

REFERENCES FOR FURTHER STUDY BY CHAPTER

Chapter 1

- Annual Review of Materials Science*. Annual Reviews, Inc. Palo Alto, CA.
- Bever, M. B. (ed.) *Encyclopedia of Materials Science and Engineering*. MIT Press-Pergamon, Cambridge, 1986.
- Canby, T. Y. "Advanced Materials—Reshaping Our Lives." *Nat. Geog.*, 176(6), 1989, p. 746.
- "Materials Engineering 2000 and Beyond: Strategies for Competitiveness." *Advanced Materials and Processes* 145(1), 1994.
- "Materials Issue." *Sci. Am.*, 255(4), 1986.
- National Geographic* magazine, 2000–2001.

Chapter 2

- Brown, T. L., H. E. LeMay and B. E. Bursten. *Chemistry*. 8th ed. Prentice-Hall, 2000.
- Chang, R. *Chemistry*. 5th ed. McGraw-Hill, 1994.
- Chang, R. *General Chemistry*. 4th ed. McGraw-Hill, 1990.
- Ebbing, D. D. *General Chemistry*. 5th ed. Houghton Mifflin, 1996.
- McWeeny, R. *Coulson's Valence*. 3d ed. Oxford University Press, 1979.
- Pauling, L. *The Nature of the Chemical Bond*. 3d ed. Cornell University Press, 1960.
- Smith, W. F. *T. M. S. Fall Meeting*. October 11, 2000. Abstract only.

Chapter 3

- Barrett, C. S. and T. Massalski. *Structure of Metals*. 3d ed. Pergamon Press, 1980.
- Cullity, B. D. *Elements of X-Ray Diffraction*. 2d ed. Addison-Wesley, 1978.
- Wilson, A. J. C. *Elements of X-Ray Crystallography*. Addison-Wesley, 1970.

Chapter 4

- Flemings, M. *Solidification Processing*. McGraw-Hill, 1974.
- Hirth J. P., and J. Lothe. *Theory of Dislocations*. 2d ed. Wiley, 1982.
- Krauss, G. (ed.) *Carburizing: Processing and Performance*. ASM International, 1989.
- Minkoff, I. *Solidification and Cast Structures*. Wiley, 1986.
- Shewmon, P. G. *Diffusion in Solids*. 2d ed. Minerals, Mining and Materials Society, 1989.

Chapters 5 and 6

- Courtney, T. H. *Mechanical Behavior of Materials*. 2d ed. 2000.
- Courtney, T. H. *Mechanical Behavior of Materials*. McGraw-Hill, 1989.
- Dieter, G. E. *Mechanical Metallurgy*. 3d ed. McGraw-Hill, 1986.
- Hertzberg, R. W. *Deformation and Fracture Mechanics of Materials*. 4th ed. 1972.

Herzberg, R. W. *Deformation and Fracture Mechanics of Engineering Materials*. 3d ed. Wiley, 1989.

Chapter 7

Benedict, G. M. and B. L. Goodall. *Metallocene-Catalyzed Polymers*. Plastics Design Library, 1998.

“Engineering Plastics.” Vol. 2, *Engineered Materials Handbook*. ASM International, 1988.

Kaufman, H. S., and J. J. Falcetta (eds.) *Introduction to Polymer Science and Technology*. Wiley, 1977.

Kohen, M. *Nylon Handbook*. Hanser, 1998.

Moore, E. P. *Polypropylene Handbook*. Hanser, 1996.

Moore, G. R., and D. E. Kline, *Properties and Processing of Polymers for Engineers*. Prentice-Hall, 1984.

Salamone, J. C. (ed.) *Polymeric Materials Encyclopedia*. Vols. 1 through 10. CRC Press, 1996.

Chapter 8

Massalski, T. B. *Binary Alloy Phase Diagrams*. ASM International, 1986.

Massalski, T. B. *Binary Alloy Phase Diagrams*. 3d ed. ASM International.

Rhines, F. *Phase Diagrams in Metallurgy*. McGraw-Hill, 1956.

Chapter 9

Krauss, G. *Steels: Heat Treatment and Processing Principles*. ASM International, 1990. *The Making, Shaping and Heat Treatment of Steel*. 11th ed. Vols. 1–3. The AISE Steel Foundation, 1999–2001.

Smith, W. F. *Structure and Properties of Engineering Alloys*. 2d ed. McGraw-Hill, 1993.

Steel, Annual Statistical Report. American Iron and Steel Institute, 2001.

Walker, J. L. et al. (ed.) *Alloying*. ASM International, 1988.

Chapter 10

Barsoum, M. *Fundamentals of Ceramics*. McGraw-Hill, 1997.

“Ceramics and Glasses,” Vol. 4, *Engineered Materials Handbook*. ASM International, 1991.

Chiang, Y., D. P. Birnie, and W. D. Kingery. *Physical Ceramics*. Wiley, 1997.

Engineered Materials Handbook. Vol. 4: *Ceramics and Glasses*. ASM International, 1991.

Kingery, W. D., H. K. Bowen, and D. R. Uhlmann. *Introduction to Ceramics*. 2d ed. Wiley, 1976.

Mobley, J. (ed.). *The American Ceramic Society, 100 Years*. American Ceramic Society, 1998.

Wachtman, J. B. (ed.) *Ceramic Innovations in the Twentieth Century*. The American Ceramic Society, 1999.

Wachtman, J. B. (ed.) *Structural Ceramics*. Academic, 1989.

Chapter 11

Chawla, K. K. *Composite Materials*. Springer-Verlag, 1987.

“Composites.” Vol. 1, *Engineered Materials Handbook*. ASM International, 1987.

Engineers' Guide to Composite Materials. ASM International, 1987.

Engineered Materials Handbook. Vol. 1: *Composites*. ASM International, 1987.

Harris, B. *Engineering Composite Materials*. Institute of Metals (London), 1986.

Metals Handbook. Vol. 21: *Composites*. ASM International, 2001.

Chapter 12

“Corrosion.” Vol. 13, *Metals Handbook*. 9th ed. ASM International, 1987.

Fontana, M. G. *Corrosion Engineering*. 3d ed. McGraw-Hill, 1986.

Jones, D. A. *Corrosion*. 2d ed. Prentice-Hall, 1996.

Uhlig, H. H. *Corrosion and Corrosion Control*. 3d ed. Wiley 1985.

Chapter 13

Hodges, D. A. and H. G. Jackson. *Analysis and Design of Digital Integrated Circuits*. 2d ed. McGraw-Hill, 1988.

Mahajan, S. and K. S. Sree Harsha. *Principles of Growth and Processing of Semiconductors*. McGraw-Hill, 1999.

Nalwa, H. S. (ed.) *Handbook of Advanced Electronic and Photonic Materials and Devices*. Vol. 1: *Semiconductors*. Academic Press, 2001.

Sze, S. M. (ed.) *VLSI Technology*. 2d ed. McGraw-Hill, 1988.

Sze, S. M. *Semiconductor Devices*. Wiley, 1985.

Wolf, S. *Silicon Processing for the VLSI Era*. 2d ed. Lattice Press, 2000.

Chapter 14

Chafee, C. D. *The Rewiring of America*. Academic, 1988.

Hatfield, W. H. and J. H. Miller, *High Temperature Superconducting Materials*. Marcel Dekker, 1988.

Miller, S. E. and I. P. Kaminow. *Optical Fiber Communications II*. Academic, 1988.

Miller, S. E. and I. P. Kaminow. *Optical Fiber Communications II*. Academic Press, 1988.

Nalwa, H. S. (ed.) *Handbook of Advanced Electronic and Photonic Materials and Devices*. Vols. 3–8. Academic Press, 2001.

Chapter 15

Chin, G. Y. and J. H. Wernick. “Magnetic Materials, Bulk.” Vol. 14, *Kirk-Othmer Encyclopedia of Chemical Technology*. 3d ed. Wiley, 1981, p. 686.

Coey, M. et al. (eds.) *Advanced Hard and Soft Magnetic Materials*. Vol. 577. Materials Research Society, 1999.

Cullity, B. D. *Introduction to Magnetic Materials*. Addison-Wesley, 1972.

Livingston, J. *Electronic Properties of Engineering Materials*. Chapter 5. Wiley, 1999.

Salzgiver, J. A. et al. (ed.) *Hard and Soft Magnetic Materials*. ASM International, 1987.