As a result of a suggestion from the Bragg Lecture Fund committee, the Kathleen Lonsdale Lectures have been established by the British Crystallographic Association to commemorate her achievements. These lectures are intended to educate the public in the science of crystallography and will be given at the annual meetings of the British Association. The first one will be at 2 p.m. on 27 August 1987 at the British Association meeting in Belfast, Northern Ireland, and will be open to the public. The lecture will be given by Professor **David Blow** and the title of the lecture is 'Protein Crystallography Applied to Medicine and Industry'.

The Chemistry award of the Wolf prize this year will be shared by two macromolecular crystallographers: Professor Sir **David Phillips**, Laboratory of Molecular Biophysics, Department of Zoology, University of Oxford, England, and Professor **D. M. Blow**, Blackett Laboratory, Imperial College of Science and Technology, London, England. They are cited for their pioneering contributions to the understanding of enzymatic catalysis through the study of enzyme structure by X-ray diffraction. The award, which is considered in the class of the Nobel, Lasker and Welch prizes, will be presented in the late spring in Israel.

Dr **M. F. Perutz**, MRC Laboratory of Molecular Biology, Cambridge, England, and Sir **John Kendrew**, St John's College, Oxford, England, were presented the 1987 Distinguished Service Award of the Miami Winter Symposium in honour of their contributions toward promoting international cooperation between biological scientists. In particular, they were cited for their support of the founding and growth of the European Molecular Biology Organization, now in its 24th year. In 1962, Dr Perutz and Sir John Kendrew jointly received the Nobel Prize in medicine, Dr Perutz for his work on determining the three-dimensional structure of hemoglobin through X-ray diffraction and Sir John for similar work on myoglobin.

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The Ewald Prize

The first Ewald Prize for outstanding contributions to the science of crystallography has been awarded jointly to Professor **J. M. Cowley** and Dr **A. F. Moodie**, for their outstanding achievements in electron diffraction and microscopy, especially for their fundamental contributions to the theory and technique of direct imaging of crystal structures and structure defects by high-resolution electron microscopy.

Their pioneering work on the dynamical scattering of electrons was reported in a series of papers in *Acta Crystallographica* and other journals from 1957 onwards. A theory of Fourier images led them to the multi-slice formulation of the scattering of an electron wave in its passage through a crystal. This formulation is able to take into account many hundreds of scattered beams, and has become the basis of widely used computer programs. The theory allows the electron micrographs, obtained with modern high-resolution instruments, to be reliably and quantitatively interpreted, and used for the determination of the structures of both perfect crystals and crystals containing defects.

Professor Cowley and Dr Moodie, together and separately, have made many further contributions to theory, methods and results in electron diffraction and microscopy. Their work has often stressed a unified approach to diffraction and microscopy through physical optics. An overview of the whole field may be found in Professor Cowley's book *Diffraction Physics* [(1981). Amsterdam: North-Holland].

John Maxwell Cowley, born in Australia in 1923 and a graduate of Adelaide University, was formerly a Chief Research Scientist at the Division of Chemical Physics, CSIRO, Melbourne, Australia. Later he was Professor of Physics at the University of Melbourne, and since 1970 has been the Galvin Professor of Physics at Arizona State University, Tempe, USA.

Alexander Forbes Moodie, born in Scotland in 1923, graduated from St Andrews University in 1948. Since then he has been a member of CSIRO in Australia where he is a Chief Research Scientist at the Division of Chemical Physics. This Division was incorporated into the Division of Materials Science and Technology at the end of 1986.

The presentation of the Ewald Prize, which consists of a medal and a certificate for each awardee and a shared award of US $20 000, will take place at the Opening Ceremony of the XIV International Congress of Crystallography at Perth, Western Australia, on 12 August 1987. An honorary medal will also be presented to the Ewald family during the ceremony.

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 the 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 M. Schlenker, Editor* Journal of Applied Crystallography, *Laboratoire Louis Néel du CNRS, BP*166, *F*-38042 *Grenoble CEDEX, France.*

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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Radix Databox 8K

Radix Instruments announces an upgraded version of its Databox automation system for X-ray diffraction: the **Databox 8K**. This new unit features over 8000 channels of data memory and expanded control capabilities, including a sample changer option.

The Databox, an intelligent stepper-motor-controller integrated with a timer/scaler and data memory, fits in a two-wide NIM module, and is capable of automating both X-ray diffractometers and scanning spectrometers. The user programs the Databox *via* an RS232 port using a simple and self-documenting command language.

For only US $4000, the Databox is an extremely cost effective and easy-to-use solution to X-ray automation needs. The Databox has proven to be an extremely reliable laboratory tool, with many accumulated unit years of trouble-free operation in the field.

Along with the Databox, Radix also now offers **XRD analysis software** from Materials Data, Inc., which runs on any IBM PC or compatible. These two packages, **Micro-ID** and **Micro-Peak**, allow full data reduction and search/match on any JCPDS subfile. Both software packages, when purchased together with the Databox, cost US $4995, plus the JCPDS subfile license fee. University discounts are available.

Radix Instruments, Inc., 1019 *Stratford Avenue, South Pasadena, California* 91030, *USA*

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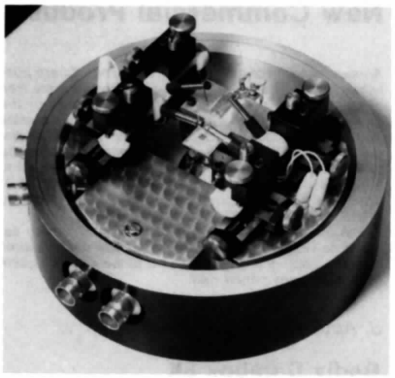
Polaron Semiconductor Cryostats

Polaron Equipment, a division of Bio-Rad Laboratories, announce a range of liquid nitrogen and helium cryostats suitable for semiconductor materials testing.

The **DL4960 liquid nitrogen cryostat** uses a horizontal continuous-flow liquid



DL4960 liquid nitrogen cryostat

nitrogen design. The sample is mounted using an electrical insulator, such as mica, together with thermal conduction paste on a metal stage. A platinum resistance thermometer and heating elements are attached directly to the stage. Cooling is provided by pumping liquid nitrogen through the base of the sample stage. Electrical connections to unbonded samples are *via* micromanipulators employing gold probes. Four micromanipulators are provided with *x*, *y*, *z* movement and adjustment of probe loading.

The design incorporates a viewing window through which the sample can be illuminated. It also allows the **DL4909 stereo microscope** option to be employed for micromanipulator probe location.

The temperature control parameters are set on the temperature programmer unit with a feedback loop controlling the heating elements and liquid nitrogen flow. The temperature programmer can also be fully controlled via an IEEE interface.

Polaron Equipment Limited, 53–63 *Greenhill Crescent, Watford Business Park, Watford, Herts WD*1 8*QS, England*

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Polaron Cryostats for DLTS

The range of applications for the DL4600 DLTS system has been further extended with a **helium cryostat** option.

The cryostat is of a closed-cycle design in order to minimize the running costs. It is fully compatible with all the **DL4600** accessories including the Fast Pulse Interface, Transient Current Interface and Optical Excitation Source.

Helium cryostat for DL4600 DLTS

The low temperatures that can be achieved are especially useful in the analysis of silicon where transition-metal impurities are of importance.

Polaron Equipment Limited, 53–63 *Greenhill Crescent, Watford Business Park, Watford, Herts WD*1 8*QS, England*

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Software for the Polaron DL4600 DLTS System

Polaron Equipment, a Division of Bio-Rad Laboratories, have recently developed some new software packages for analysing Deep level transient spectrometer (DLTS) data from the **DL4600 series DLTS Spectrometer**.

The **Editor** program enables data to be modified and prepared for reports or publications. The software allows data to be compared with other measurement sources (*e.g.* PN4200 Profile Plotter), smoothed, overlapping peaks to be separated and information to be entered *via* a graphic tablet.

The **Profiler** program allows DLTS data to be collected and analysed for spatial variation of the concentration of deep states; a state of the art calculation takes into account Debye spreading, Fermi-level crossing and other factors usually ignored or unrealistically approximated.

The **XSECT** program enables carrier cross sections of deep state to be measured directly and overcomes the severe errors encountered when this parameter is derived from the Arrhenius plot.

Polaron Equipment Limited, 53–63 Greenhill Crescent, Watford Business Park, Watford, Herts WO1 8QS, England

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Light-Lead® Shielding Bricks

Reactor Experiments, Inc., announces the availability of **LIGHT-LEAD® shielding bricks**. These bricks were designed to replace heavy hazardous lead bricks in nuclear medicine and radiochemistry applications. LIGHT-LEAD® Bricks are ideal for shielding medical radionuclides such as Tc-99m with minimum effort. LIGHT-LEAD® weighs only 7 lbs in a $2 \times 4 \times 8$ in brick. This brick is a homogeneous mixture of lead in an inert polymer. Its density is one-quarter that of solid lead.

The material meets a long-needed laboratory requirement for shielding that can be managed with safety. The excessive weight of solid lead bricks makes them both difficult and dangerous to handle. Further, the amount of shielding that they provide is not necessary for the low-energy radioisotopes currently used in nuclear medicine and other tracer applications. The cost of LIGHT-LEAD® bricks is only a fraction of that of solid lead bricks.

Additional information and a free sample of LIGHT-LEAD® are available.

Reactor Experiments, Inc., 963 Terminal Way, San Carlos, CA 94070-3278, USA