

morphic terrains, and are associated with enrichments in a characteristic suite of elements (Nb, Ta, Li, B). Alluvial and colluvial concentrations from these primary deposits are also present. Most of the tin occurrences are, however, small in size, and currently it is only the deposits in the Bastar province which are economic.

Although much exploration for tin has been undertaken over the last few decades, the exploration and development programmes have been hampered by both the remoteness of the locations, and the secrecy surrounding any resulting geological data. This book attempts to summarise the occurrences of tin mineralization in India by bringing together and presenting much of this information. It describes many of the tin occurrences in some detail: exact locations, geological setting, nature of mineralization, and history of exploration and development are all presented. The methods used during the tin exploration programmes are outlined (including some discussion on biogeochemical surveys for tin).

This is an interesting and useful summary of the occurrence of tin in India, and the collection of information into one compact text is welcomed. It is packed with data and figures, and includes a good, general introduction to tin and its deposits. It will be of particular use to anyone needing an introduction to the tin mining and exploration industry in India. It will also be useful reading for anyone interested in the mineral deposits of India, tin deposits in general, or the occurrence of mineral deposits in high-grade metamorphic rocks.

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Scott, V. D., Love, G and Reed, S. J. B. *Quantitative Electron-Probe Microanalysis* (second edition). London and New York (Ellis Horwood) 1995. xiv + 311 pp., Price £31.50 (paperback) ISBN 0 13 104050 2.

This book comprises 15 chapters covering the theoretical, instrumental and some practical aspects of electron microprobe analysis. Chapter titles are as follows: (1) 'An historical perspective', (2) 'Physical basis of quantitative analysis', (3) 'Wavelength dispersive spectrometry', (4) 'Energy dispersive spectrometry', (5) 'Processing energy dispersive spectra', (6) 'Experimental determination of X-ray intensities', (7) 'Atomic number correction', (8) 'X-ray absorption correction', (9) 'Fluorescence corrections', (10) 'Evaluation of correction procedures', (11) 'Correction procedures in practice' (12) 'The Monte Carlo method', (13) 'Analysis of thin coatings', (14) 'Analysis of thin films' and (15) 'Analysis of particles'. The original edition of this book was published about a decade ago and this second edition has been substantially revised to take into account

recent advances. The particular revisions include details of the $\phi(\rho z)$ correction procedures as well as updating the evaluation of correction methods. Details are also included of multi-layer devices for long wavelength WDS germanium energy dispersive detectors and applications in the analysis of thin films, coatings and particles (which are now afforded separate chapters).

The book gives an excellent overview of theoretical and instrumental aspects of electron microprobe analysis. A substantial part of the book is devoted to mathematical correction procedures, reflecting, no doubt, a particular area of interest to the authors. However, other instrumental aspects are adequately covered. What the authors have not attempted to do is review applications of the technique, or to demonstrate the important scientific contribution that the electron microprobe has and continues to make. Nor is any attempt made to review the capabilities of the electron microprobe in relation to other modern microprobe techniques.

This said, however, the book is excellent in its role as a 'nuts and bolts' text; it is well laid out and contains numerous line drawings which make a valued contribution in illustrating the text. The bit I enjoyed most? — browsing through the historical perspectives section which gives details and illustrations of pioneer electron microprobe instruments — 'lest we forget'. The bit I most appreciated having to hand? — the sections on the various correction procedures — 'good for the soul' and one day I'll get round to reading these chapters in detail. The bit I disliked most? — within the scope set by the authors, none, although it would have been nice to appreciate the advances that can be attributed to the electron microprobe in the various branches of science and technology.

Overall — an excellent book and, in paperback format, very good value for money. P. J. PORTS

Hodge, P. *Meteorite Craters and Impact Structures of the Earth*. Cambridge (Cambridge University Press), 1994. Price hardback £25.00. ISBN 0 521 360927. 124 pp.

As the title implies, this book is a compilation of descriptions of meteorite craters and impact structures on the Earth. Each description is accompanied by basic geographical, age and size information, a sketch-map of the surrounding area, and a summary of the geological setting. References to more detailed work on each crater are given, where appropriate. Many entries are illustrated with aerial photographs. Where the author has visited the site, he has provided a description of access details, and suggested itineraries for the best exploration of the feature.