

theory is difficult and remained controversial for some years, but there is now general agreement that annular dark-field STEM with an aberration-corrected objective lens is one of the brighter prospects for interpretable sub-ångström imaging of nanostructures. Again, the author discusses the relevant theory, optics and experimental results in considerable detail.

In the spirit of a subject that requires a good understanding of both theory and equipment, the final chapters are devoted to recent progress in the design of electron sources and detectors, including the field-emission gun, CCD detectors and image plates. This is followed by a description of practical methods for measuring the aberration constants, beam coherence and microscope stability. It is essential reading for anyone planning to install a high-resolution instrument, as is the chapter that describes how one actually acquires a high-resolution image.

Overall, the book is an impressive snapshot of the state of the art in transmission microscopy at a time of rapid progress. It should not be quickly outdated because it seems probable that developments for the next few years will be incremental, based upon advances in column optics and detectors that are already becoming available to the wider community of microscopists. As stated above, the book is demanding because the theoretical background is discussed in considerable detail but it can be read with profit by anyone with experience of microscopy. Almost every page contains some insight or comment that illuminates what might seem to be a familiar topic.

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books received

The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally, a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.

Outline of crystallography for biologists.

By David Blow. Oxford University Press, 2002. Price GBP 25 (paperback). ISBN 0-19-851051-9.

A review of this book, by R. M. Sweet, has been published in the May 2003 issue of *Acta Cryst.* Section D, page 958.

The physics of ferroelectric and antiferroelectric liquid crystals.

By I. Musevic, R. Blinc & B. Zeks. Singapore: World Scientific, 2000. Pp. 680. USD 129, GBP 88. ISBN 981-02-0325-X

A review of this book, by Nicholas Roberts and Helen Gleeson, has been published in the June 2003 issue of *J. Appl. Cryst.*, page 958.