

## The Literature of Inorganic Chemistry

The following list includes books, monographs and journals which you may find useful in Advanced Inorganic. Many of these sources will be especially useful in selecting an appropriate independent project for the last part of the course.

### General Inorganic Chemistry Textbooks

#### A. Basic

- a. *Inorganic Chemistry*, second edition, D. F. Shriver, P. W. Atkins, and C. H. Langford; W. H. Freeman and Co., New York, **1994**. 913 pp.
- b. *Inorganic Chemistry*, J. R. Bowser; Brooks-Cole Publishing Co., Pacific Grove, CA, **1993**. 805 pp.
- c. *Modern Inorganic Chemistry*, second edition, W. L. Jolly; McGraw-Hill Book Co., New York, **1991**. 655 pp.
- d. *Introduction to Modern Inorganic Chemistry*, third edition, K. M. Mackay and R. A. Mackay; International Textbook Company, London, **1981**. 349 pp.
- e. *An Introduction to Inorganic Chemistry*, K. F. Purcell and J. C. Kotz; Saunders College Publishing, Philadelphia, **1980**. 637 pp.
- f. *The Principles of Inorganic Chemistry*, W. L. Jolly; McGraw-Hill, Inc., New York, **1976**. 376 pp.

#### B. Advanced

- a. *Concepts and Models of Inorganic Chemistry*, third edition, B. E. Douglas, D. H. McDaniel and J. J. Alexander; John Wiley & Sons, Inc., New York, **1994**. 993 pp.
- b. *Inorganic Chemistry: Principles of Structure and Reactivity*, fourth edition, J. E. Huheey, E. A. Kelter and R. L. Kelter; Harper Collins College Publisher, New York, **1993**. 1052 pp.
- c. *Inorganic Chemistry, A Unified Approach*, second edition, W. W. Porterfield; Academic Press, Inc., New York, **1993**. 921 pp.
- d. *Advanced Inorganic Chemistry*, fifth edition, F. A. Cotton and G. Wilkinson; Wiley-Interscience, New York, **1988**. 1455 pp.
- e. *Chemistry of the Elements*, N. N. Greenwood and A. Earnshaw; Pergamon Press, New York, **1984**. 1542 pp.
- f. *Inorganic Chemistry, A Modern Introduction*, T. Moeller; John Wiley & Sons, New York, **1982**. 846 pp.
- g. *Inorganic Chemistry*, A. G. Sharpe; Longman, London, **1981**. 682 pp.
- h. *Inorganic Chemistry*, K. F. Purcell and J. C. Kotz; W. B. Saunders, Philadelphia, **1977**. 1116 pp.

#### C. Descriptive Inorganic Chemistry

- a. *Principles of Descriptive Inorganic Chemistry*, G. Wulfsberg; University Science Books, Mill Valley, CA, 1991. 461 pp. This is an optional text for CHE 514.
- b. *Simple Inorganic Substances*, R. T. Sanderson; R. E. Krieger Publishing Co., Malabar, FL, 1989. 500 pp.
- c. *Chemistry of the Non-Metals*, R. Steudel, English edition by F. C. Nachod and J. J. Zuckerman; Walter de Gruyter, Berlin, 1977. 402 pp.

### **Inorganic Synthesis and Characterization**

1. *Inorganic Experiments*, J. D. Woollins, editor; VCH Publishers, New York, NY, 1994. 286 pp.
2. *The Synthesis and Characterization of Inorganic Compounds*, W. L. Jolly; Prentice-Hall, Inc., Englewood Cliffs, NJ, 1970; reissued by Waveland Press, Prospect Heights, IL, 1991. 590 pp.
3. *Microscale Inorganic Chemistry, A Comprehensive Laboratory Experience*, Z. Szafran, R. M. Pike, and M. M. Singh; John Wiley & Sons, Inc., New York, 1991. 363 pp.
4. *Preparative Acetylenic Chemistry*, second edition, L. Brandsma; Elsevier Scientific Publishing Co., New York, 1988. 321 pp.
5. *Synthesis and Technique in Inorganic Chemistry*, second edition, R. J. Angelici; University Science Press, Mill Valley, CA, 1986. 237 pp.
6. *The Manipulation of Air-Sensitive Compounds*, second edition, D. F. Shriver and M. A. Drezdson; John Wiley & Sons, Inc., New York, 1986. 326 pp.
7. *Synthesis of Acetylenes, Allenes and Cumulenes: A Laboratory Manual*, L. Brandsma and H. D. Verkruijsse; Elsevier Scientific Publishing Co., New York, 1981. 276 pp.
8. *Organic Syntheses Via Boranes*, H. C. Brown, G. W. Kramer, A. B. Levy, and M. M. Midland; John Wiley and Sons, Inc., New York, 1975. 283 pp.
9. *Synthetic Inorganic Chemistry*, W. L. Jolly; Prentice-Hall, Inc., Englewood Cliffs, NJ, 1960. 196 pp.
10. *Inorganic Preparations, A Laboratory Manual*, H. F. Walton; Prentice-Hall, Inc., New York, 1948. 183 pp.

### **Physical Inorganic techniques**

1. *Physical Methods for Chemists*, second edition, R. S. Drago; Saunders, Philadelphia, 1992. 750 pp.
2. *Structural Methods in Inorganic Chemistry*, second edition, E. A. V. Ebsworth, D. W. H. Rankin, and S. Cradock; CRC Press: Boca Raton, FL, 1991. 510 pp.
3. *Infrared and Raman Spectra of Inorganic and Coordination Compounds*, third edition, K. Nakamoto; John Wiley and Sons, Inc., New York, 1978. 448 pp.
4. *Spectroscopic Methods in Organometallic Chemistry*, W. O. George, editor; Butterworth's, London, 1970. 224 pp.
5. *Physical Methods in Advanced Inorganic Chemistry*, H. A. O. Hill and P. Day; Interscience Publishers, New York, 1968. 627 pp.

6. *Physical Methods in Inorganic Chemistry*, R. S. Drago; Reinhold Publishing Corporation, New York, 1965. 430 pp.

### **Applied and Industrial**

1. *Applied Inorganic Chemistry*, T. W. Swaddle; University of Calgary Press, Calgary, CA, 1990. 331 pp.
2. *Industrial Inorganic Chemistry*, W. Buchner, R. Schliebs, G. Winter, and K. H. Buchel; VCH Publishers, New York, 1989. 614 pp.

### **Monographs and Serials**

#### **A. General Inorganic Chemistry**

1. *Comprehensive Inorganic Chemistry*, A. F. Trotman-Dickinson, editor; Pergamon Press, 1973. Five volumes. Coverage is by elements (or groups of elements) with additional chapters on topics such as organometallics.
2. *Inorganic Chemistry*, C. S. G. Phillips and R. J. P. Williams; Oxford University Press, New York, 1966. Two volumes. 685 + 683 pp.
3. *Handbuch der Preparativen Anorganische Chemie*, Bd. 3, G. Brauer; Enke, Stuttgart, 1981. The third edition of this useful book of preparations is available only in German. The UK Chemistry-Physics library has the first and second editions in English translation (second edition, Academic Press, Inc., New York, 1963-1965, two volumes. 1859 pp.).

#### **B. Organometallics**

1. *Metal Clusters*, M. Moskovits, editor; John Wiley and Sons, Inc., New York, 1986. 313 pp.
2. *Dictionary of Organometallic Compounds*, J. Buckingham, Executive editor; Chapman and Hall, London, 1984. Three volumes, plus many supplements.
3. *Comprehensive Organometallic Chemistry*, G. Wilkinson, F. G. A. Stone and E. W. Abel, editors; Pergamon Press, 1982. Nine volumes. This is the single most useful source of information on organometallic chemistry. An updated version will be available in late 1995
4. *Organometallic Chemistry*, H. Zeiss, editor; A.C.S. Monograph Series, No. 147, Reinhold Publishing Corporation, New York, 1960. 549 pp.

#### **C. Coordination compounds**

1. *Comprehensive Coordination Chemistry: The Synthesis, Reactions, Properties and Applications of Coordination Compounds*, G. Wilkinson, R. D. Gillard, and J. A. McCleverty, editors; Pergamon Press, New York, 1987. Seven volumes. Vol. 1 is Theory and Background; Vol. 2 is Ligands; Vols. 3-5 are surveys by metal; Vol. 6 is applications; and Vol. 7 is indexes.
2. *Coordination Compounds*, S. F. A. Kettle; Appleton-Century-Crofts, New York, 1969. 220 pp.

3. *Classics in Coordination Chemistry, Part I: The Selected Papers of Alfred Werner*, G. B. Kauffman, editor; Dover Publications, Inc., New York, 1968. 190 pp.
4. *Elementary Coordination Chemistry*, M. M. Jones; Prentice-Hall, Inc., Englewood Cliffs, NJ, 1964. 473 pp.
5. *The Chemistry of the Coordination Compounds*, J. C. Bailar, Jr., editor; A.C.S. Monograph Series **131**, Reinhold Publishing Corporation, New York, 1956. 834 pp.

#### **D. Synthesis and characterization**

1. *Inorganic Syntheses*, 1939-1977; McGraw-Hill, Inc, New York (seventeen volumes); 1978-1995, John Wiley and Sons, Inc., New York (volumes 18 to 30). Nearly annual volumes of checked syntheses.
2. *Organometallic Syntheses: Volume 1, Transition-Metal Compounds*, R.B. King, 1965; *Volume 2, Nontransition-Metal Compounds*, J. J. Eisch, 1981; Academic Press, New York. *Volume 3*, 1986, *Volume 4*, 1988, R. B. King and J. J. Eisch, editors; Elsevier, New York. This has become a series like *Inorganic Syntheses*. Preparative details for many important starting materials.
3. *Preparative Inorganic Reactions*, W. L. Jolly, editor; John Wiley and Sons, Inc., New York, 1964-1971. Seven volumes.
4. *Experimental Inorganic Chemistry*, R. E. Dodd and P. L. Robinson; Elsevier Publishing Company. New York, 1954. 424 pp.

### **Selected Journals and Serials**

#### **A. Multidisciplinary Journals**

1. Journal of the American Chemical Society
2. Journal of Chemical Education
3. Angewandte Chemie, International Edition in English
4. Chemische Berichte
5. Journal of the Chemical Society, Chemical Communications

#### **B. Inorganic Chemistry**

1. Inorganic Chemistry
2. Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry
3. Polyhedron
4. Journal of the Chemical Society, Dalton Transactions
5. Inorganica Chimica Acta

#### **C. Organometallic chemistry**

1. Organometallics
2. Journal of Organometallic Chemistry

#### **D. Metals and complexes**

1. Journal of Coordination Chemistry

#### **E. Solid state chemistry**

1. Journal of Solid State Chemistry
2. Chemistry of Materials

