

Powder data

The powder data were obtained by a diffractometer (Toshiba ADG-301) using Cu $K\alpha_1$ radiation ($\lambda = 1.54051$) filtered by Ni where Si powder was used as an internal standard. Intensities represent relative peak height.

Crystal physics

The crystals are uniaxially negative. The refractive index along c is 1.79 ± 0.03 and the birefringence is 0.010 , for a W lamp. The melting point estimated by DTA is 1668 ± 5 K. Piezoelectricity was observed along c at room temperature. Moh's hardness is about 6.5.

Comparison with other results

Preliminary experiments on $BaZnSiO_4$ crystals showed that

the crystal structure was essentially identical with that of $BaZnGeO_4$. The superstructure reflections of $BaZnSiO_4$ are weaker than those of $BaZnGeO_4$.

The author wishes to thank Professor H. Komatsu for comments on optical measurements. Support by the Grant-In-Aids from the Ministry of Education of Japan is acknowledged.

References

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MATSUI, Y. (1978). *U-CELL II. A Crystallographic Least-Squares Program*. Okayama Univ., Japan.

Crystallographers

This section is intended to be a series of short paragraphs dealing with the activities of crystallographers, such as their changes of position, promotions, assumption of significant new duties, honours, etc. Items for inclusion, subject to the approval of the Editorial Board, should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 5 Abbey Square, Chester CH1 2 HU, England).

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Professor **A. V. Crewe**, of the Departments of Physics and Biophysics and the Enrico Fermi Institute of the University of Chicago, USA, has been awarded the Duddell Medal and Prize of the UK Institute of Physics for his development of an ultra high resolution scanning transmission electron microscope.

Professor **K. H. Jack**, of the Crystallography Laboratory, University of Newcastle upon Tyne, has been elected a Fellow of the Royal Society.

Professor **G. A. Jeffrey**, of the Department of Crystallography of the University of Pittsburgh, has been awarded the 1980 Claude S. Hudson Award of the American Chemical Society for his contributions to the chemical profession with special reference to carbohydrate chemistry. The Award will be made at the San Francisco ACS Meeting on 27 August 1980. The award address will be entitled 'Crystallography, Quantum Mechanics and Carbohydrates'.

Professor **D. Turnbull** of Harvard University has been awarded the 1979 *Acta Metallurgica* Gold Medal. His research interests include nucleation and growth in crystals, diffusion in solids and

liquids, solid state reactions and the nature of the glassy state.

Dr **B. G. Williams**, formerly at the University of Dar es Salaam, Tanzania, has been awarded a Royal Society senior research fellowship at the Department of Physical Chemistry at the University of Cambridge.

Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. The notes (in duplicate) should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England).

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CHESS. Cornell high energy synchrotron source

Proposals are now being accepted for experiments to be carried out at CHESS, the new high energy synchrotron radiation facility at Cornell University, Ithaca, New York. Presently, three beam lines are fully operational and supply radiation for four experimental stations. These stations have available intense polarized radiation at energies in the hard X-ray range (a few keV and above). The characteristic energy of the radiation will be in a range up to 35 keV. Proposals exploiting this unique feature of the facility will receive preference. CHESS will provide the capability to facilitate studies in EXAFS, X-ray topography, small-angle scattering, Compton scatter-

ing, deep-level spectroscopy, and X-ray crystallography, but proposals need not be limited to these areas.

Proposals should be submitted by 31 August 1980. Beam time will be allocated according to the recommendation of a proposal review panel and the expected schedule of operation of the GESR storage ring.

Proposals should be sent to Proposals Secretary, CHESS, Clark Hall, Cornell University, Ithaca, New York 14853, USA.

Details on current instrumentation and available facilities can be obtained from B. W. Batterman, Director, or N. W. Ashcroft, Associate Director. Telephone: (607) 256-5161.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

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Fundamentals of crystal growth

1. By *F. Rosenberger*. Pp. x + 530. Berlin: Springer, 1979. Price DM 79, US \$ 39.50, ca £ 18.

Rather more than £1000 million are spent annually growing 5000 tonnes of crystals for solid-state devices which seem always to need bigger, cleaner, more perfect and cheaper crystals of an ever increasing range of materials. These demands can only be met by people who understand the processes occurring in their apparatus. However, the necessary