

125 MHz, an ADC rate of 100 megasamples s^{-1} for transients and 5,000 megasamples s^{-1} for repetitive signals. It has one GPIB, two RS232-C standard interfaces, and a built in digital plotter driver.

LeCroy Research Systems Ltd, Elms Court, Botley, Oxford OX2 9LP, England

J. Appl. Cryst. (1986) **19**, 68

New Precision Laue Camera

Bede Scientific Instruments announce a **precision Laue camera** designed so that the intrinsic referencing of the cassette and specimen is of very high accuracy. This is achieved by use of a dovetail slide and fine screw adjustment for specimen to film setting. Transparent sides allow the distance to be measured optically or alternatively a simple spacer jig may be used. The cassette is located on a classical kinematic mount with the correct number of constraints and a magnetic holding device. It will relocate to within 10 arc seconds and the film plane can thus be kept accurately perpendicular to the incident beam direction. Low beam divergence is achieved by use of a hypodermic needle which cuts its own hole in the film and is cheaply replaced if damaged. The camera is capable of an accuracy better than 0.1° in orientation determination. It is a precision instrument, priced at £5500.00.

Bede Scientific Instruments Limited, Church Street, Coxhoe, Durham DH6 4HE, England

J. Appl. Cryst. (1986). **19**, 68

New Zeiss Transmission Electron Microscope

The **EM 902 transmission electron microscope** is the first series-manufactured transmission electron microscope with

an integrated imaging electron energy spectrometer. The function of the instrument is based on the principle that in every EM specimen electrons undergo scattering with or without energy losses. On the one hand energy-loss electrons degrade the image quality in conventional TEM's; on the other they carry information about the chemical composition of the specimen. The spectrometer of the Zeiss EM 902 disperses the electrons according to their energy, thus offering the possibility of imaging with electrons of selected energy.

The EM 902 offers:

Improved spatial resolution and image contrast with thick sections (*e.g.* up to $1\ \mu\text{m}$ sections of biological material). The image quality is comparable to that of 300 kV to 1 MV TEMs:

Element-specific selective contrast with thin unstained specimens. There is no longer a need for heavy-metal staining, which has been known to produce artefacts and other problems.

Direct observation of elemental distribution in thin specimens enabling higher resolution, time advantage, reduced contamination and mass loss in comparison to conventional STEM-EDX/EELS-mapping techniques.

Improved resolution and contrast for darkfield images.

Improved resolution and contrast for diffraction patterns.

No limitation for conventional TEM-specimens.

Carl Zeiss, Postfach 1369/1380, D7082 Oberkochen, Federal Republic of Germany.

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TV Display for JEOL TEM Range

Now available for all **JEOL transmission electron microscopes** is a new **low-light-level TV camera** and display, which

couple to a transmission screen below the internal microscope camera. With such a camera fitted, the range of TEM operation can be increased by lowering beam current to reduce specimen damage. In practice the beam can be so low that no image is visible on the usual fluorescent screen, yet the TV display shows all the image detail normally seen at higher current.

With this reduction in specimen exposure, it is now possible to use the TV system to view thick samples or to manipulate contrast and extend into image storage, processing, analysis and recording of dynamic experiments. The scaling standard is 625 lines/25 frames/s, 2:1 interlace, so that many existing systems are compatible for further linking.

JEOL (UK) Ltd, Jeol House, Grove Park, Colindale, London NW9 0JN.

Books Received

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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.

Semiconductor physics: an introduction. 3rd edition. By *K. Seeger*. Pp. xiv + 476. Springer, 1985. Price DM 88.0, US\$34.50.

Metamorphic reactions: kinetics, textures and deformation. Edited by *A. B. Thompson* and *D. C. Rubie*. Pp. xii + 291. Springer, 1985. Price DM 154.00. This is a book written by geologists, for geologists. Two short chapters only would be of direct interest to crystallographers: one on cation disorder during crystal growth, the other on the influence of defects on properties of orthosilicates.