn metal: **10**, 5.4.6.1
Reaction with X_2: **4**, 2.7.2
Reaction with elemental S: **5**, 3.6.2.2.2
SrZn
Formation: **13**, 7.3.4.1.4
$SrZn_2$
Formation: **13**, 7.3.4.1.4
$SrZn_5$
Formation: **13**, 7.3.4.1.4
$SrZn_{13}$
Formation: **13**, 7.3.4.1.4
$Sr_{n-1}O_{3n+1}Ta_{n2}$
$[Sr_{n-1}Ta_nO_{3n+1}]$ ·
Structure: **6**, 3.10.3.2.1

T

Ta
Bromination: **4**, 2.11.4.1
Dissolution in HF: **4**, 2.11.4.1
Fluorination: **4**, 2.11.4.1
Formation of H_2 from hydrogen halides: **1** 1.2.4.1
Formation of H_2 from OH systems: **1**, 1.2.4.2
Reaction with O_2: **6**, 3.8.2.1.1
Reaction with SnF_2: **4**, 2.11.4.1
Reaction with $TaCl_5$–SiO_2: **4**, 2.9.11.4
Reaction with $TaCl_5$–Ta_2O_5: **4**, 2.9.11.4
Reaction with F_2–O_2: **4**, 2.11.4.1
Reaction with BrF_3: **4**, 2.9.3.4, 2.11.4.1
Reaction with ClF_3: **4**, 2.11.4.1
Reaction with F_2: **4**, 2.9.2.1
Reaction with Br_2: **4**, 2.9.2.3
Reaction with Cl_2: **4**, 2.9.2.2
Reaction with I_2: **4**, 2.9.2.4
Reaction with HF: **4**, 2.11.4.1
Reaction with HX: **4**, 2.9.3.2
$TaTe_2$
Lithium intercalation of: **6**, 3.11.6.1.1
Sodium intercalation of: **6**, 3.11.6.1.1
Tb
Reaction with HX: **4**, 2.9.14.1.1
Reaction with O_2: **6**, 3.8.2.1.1
Tc
Fluorination: **4**, 2.11.3.1
Fluorination in a flow system: **4**, 2.11.3.1
Hydrogenation catalyst: **16**, 14.3.6.3
Reaction with F_2: **4**, 2.9.2.1
Reaction with HX: **4**, 2.9.3.2
Reaction with Cl_2: **4**, 2.9.2.2
Reaction with O_2: **6**, 3.8.2.1.1
Te
Bioalkylation of: **16**, 14.8.2.3.4
Formation of H_2 from PH and AsH systems: **1** 1.2.5.5
Reaction with ClF_3: **3**, 2.3.2.3.4
Reaction with ClF: **3**, 2.3.2.3.4
Reaction with CuX: **4**, 2.9.14.3
Reaction with elemental Al, Ga, In: **13**, 6.2.3
Reaction with F_2: **3**, 2.3.2.1.4
Reaction with H_2: **1**, 1.4.2.3.2
Reaction with MF: **3**, 2.3.2.3.4
Reaction with NaOOCH: **1**, 1.4.3.3.3
Reaction with $[Ph_2I]Cl$: **3**, 2.3.2.4
Reaction with R_2SnH_2: **9**, 5.2.5.2.1
Reaction with RX: **3**, 2.3.2.4
Reaction with transition-metals: **4**, 2.9.14.1.2
Reaction with X_2: **3**, 2.3.2.1.4
Reduction product: **1**, 1.4.8.3.2
Toxicity: **1**, 1.4.1.3
$(Te)_x$
Formation: **5**, 3.2.6.1
Oxidation with SbF_5, AsF_5, or $S_2O_6F_2$: **5**, 3.2.6.3
Reaction with Cl_2: **5**, 3.2.6.5
Reaction with K, Rb, or Cs: **5**, 3.2.6.2
Reaction with $[Se_8][AsF_6]_2$: **5**, 3.2.7.3
Reaction with CF_3 radicals: **5**, 3.2.6.4
Reaction with elemental As: **5**, 3.3.9.1
Reaction with elemental Cs: **5**, 3.6.3.3.1
Reaction with elemental group-IA metals: **5**, 3.2.6.2
Reaction with elemental Sb: **5**, 3.3.11.1
Reaction with group-IA metals: **5**, 3.6.2.3.1
Reaction with group-IIA metals: **5**, 3.6.2.3.2
Reaction with KBH_4: **5**, 3.6.3.3.1
TeZn
ZnTe
Formation: **6**, 3.7.4.1.2
Formation: **6**, 3.7.4.1.3
Formation: **6**, 3.7.4.3.1

Formation from polychalcogenide: **6**, 3.7.4.6.2.1
Melt growth: **18**, 17.3.8.5.2
Reaction with acids: **1**, 1.4.4.3.4
Stoichiometric adjustment: **6**, 3.11.3.1

Te_2
Formation: **5**, 3.2.6.1

Te_2V
VTe_2
Sodium intercalation of: **6**, 3.11.6.1.1

Te_2W
WTe_2
Structure: **17**, 16.4.3.1

Te_9W^{2-}
$[W(Te)(Te_4)_2]^{2-}$
Formation: **6**, 3.8.4

Th
Fluorination: **4**, 2.11.5.2
Reaction with H_2O: **1**, 1.2.7.5.3

THF
Solvent in $(Ph_3P)_2Cu(OOCCH_3)$ formation: **6**, 3.7.2.6.3

$ThTi_2O_6$
Structure: **6**, 3.10.3.2.4.4

Tl
Reaction with CpH: **10**, 5.3.6.2.2.2
Reaction with $HgCP_2$: **10**, 5.3.6.2.6
Reaction with InCp: **10**, 5.3.6.2.7
Reaction with PhI: **10**, 5.3.6.2.1
Reaction with $[Ph_2X][BF_4]$: **10**, 5.3.6.2.4
Reaction with $[RN_2]BF_4$: **10**, 5.3.6.2.5
Reaction with R_3Al: **10**, 5.3.6.2.8
Reaction with hydrocarbons: **10**, 5.3.6.2.3
Use as a cathode:**10**, 5.3.6.2.9
Use as an anode: **10**, 5.3.6.2.8

Ti
Fluorination: **4**, 2.11.2.1
Reaction with: **4**, 2.9.2.3
Reaction with tetrenes: **12**, 5.8.2.16.4
Reaction with trienes: **12**, 5.8.2.16.4
Reaction with ArH: **12**, 5.8.2.6.7
Reaction with dienes: **12**, 5.8.2.4.6
Reaction with ClF_3: **4**, 2.9.3.4
Reaction with BrF_3–NOCl: **4**, 2.11.2.1
Reaction with F_2: **4**, 2.9.2.1
Reaction with ClF_3: **4**, 2.11.2.1
Reaction with Cl_2: **4**, 2.9.2.2
Reaction with H_2O: **1**, 1.2.7.5.3
Reaction with I_2: **4**, 2.9.2
Reaction with HX: **4**, 2.9.3.2
Reaction with O_2: **6**, 3.8.2.1.1
Reaction with P: **8**, 4.8.3.1.3
Reaction with WO_3: **6**, 3.10.3.1.2
Tii
Reaction with poly(methylphenylsiloxanes): **12**, 5.8.2.6.7

Tl
Bioalkylation of: **16**, 14.8.2.3.6
Reaction with alcohols: **1** 1.2.7.6
Reaction with HX: **4**, 2.6.3.1
Reaction with H_2O: **1**, 1.2.7.5.2
Reaction with Sb metal: **7**, 4.5.2
Reaction with N_2: **7**, 4.5.2
Reaction with elemental phorphorus: **7**, 4.5.2
Reaction with X_2: **4**, 2.6.2.1

Tm
Reaction with O_2: **6**, 3.8.2.1.1

U
Bromination followed by the addition of NH_4F: **4**, 2.11.5.2
Bromination followed by the addition of KF: **4**, 2.11.5.2
Fluorination: **4**, 2.11.5.2
Formation of H_2 from OH system: **1** 1.2.4.2
Reaction with H_2O: **1**, 1.2.7.5.3
Reaction with XeF_2: **4**, 2.11.5.2
Reducing agent: **1**, 1.4.4.3.4

V
Fluorination: **4**, 2.11.2.1
Formation of H_2 from hydrogen halides: **1** 1.2.4.1
Formation of H_2 from NH systems: **1**, 1.2.4.4
Reaction with: **4**, 2.9.2.3
Reaction with ArH: **12**, 5.8.2.6.7
Reaction with dienes: **12**, 5.8.2.4.6
Reaction with poly(methylphensylsiloxanes): **12**, 5.8.2.6.7
Reaction with F_2: **4**, 2.9.2.1
Reaction with Cl_2: **4**, 2.9.2.2
Reaction with I_2: **4**, 2.9.2.4
Reaction with HX: **4**, 2.9.3.2
Reaction with O_2: **6**, 3.8.2.1.1
Reaction with P: **8**, 4.8.3.1.3

VXe^+
Bond energy: **14**, 9.3.2.3

W
Catalyst constituent: **1** 1.4.3.1.1
Electrical explosion in SF_6 or CF_4: **4**, 2.11.4.1
Fluorination: **4**, 2.11.4.1
Formation: **18**, 17.2.5.2.3
Reaction with trienes: **12**, 5.8.2.16.4
Reaction with ArH: **12**, 5.8.2.6.7
Reaction with ArH and CpH: **12**, 5.8.2.6.7
Reaction with H_2O: **1**, 1.2.7.5.3
Reaction with O_2: **6**, 3.8.2.1.1
Reaction with SF_6, S_2X_2: **4**, 2.9.14.1.2
Reaction with WO_3–X_2: **4**, 2.9.11.3
Reaction with WO_3–WCl_6: **4**, 2.9.11.4
Reaction with X_2–O_2: **4**, 2.9.11.2
Reaction with O_2–F_2: **4**, 2.11.4.1
Reaction with Cl_2: **4**, 2.9.2.2
Reaction with BrF_3: **4**, 2.9.3.4