

MATERIALS

The *Kappe Library Guides* identify general resources on broad topics to help researchers begin their work. Individual projects and practitioners are avoided; guides, indexes and general introductions are preferred to specialized works.

Book citations that include a call number can be found at the Kappe Library; other books are identified by author, title and date. Magazine articles are selected from the *Avery Index* and the *Art Index* databases; to identify which are available at the Kappe Library, see the *Periodicals In the Collection* reference.

Web versions of this and all other Guides are available at <http://www.sciarc.edu/v5/aboutarch/lrg.php> and <http://sciportal.sciarc.edu> Submit questions and suggestions to the library manager directly at kevin@sciarc.edu

TOOLS TO GET STARTED

- Andrews, *Living Materials; A Sculptor's Handbook*, NB1170.A63
 Hornbostel, *Construction Materials*, 2nd. ed., Reference-TA403.H59 1991

MATERIALS A - Z:

AESTHETICS, SYMBOLISM, SCIENCE

- Barthes, "Plastic," *Mythologies*, AC25.B313
 Baxandall, "Art and Matter," *Painting and Experience in Fifteenth Century Italy*, ND615.B32 1998
 Berenson, "Material," *Aesthetics and History*, N70.B465 1979
 Cioran, "Die Faszination des Materials: über Roger Caillois," *Akzente*, September 1983
 Cobb, *Creations of Fire: Chemistry's Lively History from Alchemy to the Atomic Age*, QD11.C59 1995
 Coomaraswamy, "The Medieval Theory of Beauty," *Traditional Art and Symbolism*, N7445.2.C68 1977
 Davies & Gribbin, *The Matter Myth*, QC6.4.R42D38 1992
 Dieste, "Some Reflections on Architecture and Construction," *Perspecta*, no. 27, 1992
 Koren, *Wabi-Sabi*, BH221.J3K67 1994
 "Magic of Materials," *Daidalos*, no. 56, 1995 (theme issue)
 Michelangelo, "Non ha l'ottimo artista"/"No block of marble," *Life, Letters & Poetry*, N6923.B9M549 1987
 Morávansky, "'Truth to Material' vs. 'The Principle of Cladding': the Language of Materials in Architecture," *AA Files*, no. 31, 1996
 Raff, *Die Sprache der Materialien*, 1994
 Richards, "Dialogue: Foreign Exchange," *Interiors*, November 1991
 Ringbom, *Stone, Style and Truth: the Vogue for Natural Stone in Nordic Architecture 1880-1910*, 1987
 Ruskin, "The Lamp of Truth," *The Seven Lamps of Architecture*, NA2550.R75 1989
 Sadalla, "Symbolism in Building Materials," *Environment and Behavior*, March 1993
 Toulmin, *The Architecture of Matter*, Q125.T67 1982
 Walker, "It's Not What You Use, It's How You Use It," *Design Book Review*, no. 39, 1997

BIOMATERIALS

- BioFind, <http://www.biofind.com/> (Don't miss BioTech Rumor Mill section)
 Biotechnology Industry Organization, <http://www.bio.org/>
 Biotechnology Information Center (BIC), <http://www.nal.usda.gov/bic>
 Drexler, *Engines of Creation*, <http://www.foresight.org/EOC/>
 Hoch, *Nanofabrication and Biosystems; materials science, engineering & biology*, TP248.2.N36 1996
 National Science Foundation Nanotechnology Database, <http://www.itri.loyola.edu/nanobase>

CERAMICS & EARTH

- Earthbuilder Encyclopedia*, TH4816.A3T5 1989
Glazed Expressions (quarterly periodical of the Tiles & Architectural Ceramics Society)
 Khalili, *Ceramic Houses*, NA7423.B87K43 1986
 Ferriday, *Last of the Handmade Buildings*, NA3511.P67F46 1984
 Teutonico, *Architectural Ceramics; history, manufacture & conservation*, 1996

Winter, *Greek Architectural Terracottas*, NA3551.A1W55 1993
Couleurs de Tunisie: 25 siècles de céramique, NK4174.8.A1C58 1994

COMPOSITES

"Architecture et composites," *Techniques & Architecture*, October/November 1995 (theme issue)
Brookes, "Building With Composites," *The Architects' Journal*, June 18, 1998
Hull, *Introduction to Composite Materials*, 2nd. ed. TA418.9.C6H85 1996
Lown, "Flexible Composites," *I.D.*, January/February 1997
Schwartz, *Composite Materials Handbook*, 2nd. ed., TA418.9.C6S38 1983
Sullivan, "Designing With Aluminum Composites," *Architecture*, June 1997

CONCRETE

American Concrete Institute (ACI), <http://www.aci-int.org>
American Concrete Institute (ACI), *Manual of Concrete Practice*, TA439.A358 1996, volumes 1-5
Béton-Béton-Concrète, *Werk, Bauen & Wohnen*, January/February 1996 (theme issue)
"Le Béton," *l'Architecture d'aujourd'hui*, February 1994 (theme issue)
"Concrete," *Architecture*, October 1992 (theme issue)
Concrete Reinforcing Steel Institute (CRSI), <http://www.crsi.org>
Concrete Sawing and Drilling Association (CSDA), <http://www.csd.org>
Libby, *Modern Prestressed Concrete*, TA683.9.L47 1990
National Precast Concrete Institute (NPCA), <http://www.precast.org>
Parker, *Simplified Design of Concrete Structures*, 7th. ed., TA683.2.A524 1997
Precast/Prestressed Concrete Institute (PCI), <http://www.pci.org>
Tilt-Up Concrete Association (TCA), <http://www.tilt-up.org>

CONSERVATION

"Beton unter Strom," *Werk, Bauen & Wohnen*, January/February 1996
Hochfield, "Mortal Monuments," *Art News*, Summer 1991
"Preserving Historic Materials," *Architecture*, November 1986 (theme issue)
Studies in Conservation (periodical published monthly)
"Via Saronno 9: Stone Restoration Workshop," *Abitare*, May 1987

CONSTRUCTION & DESIGN (GENERAL)

Adam, *Roman Building: materials and techniques*, TH16.A3313 1994
Antonelli, *Mutant Materials in Contemporary Design*, NK1390.A58 1995
Bianchina, *Illustrated Dictionary of Building Materials & Techniques*, TH9.B466 1993
Construction History (periodical published quarterly by The Construction History Group)
Fitchen, *Building Coconstruction Before Mechanization*, TH15.F88 1995
Jester, *Twentieth Century Building Materials*, TA403.6.T87 1995
Material Connexion, <http://www.materialconnexion.com/> (Subscriber only online materials database)
Penny, *Materials of Sculpture*, NB1202.P46 1993
Peters, *Building in the Nineteenth Century*, TA19.P47 1996
Protzen, *Inca Architecture and Construction at Ollantaytambo*, F3429.O44P76 1993
Rosen, *Architectural Materials for Construction*, TA403.6.R66 1996

FINISHES

Association of Wall and Ceiling International, <http://www.awci.org>
Baird, "Gypsum Drywall," *Architecture*, June 1994
Carpet and Rug Institute, <http://www.carpet-rug.com>
Ceilings and Interior Systems Construction Association (CISCA), <http://www.cisca.org>
Degioanni, "Plâtres: architecture et acoustique," *l'Architecture d'aujourd'hui*, February 1995
Edwards, "Floorcloth and Linoleum: Aspects of the History of Oil-Coated Materials for Floors," *Textile History*, Autumn 1996
"Finishes," *Architectural Record*, December 1998
Hardwood Manufacturer's Association (HMA), <http://www.hardwood.org>
"Interior Finishes," *Architectural Record*, September 1998
Maynard, "Gypsum Board Pumps Up," *Architecture*, July 1998
National Oak Flooring Association, <http://www.woodflooring.org>
National Terrazzo and Mosaic Association, Inc., <http://www.ntma.com>
"Plasters & Treatments," *Abitare*, February 1997

Steel Structures Painting Council (SSPC), <http://www.sspc.org>
"Superfici," *Domus*, October 1988
Tile Council of America, Inc., <http://www.tileusa.com>
Trivella, "Exterior Walls," *Abitare*, February 1992

GLASS

Bray, *Dictionary of Glass; materials and techniques*, TP788.B78 1995
"Glas-Verre-Glass," *Werk, Bauen & Wohnen*, January/February 1997 (theme issue)
"Glass and Transparency," *Architecture Review*, May 1998 (theme issue)
"Glass Block and Glass," *Detail*, January/February 1988 (theme issue)
"Transparency," *Arca*, March 1993 (theme issue)
U.S. Glass Magazine, <http://www.usglassmag.com/>

HAZARDOUS MATERIALS

Bone, "Health Risks on Site," *The Architects' Journal*, July 13, 1994
Curwell, "Using Hazardous Materials," *The Architects' Journal*, June 15, 1995
Malin, "Quiet Progress in Managing Environmental Toxins," *Architectural Record*, September 1996
Malin, "Some Old and Some New Sick Building Culprits," *Architectural Record*, February 1996
Retondo, "Technics: Mercury, et. al.," *Progressive Architecture*, March 1991

INTELLIGENT MATERIALS

Center for Intelligent Material Systems and Structures (CIMSS), <http://www.cimss.vt.edu/>
Rogers, "Intelligent Materials," http://www.nanocentral.com/nanosci/what/rogers/intelligent_materials.html
Smart Materials and Structures, (periodical published 6 times each year), <http://www.iop.org/Journals/sm>
Smart Structure & Materials Technical Group, <http://spie.org/app/tg/index.cfm?fuseaction=SmartStructures> (subset of SPIE)

MASONRY & STONE

Arnold, *Building In Egypt: Pharaonic Stone Masonry*, TH1201.A77 1991
"Brick and Blockwork Walls," *Detail*, October/November 1996 (theme issue)
Brick Institute of America (BIA), <http://www.bia.org>
"Fair-Faced Masonry Work," *Detail*, July/August 1987 (theme issue)
International Masonry Institute (IMI), <http://www.imiweb.org>
Laska, *Masonry and Steel; detailing handbook*, TH2025.L37 1993
"Masonry," *Architectural Record*, December 1998
Masonry Heater Association of North America, <http://www.mha-net.org>
Masonry Institute of America, <http://www.buckley.com/masonryinstitute/default.html>
National Association of Brick Distributors (NABD), <http://www.brickvalue.org>
National Concrete Masonry Association (NCMA), <http://www.ncma.org>
National Stone Association (NSA), <http://www.agggregates.org>
Portland Cement Association (PCA), <http://www.portcement.org>
Sallis, *Stone*, NX65.S85S25 1994
Swenson, "Making Exterior Stone Succeed," *Architectural Record*, March 1997
"When Should You Visit the Quarry?" *Architectural Record*, August 1995

MATERIALS SCIENCE

Addleson, *Performance of Materials in Buildings*, TA407.A443 1991
American Society for Testing and Materials (ASTM), <http://www.astm.org/>
ASM International (formerly, "American Society for Metals"), <http://www.asm-intl.org/index.htm>
Callister, *Materials Science & Engineering: introduction*, 4th. ed., TA403.C23 1996
Den, *Strength of Materials*, TA405.D4 1961
Harkanyi, *Selective Guide to Literature on Materials Engineering*, TA403.H3725 1997
Institute of Materials (international), <http://www.instmat.co.uk/>
Materials and Process Simulation Center, <http://www.wag.caltech.edu/>
Materials Research Society (MRS), <http://www.mrs.org/>
Minerals Metals and Materials Society (TMS), <http://www.tms.org/>
Society for the Advancement of Material and Process Engineering (SAMPE), <http://www.sampe.org/>
SAMPE, Los Angeles Chapter, <http://www0.delphi.com/sampela/>

METAL

Aluminum Association, Inc., <http://www.aluminum.org>
American Galvanizers Association, <http://www.usalink.net/aga>
American Institute of Steel Construction (AISC), <http://www.aiscweb.com>
American Iron and Steel Institute, <http://www.steel.org>
American Welding Society, <http://www.amweld.org>
Construction Specification Institute, <http://www.csinet.org>
Industrial Perforators Association, <http://www.iperf.org>
Istituto Italiano del Rame/Italian Institute of Copper, <http://www.iir.it/>
Lead Industries Association (LIA), <http://www.leadinfo.com>
AISC, *Manual of Steel Construction*, 9th. ed., TA684.L558 1986, vol.s 1-2
Metal Treating Institute, <http://www.metaltreat.com>
Nickel Development Institute (NDI), <http://home.istar.ca/~nidi/home.html>
Raymond, *Out of the Fiery Furnace : The Impact of Metals on the History of Mankind*, CB478.R36 1986
Sheet Metal and Air Conditioning Contractors National Association (SMACNA), <http://www.smacna.org>
SMACNA, *Sheet Metal Manual*, 5th. ed., Reference-TH1651.A66 1993
Stacey, "Building in Aluminum," *The Architects' Journal*, February 6, 1997
"Steel Constructions," *Arca*, March 1997 (theme issue)
Steel Deck Institute, <http://www.sdi.org>
Zahner, *Architectural Metals: A Guide to Selection, Specification, and Performance*, TA461.Z34 1995

PHOTOVOTALICS & SEMICONDUCTORS

Compagno, *Intelligent Glass Facades*, NA4140.C66 1995
Humm, *Photovoltaics in Architecture*, TK1087.P49 1993
Sick, *Photovoltaics in Buildings*, TK1087.P49 1993

PLASTICS

Color and Appearance Division / International Society of Plastics Engineers (SPECAD), <http://specad.org/index.html>
Society of Plastics Engineers, <http://www.4spe.org/>
Society of the Plastics Industry, Inc. (SPI), <http://www.socplas.org>

RECYCLED MATERIALS & SUSTAINABILITY

Building and Environment (periodical published bimonthly)
"Designing Sustainability," *Domus*, June 1997 (theme issue)
Hagan, "The Good, the Bad and the Juggled: the New Ethics of Building Materials," *Journal of Architecture*, Summer 1998
Holden, "Please Walk On the Glass," *The Architects' Journal*, October 2, 1997
Padjen, "Engineered Lumber's Strengths," *Architecture*, February 1997
Refuse: good everyday design from reused and recycled materials, NK1390.A73 1990
"Pliny the Greener," *Architecture*, June 1998
U.S. Green Building Council (USGBC), <http://www.usgbc.org/>

TEXTILES

"Aspects of Membrane Structures," *Detail*, December 1994 (theme issue)
Schaeffer, *Tensioned Fabric Structures*, TA663.T46 1996

WATER

"Acquatic Arts," *Daidalos*, no. 55, March 1995
Atkinson, "Damp and Decay in Building," *Building*, May 17, 1985
Binsacca, "Condensation," *Builder*, December 1988
van der Leeden, *The Water Encyclopedia*, TD351.V36 1990

WOOD

American Forest and Paper Association, <http://www.afandpa.org>
American Institute of Timber Construction (AITC), <http://www.aitc-glulam.org>
American Wood Council National Forest Products Association (AWC/NFPA),
<http://www.afandpa.org/WoodDesign/index.html>
American Wood Preservers Institute, <http://www.awpi.org>
Breyer, *Design of Wood Structures*, 3rd. ed., TH1101.B69 1993
California Redwood Association (CRA), <http://www.calredwood.org>

Canadian Wood Council (CWC), <http://www.cwc.ca>
Martensson, *Woodworker's Bible*, TT197.M37 1986
McClure, *Bamboo*, SB317.B2M9 1993
Parker, *Simplified Design of Structural Wood*, 3rd. ed., TH1101.P37 1979
Southern Forest Products Association, <http://www.sfpa.org>
Western Red Cedar Association, <http://www.cofi.org/WRCLA>
Western Wood Products Association (WWPA), <http://www.wwpa.org>
Yeomans, "18th Century Timber Construction," *The Architects' Journal*, July 10, 1991 (1st of 3-part article)
Zwenger, *Wood and Wood Joints; building traditions of Europe and Japan*, TH2301.Z97 1997

[11/16/00]