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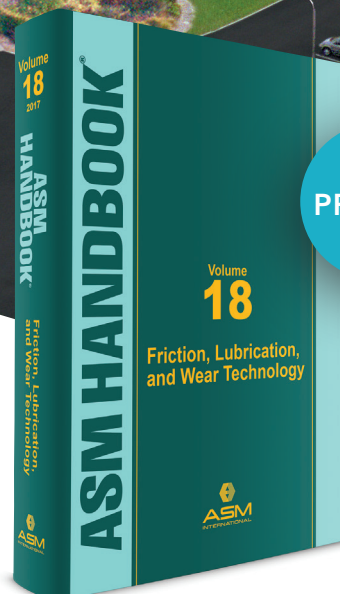
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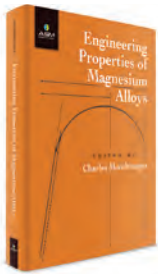
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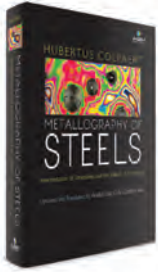
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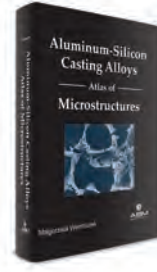
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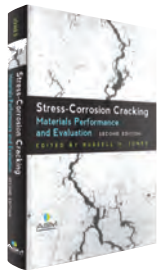
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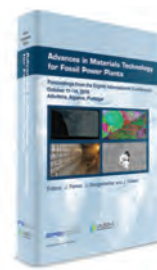
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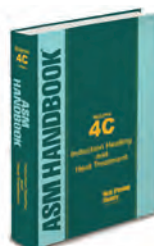
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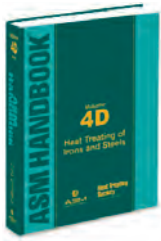
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Packed with information and knowledge for anyone who uses or works with heat treated steels or cast irons. Written and reviewed by recognized authorities, this new handbook gives you in-depth articles with details on the processing and properties for all significant applications and types of heat treated ferrous alloys. New content includes not only updates on new alloys, but also expanded coverage on the effects of heat treating on the properties for more carbon and low-alloy steels, tool steels, stainless steels, and other high-alloy grades.



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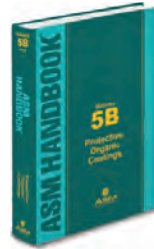
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2011 • 936 pages

ISBN: 978-1-61503-133-7

Product Code: 05264G

Price: \$297 / ASM Member: \$225

A focused revision of the welding process information in Volume 6: *Welding, Brazing and Soldering* (1993). Updated and expanded articles on the fundamental principles of welding, including heat transfer, solidification, residual stress, and distortion. Workhorse methods of arc and resistance welding, friction stir welding, laser beam welding, explosive welding, and ultrasonic welding.



Brazing Handbook Fifth Edition

American Welding Society

2007 • 704 pages

ISBN: 0-87171-046-8

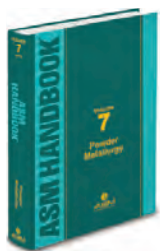
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 2015 • 907 pages
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The updated and revised volume covers all aspects of powder metallurgy – including powder production and characterization, powder compaction, sintering, and compaction methods – and features new coverage of metal injection molding. Extensive coverage is provided of ferrous and nonferrous powder metallurgy materials. The new handbook format simplifies understanding of process and property relationships by treating each metal/ally family in individual divisions.

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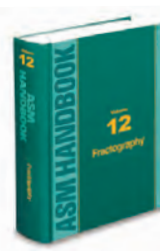
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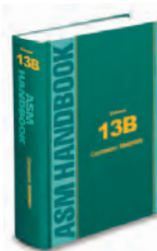
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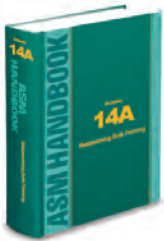
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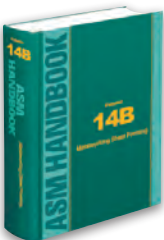
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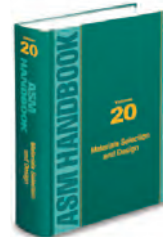


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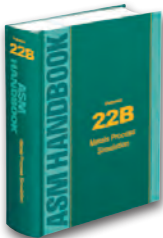
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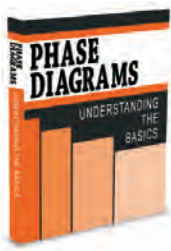


Metals Handbook® Desk Edition, 2nd Edition

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1998 • 1521 pages
ISBN: 978-0-87170-654-6
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Exceptionally well-written text for non-metallurgists or anyone seeking a quick refresher on an essential tool in modern metallurgy. Ample

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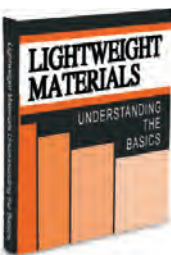
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The eighth in a series of conferences on the subject of materials for advanced plants, held

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Co-published by the Electric Power Research Institute (EPRI) and ASM International.



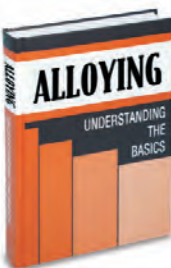
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Edited by J.R. Davis
2001 • 647 pages
ISBN: 978-0-87170-744-4
Product Code: 06117G

Price: \$187 / ASM Member: \$135

A complete guide to the influence of alloy additions on mechanical properties, physical properties, corrosion and chemical behavior, and processing and manufacturing characteristics.



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Product Code: 05508A

Price: Price: \$203 / ASM Member: \$152

Proceedings from the Materials Science and Technology 2016 Conference, Salt Lake City, UT, October 23-27, 2016.



Structural Materials: A Textbook with Animations

By C.J. McMahon, Jr.
2004 • 470 pages
ISBN: 978-0-96465-985-8
Product Code: 05913G

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A comprehensive introduction to structural materials and the underlying principles that affect their selection, properties, and performance. The book focuses on familiar

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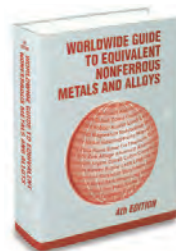
2006 • 1416 pages
ISBN: 978-0-87170-822-9
Product Code: 05121G

Price: \$307 / ASM Member: \$231

Standard worldwide designations for cast irons and steels, wrought carbon and alloy steels, plus stainless, high-strength, and tool steels. Entries for more than 30,000 alloy designations. Well over 5,000 entries have been updated and over 3,000 are new additions. Newly expanded

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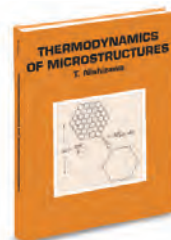


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By Taiji Nishizawa, translated by Kiyohito Ishida
2008 • 308 pages
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Fundamental relationships governing the behavior of microstructures.



ASM Metals Reference Book, 3rd Edition

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Chemical compositions, physical and mechanical properties, manufacturing processes, applications, pertinent specifications and standards, and test methods.



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2008 • 672 pages

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Product Code: 05224G

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A thorough presentation of physical and mechanical metallurgical concepts along with a practical survey of all important metals, their alloys, and their engineering properties. Covers basic metallurgy, metallic material selection, and application.

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By Ramnarayan Chattopadhyay

2014 • 336 pages

ISBN: 978-1-62708-064-4

Product Code: 05436G

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This book describes green engineering concepts to improve energy efficiency by reducing energy losses due to friction and wear in metalworking operations and by extending component life.



Transformations: Selected Works of G.B. Olson on Materials, Microstructure, and Design

Edited by Carelyn E. Campbell, Michele V. Manuel, and Wei Xiong

2017 • Approx. 500 pages

ISBN: 978-1-62708-137-5

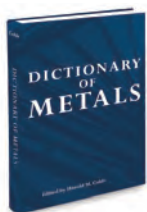
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Dictionary of Metals

Edited by Harold M. Cobb

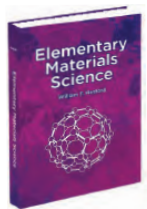
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ISBN: 978-1-61503-978-4

Product Code: 05359G

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Elementary Materials Science

By William F. Hosford

2013 • 188 pages

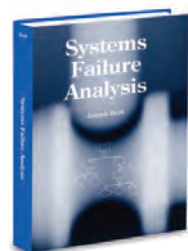
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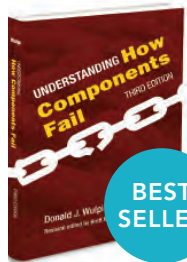
Edited by K.A. Esaklul

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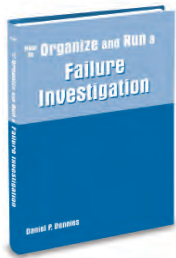
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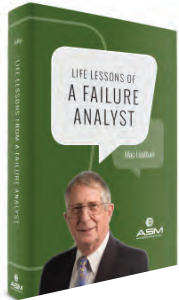
Failure Analysis of Heat Treated Steel Components

Edited by L.C.F. Canale, R.A. Mesquita and G.E. Totten
2008 • 652 pages
ISBN: 978-0-87170-868-7
Product Code: 05113G

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By McIntyre R. Louthan, Jr.
2016 • 202 pages
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This compilation of editorials written by popular instructor of the ASM course Metallurgy for the Non-Metallurgist™ and the former editor-in-chief of the *Journal of Failure Analysis and Prevention* is applicable to failure analysts and all others looking to achieve success in almost any career.

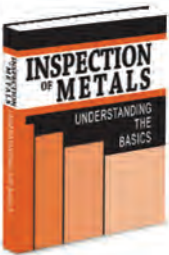
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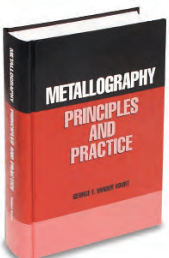
Inspection of Metals: Understanding the Basics

Edited by F.C. Campbell
2013 • 487 pages
ISBN: 978-1-62708-000-2
Product Code: 05372G

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Emphasizes final part inspection at the manufacturing facility or on receipt at the user's facility. Provides an intermediate level overview to

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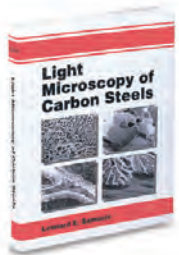


Metallography: Principles and Practice

By G. Vander Voort
1984 • 752 pages
ISBN: 978-0-87170-672-0
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Price: \$177 / ASM Member: \$135

A proven reference work for metallographers, engineers, and technicians as well as students. Thoroughly referenced and well-illustrated with an extensive collection of micrographs and macrographs.

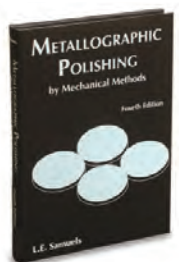


Light Microscopy of Carbon Steels

By L.E. Samuels
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"How to" book gives everyday working examples and discusses the relationship between the constitution, properties, and microstructure of various carbon steel products. Over 1,200 micrographs and 90 other figures.



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By L.E. Samuels
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Product Code: 06964G

Price: \$157 / ASM Member: \$115



ALSO SEE

ASM Handbook, Volume 9: Metallography and Microstructures, page 3



Metallography of Steels: Interpretation of Structure and the Effects of Processing

By Hubertus Colpaert

Translated and updated by André Luiz V. da Costa e Silva

2018 • Approx. 700 pages

ISBN: 978-1-62708-148-1

Product Code: 05922G

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Price: \$77 / ASM Member: \$55



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Product Code: 05331G

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Hardness testing of metals, plastics, rubber and other materials. Technical developments such as the introduction of image processing in the Brinell and

Vickers method, the adaptation of hardness testing machines to process-oriented testing conditions, and the development of highly accurate and efficient calibration methods.



Optical Microscopy of Fiber-Reinforced Composites

By Brian S. Hayes and Luther M. Gammon

2010 • 284 pages

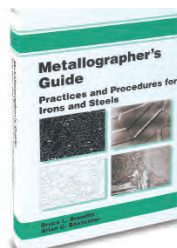
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By B.L. Bramfitt and A.O. Benschoter

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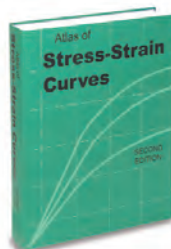


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Tensile Testing, 2nd Edition

Edited by J.R. Davis

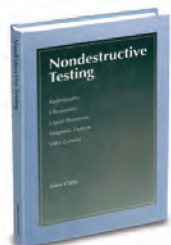
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Product Code: 06987G

Price: \$257 / ASM Member: \$185

Focuses on metallic materials but also addresses unique capabilities of important nonmetals.



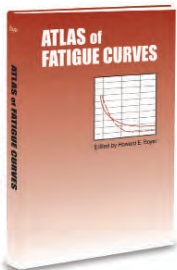
Fatigue and Durability of Metals at High Temperatures

By S.S. Manson and G.R. Halford

2009 • 268 pages
ISBN: 978-0-87170-718-5
Product Code: 05206G

Price: \$257 / ASM Member: \$185

Written by preeminent experts, this work gives development engineers, students, and component designers an important reference on how to analyze time-dependent metal fatigue at high temperatures.



Atlas of Fatigue Curves

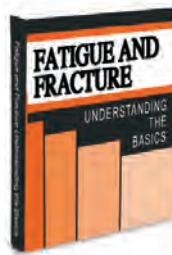
Edited by H.E. Boyer

1986 • 518 pages • Illustrated
ISBN: 978-0-87170-214-2
Product Code: 06156G

Price: \$307 / ASM Member: \$231

More than 500 fatigue curves for industrial ferrous and nonferrous alloys. Standard S-N curves, curves showing effect of surface hardening on fatigue strength, crack growth-rate curves, curves comparing the

fatigue strengths of various alloys, effect of temperature, humidity, frequency, aging, environment and more.



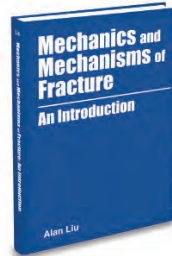
Fatigue and Fracture: Understanding the Basics

Edited by F.C. Campbell

2012 • 698 pages
ISBN: 978-1-61503-976-0
Product Code: 05361G

Price: \$187 / ASM Member: \$135

Covers mechanical properties of materials, differences between ductile and brittle fractures, fracture mechanics, the basics of fatigue, structural joints, high temperature failures, wear, environmentally-induced failures, and steps in the failure analysis process. Chapters devoted to fatigue and fracture of steels, aluminum alloys, titanium and titanium alloys, ceramics, polymers, and continuous fiber polymer matrix composites.



Mechanics and Mechanisms of Fracture: An Introduction

By A.F. Liu

2005 • 458 pages

"Recommended." - Choice: Current Reviews for Academic Libraries, June 2006

ISBN: 978-0-87170-802-1
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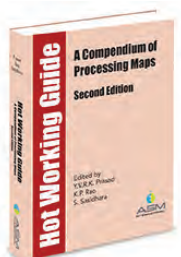
Extrusion, 2nd Edition

Edited by M. Bauser, G. Sauer, and K. Siegert

2006 • 608 pages
ISBN: 978-0-87170-837-3
Product Code: 06998G

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Newest edition. Overview of extrusion processes, equipment, and tooling. Metallurgical fundamentals of extrusion are covered in detail.



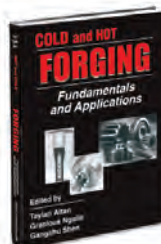
Hot Working Guide: A Compendium of Processing Maps, Second Edition

Edited by Y.V.R.K. Prasad, K.P. Rao, and S. Sasidhara

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ISBN: 978-1-62708-091-0
Product Code: 05445G

Price: \$265 / ASM Member: \$199

This is a unique source book with flow stress data for hot working, processing maps with metallurgical interpretation and optimum processing conditions for metals, alloys, intermetallics, and metal matrix composites. In the second edition, significant additions of maps on stainless steels, magnesium alloys, titanium alloys and nickel alloys have been made.



Cold and Hot Forging: Fundamentals and Applications

Edited by T. Altan, G. Ngaile and G. Shen

2005 • 341 pages
ISBN: 978-0-87170-805-2
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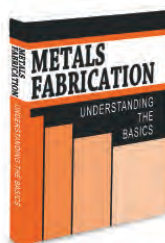


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The latest developments on the design of sheet forming operations, equipment, tooling, and process modeling.



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This book can be read and understood by anyone with a technical background. It is especially useful to those who deal with metals including designers,

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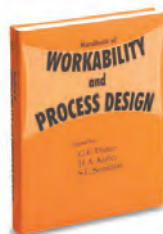


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Edited by G.E. Dieter, H.A. Kuhn, and S.L. Semiatin
2003 • 414 pages
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STEELS



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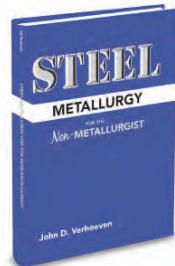
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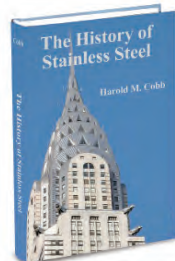


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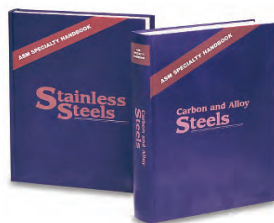
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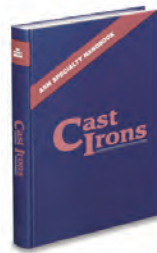
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By George Krauss

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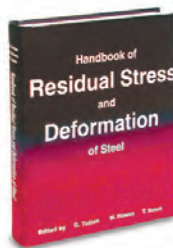
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By Michael F. McGuire

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Addresses selection for corrosion resistance, processing, and major applications.



Handbook of Residual Stress and Deformation of Steel

Edited by G. Totten, M. Howes, and T. Inoue

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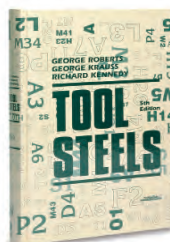


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Co-published by Steel Founders' Society of America and ASM International
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Purchase, design, and manufacture of castings (including casting and molding, heat treatment, and quality assurance), materials selection for mechanical and chemical properties, and materials selection for processing properties.



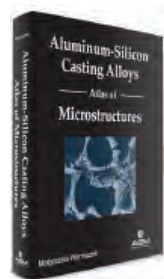
Tool Steels, 5th Edition

By G. Roberts, G. Krauss, and R. Kennedy
1998 • 364 pages
ISBN: 978-0-87170-599-0
Product Code: 06590G

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Contains a significant amount of information from the past two decades presented in an easy-to-use outline format, making this a "must have" reference for engineers involved in tool-steel production, as well as in the selection and use of tool steels in metalworking and other materials manufacturing industries.

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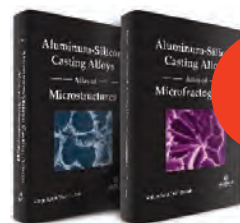


Aluminum-Silicon Casting Alloys: Atlas of Microstructures

By Małgorzata Warmuzek
2016 • Approximately 186 pages
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Product Code: 05919G

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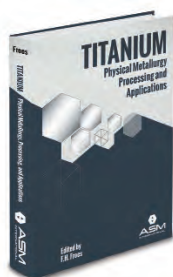
This atlas provides engineers and researchers who work with aluminum castings with a practical and substantive tool for the visual analysis of the microscopic images of the microstructure of the aluminum casting alloys, as examined during routine laboratory procedures.



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By Małgorzata Warmuzek
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Titanium: Physical Metallurgy, Processing, and Applications

Edited by F.H. Froes
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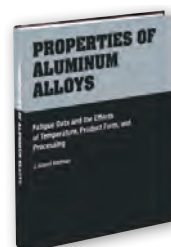
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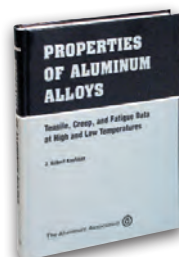


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ISBN: 978-0-87170-839-7
Product code: 05156G

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One of the most comprehensive collections of fatigue data yet available for aluminum alloys, temperatures, and products. The data, including over 1000 curves and numerous tables, are presented in a consistent format, conveniently arranged by alloy and temper.



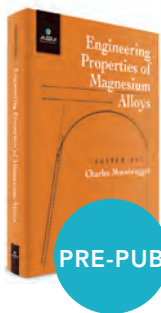
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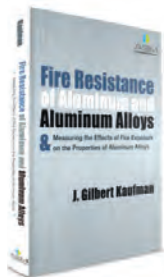


Engineering Properties of Magnesium Alloys

Edited by Charles Moosbrugger
2017 • Approx. 175 pages
ISBN: 978-1-62708-143-6
Product Code: 05920G

Price: \$199 / ASM Member: \$149
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Written for engineers, scientists, teachers, and students engaged in the design process of material selection and material elimination. While focused on mechanical properties for structural design, the physical properties that are germane to corrosion behavior and electrical applications are represented. Datasheets for individual magnesium alloys provide a handy quick reference to specific properties and performance. Topics such as the alloy designation system and product forms are addressed.



Fire Resistance of Aluminum and Aluminum Alloys

& Measuring the Effects of Fire Exposure on the Properties of Aluminum Alloys

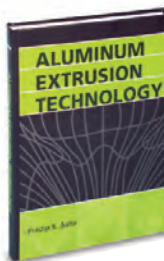
By J. Gilbert Kaufman

2016 • 138 pages
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Product Code: 05917G

Price: \$149 / ASM Member: \$109

Contains valuable information about the fire resistance of aluminum and aluminum alloys

including what occurs when aluminum is in a fire and how the effects of fire damage are evaluated. All aspects of aluminum's fire resistance are described, and reliable methods to estimate the extent of damage resulting from exposure to fire are presented, most notably the relationship between hardness and electrical conductivity with strength.



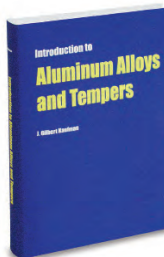
Aluminum Extrusion Technology

By P.K. Saha

2000 • 259 pages
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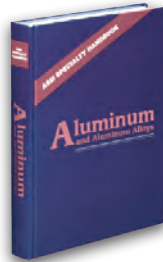
Beryllium Chemistry and Processing

By K.A. Walsh • Edited by E.E. Vidal, A. Goldberg, E. Dalder, D.L. Olson, and B. Mishra

2009 • 680 pages
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Product Code: 05223G

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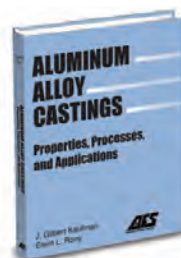
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Edited by J.R. Davis

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ISBN: 978-0-87170-685-0
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Price: \$307 / ASM Member: \$231

The compositions, properties, processing, performance, and applications of nickel, cobalt, and their alloys.



Aluminum Alloy Castings: Properties, Processes, and Applications

By J.G. Kaufman and E.L. Rooy

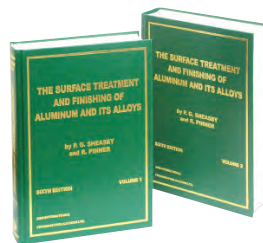
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Extensive collections of property and performance data, including aging response curves, growth curves, and fatigue curves.



The Surface Treatment and Finishing of Aluminum and Its Alloys, (2 Volume Book + CD)

By P.G. Sheasby and R. Pinner

2001 • 1387 pages

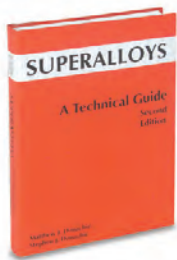
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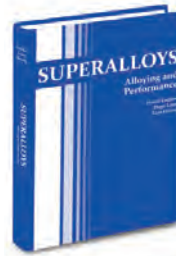
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An introduction for understanding the compositional complexity of superalloys and the wide range of alloys developed for specific applications. The basics of alloying, strengthening mechanisms, and structure of superalloys are explained in optimizing particular mechanical properties, oxidation/corrosion resistance, and manufacturing characteristics such as castability, forgeability, and weldability.

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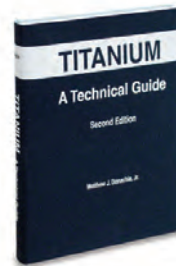
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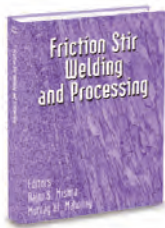
By Giles Humpston and David M. Jacobson

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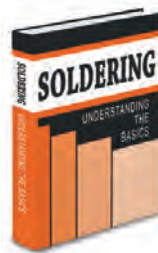
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Edited by F.C. Campbell
2011 • 346 pages
ISBN: 978-1-61503-825-1
Product Code: 05329G

Price: \$187 / ASM Member: \$135

Extends ASM's Understanding the Basics series into fabrication technologies. An introduction to welding, brazing, soldering, fastening, and adhesive bonding. Addresses metallurgical issues that must

be understood during welding, including joining systems of materials that are the same, similar, or different.



Soldering: Understanding the Basics

By M.M. Schwartz
2014 • 184 pages
ISBN: 978-1-62708-058-3
Product Code: 05338G

Price: \$187 / ASM Member: \$135

Covers various soldering methods and techniques as well as the latest on solder alloys, solder films, surface preparation, fluxes and cleaning methods, heating methods, inspection techniques, and quality control and reliability.



Brazing, 2nd Edition

By M.M. Schwartz
2003 • 421 pages
ISBN: 978-0-87170-784-0
Product Code: 06955G

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recommended heat treating procedure. A wide variety of additional heat treating data is included, such as representative micrographs, isothermal transformation diagrams, cooling transformation diagrams, tempering curves, and data on dimensional change.

Heat Treater's Guide: Practices and Procedures for Nonferrous Alloys

1996 • 669 pages
ISBN: 978-0-87170-565-5
Product Code: 06325G

Price: \$307 / ASM Member: \$231

Quick access to recommended heat treating information for hundreds of nonferrous alloys, plus composition, trade names, common name, specifications (both U.S. and foreign), available product forms, and typical applications. Information is presented by alloy group in the datasheet format established in the companion edition on irons and steels.



Heat Treatment of Gears: A Practical Guide for Engineers

By A.K. Rakhit
2000 • 209 pages
ISBN: 978-0-87170-694-2
Product Code: 06732G

Price: \$167 / ASM Member: \$125

Heat treat distortion of gears is discussed in detail for the major heat treat processes. A case history of each successful gear heat treat process is included.

Vacuum Heat Treatment

By Daniel H. Herring • Publisher: BNP Media

Volume I: Principles, Practices, and Applications

2012 • 536 pages

ISBN: 978-0-976-75650-7

Product Code: 75025G

Price: \$154.99 / ASM Member: \$139.49

Volume I is a comprehensive introduction and technical resource for vacuum processes and equipment, focusing on subjects that engineers, heat treaters, quality assurance personnel, and metallurgists need to know.

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2016 • 1076 pages

ISBN: 978-0-692-76738-2

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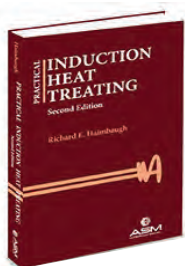
2015 • 824 pages

ISBN: 978-0-692-51299-9

Product Code: 75169G

Price: \$154.99 / ASM Member \$139.49

Volume 2 focuses on furnace atmospheres, quenching practices, testing, safety, conservation, maintenance, and specification compliance.



Practical Induction Heat Treating, Second Edition

By R.E. Haimbaugh

2015 • 365 pages

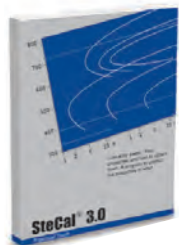
ISBN: 978-1-62708-089-7

Product Code: 05505G

Price: \$207 / ASM Member: \$155

This book is a quick reference source for induction heaters and ties in the metallurgy, theory, and practice of induction heat treating

from a hands-on explanation of what floor people need to know. New material has been added including updated information on quenching methods, applications, inspection for quality control, and updated material on power supplies.



SteCal® 3.0 (CD + Booklet)

By P. Tarin and J. Pérez

2004 • Microsoft Windows format

ISBN: 978-0-87170-796-3

Product Code: 07482A

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Use for predicting the properties obtained from heat treating low-alloy steels. An excellent tool for heat treaters to use in estimating and refining heat treating parameters for unfamiliar steels, or

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1991 • 804 pages • 1839 diagrams

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Nonferrous Alloys

Edited by G. Vander Voort

1991 • 474 pages • 500 diagrams

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Price: \$307 / ASM Member: \$231

Heat Treating Reference Library DVD, 2012 Edition

2012 • ASM International

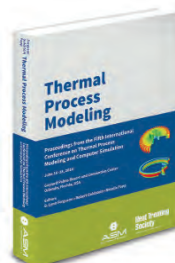
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Thermal Process Modeling: Proceedings of the 5th International Conference on Thermal Process Modeling and Computer Simulation

Edited by B.L. Ferguson, R. Goldstein, and R. Papp

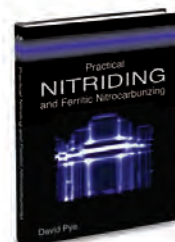
2014 • 329 pages

ISBN: 978-1-62708-068-2

Product Code: 05447G

Price: \$168 / ASM Member: \$139

This collection of papers represents the heart of the 5th International Conference on Thermal Process Modeling and Computer Simulation. Thermal processes are key manufacturing steps in producing durable and useful products, with solidification, welding, heat treating, and surface engineering being primary steps.



Practical Nitriding and Ferritic Nitrocarburizing

By David Pye

2003 • 256 pages

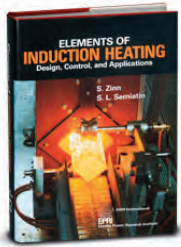
ISBN: 978-0-87170-791-8

Product Code: 06950G

Price: \$207 / ASM Member: \$155

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Elements of Induction Heating: Design, Control, & Applications

By S. Zinn, S.L. Semiatin
1988 • 335 pages
ISBN: 978-0-87170-308-8
Product Code: 06522G
Price: \$107 / ASM Member: \$75



Practical Heat Treating, 2nd Edition

By J.L. Dossett and H.E. Boyer
2006 • 296 pages
ISBN: 978-0-87170-829-8
Product Code: 05144G
Price: \$147 / ASM Member: \$105

An excellent introduction and guide for design and manufacturing engineers, technicians, students, and others who need to understand why heat treatment is specified and how different processes are used to obtain desired properties. Clear, concise, and non-theoretical language.

is specified and how different processes are used to obtain desired properties. Clear, concise, and non-theoretical language.

Surface Hardening of Steels: Understanding the Basics

Edited by J.R. Davis
2002 • 364 pages
ISBN: 978-0-87170-764-2
Product Code: 06952G
Price: \$147 / ASM Member: \$105

A practical selection guide to help engineers and technicians choose the most efficient surface hardening techniques that offer consistent and repeatable results. Emphasis is placed on processing temperature, case/coating thickness, bond strength, and hardness level obtained.

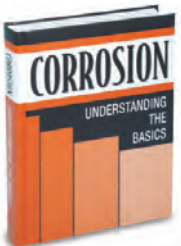
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CORROSION



Corrosion: Understanding the Basics

Edited by J.R. Davis
2000 • 563 pages
ISBN: 978-0-87170-641-6
Product Code: 06691G
Price: \$197 / ASM Member: \$145

A "how to" approach to understanding and solving the problems of corrosion of structural materials. Written for those with limited technical background. Provides more experienced engineers with a useful overview of the principles of corrosion and can be used as a general guide for developing a corrosion-control program.

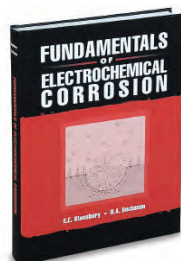


Handbook of Corrosion Data, 2nd Edition

Edited by B. Craig and D. Anderson
1995 • 998 pages
ISBN: 978-0-87170-518-1
Product Code: 06407G
Price: \$307 / ASM Member: \$231

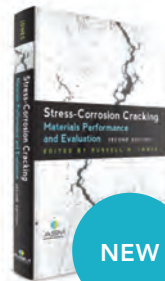
Includes "Corrosion of Metals and Alloys" and "Corrosion Media." The first part contains summaries of the general corrosion characteristics of major metals and alloys in

various corrosion environments. The second part is organized alphabetically by chemical compound and the data for each corrosive agent/compound are in tabular form.



Fundamentals of Electrochemical Corrosion

By E.E. Stansbury and R.A. Buchanan
2000 • 487 pages
ISBN: 978-0-87170-676-8
Product Code: 06594G
Price: \$157 / ASM Member: \$115



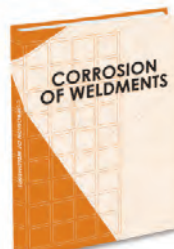
NEW

Stress-Corrosion Cracking: Materials Performance and Evaluation, Second Edition

Edited by Russell H. Jones
2016 • 473 pages
ISBN: 978-1-62708-118-4
Product Code: 05509G
Price: \$199 / ASM Member: \$149

This new second edition serves as a go-to reference on the complex subject of stress-corrosion cracking (SCC), offering information to help metallurgists, materials scientists, and designers determine whether

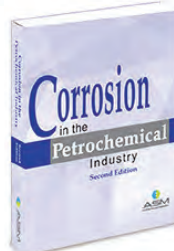
SCC will be an issue for their design or application; and for the failure analyst to help determine if SCC played a role in a failure under investigation.



Corrosion of Weldments

Edited by J.R. Davis
2006 • 236 pages
ISBN: 978-0-87170-841-0
Product Code: 05182G
Price: \$207 / ASM Member: \$155

Details the many forms of weld corrosion and the methods used to minimize weld corrosion.

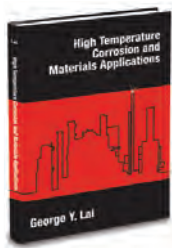


Corrosion in the Petrochemical Industry, Second Edition

Edited by Victoria Burt
2015 • 426 pages
ISBN: 978-1-62708-094-1
Product Code: 05503G
Price: \$219 / ASM Member: \$165

A comprehensive guide to understanding and preventing corrosion in the petrochemical industry.

Written for engineers, production managers and technicians, this book explains how to select the best material for a corrosion-sensitive petrochemical application, and how to choose among various prevention methods. Included in the second edition are new articles on corrosion inhibitors and high-temperature environments.

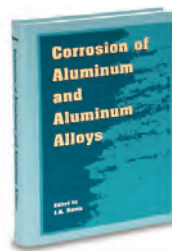


High-Temperature Corrosion and Materials Applications

By George Y. Lai
2007 • 480 pages
ISBN: 978-0-87170-853-3
Product Code: 05208G

Price: \$237 / ASM Member: \$175

Covers oxidation, nitridation, carburization and metal dusting, corrosion by halogen and halides, sulfidation, erosion and erosion-corrosion, hot corrosion in gas turbines, boilers and furnaces, stress-assisted corrosion and cracking, molten salt corrosion, liquid metal corrosion and embrittlement, and hydrogen attack.



Corrosion of Aluminum and Aluminum Alloys

Edited by J.R. Davis
1999 • 313 pages
ISBN: 978-0-87170-629-4
Product Code: 06787G

Price: \$167 / ASM Member: \$125

Presents comprehensive coverage of the corrosion behavior of aluminum and aluminum alloys, with emphasis on practical information about how to select and process these materials in order to prevent corrosion attack.

COATINGS & SURFACE ENGINEERING



Protective Coatings for Turbine Blades

By Y. Tamarin
2002 • 244 pages
ISBN: 978-0-87170-759-8
Product Code: 06738G

Price: \$53 / ASM Member: \$42

Addresses the problem of surface protection for aircraft engine turbine blades. Based on the author's 30-plus years of work on the development and application of coatings to protect against oxidation and hot corrosion. Describes and details a methodology for optimizing turbine blade surface protection.



Volume 5B: Protective Organic Coatings

Edited by Kenneth B. Tator
2015 • 545 pages
ISBN: 978-1-62708-081-1
Product Code: 05437G

Price: \$297 / ASM Member: \$225

This completely new volume addresses a need for comprehensive information on organic coatings, including coating materials, surface preparation,

application processes, industrial uses, and coating evaluation and analysis methods. This volume is essential for industrial coating users, specifiers, and contractors. The content in this volume has been written and reviewed by leading industry experts, making this latest ASM Handbook the definitive resource on this important topic. Plus, Volume 5B is the first volume in the ASM Handbook series to be printed in full color.



Surface Engineering for Corrosion and Wear Resistance

Edited by J.R. Davis
2001 • 279 pages
Co-published by IOM Communications and ASM International
ISBN: 978-0-87170-700-0
Product Code: 06835G

Price: \$107 / ASM Member: \$75

Provides practical information to help engineers select the best possible surface treatment for a specific corrosion or wear application. Covers process comparisons, and dozens of useful tables and figures compare surface treatment thickness and hardness ranges; abrasion and corrosion resistance; processing time, temperature, and pressure; costs; distortion tendencies; and other critical process factors and coating characteristics.

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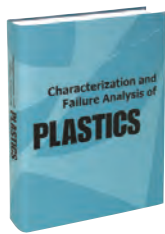


High Pressure Cold Spray: Principles and Applications

Edited by C.M. Kay and J. Karthikeyan
2016 • 324 pages
ISBN: 978-1-62708-096-5
Product Code: 05446G

Price: \$199 / ASM Member: \$179

A highly practical and useful "go-to" resource that presents an in-depth look at the high pressure cold spray process and describes applications in various industries. Applications of cold spray processes including protective coating production, development of performance enhancing layers, repair and refurbishing of parts, and NNS fabrication are elaborated in each industry with illustrative case studies by cold sprayers actively involved in the field.



Characterization and Failure Analysis of Plastics

2003 • 482 pages
ISBN: 978-0-87170-789-5
Product Code: 06978G

Price: \$247 / ASM Member: \$185

Covers the performance of plastics and how it is characterized during design, property testing, and failure analysis. Selected by *Choice* magazine for its

excellence in scholarship and presentation, the significance of its contribution to the field, and value as an important treatment of the subject.



Composite Filament Winding

Edited by S.T. Peters
2011 • 174 pages
ISBN: 978-1-61503-722-3
Product Code: 05286G

Price: \$167 / ASM Member: \$125

Topics include capabilities and limitations of filament winding, practical issues such as fiber and resin handling, winding theory, software and numerical control, history of the process, and more.

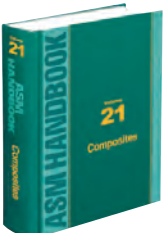


Optical Microscopy of Fiber-Reinforced Composites

By Brian S. Hayes and Luther M. Gammon
2010 • 284 pages
ISBN: 978-1-61503-044-6
Product Code: 05303G

Price: \$177 / ASM Member: \$135

Optical microscopy is one of the most valuable but under-utilized tools for analyzing fiber-reinforced polymer matrix composites. Covers sample preparation, microscopic techniques, and applications. The power to study the microstructure of heterogeneous, anisotropic materials is illustrated with over 180 full color images.



Volume 21: Composites

Edited by D.B. Miracle and S.L. Donaldson
2001 • 1201 pages
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Product Code: 06781G

Price: \$297 / ASM Member: \$225

See page 4 for more information.

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Price: \$207 / ASM Member: \$155

Volume 4: Ceramics and Glasses

1991 • 1217 pages
ISBN: 978-0-87170-282-1
Product Code: 06912G

Price: \$207 / ASM Member: \$155



Structural Composite Materials

By F.C. Campbell
2010 • 630 pages
ISBN: 978-1-61503-037-8
Product Code: 05287G

Price: \$167 / ASM Member: \$125

All aspects of continuous and discontinuous fiber-reinforced polymer, metal, and ceramic composites are described in terms of fabrication, properties, design, analysis, and in-service performance.

MICROELECTRONICS

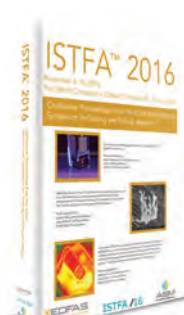


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Edited by Richard J. Ross
2011 • 674 pages
ISBN: 978-1-61503-725-4
Product Code: 09110Z

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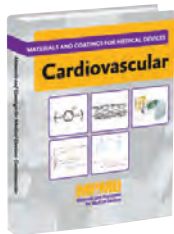
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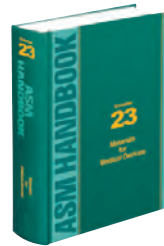


Materials and Coatings for Medical Devices: Cardiovascular

2009 • 452 pages
ISBN: 978-1-61503-000-2
Product Code: 05269G

Price: \$307 / ASM Member: \$231

A unique volume of engineering property data with detailed biological response information, in a consistent data sheet format, for the materials and coatings for cardiovascular medical devices. The emphasis is on materials and coatings used in FDA-approved implantable devices.



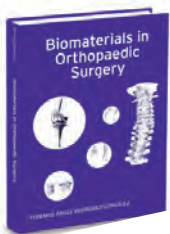
Volume 23: Materials for Medical Devices

Edited by Roger Narayan
2012 • 396 pages
ISBN: 978-1-61503-827-5
Product Code: 05285G

Price: \$297 / ASM Member: \$225

State-of-the-art reference for implant materials including stainless steels, cobalt-base alloys, titanium, shape memory alloys, noble metals, ceramics, and polymers. Examples of materials- and mechanical-based failures of medical devices. Covers biotribology, implant wear, clinical wear, and biological aspects. Corrosion effects, corrosion products, mechanically assisted corrosion, and corrosion fatigue. Biocompatibility of ceramics and polymers.

Volume 23 is a replacement for the *Handbook of Materials for Medical Devices* edited by J.R. Davis (ASM, 2003). It features new content that greatly expands the scope and depth of coverage, including a more in-depth discussion of materials and focus on applications.



Biomaterials in Orthopaedic Surgery

By Federico Ángel Rodríguez-González
2009 • 236 pages
ISBN: 978-1-61503-009-5
Product Code: 05233G

Price: \$137 / ASM Member: \$105

Biomaterials (metallic, nonmetallic, and bone allografts) used for orthopaedic applications and the engineering and clinical aspects of their use and performance. Case studies and specific applications include internal and external bone fracture fixation, hip and knee joint replacements, spine implants and disc prostheses, and the application of structural bone allografts for patients with bone tumors.

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Pearson's Crystal Data: Crystal Structure Database for Inorganic Compounds®*

Edited by Pierre Villars and Karin Cenzual

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Edited by T.B. Massalski, H. Okamoto,
P.R. Subramanian, and L. Kacprzak

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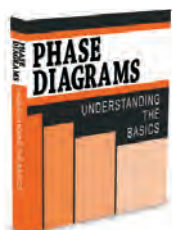
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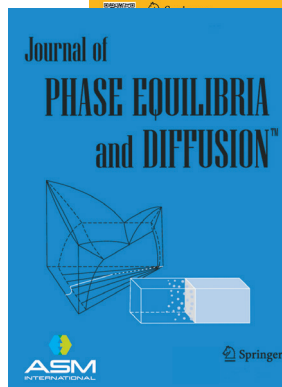
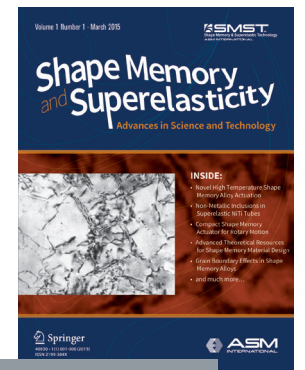
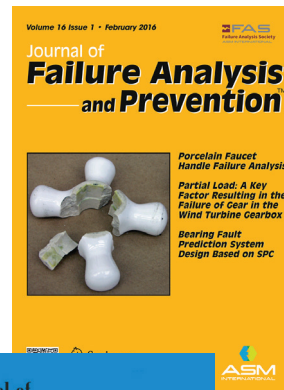
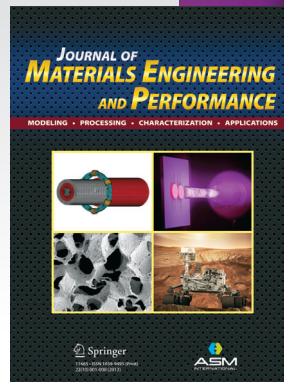
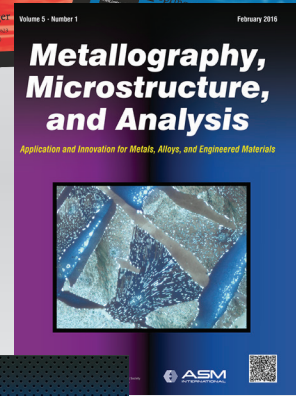
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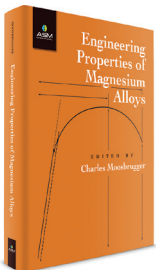
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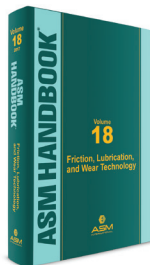
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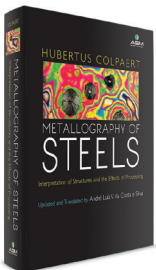
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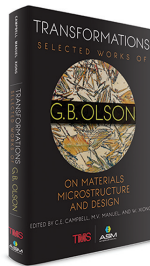
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