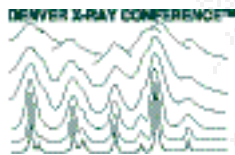


54th Annual Denver X-ray Conference



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Plenary Session: X-ray Imaging

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Workshops

Workshops will be held Monday & Tuesday, 1–2 August

XRD & XRF

X-ray Microtomography

Organized by: **S. Stock**

Northwestern University Medical School
Chicago, IL
s-stock@northwestern.edu

X-ray Optics

Organized by: **G.J. Havrilla**

Los Alamos National Laboratory
Los Alamos, NM
havrilla@lanl.gov

XRD

Rietveld Applications

I—Beginner & II—Advanced

Full day

Organized by: **A. Kern**

Bruker AXS GmbH
Karlsruhe, Germany
arnt.kern@bruker-axs.de

J. Faber

International Centre for Diffraction Data
Newtown Square, PA
faber@icdd.com

Stress Analysis

Organized by: **I.C. Noyan**

Columbia University
New York, NY
icn2@columbia.edu

Line Profile Analysis by the Whole Powder Pattern Fitting

Organized by: **D. Balzar**

University of Denver
Denver, CO and NIST, Boulder, CO
balzar@boulder.nist.gov

Two-dimensional X-ray Diffraction

Organized by: **T. Blanton**

Eastman Kodak Company
Rochester, NY
thomas.blanton@kodak.com

B. He

Bruker AXS, Inc.
Madison, WI
bhe@bruker-axs.com

XRF

Specimen Preparation I & II

Full day

Organized by: **J. Anzelmo**

Anzelmo & Associates, Inc.
Madison, WI
jaanzelmo@aol.com

D. Broton

Construction Technology Labs
Skokie, IL
dbroton@ctlgroup.com

Energy Dispersive XRF

Organized by: **M.A. Zaitz**

IBM
Hopewell Junction, NY
zaitz@us.ibm.com

J. Anzelmo

Anzelmo & Associates, Inc.
Madison, WI
jaanzelmo@aol.com

Quantitative XRF I & II Full day

Organized by: **M. Mantler**

Vienna University of Technology
Vienna, Austria
michael.mantler@ifp.tuwien.ac.at

Basic XRF

Organized by: **L. Creasy**

Timet North American Operation
Morgantown, PA
larry.creasy@timet.com

Monte Carlo Techniques in XRF

Organized by: **R. Gardner**

North Carolina State University
Raleigh, NC
gardner@ncsu.edu

Workshops are half-day unless noted otherwise.

Exact Date & Time of Workshops and Sessions will not be determined until April 2005.

Please visit our web site for updates: www.dxcicdd.com

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Practical X-ray Fluorescence

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Fundamentals of X-ray Powder Diffraction

6–10 June 2005

Advanced Methods in X-ray Powder Diffraction

13–17 June 2005

Contact: clinics@icdd.com or visit: www.icdd.com/education

Sessions will be held Wednesday, Thursday & Friday, 3–5 August

Plenary Session: Wednesday, 3 August X-ray Imaging

Organized by: R. Barton, Jr., Emeritus, DuPont Experimental Station, Wilmington, DE
S. Stock, Northwestern University Medical School, Chicago, IL

“Biomedical X-ray Imaging, Current Status and Some Future Challenges”
E.L. Ritman, Mayo Clinic College of Medicine, Rochester, MN

“Where Are We After The Decade-Long Renaissance in X-ray Imaging?”
A. Snigirev, ESRF—European Synchrotron Radiation Facility, Grenoble, France

“X-ray Backscatter Imaging: Photography Through Barriers”
J. Callerame, American Science & Engineering, Inc., Billerica, MA

“Geoscience Applications of Synchrotron Computed Microtomography”
M.L. Rivers, University of Chicago, Chicago, IL

Special Sessions: Invited Talks

XRD & XRF

New Developments in XRD & XRF Instrumentation

Organized by: J. Anzelmo

Anzelmo & Associates, Inc.
Madison, WI

jaanzelmo@aol.com, 608.824.0254

Abstracts should be submitted by technical representatives of a manufacturer. They should discuss specifications, and applications concerning one of their newest and most important products. Talks should include comments about software, XRD and XRF equipment, and accessories. No mention of prices or a comparison with competitors' products can be included.

Thin Films

Organized by: T.C. Huang
Emeritus

IBM Almaden Research Center
San Jose, CA
tinghuang@tinghuang.com
408.578.4060

Co-chair: H. Toraya

Rigaku Corporation, Tokyo, Japan

“Novel Analytical Approaches in
Numerical Analysis of XRR and
HRXRD Data from Thin Films”

A. Ulyanenkov

Bruker AXS GmbH, Karlsruhe, Germany

Detectors & Sources

Organized by: T.C. Huang
Emeritus

IBM Almaden Research Center
San Jose, CA
tinghuang@tinghuang.com
408.578.4060

“A New Area Detector for Rapid XRD
Study of Inhomogeneous Samples”

T. Taguchi

Rigaku Corporation, Tokyo, Japan

Advanced Imaging Techniques

Organized by: A. Snigirev

ESRF—European Synchrotron Radiation
Facility, Grenoble, France
snigirev@esrf.fr

Co-chair: S. Wilkins

CSIRO Manufacturing & Infrastructure
Technology, Victoria, Australia

“Phase Imaging with an X-ray
Talbot Interferometer”

A. Momose

The University of Tokyo, Chiba, Japan

“Time-resolved X-ray Imaging in
Studies of Advanced Alloy
Solidification Processes”

R. Mathiesen

SINTEF Materials Technology,
Trondheim, Norway

“Quantitative sub-100nm Phase-
contrast Imaging Using an SEM-
based Full-field X-ray Microscope”

S. Wilkins

CSIRO Manufacturing & Infrastructure
Technology, Victoria, Australia

X-ray Optics

Organized by: G.J. Havrilla

Los Alamos National Laboratory
Los Alamos, NM
havrilla@lanl.gov
505.667.9627

Invited talks to be announced.

Microbeam Analysis

Organized by: V.E. Buhrke,
Consultant

Portola Valley, CA
vebuhrke@sbcglobal.net
650.851.5020

“Micro Diffraction Techniques”

T.N. Blanton

Eastman Kodak Company, Rochester, NY

XMT Applied to Materials Characterization

Organized by: S. Stock

Northwestern University Medical School
Chicago, IL
s-stock@northwestern.edu
312.503.1845

R. Barton, Jr.

Emeritus

DuPont Experimental Station
Wilmington, DE
rb905@comcast.net
302.655.5126

“Multi-mode X-ray Study of Sulfate
Attack of Portland Cement”

K.E. Kurtis

Georgia Institute of Technology,
Atlanta, GA

“Ultrafast X-ray Imaging for Fuel
Spray Applications”

J. Wang

Argonne National Laboratory, Advanced
Photon Source, Argonne, IL

“Microtomographic Imaging and
Analysis for Basic Research”

J.H. Dunsmuir

ExxonMobil Research and Engineering
Co., Annandale, NJ

XRD

Stress Analysis

Organized by: C. Goldsmith

IBM, Hopewell Junction, NY
cgoldsmi@us.ibm.com
845.894.3683

T.R. Watkins

Oak Ridge National Laboratory
Oak Ridge, TN
watkinstr@ornl.gov
865.574.2046

“Recipes for the Collection of
Reliable XRD Residual Stress Data”

A.C. Vermeulen

PANalytical, Almelo, The Netherlands

“Plastic Anisotropy in Hot Extruded
Mg and Brass Alloys”

W. Reimers

Technische Universitaet Berlin, Berlin,
Germany

Industrial Applications of XRD

Organized by: R.L. Snyder

Georgia Institute of Technology
Atlanta, GA
bob.snyder@mse.gatech.edu
404.894.2888

C.R. Hubbard

Oak Ridge National Laboratory
Oak Ridge, TN
hubbardcr@ornl.gov
865.574.4472

E.A. Payzant

Oak Ridge National Laboratory
Oak Ridge, TN
payzanta@ornl.gov
865.574.6538

“An X-ray Diffraction Investigation
of Nanomaterial Used in
Composite Catalyst Systems”

K. Edwards

W.R. Grace, Columbia, MD

Parallel Beam Diffraction

Organized by: S.T. Misture

New York State College of Ceramics at
Alfred University
Alfred, NY
misture@alfred.edu
607.871.2438

“Application of Parallel Beam
Optics at Elevated Temperatures”

T.R. Watkins

Oak Ridge National Laboratory, Oak
Ridge, TN

Line Profile Analysis

Organized by: R.L. Snyder

Georgia Institute of Technology
Atlanta, GA
bob.snyder@mse.gatech.edu
404.894.2888

J.A. Kaduk

BP Chemicals
Naperville, IL
kadukJA@BP.com
630.420.4547

Invited talks to be announced

XRF

Quantitative XRF

Organized by: J. Gilfrich

Emeritus
SFA, Inc./NRL
Bethesda, MD
jgilfrich@att.net
301.365.5070

Co-chair: W.T. Elam

University of Washington
Redmond, WA

“Standardless Analysis”

M. Mantler

Vienna Institute of Technology, Vienna,
Austria

“Optimization of Quantification
Schemes for Contemporary Field-
Portable XRF Analyzers”

S. Piorek

Niton LLC, Billerica, MA

Problem Solving/Industrial Applications—XRF

Organized by: D. Broton

Construction Technology Labs
Skokie, IL
dbroton@CTLgroup.com
847.965.7500

“Modern X-ray Instrumentation in
an Old Cement Plant Laboratory”

B. Rowe

Holcim, Inc., Clarksville, MO

“Practical Applications of New
Generation XRF-XRD Instruments in
Cement Process Control Systems”

S. Feldman

PANalytical, Inc., Natick, MA

Trace Analysis—ppm to ppb

Organized by: M.A. Zaitz

IBM
Hopewell Junction, NY
Zaitz@us.ibm.com
845.894.6337

“Applications of High-energy
Polarized Beam EDXRF”

R. Van Grieken

University of Antwerp, Antwerp, Belgium

Energy Dispersive Applications

Organized by: R. Van Grieken

University of Antwerp
Antwerp, Belgium,
rene.vangrieken@ua.ac.be

“Quantitative ED Electron Probe
X-ray Microanalysis of Individual
Particles”

C-U. Ro

Inha University, Incheon, Korea

“Micro-XRF Analysis of
Biomaterials”

K. Tsuji

Osaka City University, Osaka, Japan

“EDXRF of Hot Particles”

S. Török

KFKI Atomic Energy Research Institute,
Budapest, Hungary

Fusion Applications

Organized by: J. Anzelmo

Anzelmo & Associates, Inc.
Madison, WI
jaanzelmo@aol.com
608.824.0254

Co-chair: T. Ahmedali

McGill University
Montreal, Canada

“XRF Analysis of Complex Materials:
Optimizing the Technique”

T. Ahmedali

McGill University, Montreal, Canada

“The Fusion Method Applied to a
Wide Variety of Industrial
Applications”

K. Maley

SGS Lakefield Research, Ontario, Canada

Contributed Papers:

Abstracts are hereby solicited for oral presentation in any of the special sessions previously listed, or the XRD and XRF poster sessions. Not all contributed abstracts submitted for oral presentation will be placed in a special session, but rather, will default to poster presentation. Poster sessions will be held on Monday, Tuesday & Wednesday evening of conference week, in conjunction with the evening receptions. Abstracts of more general interest will be placed in oral sessions. The Organizing Committee considers the withdrawal of an abstract after it has been accepted and advertised as highly nonprofessional (except in special circumstances). Please try to secure travel funding and approvals before submitting your abstract.

Visa Application Notice:

Obtaining a Visa is the sole responsibility of the attendee. The Denver X-ray Conference is not permitted to mediate with either the U.S. Embassy abroad or with the State Department on behalf of any conference attendee. However, if you need an invitation letter to the conference to submit with your application, please e-mail your request to: flaherty@icdd.com. Please include your name, mailing address, fax number, and the title(s) of any abstract(s) that you have submitted for the conference. A copy of the letter will be faxed and airmailed to you.

Make your hotel reservation NOW:

The 2005 Denver X-ray Conference will be held at the

Sheraton Colorado Springs

2886 South Circle Drive

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phone: 719.576.5900

fax: 719.576.7695

web site: http://www.starwood.com/sheraton/search/hotel_detail.html?propertyID=850

Attendees are responsible for making their own reservations. Please identify yourself as a Denver X-ray Conference attendee when booking your reservation. A special conference rate of \$110.00 per night plus tax has been contracted for our group. Don't wait to book your reservation—there are a limited number of rooms available at the special conference rate! Rates applicable until 7 July 2005 (subject to availability). All reservations must be guaranteed and accompanied by a first night room deposit or guaranteed with a major credit card. Cancellation Policy: Deposits (taken either in cash or by credit card) are refunded or credited only if notice is received 48 hours prior to arrival date; guest must obtain cancellation number.

Student Rooms:

There are a limited number of hotel rooms being offered to students at a discounted rate of \$55 per night plus tax. Student rooms are shared—each room will be equipped with two queen beds to accommodate two persons. Please visit the Denver X-ray Conference web site: www.dxcicdd.com for a Student Room Authorization form. Student identification will be required. Rooms will be booked on a first come first serve basis.

Have an idea for a workshop or session?

Visit: <http://www.dxcicdd.com/workshopsuggestions.htm>

Exhibits:

Vendors—don't miss this opportunity to display your company's products and services to this elite crowd of scientists. Applications for exhibit space will be available on 1 March 2005. Contact Denise Flaherty: flaherty@icdd.com, 610.325.9814, to add your name to the mailing list.

Guidelines for Preparing Abstracts

Abstracts are reproduced as submitted in the *Book of Abstracts*, and will also be published on the Denver X-ray Conference web site, with links to, or duplicate copies on other affiliated web sites (e.g., ICDD). If you do not want your abstract so published, please note your request on the information page of your abstract submission. Abstracts must not exceed one page in length and must include the title, author(s), affiliation(s) and the text. To provide uniformity, abstracts must be prepared according to the following guidelines:

Abstract Format

- ▼ Paper Size: 8.5 x 11 inches; A4 paper must be formatted for 8.5 x 11 inches
- ▼ Size: Entire abstract, including title, author(s), affiliation(s), and text, must fit into a maximum area of 15 cm (5.9") wide by 20 cm (7.9") high. Please allow a top margin of 3.8 cm (1.5") to allow insertion of session codes/information by conference staff
- ▼ Font: Times or Times New Roman, 12 point
- ▼ Title: Bold, centered, all uppercase (except where lowercase letters are needed for clarity)
- ▼ Leave one blank line between the title and the author(s)
- ▼ Author(s) and affiliation(s): mixed upper and lowercase, centered; if there is more than one author, underline the presenting author's name
- ▼ Leave two blank lines before beginning the text
- ▼ Text:
 - ▲ text should appear flush left; do not indent
 - ▲ use line spacing sufficiently large enough to allow the abstract to be read easily, including subscripts, superscripts and Greek letters
 - ▲ a blank line is recommended (space permitting) between paragraphs

The deadline for receipt of abstracts is 1 March 2005

Information Page

In addition to the abstract, please submit a separate page with the following information:

- ▼ Permission to post abstract on the DXC web site and affiliated web sites
- ▼ Speaker's name, mailing address, phone number, fax number, and e-mail address
- ▼ If the speaker is not the person to whom correspondence should be sent, please include contact person's name, mailing address, phone number, fax number, and e-mail address
- ▼ Indicate your preferences:
 - ▲ oral presentation or poster
 - ▲ if oral presentation is preferred, suggest session where paper may be best suited
 - ▲ if poster presentation is preferred, choose the XRD or XRF evening poster session
- ▼ If your submission is invited, please indicate that your paper is invited and include the chairperson's name that issued your invitation along with the session title
- ▼ Indicate whether you intend to publish this paper in *Advances in X-ray Analysis*, Volume 49. If you do not plan on publishing, please explain why.

Abstract Submission

Abstracts may be submitted on-line or by e-mail:

1. On-line:
Please visit the DXC web site: www.dxc.icdd.com for complete instructions for on-line submission
2. E-mail:
Send as an attached file, created in:
 - a) Adobe® PDF (preferred format)
 - b) Microsoft® Word (6.0 through XP)
 - c) WordPerfect (6.0 through 7)to: dxc@icdd.com

Please note:

- ▼ Special characters, tables, mathematical formulae and figures should be kept to a minimum
 - ▼ If special symbols or Greek letters are used, please limit the fonts to those that are available with the standard distribution of Microsoft® Word or WordPerfect. Nonstandard fonts may lead to errors in transmission
 - ▼ All graphics must be embedded in the Word or WordPerfect document
- Note:** Because they do not reproduce well, abstracts submitted by facsimile will not be accepted.

Receipt of abstracts will be confirmed via e-mail. If you do not receive your confirmation within two weeks of your submission, please contact:

Denise Flaherty
Conference Coordinator
flaherty@icdd.com
phone: 610.325.9814

Jerome B. Cohen Student Award

This award, instituted in the memory of Professor Jerome B. Cohen, one of the leaders in the field of X-ray analysis and in the training of students in this art, is intended to recognize the outstanding achievements of student research in this field. All students, graduate or undergraduate, who are working in any aspect of X-ray analysis, can submit their work. The research must be original, of high quality and must be primarily the work of the student.

The papers submitted for this competition must be received in electronic form by 1 July 2005 in final publication form. The winner will be selected by a committee of researchers in the field, announced at the Plenary Session of the conference and listed in the proceedings. The award for the year 2005 will be in the amount of \$1,000.

Students interested in participating in this year's competition must submit their papers and a certification form to dxc@icdd.com by the due date. The certification form can be obtained on the Denver X-ray Conference web site: <http://www.dxcicdd.com>.

Conference Proceedings

Don't miss this opportunity to showcase your research by submitting your presented paper in the conference proceedings, *Advances in X-ray Analysis*. Select papers will also be published in *Powder Diffraction*. *Advances in X-ray Analysis* is distributed throughout the world, and the complete manuscripts of past volumes can also be viewed on the ICDD web site: <http://www.dxcicdd.com/advances/advances.htm>. In the interest of releasing the conference proceedings, *Advances in X-ray Analysis*, as early as possible after the conclusion of the conference, we are encouraging authors to submit their manuscripts for publication during the conference at the conference registration desk. If you are unable to bring your manuscript with you at that time, please mail it no later than 3 September 2005 to:

Denise Flaherty
ICDD
12 Campus Boulevard
Newtown Square, PA 19073-3273 U.S.A.

Note: To be acceptable for publication, papers should describe either new methods, theory and applications, improvements in methods or instrumentation, or other advances in the state of the art. ***Papers emphasizing commercial aspects are discouraged.*** Information for preparing manuscripts will be mailed after abstracts have been received.

2005 Denver X-ray Conference Organizing Committee

John A. Anzelmo, Anzelmo & Associates, Inc., Madison, WI

Randolph Barton, Jr., Emeritus, DuPont Experimental Station, Wilmington, DE

Don Broton, Construction Technology Labs, Skokie, IL

Victor E. Buhrke, Chair, Consultant, Portola Valley, CA

John V. Gilfrich, Emeritus, SFA, Inc./NRL, Bethesda, MD

George J. Havrilla, Los Alamos National Laboratory, Los Alamos, NM

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Terry Maguire, Conference Administrator, International Centre for Diffraction Data, Newtown Square, PA

Scott T. Misture, NYS College of Ceramics at Alfred University, Alfred, NY

I. Cev Noyan, Columbia University, New York, NY

Robert L. Snyder, Georgia Institute of Technology, Atlanta, GA

Mary Ann Zaitz, IBM, Hopewell Junction, NY

Conference Preregistration Fees*

Full week: exhibits, workshops, sessions†	\$400
Monday & Tuesday: exhibits, workshops†	\$350
Wednesday, Thursday & Friday: exhibits, sessions†	\$350
Session organizers, invited speakers & workshop instructors†	\$100
Students, unemployed X-ray people, and persons 65 and older: exhibits, workshops, sessions	\$75

*Preregistration fees will only be valid until 5 July 2005. Registration fees will increase after 5 July 2005.

†Includes a copy of Volume 49 of *Advances in X-ray Analysis* on CD-ROM.



Dates to Remember

Deadline for submission of abstracts

1 March 2005

Conference Programs mailed
(includes registration forms)

May 2005

Conference Preregistration begins

May 2005

Deadline to register at the Sheraton Colorado Springs
(Conference rate, subject to availability)

7 July 2005

Deadline for submission of manuscripts: at the
Conference or no later than **3 September 2005**

For More Information

The Call for Papers and the tentative Conference Program can be found on the Denver X-ray Conference web page at:
<http://www.dxcicdd.com>.

Please continue to monitor this site for the latest conference information.

For additional information, contact: **Denise Flaherty**
Phone: 610.325.9814
Fax: 610.325.9823
E-mail: flaherty@icdd.com