BOOK REVIEW

ENCYCLOPAEDIA OF MATERIALS SCIENCE AND ENGINEERING, M. B. Bever (Editor-in-Chief), 8 Volumes, Text 5552 pages + indexes 554 pages, price $ 1950, Pergamon Press, Oxford.

This encyclopaedia is a monumental eight-volume reference work covering the entire spectrum of topics dealing with the principles and practice of materials science and engineering. The coverage is such that it is useful for beginners as well as experts. The encyclopaedia is also most useful to designers and those involved in products and processes. Over 1400 engineers and scientists have contributed to the volumes.

The encyclopaedia includes the following classes of materials: metals and alloys, ceramics, glasses, other inorganic materials, polymers, elastomers, fibers, composites, wood, paper and materials of biological origin. Based on applications, materials of the following types are covered: industrial, electrical, electronic, superconducting, nuclear, energy, magnetic, biomedical, dental and building. Production, processing and fabrication aspects are discussed where necessary, besides properties and applications. Justice has been done to the physical, chemical and engineering aspects of materials. Materials-related methods and phenomena such as characterization techniques, nondestructive evaluation, surfaces and interfaces, surface coatings, joining by adhesives, welding, safety etc are described. Some general aspects, for example, mineral resources, materials policy and economics and humanistic aspects of materials are also covered.

All in all, this encyclopaedia is fantastic. It is a must in the personal library of solid state scientists, metallurgists, ceramicists, materials scientists and many others interested in materials science, engineering, processing, applications and policy. But, alas, the encyclopaedia is too expensive for individuals to buy. At least every science and engineering library must have this encyclopaedia which is a great boon to students, teachers and practitioners of the "science and engineering of materials" in the broadest sense.

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