

I think that the background section is somewhat uneven. There are some topics, including the Shannon sampling theorem, the resultant limits to transforming accurately to a diffraction pattern of a given resolution, and the issue of wrap-around effects, that could have been discussed in much greater detail, particularly since this book is devoted to image simulation. Certainly much of this information can be found in works cited in the excellent reference list, but it would be more efficient if it were included in this one volume. Since some X-ray crystallographers are becoming interested in high-resolution electron microscopy, it would have been helpful if the relationship between the back focal plane (where the diffraction pattern is found) and the image plane of a lens could have been stated more explicitly, even though the current presentation is not confusing to those already familiar with electron microscopy. Several images and diffraction patterns are poorly reproduced. Details of the convergent-beam patterns on p. 148, for example, are quite badly obscured, as is an illustration of the intensity distribution of an electron probe on p. 141, to name just two of several examples. On a nonscientific level, better editing would have tidied up occasionally appalling grammar and the far too abundant typographical errors. It needs more than a spell-checker to distinguish between 'incite' and 'insight'! None of the reservations mentioned, however, should obscure the great usefulness of this volume and the software provided with it. It should be on the shelf of any serious electron microscopist interested in the experimental study of crystalline objects at high resolution.

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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.*

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**Group III nitride semiconductor compounds. Physics and applications.** Edited by BERNARD GILL. New

York: Oxford University Press, 1998. Pp. xvii + 470. Price US \$145.00. ISBN 0-19-850159-5. The book contains 11 contributions on the preparation, properties and applications of nitride semiconductors. It is intended as a tutorial introduction to the field for graduate students and young researchers.

**Scanning probe microscopy of polymers.** (ACS Symposium Series 694). Edited by B. D. RATNER and V. V. TSUKRUK. New York: Oxford University Press, 1998. Pp. xii + 367. Price US \$125.00. ISBN 0-8412-3562-7. This volume is 'developed from a symposium sponsored by the Division of Polymer Chemistry, at the 212th National Meeting of the American Chemical Society, Orlando, FL, August 25-29 1996'. It contains an Introduction, 13 papers on polymer morphology and structure, three on studies of local surface properties and four on current trends in SPM techniques.

**Disperse systems.** By MAKOTO TAKEO, Pp. xi + 317. Weinheim: Wiley-VCH Verlag GmbH, 1999. Price £85.00. ISBN 3-527-29458-9. The book discusses the nature and physical properties of disperse systems, including colloids, sols, micelles, vesicles, bilayers, emulsions, gels and aerosols. It is intended for use in 'graduate courses in physics, physical chemistry, and chemical engineering and as a reference for those doing academic or industrial research'.

### New Commercial Products

*Announcements of new commercial products are published by the Journal of Applied Crystallography free of charge. The descriptions, up to 300 words or the equivalent if a figure is included, should give the price and manufacturer's full address. Full or partial inclusion is subject to the Editor's approval and to the space available. All correspondence should be sent to the Editor, Professor A. M. Glazer, Editor Journal of Applied Crystallography, Clarendon Laboratory, University of Oxford, Parks Road, Oxford OX1 3PU, England.*

*The International Union of Crystallography can assume no responsibility for the accuracy of the claims made. A copy of the version sent to the printer is sent to the company concerned.*

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### Portable xenon pressure chamber

Oxford Cryosystems has teamed up with the University of Oxford to design and manufacture a portable xenon

pressure chamber, the Xcell. This device is designed to easily produce heavy-atom derivatives for macromolecular X-ray crystallography.



The Xcell encloses the crystal sample in a small chamber. The chamber can then be pressurized with xenon from a cylinder to a maximum of 25 bar. A quick-release connector allows the Xcell to be isolated from the gas supply whilst still under pressure, making the device both highly portable and highly usable. Other benefits of the Xcell include:

- a small pressure chamber to minimize the consumption of expensive xenon;
- various safety features such as a preset relief valve allowing a maximum pressure of 25 bar inside the cell;
- carefully controlled inlet and vent valves to enable the chamber to be pressurized and vented without damage to the crystal sample;
- compatibility with common sample-mounting systems.

For further information on the Xcell, pricing and delivery, please contact Oxford Cryosystems.

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### Crystallographica Search-Match

Oxford Cryosystems has announced the launch of *Crystallographica Search-Match* (CSM), an all-new search-match program for use with the Powder Diffraction File (PDF). CSM is suitable for any materials scientist whose work involves identification or quality control using powder diffraction samples.

CSM takes advantage of the latest 32-bit technology and modern search techniques to allow fast, automatic