

4–8 August 2008
Denver Marriott Tech Center Hotel
Denver, Colorado U.S.A.

**CALL
FOR
PAPERS**

**57th Annual Conference on Applications of X-ray Analysis
Denver X-ray Conference**

Joint meeting with ICRS-8

**The 8th International Conference
on Residual Stresses**

Plenary Session: Stress and Society

Exhibits, Workshops, Sessions
Training & Applications
Techniques & Instrumentation



Sponsored by
International Centre for Diffraction Data



Workshops Monday & Tuesday 4–5 August

The exact date & time of each workshop will not be determined until April 2008.

Attendees will be required to sign up for individual workshops when registering.

XRD & XRF

Cultural Heritage and Conservation Applications—Full day

Organizer & Instructors:

K. Trentelman, Getty Conservation Institute, Los Angeles, CA, ktrentelman@getty.edu

L. Glinsman, National Gallery of Art, Washington, D.C.

A. Drews, Ford Research & Advanced Engineering, Dearborn, MI

C. McGlinchey, The Museum of Modern Art, New York, NY

This workshop will explore the application of XRF and XRD to the study of cultural heritage materials. Lectures will describe the types of questions about works of art these techniques are used to help answer; the limitations of analyzing works of art, where sampling or even touching the object may not be allowed; the types of instrumentation that have been utilized in this field over the past several decades; and the optimization of portable XRF instruments. In addition, a panel discussion and hands-on session will explore further the issues and challenges involved in the analysis of works of art.

Nanomaterials and Their Applications

Organizers & Instructors:

R.L. Snyder, Georgia Institute of Technology, Atlanta, GA, bob.snyder@mse.gatech.edu

V. Petkov, Central Michigan University, Mt. Pleasant, MI, petkov@phy.cmich.edu

Z.L. Wang, Georgia Institute of Technology, Atlanta, GA

B. Bunker, University of Notre Dame, Notre Dame, IN

This workshop will focus on the synthesis, applications and characterization of nanomaterials. We will begin with a broad survey of their synthesis and unusual properties with a wide survey of their applications. We will then move on to focus on the ways we can characterize these atomic and molecular structured materials.

XRD

Introduction to Rietveld

Organizer & Instructors:

J.A. Kaduk, INEOS Technologies, Naperville, IL, james.kaduk@innovene.com

Instructors and description to be announced.

High-throughput X-rays

Organizer & Instructors:

B. Toby, Argonne National Laboratory–APS, Argonne, IL, brian.toby@anl.gov

Instructors to be announced.

New powder diffraction methods and instrumentation, particularly at synchrotron X-ray sources, have greatly expanded experimental capabilities. Complete high quality diffraction measurements, with a data range suitable for pair distribution analysis, can be collected in a fraction of a second. The new 11-BM instrument at the APS offers high resolution diffraction patterns, optimal for indexing, structure solution and refinement, which can be collected in less than an hour. This 11-BM instrument will be available to the public for mail-in use—a first for US powder diffraction. The goals of this half-day workshop are to provide an overview to the instrumentation utilized for high-throughput diffraction capabilities and some background on the support infrastructure needed to support high-throughput work. In the case of the 11-BM diffractometer, attendees will learn about how to use this instrument for their own research.

Combined Use of X-rays and Neutrons

Organizer & Instructors:

A. Hug, Spallation Neutron Source, Oak Ridge, TN, huqa@ornl.gov

J. Hodges, L. Coates, Spallation Neutron Source, Oak Ridge, TN

X-rays and Neutrons are complementary scattering techniques for characterizing structures and dynamics of materials of interest that range from solid state oxides to proteins. Neutron scattering lengths are independent of the atomic number of elements as a result of which neutrons can distinguish between isotopes of the same element and are good at detecting light elements in the presence of heavier elements in families of compounds such as metal oxide, hydrides, etc. In biological samples, one can make use of the substitution of hydrogen with deuterium to locate their position. This half-day workshop will be dedicated to understanding the fundamentals of using both X-rays and Neutrons along with specific examples of how to analyze combined sets of X-ray and Neutron data from the same sample.

**ICDD 2008 XRD EVENTS**
Sponsored by the International Centre for Diffraction Data

Live Instrumentation, Hands-on Training & Theoretical Lectures

**Rietveld Refinement & Indexing**
Fall 2008

**Pharmaceutical Powder X-ray Diffraction Symposium**
25–28 February 2008 ♦ Orlando, Florida

Fundamentals of X-ray Powder Diffraction
2–6 June 2008

Advanced Methods in X-ray Powder Diffraction
9–13 June 2008

Workshops

Workshops Monday & Tuesday 4-5 August

Texture Analysis with Area Detectors

Organizers & Instructors:

B. B. He, Bruker AXS, Inc., Madison, WI,
bob.he@bruker-axs.com

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

R. Tissot, Sandia National Labs, Albuquerque

U. Preckwinkel, Bruker AXS, Inc. Madison, WI

Advantages of area detectors for texture analysis have been well recognized by many users. Compared to point or line detectors, texture can be measured using area detectors with high sensitivity, high speed and high accuracy. Area detectors can reveal the microstructure and texture information simultaneously. Texture measurement is extremely fast since diffraction intensities and backgrounds for multiple poles and multiple directions can be measured simultaneously. The orientation relationship between different layers of films or coating and substrate can be accurately measured since all diffraction patterns of all layers and substrate are collected with the same sample orientations. This workshop will cover the recent progress in theory, instrumentation, data collection and analysis strategy with area detectors for texture analysis.

ICRS-8 Workshop on Stress Analysis (full day)

Organizers:

I.C. Noyan, Columbia University, New York, NY,
icn2@columbia.edu

M. Prime, Los Alamos National Laboratory, Los Alamos, NM,
prime@lanl.gov

This workshop will cover stress determination techniques using mechanical and diffraction methods as well as briefly reviewing basics of stress/strain and residual stress. It will be a basic tutorial aimed at engineers starting out to make such measurements, select measurement techniques, or just understand and interpret results. We will cover hole drilling, slitting, contour, layer removal and eigenstress analysis, as well as neutron and X-ray diffraction techniques.

Non-ambient XRD

Organizer & Instructors:

S.T. Misture, NYS College of Ceramics at Alfred University, Alfred, NY, misture@alfred.edu

E.A. Payzant, Oak Ridge National Laboratory, Oak Ridge, TN

S. Skinner, Imperial College London, London, England

C. Resch, Anton Paar GmbH, Graz, Austria

Description to be announced.

XRF

XRF Specimen Preparation (full day)

Organizer & Instructors:

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

D. Broton, CTL Group, Skokie, IL

L. Arias, Bruker AXS, Madison, WI

J. Metz, Sharp and Howells Pty Ltd, Bulleen, Australia

The workshop will begin in the morning with a review of simple ratio method techniques and continue through more advanced internal ratio preparation methods of analysis involving the fusion process (Metz). A discussion of sample preparation physics and a detailed discussion of the fusion method of sample preparation will follow (Anzelmo). The afternoon session will begin with an overview of the sampling process including equipment and techniques starting from the bulk sample through specimen preparation (Broton). This will be followed by a detailed description of liquid analysis techniques and equipment (Arias).

Quantitative Analysis (full day)

Organizer & Instructors:

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

B. Vrebos, PANalytical, Almelo, The Netherlands

W.T. Elam, EDAX/University of Washington, Redmond, WA

Part 1 (Morning):

1. Classical fundamental parameter models and mathematical foundation.
2. Fundamental parameter models for thin films (introduction).
3. Coherent and incoherent scattering (introduction).
4. Compensation Methods.
5. Obtaining net intensities (includes background subtraction, line overlaps).

Part 2 (Afternoon):

1. Analysis of thin films.
2. Modeling (computing) of inc+coh scattering, polarization.
3. EDS: Detector response function.
4. EDS: Background subtraction.
5. EDS: Artifacts in spectra.

Workshops Monday & Tuesday 4-5 August

Basic XRF

Organizers & Instructors:

W.T. Elam, Edax/University of Washington, Redmond, WA, wtelam@apl.washington.edu

G.J. Havrilla, Los Alamos National Laboratory, Los Alamos, NM, havrilla@lanl.gov

Instructors to be announced.

This workshop provides a basic introduction to the principles of XRF, and is specifically aimed at those new to the field. It will consist of a general overview of the technique, followed by more specific details of the basic principles with emphasis on understanding how to use XRF and what its capabilities are. A few particular applications will be presented to provide an understanding of how the basic principles affect actual practice.

Trace Analysis

Organizer & Instructors:

P. Wobrauschek, Atominstitut—TU Wien, Vienna, Austria, wobi@ati.ac.at

Instructors to be announced.

Motivation to analyze sample on their trace element contents are many fold, mostly driven by possible health hazards of some chemical elements, but also while observing changing material characteristics.

Trace analysis requires physical and technical efforts to improve detection limits in XRF. A variety of approaches are available as modern excitation sources and X-ray optics to improve the beam quality, excitation geometries can be varied from conventional 45 degree incidence to grating incidence leading to TXRF. Sample preparation techniques like micro spots using nanoliter to picoliter droplets open new interesting fields of applications. Impact and importance on a wide range of materials including environmental and biological systems will be given.

Energy Dispersive XRF

Organizer & Instructors:

B. Scruggs, EDAX, Inc., Mahwah, NJ, Bruce.Scruggs@Ametek.com

J. Heckel, Spectro Analytical, Kleve, Germany

C. Streli, P. Wobrauschek, Atominstitut—Vienna University of Technology, Vienna, Austria

The Energy Dispersive X-ray Fluorescence (EDXRF) workshop provides a comprehensive review of XRF spectroscopy for both the beginner and experienced X-ray spectroscopist. Topics to be covered are instrumentation including sources and detectors, and qualitative and quantitative analysis. Applications will be discussed including mobile, online, bulk and micro ED-XRF analyses.

Announcing:



The 7th Pharmaceutical Powder X-ray Diffraction Symposium

Orlando, Florida, USA
www.icdd.com/ppxrd

Workshop

25 February 2008

Exercises in Quantitative Phase Identification

Preliminary Program

26-28 February

- ◆ Patent and Regulatory Issues
- ◆ Process Analytical Technology
- ◆ Formulation, Product Development, Drug Delivery, and Polymorph & Salt Screening
- ◆ XRPD Structural Techniques (Acquisition and Use of XRPD Data, Indexing, Structure Determination, Rietveld Refinement)
- ◆ Complementary Techniques (DSC, TGA, Hot Stage Microscopy, FTIR, Raman, NMR, SEM, AFM, Light Microscopy, XRF, SAXS, SANS)
- ◆ New Frontiers in XRD in Pharmaceutical R&D (Cocrystals & Crystallization)

Sponsored by:
The International Centre
for Diffraction Data

Workshops

Sessions Wednesday, Thursday & Friday 6-8 August

The exact date and time of each session will not be determined until April 2008.

PLENARY SESSION

Stress and Society

Chairs:

I.C. Noyan, Columbia University, New York, NY,
icn2@columbia.edu

M. Prime, Los Alamos National Laboratory, Los Alamos, NM,
prime@lanl.gov

E. Üstündag, Iowa State University, Ames, IA,
ustundag@iastate.edu

MORE MILES FOR TIRED IRON: THE APPLICATION OF RESIDUAL STRESSES TO AGING AIRCRAFT

M. Shepard, US Air Force Research Laboratory, WPAFB, OH

AN INTEGRATED VIEW OF MATERIALS STATE AWARENESS: DEALING WITH MISSING AND UNCERTAIN INFORMATION

R.B. Thompson, Iowa State University, Ames, IA

DENTAL STRESS, MECHANICAL NOT PSYCHOLOGICAL, EVEN SOME RESIDUAL STRESS

M. Bagby, West Virginia University, Morgantown, West Virginia

RESIDUAL STRESSES IN THE U.S. NUCLEAR POWER INDUSTRY

A.A. Csontos, U.S. Nuclear Regulatory Commission, Washington, D.C.

XRD AND XRF

Cultural Heritage

Chair: **K. Trentelman**, Getty Conservation Institute, Los Angeles, CA, ktrentelman@getty.edu

CONFOCAL XRF OF PAINTINGS

J. Mass, Winterthur Museum and Country Estate, Winterthur, DE

PORTABLE XRD/XRF INSTRUMENTATION FOR THE STUDY OF WORKS OF ART

G. Chiari, Getty Conservation Institute, Los Angeles CA

XRF DETECTION OF HEAVY METAL PESTICIDES IN ARCHAEOLOGICAL AND ANTHROPOLOGICAL ARTIFACTS

A. Shugar, Buffalo State College, Buffalo NY

New Developments in XRD & XRF Instrumentation

Chair: **V.E. Buhrke**, Consultant, Portola Valley, CA, vebuhrke@sbcglobal.net

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.

Analysis of Nanomaterials (full day)

Chairs: **R.L. Snyder**, Georgia Institute of Technology, Atlanta, GA, bob.snyder@mse.gatech.edu

V. Petkov, Central Michigan University, Mt. Pleasant, MI, petkov@phy.cmich.edu

NANOGENERATORS AND NANOPIEZETRONICS

Z.L. Wang, Georgia Institute of Technology, Atlanta, GA

XAFS STUDIES OF NANOSYSTEMS: HOW X-RAY, ELECTRON MICROSCOPY, AND OPTICAL TECHNIQUES EACH CONTRIBUTE TO STRUCTURAL CHARACTERIZATION

B. Bunker, University of Notre Dame, Notre Dame, IN

NATURAL NANOPARTICLE SHAPE, STRUCTURE, PROPERTIES AND REACTIVITY FROM X-RAY STUDIES

G.A. Waychunas, Lawrence Berkeley National Lab, Berkeley, CA

HARD X-RAY FULL FIELD 3D IMAGING WITH SUB-50 NM RESOLUTION

A. Tkachuk, Xradia, Concord, CA

STRUCTURE AND KINETICS OF SELF-ASSEMBLED NANOCRYSTALLINE SYSTEMS PROBED BY SMALL ANGLE X-RAY SCATTERING TECHNIQUES

X.-M. Lin, Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL

Thin Films

Chairs: **T.N. Blanton**, Eastman Kodak Company Research Labs, Rochester, NY, thomas.blanton@kodak.com

T. Huang, Emeritus, IBM Almaden Research Center, San Jose, CA

DETERMINATION OF CRYSTALLOGRAPHIC POLARITY OF THIN FILMS USING HIGH RESOLUTION XRD

K. Inaba, Rigaku Corporation, Tokyo, Japan

Microbeam X-ray Analysis

Chair: **K. Tsuji**, Osaka City University, Osaka, Japan, tsuji@a-chem.eng.osaka-cu.ac.jp

Co-chair: **G.J. Havrilla**, Los Alamos National Laboratory, Los Alamos, NM

INVITED TALKS TO BE ANNOUNCED.

Sessions Wednesday, Thursday & Friday 6-8 August

X-ray Microimaging

Chair: **Q. Shen**, Northwestern University, Chicago, IL and APS—Argonne National Laboratory, Argonne, IL, qshen@aps.anl.gov

IMAGING MATERIALS SPECIMENS USING X-RAY NANO-CT

P. Pianetta, Stanford University, Menlo Park, CA

ULTRAFAST X-RAY MICRO-IMAGING OF TRANSIENT FLUID DYNAMICS

K. Fezzaa, Argonne National Laboratory, Argonne, IL

XRD

High Temperature In-situ Analysis

Chair: **S.T. Misture**, NYS College of Ceramics at Alfred University, Alfred, NY, misture@alfred.edu

IN-SITU CHARACTERIZATION OF NOVEL FUEL CELL MATERIALS

S. Skinner, Imperial College London, London, United Kingdom

Energy Conversion Materials

Chair: **S.T. Misture**, NYS College of Ceramics at Alfred University, Alfred, NY, misture@alfred.edu

INVITED TALKS TO BE ANNOUNCED.

Industrial Applications of XRD

Chairs: **R.L. Snyder**, Georgia Institute of Technology, Atlanta, GA, bob.snyder@mse.gatech.edu

E.A. Payzant, Oak Ridge National Laboratory, Oak Ridge, TN, payzanta@ornl.gov

PROBING THIN-LAYERED AND NANO-STRUCTURED MATERIALS—X-RAY SCATTERING TOOLS

J. Woitok, PANalytical, Almelo, The Netherlands

X-RAY ANALYSIS OF CEMENT ADDITIVES AND CONCRETE ADMIXTURES AT W.R. GRACE

J. Nicolich, W.R. Grace & Co., Cambridge, MA

Small Angle Scattering

Chair: **J. Ilavsky**, APS – Argonne National Laboratory, Argonne, IL, ilavsky@aps.anl.gov

INVITED TALKS TO BE ANNOUNCED.

XRF

Regulatory Applications

Chair: **W.T. Elam**, Edax/University of Washington, Redmond, WA, wtelam@apl.washington.edu

TITLE TO BE ANNOUNCED.

S. Piorek, Thermo Fisher Scientific, Billerica, MA

Fusion & Industrial Applications of XRF

Chair: **J.A. Anzelmo**, Anzelmo & Associates, Inc., Madison, WI, jaanzelmo@aol.com

APPLICATIONS OF XRF IN THE OIL INDUSTRY

R. Morton, Conoco Phillips, Bartelsville, OK

FURTHER STUDIES OF THE BORATE FUSION METHOD OF SAMPLE PREPARATION

M. Loubser, University of Pretoria, Pretoria, South Africa

Quantitative Analysis

Chair: **W.T. Elam**, Edax/University of Washington, Redmond, WA, wtelam@apl.washington.edu

GENERATING RELIABLE QUALITATIVE AND QUANTITATIVE XRF RESULTS TO SUPPORT FDA LAB AND FIELD INVESTIGATIONS

P. Palmer, San Francisco State University, San Francisco, CA and **R. Jacobs**, FDA, Alameda, CA

Trace Analysis

Chair: **M.A. Zaitz**, IBM, Hopewell Junction, NY, zaitz@us.ibm.com

INVITED TALKS TO BE ANNOUNCED.

**ICDD 2008 XRF EVENTS**
Sponsored by the International Centre for Diffraction Data

Live Instrumentation, Hands-on Training & Theoretical Lectures

Specimen Preparation for X-ray Fluorescence
Fall 2008
Practical X-ray Fluorescence
28 April–2 May 2008

**Demonstrations of:
Fluxers,
Fusions,
Presses,
& More!!**

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Contributed Abstracts

Abstracts are hereby solicited for oral presentation in any of the special sessions 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 and Tuesday 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.

The 8th International Conference on Residual Stresses (ICRS-8)

Workshop: "Stress Analysis" Tuesday, 5 August (see description under Workshops)

Oral Sessions: Wednesday–Friday, 6–8 August

Dinner and Poster Session:

The traditional ICRS Conference Dinner will be held on Thursday night. Dinner costs are included in the ICRS registration fee. A limited number of dinner tickets may be available the first day of the conference. ICRS-8 will have one poster session in order to provide an opportunity for authors and attendees to interact. The poster session will start before the ICRS Conference Dinner Thursday night and posters will be available for viewing after the dinner as well.

Abstracts are hereby solicited for the following Special Sessions:

Industrial Applications

Engineered Residual Stresses and Industrial Applications

Chairs: **J. Bunch**, The Boeing Company, Seattle, WA, jeffrey.o.bunch@f22.boeing.com

M. Hill, University of California, Davis, CA, mrhill@ucdavis.edu

Residual Stress in Materials Engineering

Chairs: **C. Murray**, IBM - T.J. Watson Research Center, Yorktown Heights, NY, conal@us.ibm.com

T. Gnaupel-Herold, NIST Center for Neutron Research, Gaithersburg, MD, tg-h@nist.gov

Residual Stress Induced Distortions and Other Effects

Distortion, Effect on Material Property Measurements, Failures, Stability

Chair: **M. Prime**, Los Alamos National Laboratory, Los Alamos, NM, prime@lanl.gov

Relaxation Techniques for Residual Stress Measurement

Slitting (Compliance), Hole Drilling, Contour, Deep Hole, Indentation, and Others

Chairs: **M. Hill**, University of California, Davis, CA, mrhill@ucdavis.edu

M. Prime, Los Alamos National Laboratory, Los Alamos, NM, prime@lanl.gov

Diffraction Techniques for Stress Measurement

Neutron Diffraction Measurement of Residual Stress

Chairs: **D. Brown**, Los Alamos National Laboratory, Los Alamos, NM, dbrown@lanl.gov

X.-L. Wang, Oak Ridge National Laboratory, Oak Ridge, TN, wangxl@ornl.gov

Synchrotrons: Macrobeam and High Energy Techniques

Chairs: **M. Daymond**, Queen's University, Kingston, Ontario, Canada, daymond@me.queensu.ca

J. Almer, Argonne National Laboratory, Argonne, IL, almer@aps.anl.gov

Synchrotrons: Microbeam Techniques

Chairs: **G. Ice**, Oak Ridge National Laboratory, Oak Ridge, TN, icege@ornl.gov

N. Tamura, Lawrence Berkeley National Laboratory, Berkeley, CA, ntamura@lbl.gov

Laboratory X-ray Techniques

Chairs: **C. Goldsmith**, IBM Corporation, Hopewell Junction, NY, cgoldsmi@us.ibm.com

T. Watkins, Oak Ridge National Laboratory, Oak Ridge, TN, watkinstr@ornl.gov

Other Damage Evaluation and Residual Stress Determination Techniques

Chair: **J. Gray**, Iowa State University, Ames, IA, jngray@iastate.edu

Modeling of Residual Stresses and Mechanical Response

Modeling Stress Formation and Processes

Chair: **C. Tome**, Los Alamos National Laboratories, Los Alamos, NM, tome@lanl.gov

Modeling of the Mechanical Response of Structures with Residual Stresses

Chair: **I. Beyerlein**, Los Alamos National Laboratory, Los Alamos, NM, irene@lanl.gov

Eigenstrain and Hybrid Numerical-Experimental Methods

Chair: **M. Hill**, University of California, Davis, CA, mrhill@ucdavis.edu

Future Directions and Challenges in Residual Stress Analysis

Moderators: **E. Üstündag**, Iowa State University, Ames, IA, ustundag@iastate.edu

M. Prime, Los Alamos National Laboratory, Los Alamos, NM, prime@lanl.gov

Guidelines for Preparing Abstracts for DXC & ICRS-8

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 and ICRS-8). 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.

Information Page

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

- ▼ Is the abstract being submitted for the DXC or ICRS conference?
- ▼ 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, XRF or ICRS 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 the DXC proceedings or the ICRS proceedings. 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.dxcicdd.com for complete instructions for on-line submission.

2. E-mail:

Send to dxci@icdd.com as an attached file created in:

- a) Adobe® PDF (preferred format)
- b) Microsoft® Word (Word 97–Word 2003)

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. Nonstandard fonts may lead to errors in transmission.
- ▼ All graphics must be embedded in the Word 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

Deadline for submission is 1 March 2008

Conference Information

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.

Hotel Reservation

Rates applicable until 8 July 2008 (subject to availability).

The 2008 Denver X-ray Conference (DXC) and the 8th International Conference on Residual Stresses (ICRS) will be held at the Denver Marriott Tech Center Hotel, 4900 S. Syracuse Street, Denver, CO 80237, U.S.A., phone: 1.800.228.9290, or dial direct: 1.888.238.1491, fax: 1.303.740.2523, web site: <http://marriott.com/property/propertypage/DENTC>.

Attendees are responsible for making their own reservations. Please identify yourself as a Denver X-ray Conference attendee, including those registering for ICRS, when booking your reservation. If registering on-line, please use booking code: dxrdxra. A special conference rate of \$125.00 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 8 July 2008 (subject to availability). All reservations must be accompanied by a first night room deposit, or guaranteed with a major credit card.

Student Rooms

There are a limited number of hotel rooms being offered to students at a discounted rate of \$65 per night plus tax. Student rooms are shared—each room will be equipped with two double 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.

Exhibits

Vendors—don't miss this opportunity to display your company's products and services to this elite crowd of scientists. The cost for an 8' x 10' booth will be \$1,950.00 and will include a vendor sponsored wine and cheese reception on Wednesday evening of conference week. Applications for exhibit space will be available on 1 March 2008. Contact Denise Flaherty: flaherty@icdd.com, 610-325-9814, to add your name to the mailing list.

Sponsorship Opportunities

There are various sponsorships available to exhibitors of the Denver X-ray Conference. Please visit our web site: www.dxcicdd.com for details.

Have an idea for a workshop or session?

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

Jerome B. Cohen Student Award

This award was instituted in the name 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. The award is intended to recognize the outstanding achievements of student research in this field. All students, graduate or undergraduate, who are working in the field of X-ray analysis, can submit a technical paper describing their work. The following criteria applies:

- The research must be original, of high quality, and must be primarily the work of the student.
- All papers submitted to the Cohen Award must be presented at the conference in either oral or poster session. Thus, all first-author students must submit an abstract and also attend the conference.
- The papers submitted for this competition must be received in final publication form electronically by 1 July 2008. The winning manuscript will also be listed in the conference proceedings.

The winner will be selected by a committee of researchers in the field, and notified one week before the conference. The winner must be able to attend the Plenary session of the conference on Wednesday morning for the announcement of the award. The award for the year 2008 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 dxci@icdd.com by 1 July 2008. The certification form and instructions for preparing a manuscript can be obtained on the Denver X-ray Conference web site: <http://www.dxcicdd.com>.

Conference Information

Conference Proceedings—DXC & ICRS

Don't miss this opportunity to showcase your research by submitting your presented paper in the DXC conference proceedings, *Advances in X-ray Analysis*, Volume 52 or the proceedings for ICRS-8, which will be mailed after the conference on CD-ROM. Select DXC papers will also be published in *Powder Diffraction*, and select ICRS papers will also be invited for publication in a special issue of archival journals.

In the interest of releasing the conference proceedings 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, it can be accepted until 1 September 2008. Preparation guidelines for DXC manuscripts will be e-mailed to authors after the abstract deadline, and are also available on:

<http://www.dxcicdd.com/advances/authors.htm>.

Submission information for ICRS-8 will also be supplied at a later date.

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.

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>.

Mail DXC manuscripts no later than 1 September 2008 to:

Denise Flaherty

ICDD

12 Campus Boulevard

Newtown Square, PA 19073-3273 U.S.A.

Instructions for mailing ICRS manuscripts will be supplied at a later date.

Two Conferences for the Price of One!

Sign up for the full week, and have access to both the DXC and ICRS-8 programs.

REGISTRATION FEES

Pre-registration will begin in May and run until 1 July 2008. At that time, registration forms will be available in the conference Program and also on-line at www.dxcicdd.com. After 1 July 2008, prices will increase by \$75.

Pre-registration Fees (valid until 1 July 2008)

DXC:

Full week: workshops, sessions, exhibits [†]	\$475
Monday & Tuesday: workshops & exhibits only [†]	\$425
Wednesday, Thursday & Friday: sessions & exhibits only [†]	\$425
Session organizers, invited speakers, workshop instructors [†]	\$100
Students, unemployed X-ray people, and persons 65 and older (Identification is required)	\$125

[†] Includes a copy of Volume 52 of *Advances in X-ray Analysis* on CD-ROM.

ICRS-8 (includes conference dinner and proceedings on CD-ROM):

Full week: Monday & Tuesday workshops, Wednesday–Friday sessions, Monday–Thursday exhibits	\$510
Half week: Wednesday–Friday sessions, Wednesday–Thursday exhibits	\$460
Students (Identification is required)	\$125

Conference Fees

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DATES TO REMEMBER

Deadline for submission of abstracts	1 March 2008
Exhibit packets mailed	1 March 2008
Conference Programs mailed (includes registration forms)	May 2008
Conference Preregistration begins	May 2008
Deadline to register at the Denver Marriott Tech Center (Conference rate, subject to availability)	8 July 2008
Deadline for submission of manuscripts: at the Conference or no later than	1 September 2008