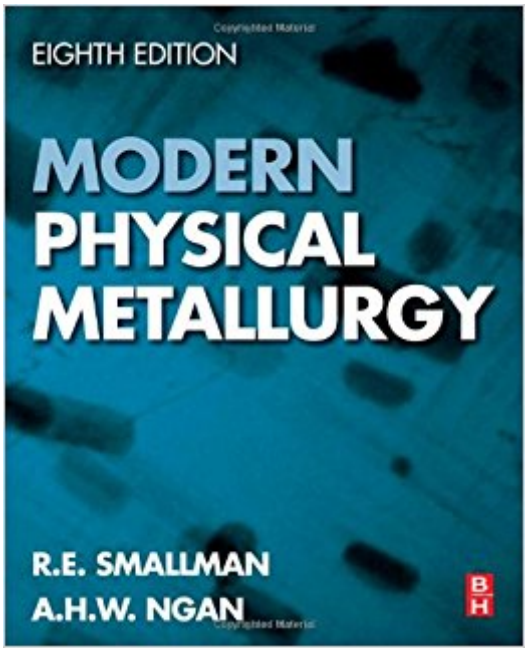
Modern Physical Metallurgy, Eighth Edition



Synopsis

Modern Physical Metallurgy describes, in a very readable form, the fundamental principles of physical metallurgy and the basic techniques for assessing microstructure. This book enables you to understand the properties and applications of metals and alloys at a deeper level than that provided in an introductory materials course. The eighth edition of this classic text has been updated to provide a balanced coverage of properties, characterization, phase transformations, crystal structure, and corrosion not available in other texts, and includes updated illustrations along with extensive new real-world examples and homework problems. Renowned coverage of metals and alloys from one of the world’s leading metallurgy educatorsCovers new materials characterization techniques, including scanning tunneling microscopy (STM), atomic force microscopy (AFM), and nanoindentationProvides the most thorough coverage ofÂ characterization, mechanical properties, surface engineering and corrosion of any textbook in its fieldIncludes new worked examples with real-world applications, case studies, extensive homework exercises, and a full online solutions manual and image bank

Book Information

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Customer Reviews

"â |this edition of the textbook has dropped the coverage of such materials as polymers, ceramics, biomaterials, sports materials, and nano-materials that appeared in earlier edition. The focus returns to the original physical metallurgy, and the material has been rearranged so that separate chapter deal with solidification, point defect behavior, interfaces and grain boundaries, precipitation

hardening, and other matters." --ProtoView.com, January 2014

Modern Physical Metallurgy describes, in a very readable form, the fundamental principles of physical metallurgy and the basic techniques available for the assessment of microstructure. This book will enable the student to understand the properties and applications of metals and alloys at a deeper level than an introductory materials course may provide. The 8th Edition ofÂ this classic text has been updated to provide more balanced coverage of physical and mechanical properties, characterisation, phase transformations, crystal defects, corrosion and surface treatment, as well as updated illustrations and extensive new real-world examples and homework problems. Key Features: Renowned coverage of metals and alloys from two of the world's leading metallurgy researchers and educatorsCovers new materials characterization techniques, including scanning tunneling microscopy (STM), atomic force microscopy (AFM), and nanoindentationProvides a more thorough coverage of characterisation, mechanical and physical properties, crystal defects, corrosion and surface treatment of any general physical metallurgy bookNew worked examples with real-world applications, case studies, extensive homework exercises, new illustrations, and a full online solutions manual and image bank Contents: Atoms and Atomic Arrangements I Phase Diagrams and Alloy Theory I Solidification I Introduction to Dislocations I Characterization and Analysis I Point Defect Behaviour I Diffusion I Physical Properties I Plastic Deformation and Dislocation Behavior I Surfaces, Grain Boundaries, and Interfaces I Work Hardening and Annealing I Steel Transformations I Precipitation Hardening I Selected Alloys I Creep, Fatigue, and Fracture I Oxidation, Corrosion and Surface Engineering

Probably one of the worst text books I've been subjected to. Books like this literally drove my department's metallurgy specialist to decide to writ his own.

good

Modern Physical Metallurgy, Eighth Edition Extractive Metallurgy of Tin (Process metallurgy) Physical Metallurgy, Second Edition PMP Exam Prep, Eighth Edition: Rita's Course in a Book for Passing the PMP Exam by Rita Mulcahy Published by RMC Publications 8th (eighth) edition (2013) Paperback Physical Metallurgy Principles Physical Metallurgy Principles (Prindle, Weber & Schmidt Series in Advanced Mathematics) Practical Metallurgy and Materials of Industry (6th Edition) Complete Casting Handbook, Second Edition: Metal Casting Processes, Metallurgy, Techniques

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