

NEWS

***Book reviews***

**Modern batteries: an introduction to electro-chemical power sources**

Colin A. Vincent with Franco Bonino, Mario Lazzari and Bruno Scrosati, Edward Arnold, London, 1984  
272 pp., £14.50, ISBN 0 7131 34690

Colin Vincent and his co-authors Franco Bonino, Mario Lazzari and Bruno Scrosati have produced a delightful book which will fill a gap on the shelf of electrochemists and battery technologists engaged in teaching and research. The book begins with a concise summary of the thermodynamics of electrochemical cells and of the kinetics of electrode processes, including electrocrystallization as well as charge and mass transfer. However, it is a pity that the authors have chosen to adhere to the 'polarographic convention' for currents since this leads to confusion in the teaching of electrochemistry and is not helpful when considering battery electrode reactions. Subsequent chapters deal with primary and secondary aqueous electrolyte cells, high temperature and solid-state cells as well as lithium-liquid electrolyte and secondary

hybrid cells. Each chapter contains a wealth of information, and the illustrations are well chosen to accompany the text. Some light relief is provided by two artist's impressions of 1000 Mwn load-levelling batteries which would certainly provoke comment from Prince Charles. The reader is left to make detailed comparison on the basis of performance criteria given in the different chapters, and the cost analysis is limited essentially to the introduction which makes the alarming point that the zinc-silver button cell provides electricity at £7000 per kWh.

The layout and presentation of the book are pleasing and the appendices, bibliography and glossary are useful additions which round off the overall impression of a well-thought-out book. The price is modest, and should be particularly attractive to postgraduate students who need an up-to-date overview of battery science.

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