Summary of 2015 DXC and TXRF 2015

Denise Zulli
International Centre for Diffraction Data, 12 Campus Blvd., Newtown Square, PA 19073, USA
Zulli@icdd.com

LOCATION, DATES, AND ATTENDANCE

The 64th Annual Denver X-Ray Conference (DXC) was held as a joint meeting with the 16th International Conference on Total Reflection X-Ray Fluorescence Analysis and Related Methods (TXRF 2015) in Westminster Colorado at the Westin Westminster Hotel from 3 to 7 August 2015. The meeting attracted nearly 300 registered attendees and over 150 exhibit staff.

WORKSHOPS AND SESSIONS

Fifteen half-day tutorial workshops were held for DXC, and the TXRF Conference ran one full day of workshops. Various subjects were covered to satisfy the needs of both the beginner and advanced attendee. Nearly 200 presentations were made during the oral and poster sessions at DXC and TXRF. Twelve half-day oral sessions were held for DXC and five sessions were held for TXRF. Two Poster sessions were held in the evenings, one for XRD and one for both XRF and TXRF.

PLENARY SESSION

The Plenary Session, *TXRF Around the World*, was held on Wednesday morning, chaired by Mary Ann Zaitz of IBM, Hopewell Junction, New York, NY. Three keynote speakers presented their work: Dr. Reinhold Klockenkämper, ISAS, Dortmund, Germany, presented the talk, "Worldwide Distribution of TXRF. Its Capacity and Acceptance"; Dr. Cristina Vázquez, University of Buenos Aires, Buenos Aires, Argentina, spoke on, "Total Reflection

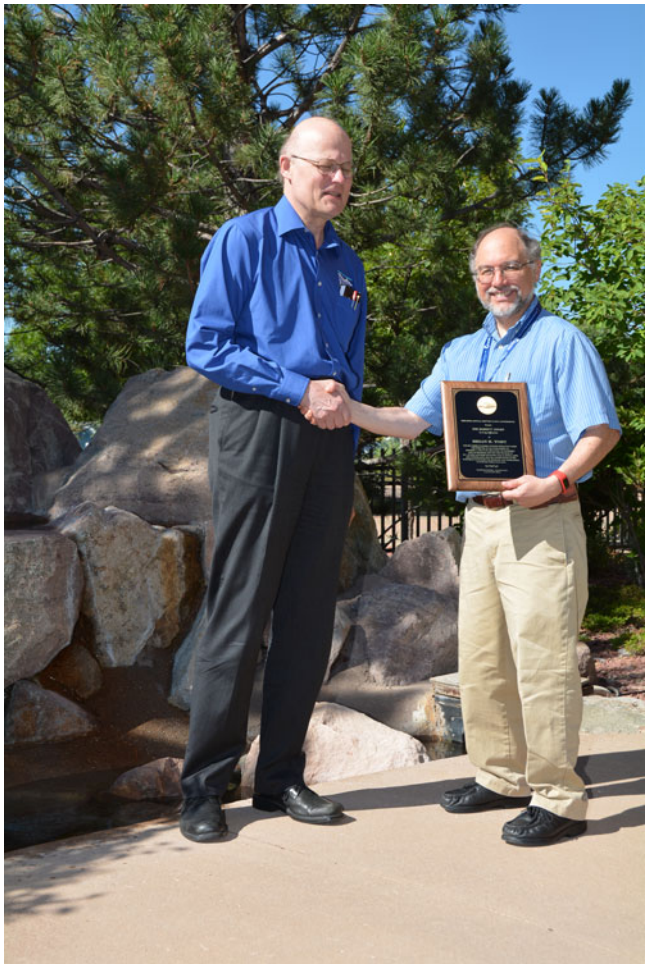


Photo 1. (Color online) Brian Toby, right, receives the 2015 Barrett Award from Jim Kaduk.



Photo 2. (Color online) Cev Noyan, right, receives the 2015 Jenkins Award from Tom Blanton.

 0885-7156/2015/30(4)/378/4/$18.00 © 2015 JCPDS-ICDD

https://doi.org/10.1017/S0885715615000780 Published online by Cambridge University Press

X-Ray Fluorescence in Latin America"; and Dr. Yoshihiro Mori, Horiba, Ltd., Kyoto, Japan, presented the talk, "Industrial Applications and Standardization of TXRF".

PLENARY SESSION AWARDS

Three awards were presented during the Plenary session. The 2015 Barrett Award was presented to Brian Toby, Advanced Photon Source, Argonne National Laboratory, Argonne, IL, USA; the 2015 Jenkins Award was presented to Cev Noyan, Columbia University, New York, NY; and the 2015 Jerome B. Cohen Student Award was presented to Peter Metz, Alfred University, Alfred, NY for his manuscript, "X-Ray and Neutron Total Scattering Analysis of $H_y{\cdot}(Bi_{0.2}Ca_{0.55}Sr_{0.25})(Ag_{0.25}Na_{0.75})Nb_3O_{10}{\cdot}xH_2O$ Perovskite Nanosheet Booklets with Stacking Disorder".

ROBERT L. SNYDER STUDENT TRAVEL AWARD

Congratulations to the following students who were selected to receive the annual Robert L. Snyder Student Travel Awards:

- Pere Barriobero Vila, Vienna University of Technology, Vienna, Austria
  Role of Element Partitioning on the α–β Phase Transformation Kinetics of a bi-modal Ti-6Al-6V-2Sn Alloy During Continuous Heating
- Tsuyoshi Matsuno, Osaka City University, Osaka, Japan
  Improvement of Spatial Resolution of Confocal Micro-XRF Images Using Principal Component Analysis and *TXRF of Metal Particles in used Machine Oils and Feasibility Research for Application of Principal Component Analysis*
- Brian May, University of Illinois at Chicago, Chicago, IL, USA
  X-Ray Nanodiffraction Study of the Delithiation Mechanism of LiFePO4 Single Particles
- Sean Mills, Los Alamos National Laboratory, Los Alamos, NM, USA
  In-Situ Annealing of Uranium-10 Weight Percent Molybdenum Foils
- Yuki Takimoto, Osaka City University, Osaka, Japan
  WD-XRF Imaging with Polycapillary Optics Under Glancing Incidence Geometry
- Vanessa Isabel Tardillo Suárez, Brazilian Synchrotron Light Lab & Universidade Federal De Vicosa, São Paulo, Brazil
  Modeling Depth Resolved XRF Data to Study Semiconductor-Oxide Thin Films Doped with Transition Metals Ions.

BEST POSTER AWARDS

Awards were named for the XRD and the XRF/TXRF poster sessions. The following posters won awards:

XRD Best Poster Awards

Relating Particle Sampling Statistics and Intensity Statistics in Powder Diffraction Experiments with Nanocrystalline Powders
H. Öztürk, I.C. Noyan, Columbia University, New York, NY, USA; H. Yan, J. Hill, BNL, Upton, NY, USA.

A Small Angle X-Ray Scattering Study of the Structural Changes and Thermal Stability of Highly Ordered Mesoporous Nanostructures
Y. Kim, K. Park, Y.-H. Jung, G.-S. Hong, K. Han, Korea Institute of Energy Research, Republic of Korea; G. Kwak, Korea Research Institute of Chemical Technology, Republic of Korea.

Best XRD Student Poster

In situ X-Ray Diffraction Study of High-Pressure CO_2 Adsorption in Metal-Organic Frameworks
S.D. Marks, P.G. Evans, University of Wisconsin-Madison, Madison, WI; K. Riascos-Rodriguez, A.J. Hernandez-Maldonado, University of Puerto Rico-Mayaguez, Puerto Rico.

XRF Best Poster Awards

Spatially Resolved Manganese Distribution in Antler and Human Bone
A. Turyanskaya, M. Rauwolf, B. Pemmer, J. Prost, P. Wobrauschek, C. Streli, TU Wien, Vienna, Austria; A. Roschger, P. Roschger, J.G. Hofstaetter, K. Klaushofer, Hanusch Hospital, Vienna, Austria; J.G. Hofstaetter, Orthopaedic Hospital Vienna-Speising, Vienna, Austria; R. Simon, KIT, Synchrotron Radiation Source ANKA, Eggenstein-Leopoldshafen, Deutschland; T. Landete-Castillejos, Wildlife Management Res. Group, Albacete, Spain.

Oxidation State Measurements of the Uranium M-alpha Peak Using a Microcalorimeter Array Coupled to a Scanning Electron Microscope
G.J. Havrilla, M.P. Croce, S.A. Kozimor, M.W. Rabin, Los Alamos National Laboratory, Los Alamos, NM; R. Cantor, A. Hall, STAR Cryoelectronics Inc., Santa Fe, NM; D.R. Schmidt, D. Swetz, J.N. Ullom, National Institute of Standards and Technology, Boulder, CO, USA.

Best XRF Student Poster

X-Ray Fluorescence Analysis with Micro-glass-beads using One-milligram of Archaeological Ceramics for Application to Determination of Minor Elements
S. Ichikawa, T. Nakamura, Meiji University, Kanagawa, Kawasaki, Japan.

TXRF Best Poster Awards

Setup and Characterization of Synchrotron Radiation Induced Total Reflection X-Ray Fluorescence X-ray Absorption Near Edge Structures at BESSY II BAMLine
Z.P. Gotlib, U.E.A. Fittschen, Washington State University, Pullman, WA; S. Böttger, D. Rosenberg, W. Jansen, M. Busker, Europe-University Flensburg, Flensburg, Germany; M. Menzel, University of Hamburg, Hamburg, Germany; A. Guilherme, M. Radtke, H. Riesemeier,

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Photo 3. (Color online) Peter Metz, left, recipient of the 2015 Jerome B. Cohen Student Award.

Federal Institute for Materials Research and Testing, Berlin, Germany; P. Wobrauschek, C. Streli, Vienna University of Technology, Vienna, Austria.

Shading in TXRF: Calculations and Experimental Validation Using a Color X-Ray Camera with Subpixel Resolution

M. Menzel, A. Meyer, University of Hamburg, Hamburg, Germany; O. Scharf, S. Nowak, IFG Institute for Scientific Instruments GmbH, Berlin, Germany; M. Radtke, U. Reinholz, G. Buzanich, BAM Federal Institute for Materials Research and Testing, Berlin, Germany; P. Hischenhuber, C. Streli, Atominstitut TU



Photo 4. (Color online) TXRF 2015 Attendees.

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Wien, Wien, Austria; V. Lopez, K. McIntosh, G.J. Havrilla, Los Alamos National Laboratory, Los Alamos, NM; E.A.U. Fittschen*, Washington State University, Pullman, WA, USA.

WD-XRF Imaging with Polycapillary Optics under Glancing Incidence Geometry
Y. Takimoto, M. Yamanashi, K. Tsuji, Osaka City University, Osaka, Japan; S. Kato, T. Shoji, Rigaku Corporation, Osaka, Japan.

Best TXRF Student Poster

Comparison of Grazing Incidence X-Ray Fluorescence and X-Ray Reflectivity Data Obtained at the XRF Beamline of the Elettra Sincrotrone Trieste and an Optimized Lab Spectrometer
D. Ingerle, P. Wobrauschek, C. Streli, Vienna University of Technology, Vienna, Austria; G. Pepponi, Fondazione Bruno Kessler, Povo, Italy; J.J. Leani, A. Migliori, A.G. Karydas, International Atomic Energy Agency (IAEA), Seibersdorf, Austria; D.M. Eichert, W.H. Jark, Elettra – Sincrotrone Trieste, Basovizza, Trieste, Italy; J. Zecevic, F. Meirer, Utrecht University, Utrecht, Netherlands.

EXHIBITS

Forty-four companies exhibited at the conference, displaying various products and services for X-ray diffraction and X-ray fluorescence. Complete exhibit details including contact information and a description of products and services can still be viewed on the exhibit page of the Denver X-Ray Conference web site: www.dxcicdd.com.

2016 DENVER X-RAY CONFERENCE

Join us 1–5 August 2016 at the Chicago Westin O'Hare Hotel in Rosemont, IL. Stay connected with DXC and ICDD by following us on Twitter, Facebook, Google+ and LinkedIn. Visit our web site or contact our Conference Coordinator, Denise Zulli. Web: www.dxcicdd.com; E-mail: Zulli@icdd.com; Phone: 610-325-9814.

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