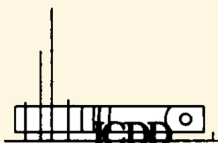


# Powder Diffraction

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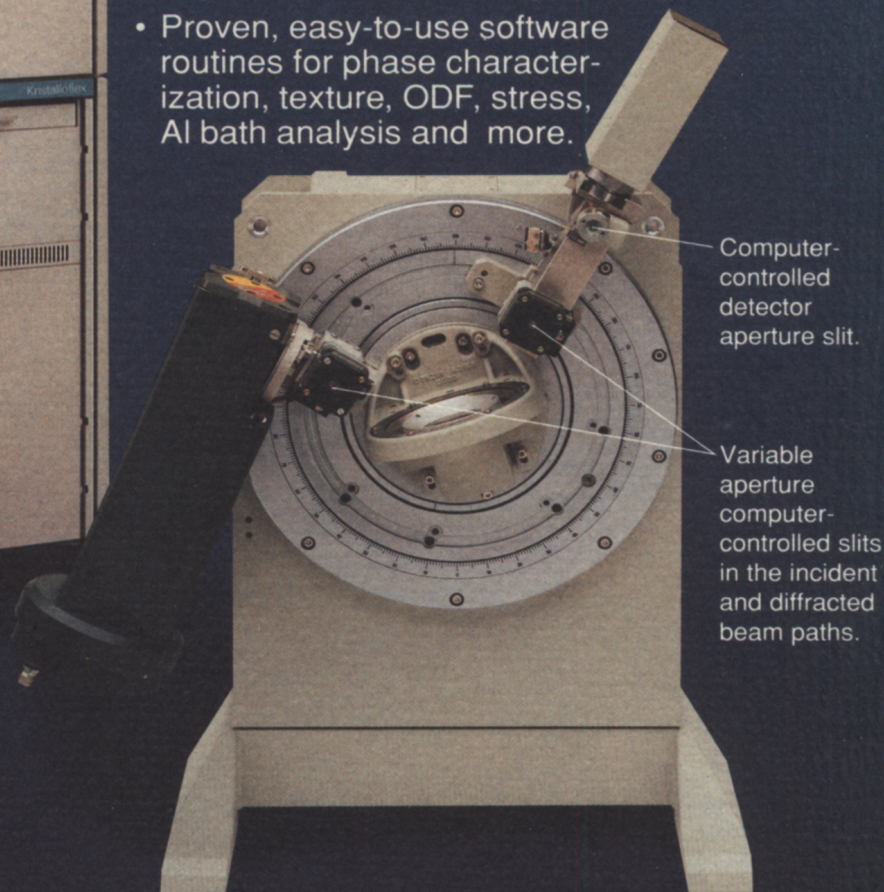
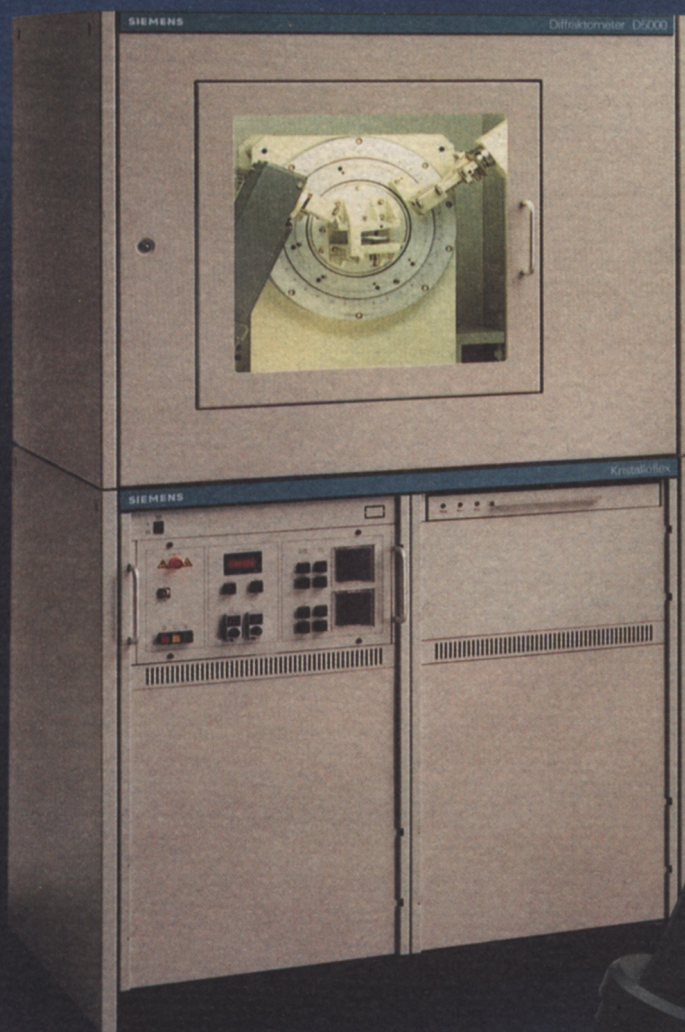
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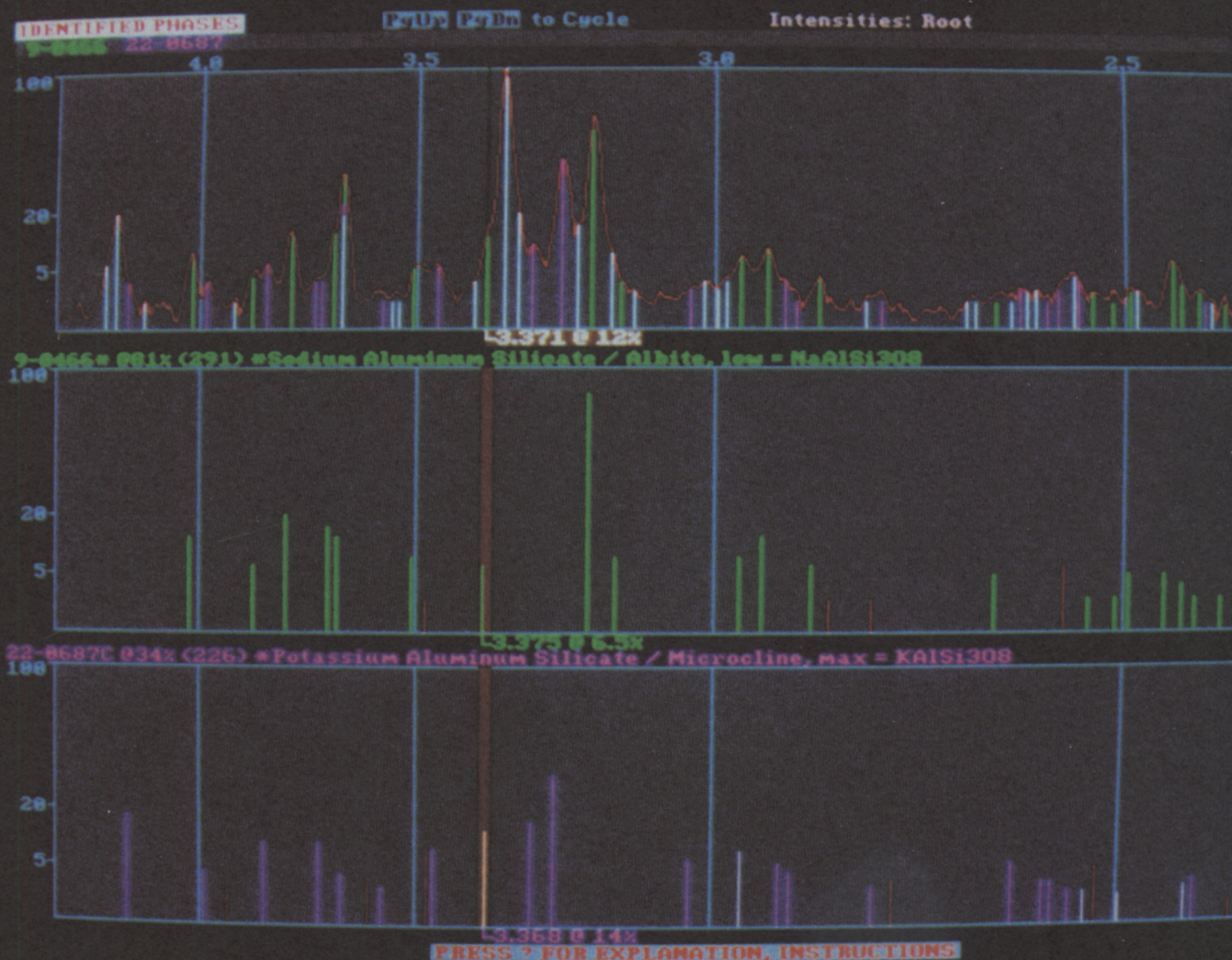
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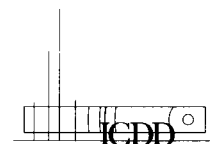
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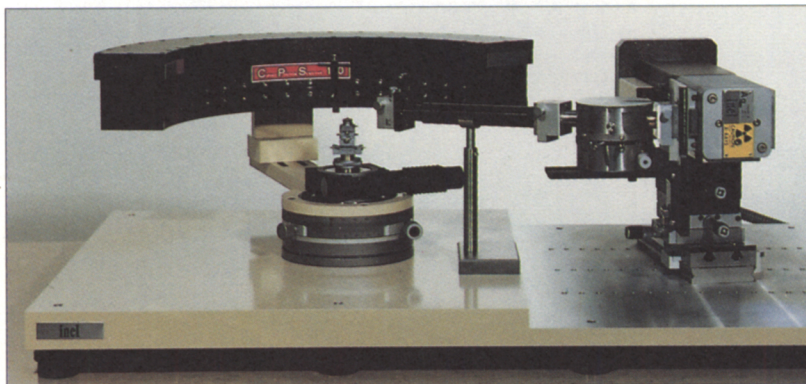
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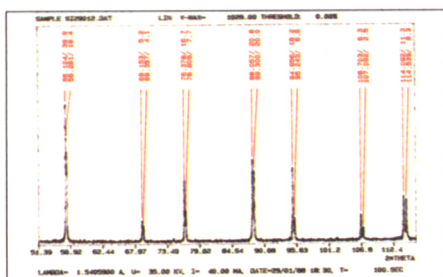
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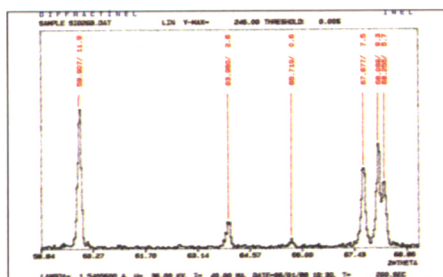
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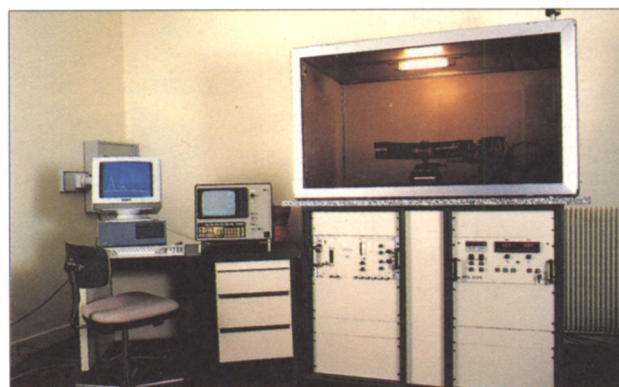
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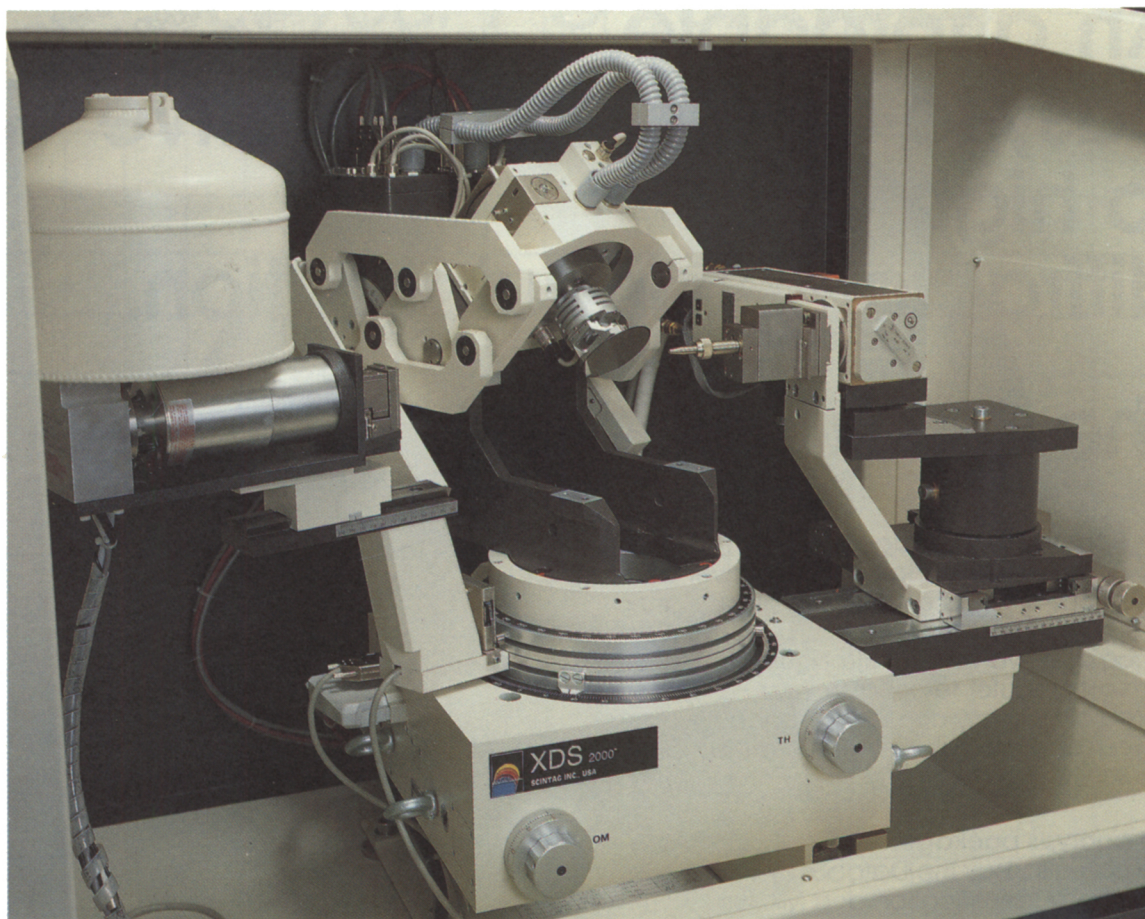
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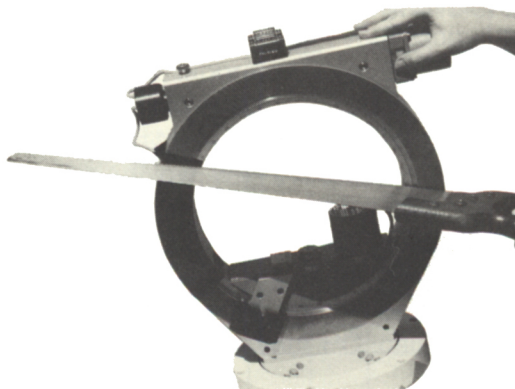
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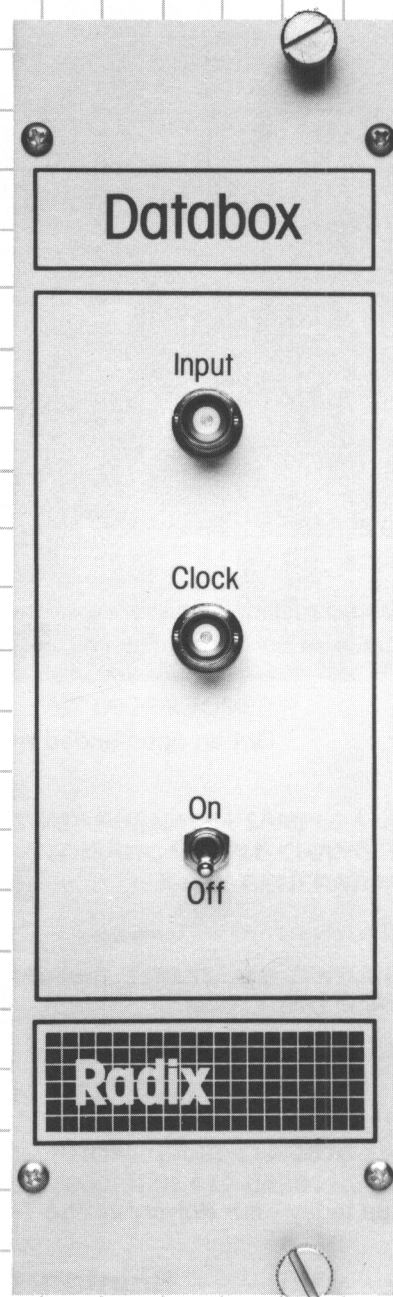
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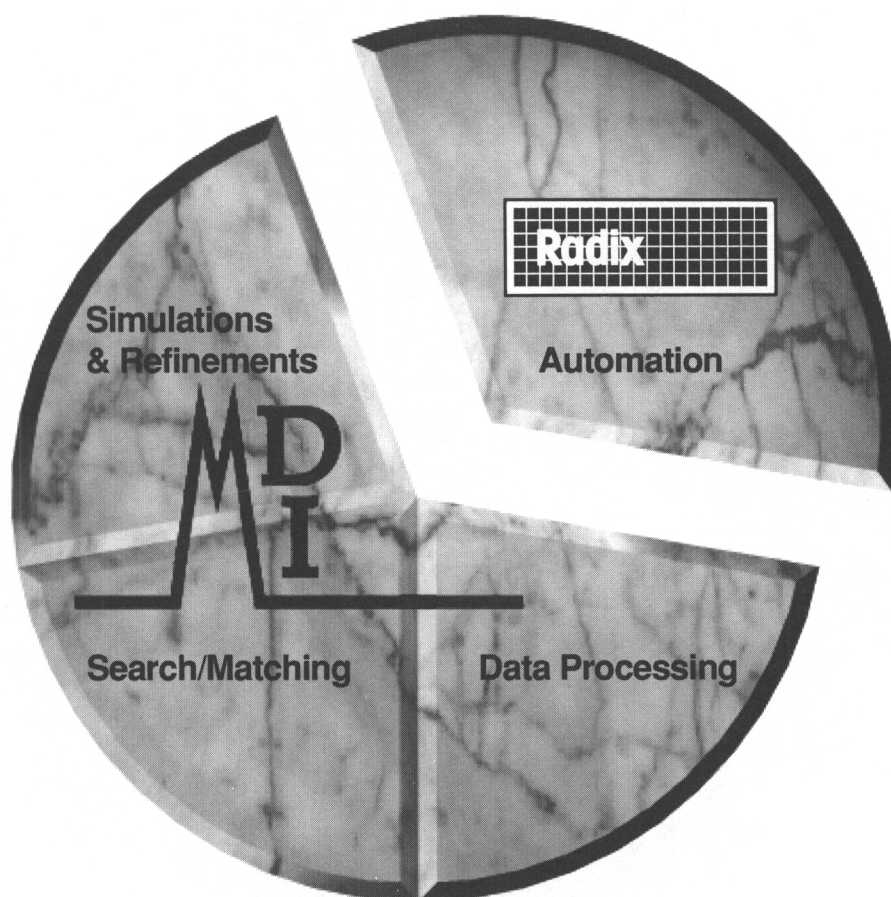
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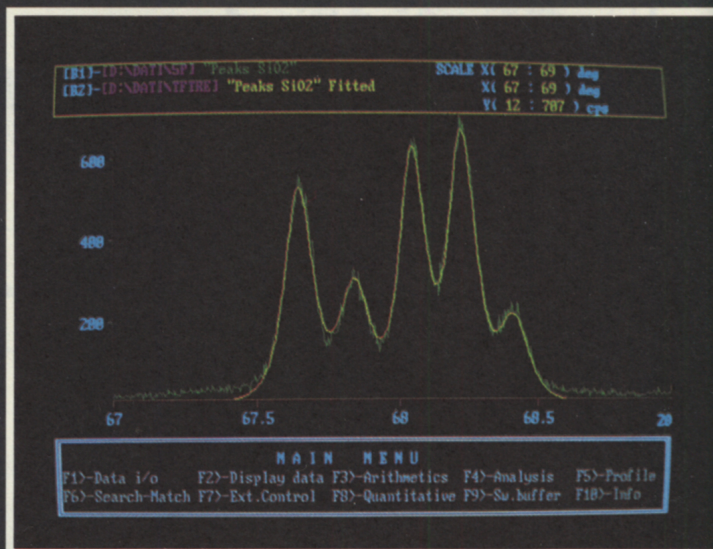
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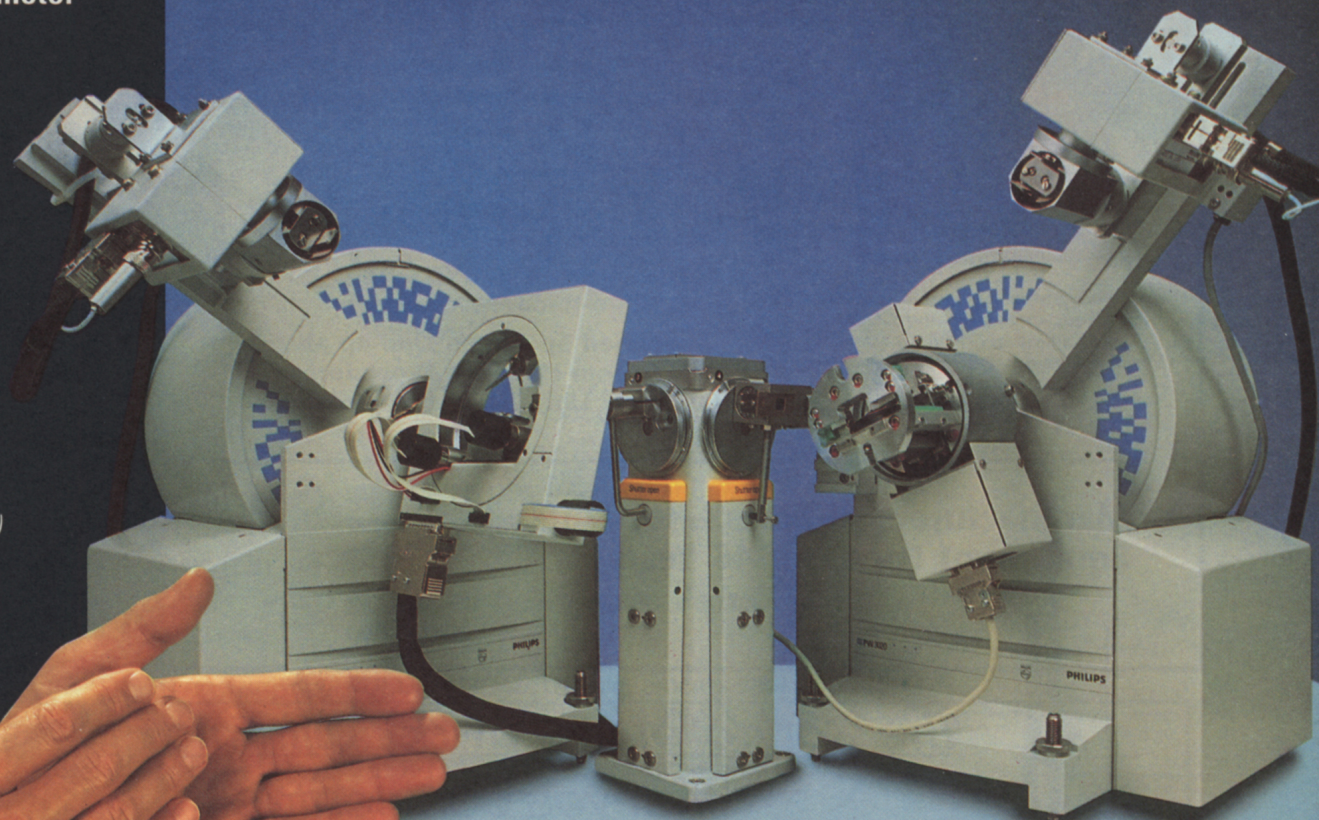
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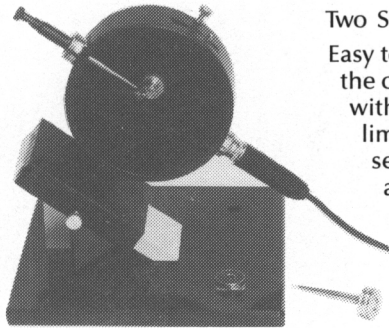


PD9

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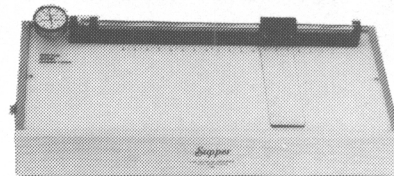
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PD10

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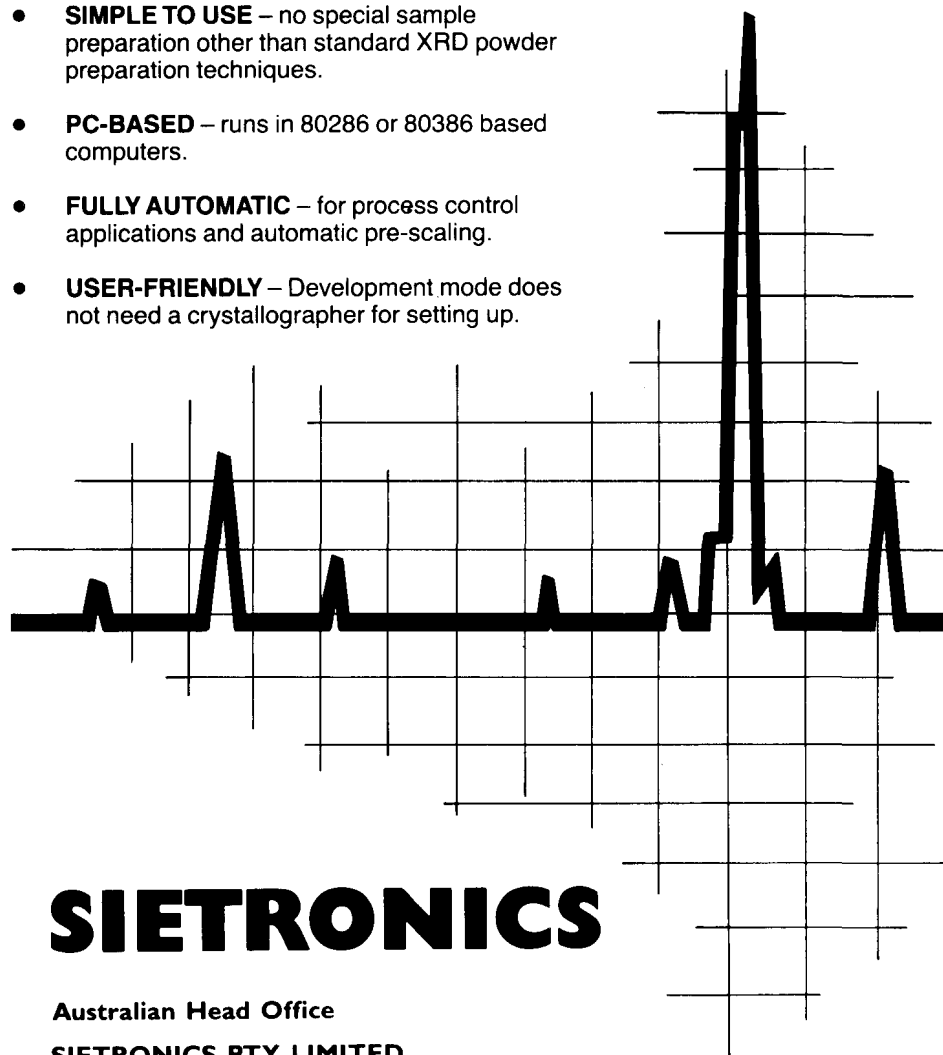
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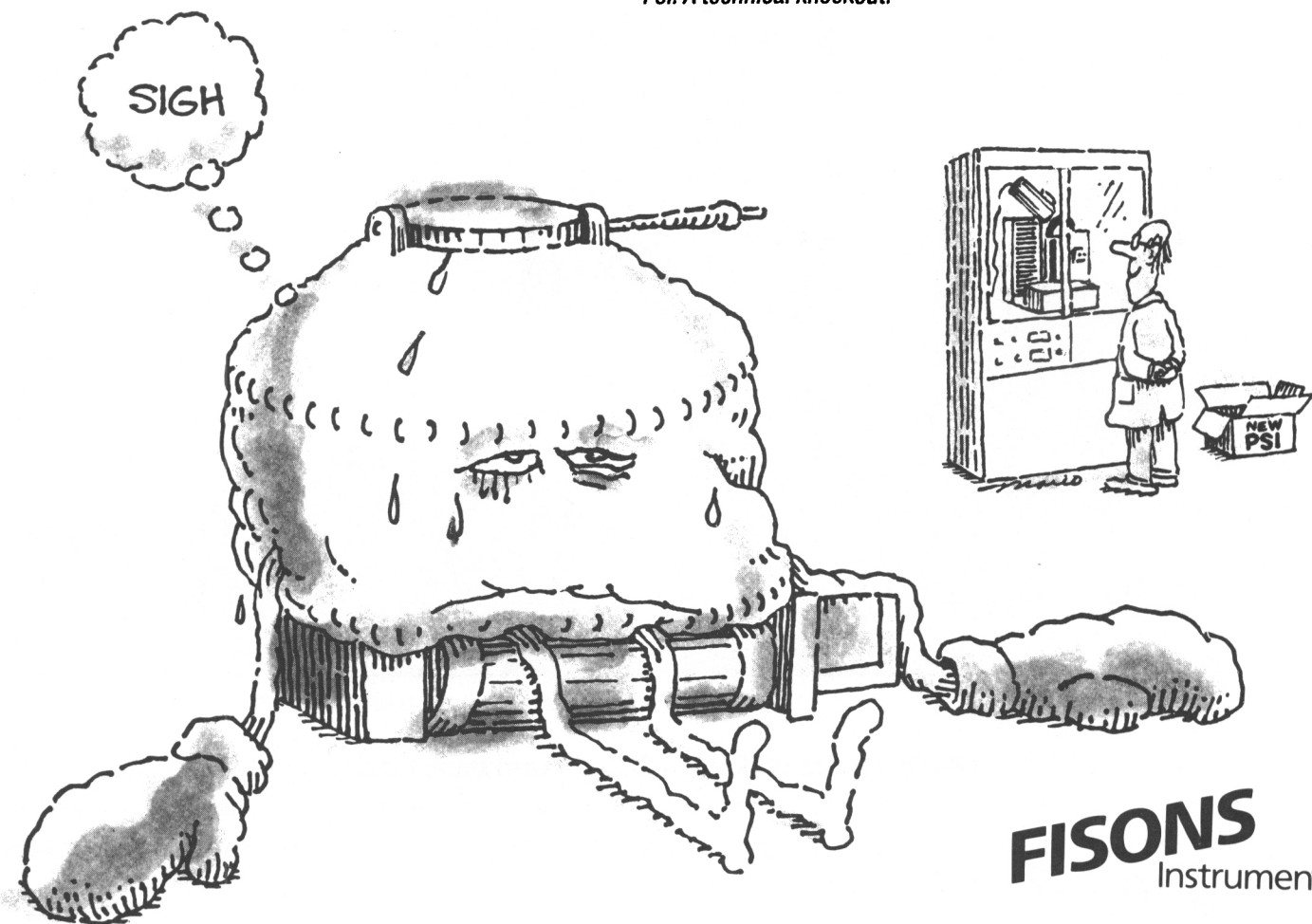
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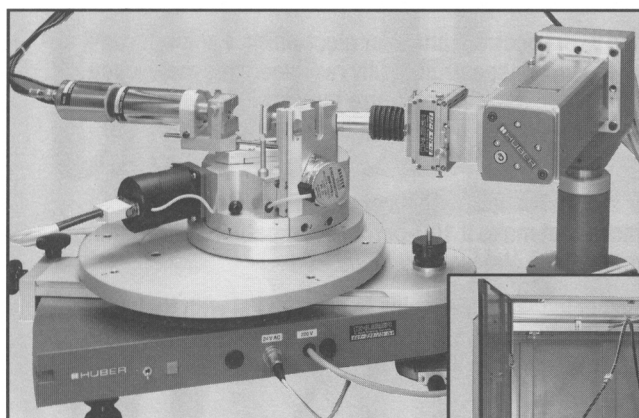
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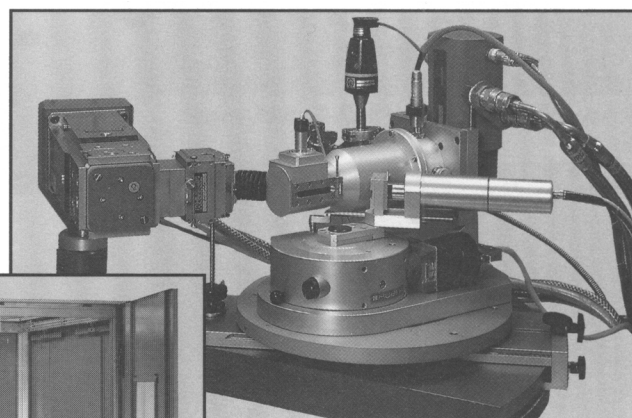
PD14

# X-RAY GUINIER DIFFRACTOMETER

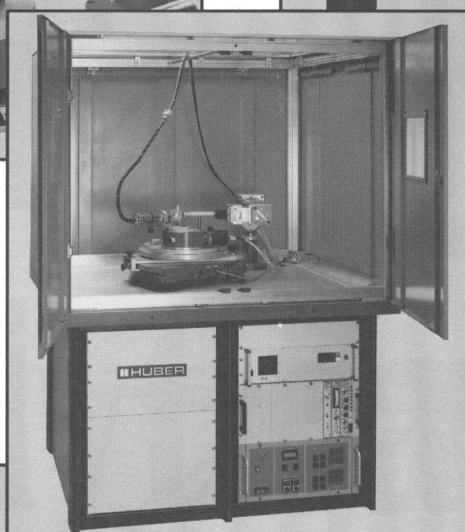
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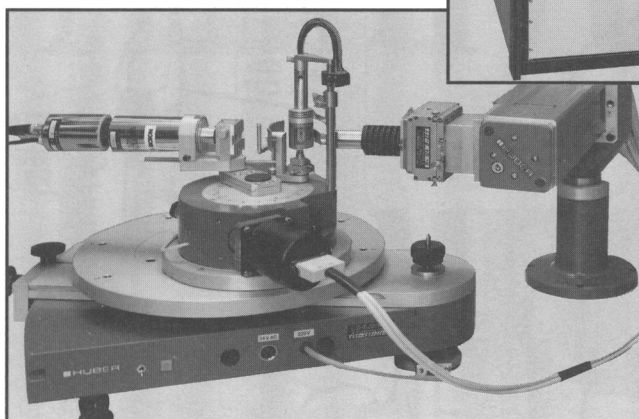


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**HUBER 644:** For single capillaries from room temperature to 900 °C.

**HUBER 653:** For plane solid samples or thin films at room temperature.



Together with HUBER's G600Software Package, a PC(AT) workstation including VGA monitor, printer and plotter, scans and evaluates the diffraction data. Peak search, fit, indexing and least squares refinement of unit cell data are standard. All data are accessible from MS-DOS for further optional Rietveld-and/or Powder Diffraction File handling.

**HUBER**  
High-Tech made in Bavaria, Germany

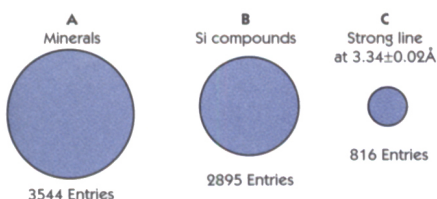
HUBER DIFFRAKTIONSTECHNIK GMBH  
Sommerstr. 4, D-8219 Rimsting, Germany  
Tel.:(08051)4472 Fax.: (08051) 61680 Tlx.: 525487 hudi d



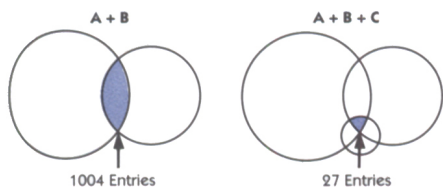
# PC-PDF

## The Powder Diffraction File on CD-ROM

**Search** on key fields within the data base.



**Search** on combinations of fields.



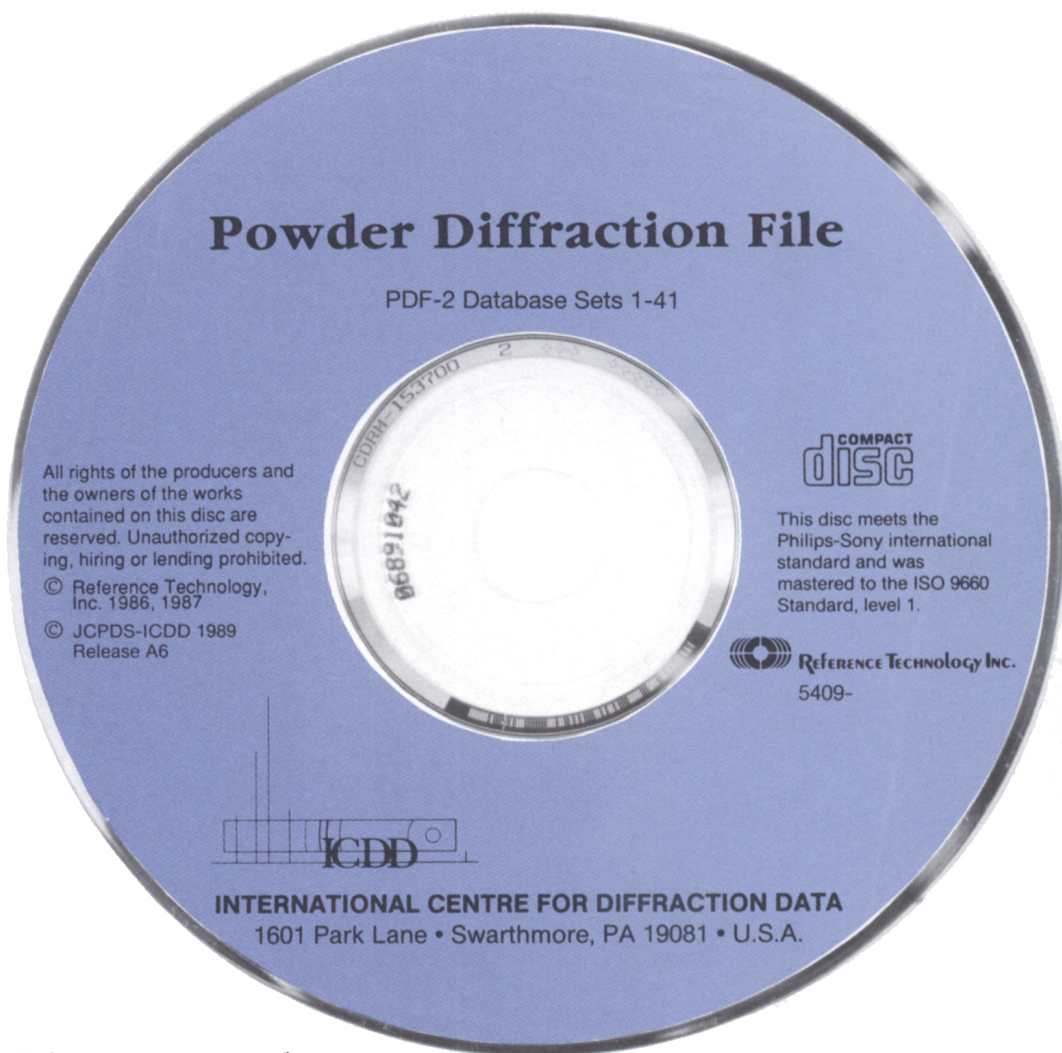
**Display** results within seconds.

**PC-PDF**, a low cost personal computer based system, makes the entire Powder Diffraction File available on a single CD-ROM disk and, through use of optimum packing and access algorithms, displays results within seconds.

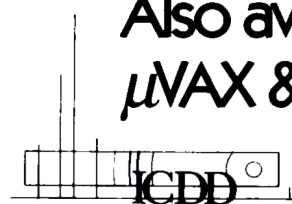
- Use with an IBM-XT or equivalent system.
- Annually updated disks will be made from the full data base and will include all additions and corrections.
- Space saving: One disk contains data equivalent to a file cabinet full of Data Cards.

You can now enhance your present system for search, retrieval and display. For additional descriptive material and ordering information, contact:

JCPDS-International Centre for Diffraction Data  
1601 Park Lane, Swarthmore, PA 19081-2389 USA  
(215)328-9400 Telex: 847170



Also available for  
 $\mu$ VAX & Macintosh

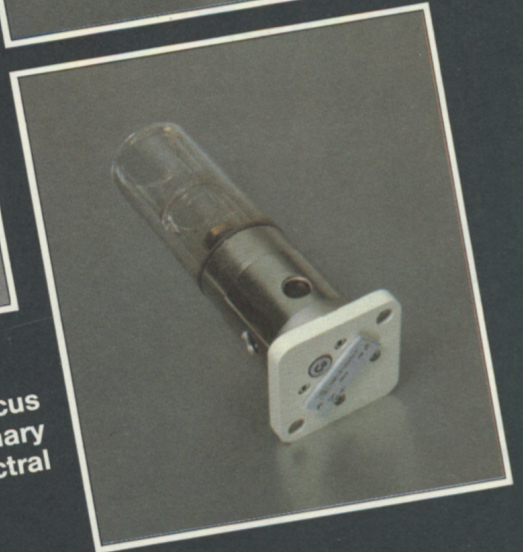


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# New Scholarships in Crystallography

In spite of the importance of crystallography in chemistry, physics, geology, materials science and biology, there are very few scholarships for which the central theme of the support is crystallographic research. Most materials-oriented crystallographic research is part of larger projects on understanding or synthesizing compounds or materials for specific properties or applications where the student needs to determine the structure-property relationships. The only scholarship specifically emphasizing crystallography known to this author is the Kraus Award given by the Mineralogical Society of America. If there are other such scholarships, I request readers to provide me with the general information, and I will pass the information on to our general readership.

Now the International Centre for Diffraction Data has created a new scholarship program to support research in crystallography. The initial awards in this program will be for 1992, and the details of this program are presented in the announcement accompanying this editorial. This program is a welcome addition to the support of our scientists in training. I encourage qualified students to apply for these scholarships. I also encourage any company or individual who would like to contribute to a worthwhile cause to contact the General Manager of the ICDD for further information about this program.

Deane K. Smith  
Editor-in-Chief

## Crystallography Scholarship Fund of JCPDS-ICDD

The science of crystallography has played a key role in the development of X-ray diffraction, electron diffraction and neutron diffraction for the elucidation of the atomic structure of matter. Crystallography is an interdisciplinary branch of science taught in departments of physics, chemistry, geology, molecular biology, metallurgy, and materials science. To encourage promising graduate students to pursue crystallographically-oriented research, the International Centre has embarked on establishing a Crystallography Scholarship Fund. While the Ewald Prize is awarded every three years to an internationally recognized crystallographer, little effort has been made by science departments to cultivate aspiring crystallographers. Convinced of the beneficial, scientific impact of the proposed scholarships for crystallographically-oriented research, the ICDD Chairman has initiated the solicitation of funds from private and industrial sectors to reach the goal of \$250,000. Approximately one-third of this goal has been reached and the Board of Directors of ICDD has decided to initiate this program by offering two scholarships for the calendar year 1992. The following qualifications and restrictions are to be met:

*Qualifications* for the applicants: graduate student with major interest in crystallography (crystal structure analysis, crystal morphology, modulated structures, correlation of atomic structure with physical properties, systematic classification of crystal structures, phase identification and materials characterization).

a. Submission of one-page proposal by graduate student describing type of crystallographic research to be partially supported by scholarship.

b. Supportive letter from sponsoring professor from an accredited university or an institute of technology.

c. No restriction on country, race, age, or sex.

d. Term of scholarship: one year with only one renewal if approved at the end of the first year on the basis of the student's written accomplishments during the first year.

*Restrictions* on scholarship fund:

a. The scholarship stipend of \$2,000 is to be paid to the graduate student to help defray tuition, laboratory fees, and registration fees to accredited scientific meetings related to crystallography.

b. Distribution of scholarships: No more than one scholarship per year to any accredited institution.

c. The funds of the scholarship are not to be used for travel.

d. Every five years a Cost-of-Living Adjustment (COLA) may be applied to the annual stipend of \$2,000.

e. The awarding of the scholarships is to be administered by a committee consisting of the ICDD Chairman, Chairman of the ICDD Technical Committee, and the Chairman of the ICDD Education Subcommittee. One or more accredited professors (with no conflicts of interest) may be invited to assist in the selection of successful candidates.

Applications should be mailed, prior to October 31, 1991, to:

Secretary, ICDD  
1601 Park Lane  
Swarthmore, PA 19081-2389, USA

Ludo K. Frevel, Chairman  
ICDD