

Book Review

Batteries for Portable Devices

RICHARD WILLS

University of Southampton, Southampton, UK

(author for correspondence, e-mail: electro@chemeng.fsnet.co.uk)

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This book presents a thorough review of small battery systems for use in small or portable electronic devices. The first three chapters provide an overview of the subject area, covering basic concepts (chapter 1), requirements for use in portable devices (chapter 2), and current battery classes (chapter 3). The following two chapters present detailed descriptions of the major commercial primary and secondary batteries. These chapters include aspects such as the cell chemistries, construction, performance, and applications. Batteries for medical and niche applications are considered in chapter 6. Safety considerations for the most popular battery systems are covered well in chapter 7 and Appendix E. The book concludes with chapters on battery substitutes/support devices, recycling considerations and the world market for batteries. There are also a number of useful appendices to accompany the text and provide further sources of information.

This book generally reads very well and provides a substantial catalogue of information on portable battery types, their chemistries and applications. Indeed, it would be difficult to find another, single text with the same range of comparison data for the large number of commercial portable batteries available today. The text concentrates on construction and performance of batteries rather than their detailed electrochemistry. Useful features of the text include treatments of (a) battery management and control electronics, (b) small and miniaturised fuel cells for portable electronics and (c) battery collection and recycling. Global trends in the market for batteries are considered as a final chapter in the book.

Unfortunately, the image quality of some of the figures is disappointing and there is a lack of consistency in their format. The cost of the book, when considering the fast moving nature of the field, may be off-putting to some readers. This book is recommended for use by postgraduates, academics or industrial specialists working in the field of small-scale batteries. The book should prove to be a useful addition to reference books on modern batteries.