

FURTHER READING AND WEB SITES

BOOKS

- Amato, Ivan. *Stuff: The Materials the World Is Made of*. New York: Basic Books, 1997. Focusing on human-made materials, this book describes the history as well as current research of the science and technology of all kinds of materials, from metal to synthetic diamonds.
- Atkins, Peter. *Atkins' Molecules*, 2nd ed. Cambridge, U.K.: Cambridge University Press, 2003. Atkins, a chemist and popular science author, offers an in-depth look at a variety of important molecules, such as polymers, soaps, and the molecules underlying human senses of taste, smell, pain, and vision.
- Bloomfield, Louis A. *How Things Work: The Physics of Everyday Life*, 3rd ed. New York: John Wiley & Sons, 2005. This exceptional college-level text explains the physics behind a wide variety of everyday phenomena.
- Bortz, Fred. *Techno-Matter: The Materials behind the Marvels*. Fairfield, Iowa: 21st Century Books, 2001. Intended for young adults, this book explores materials science, including semiconductors, metallurgy, superconductors, and much more.
- Calle, Carlos I. *Superstrings and Other Things: A Guide to Physics*. Bristol: Institute of Physics, 2001. Calle explains the laws and principles of physics in a clear and accessible manner.

Dupré, Judith and Philip Johnson. *Skyscrapers*. New York: Black Dog & Leventhal, 2001. With plenty of elegant photographs that do justice to these remarkable structures, Dupré's book describes 50 skyscrapers of the 20th century.

Gordon, J. E. *The Science of Structures and Materials*. New York: Scientific American Books, 1988. A noted materials scientist describes the scientific aspects of materials and how they are used to build structures such as bridges and airplanes.

Henderson, Harry. *Nuclear Physics*. New York: Facts On File, 1998. Telling the story of the development of nuclear physics from a broad perspective, this book focuses on the work of Marie and Pierre Curie, Ernest Rutherford, Neils Bohr, Lise Meitner, Richard Feynman, and Murray Gell-Mann.

Supplee, Curt. *The New Everyday Science Explained*. Washington, D.C.: National Geographic Society, 2004. This richly illustrated book provides concise scientific answers to some of the most basic questions about people and nature.

Tweed, Mark. *Essential Elements: Atoms, Quarks, and the Periodic Table*. New York: Walker & Company, 2003. This small volume provides a concise and readable introduction to the components of the atom and the properties of the fundamental elements.

WEB SITES

American Institute of Physics. "Physics Success Stories." Available online. URL: <http://www.aip.org/success/>. Accessed on August 25, 2006. Examples of how the study of physics has impacted society and technology.

American Physical Society. "Physics Central." Available online. URL: <http://www.physicscentral.com/>. Accessed on August 25, 2006. A collection of articles, illustrations, and photographs explaining physics and its applications, and introducing some of the physicists who are advancing the frontiers of physics even farther.

Chaplin, Martin. "Water Structure and Behavior." Available online. URL: <http://www.lsbu.ac.uk/water/index2.html>. Accessed

on August 25, 2006. This Web site contains a huge amount of information on the water molecule and its properties and interactions, and the reasons water so strongly affects human health and welfare.

Day, Dwayne A. "Composites and Advanced Materials." Available online. URL: http://www.centennialofflight.gov/essay/Evolution_of_Technology/composites/Tech40.htm. Accessed on August 25, 2006. This Web page discusses the importance of composites and other materials in the development of modern aircraft.

Eastman, Timothy E. "Perspectives on Plasma—the Fourth State of Matter." Available online. URL: <http://www.plasmas.org/>. Accessed on August 25, 2006. Tutorials covering the basic concepts and applications of plasmas.

Exploratorium: The Museum of Science, Art and Human Perception. Available online. URL: <http://www.exploratorium.edu/>. Accessed on August 25, 2006. An excellent Web resource containing much information on the scientific explanations of everyday things.

Foresight Institute homepage. Available online. URL: <http://www.foresight.org/>. Accessed on August 25, 2006. Foresight is a non-profit organization dedicated to promoting nanotechnology applications and advancing public awareness of this promising technology. Their Web pages offer news, information, and links to other nanotechnology Web sites.

HowStuffWorks, Inc., homepage. Available online. URL: <http://www.howstuffworks.com/>. Accessed on August 25, 2006. Contains a large number of articles, generally written by knowledgeable authors, explaining the science behind everything from computers to satellites.

Lawrence Berkeley National Laboratory. "Exploring the Material World." Available online. URL: http://www.lbl.gov/MicroWorlds/module_index.html. Accessed on August 25, 2006. Teaching modules on this Web site include "Exploring the Material World," "Kevlar—the Wonder Material," and "Selenium: A Window on the Wetlands."

LiftPort Group homepage. Available online. URL: <http://www.liftport.com/>. Accessed on August 25, 2006. News and information from the corporation that hopes to build a space elevator by 2018.

Nave, Carl R. "HyperPhysics Concepts." Available online. URL: <http://hyperphysics.phy-astr.gsu.edu/hbase/hph.html>. Accessed on August 25, 2006. This comprehensive resource for students offers illustrated explanations and examples of the basic concepts of physics, including condensed matter.

Nuclear Energy Institute (NEI) homepage. Available online. URL: <http://www.nei.org/>. Accessed on August 25, 2006. NEI members include companies involved in the maintenance and operation of nuclear power plants, and companies involved in the field of nuclear medicine. This institute helps set policies affecting the industry, and its Web page includes news and basic information on all aspects of nuclear energy.

Portland Cement Association. "Effect of Cement Characteristics on Concrete Properties." Available online. URL: http://www.cement.org/tech/cct_cement_characteristics.asp. Accessed on August 25, 2006. This Web page discusses properties of cement that are crucial in the formation of concrete.