

Short Courses and Workshops

JCPDS — International Centre for Diffraction Data Short Course on Search/Match Methods

The JCPDS-International Centre for Diffraction Data will continue to offer three day short courses on Search/Match methods at the Swarthmore, PA, headquarters of the International Centre.

The courses, which are now in their 5th year, are intended to build proficiency of the user in the interpretation of experimental data, especially in the application of the information provided in the *Powder Diffraction File*. The courses should be useful to the novice as well as the experienced powder diffractionist, and all discussions start with the basic principles leading on to useful laboratory procedures. Workbooks are provided to all attendees and these contain a number of experimentally obtained X-ray diffraction data sets which are used as class exercises. During the workbook sessions, the classes are subdivided to match the needs and experience of the attendees.

The course will emphasize the nature and organization of the information in the *Powder Diffraction File* and retrieval and use of this information for interpreting experimentally collected diffraction data. The implications of the accuracy of measurement of d-spacings, and intensities of experimental data with respect to use of the powder file will be discussed, as well as common instrumentation and specimen-induced errors. The use of both manual and computer search/match methods for phase identification will be practiced through the use of workbooks. Applications of File data for further characterizing phases will be illustrated using several mineralogical problems and a special X-ray diffraction minerals workbook. Other types of materials may be studied including organic and forensic materials, depending upon the needs of the participants.

Course Schedule

First day	
Morning	Optimization of data collection Evaluation of experimental diffraction data Instrument-induced errors Sample-induced errors
Afternoon	Introduction to the <i>Powder Diffraction File</i> Alphabetic search procedures Hanawalt search procedures
Second day	
Morning	Index search procedures Classical powder diffraction problems Phase identification
Afternoon	Phase identification in polyphase samples Solid-solution analysis d-Spacing calibration

Third day	
Morning	Indexing of powder data Quantitative analysis Mineral problems
Afternoon	Computer retrieval of identifications

For further information please contact:

Ms. Josephine Felizzi
JCPDS — International Centre for Diffraction Data
1601 Park Lane
Swarthmore, PA 19081, U.S.A.
(215) 328-9403

The cost of a course is \$550.00 which includes textual materials and lunches. Lodging, transportation and other costs are at the expense of the attendee.

JCPDS — International Centre for Diffraction Data Course Schedules

1986

September 30 to October 2
International Centre Headquarters
Swarthmore, PA, U.S.A.

December 2-4
Los Angeles, CA, U.S.A.

1987

February 10-12
Mid-West Venue to be arranged

April 21-23
International Centre Headquarters
Swarthmore, PA, U.S.A.

NBS Workshop Quantitative X-ray Diffraction Analysis

June 23-24, 1986
Gaithersburg, MD, U.S.A.

A workshop on Quantitative X-ray Diffraction Analysis will be held at the National Bureau of Standards. The workshop is intended to disseminate information on techniques and instrumentation for quantitative X-ray diffraction analysis to technical and research staff from a wide variety of industries, who are involved with X-ray diffraction analysis and who are interested in applying the method to quantitative analysis. The workshop will cover fundamental

aspects of quantitative X-ray diffraction analysis and how these should be applied in the development of methods for quantitative analysis. Instrumentation, analytical techniques, and standards for quantitative X-ray diffraction will be discussed. Speakers will describe quantitative analysis of a number of specific materials, e.g. portland cement, ceramics, and clays. The workshop is co-sponsored by the Center for Building Technology, the Institute for Materials Science and Engineering, and the Office of Standard Reference Materials at NBS. Contact: Leslie Struble, Building 226, Room B348, NBS, Gaithersburg, MD, U.S.A. 20899, 301/921-2635; or Camden Hubbard, Building 223, Room A247, NBS, Gaithersburg, MD 20899, U.S.A. 301/921-2845.

**2nd Annual Short Course on Materials
Characterization of Thin & Thick Films &
Semiconductor Materials by X-ray Diffraction
July 20-25, 1986
Sheraton Kauai Hotel, Poipu Beach,
Kauai, Hawaii**

Contact: Tom Flanagan, 17 Sherman Road, PO Box 25, Millis, Massachusetts 02506, U.S.A.

1986 Denver X-Ray Conference

The 35th Annual Denver Conference on Applications of X-ray Analysis will be held August 4-8, 1986, at the University of Denver, University Park Campus, Denver, Colorado. The area of emphasis this year will be X-ray Fluorescence. The program will include the following:

Plenary Session

"XRF Spectrometry, a World Perspective"

Chair: R. Jenkins, JCPDS-International Centre for Diffraction Data and J. V. Gilfrich, U.S. Naval Research Laboratory

Special Sessions

"Recent Developments in XRF Dispersion Devices"

Chair: J. A. Nicolosi, Philips Electronic Instruments, Inc.

"Elements and Compounds in Lubricants and Fuels"

Chair: D. E. Leyden, Colorado State University

"High Temperature and Non-Ambient XRD Applications"

Chair: E. Ryba, The Pennsylvania State University

"Quantitative Phase Analysis by XRD"

Chair: D. K. Smith, The Pennsylvania State University

Workshops

Quantitative XRF Tutorial	(Lachance)
Standards and Reference Materials for XRF	(Gilfrich)
XRF Sample Prep. Methods	(Buhrke)
Microcomputing in XRF	(Leyden)
X-ray Safety XRF and XRD	(Wallace)
Standards and Reference Materials for XRD	(Jenkins)
Personal Computing in XRD	(Garvey)
Computer Aided Qualitative Analysis	(JCPDS)
Film Microdensitometry for XRD	(Brown)
Synchrotron Applications in XRD and XRF	(Parrish, Gilfrich)

For additional information contact Denver X-ray Conference Secretary, DRI/CAMS, University of Denver, Denver, CO 80208, U.S.A. (303) 871-2141.