3:50 D-68 ***Invited*—Transient Microstructure of Thermoplastic Polyurethane Nanocomposites Under Uniaxial Deformation**

H. Koerner, R. Vaia, *Air Force Research Lab, WPAFB, OH*

4:20 D-75 Preferred Orientation in Polymer Fibers

C. Burger, B.S. Hsiao, B. Chu, *Stony Brook University, Stony Brook, NY*

4:40 D-11 Polymer-Oriented Tools in the *Irena* Package for Small-Angle Scattering Data Analysis

J. Ilavsky, *APS- Argonne National Laboratory, Argonne, IL*

5:00 D-99 Relaxation Behaviors of Nanoparticles in Polymer Composites: Influence of Local Frictions by Polymer Chains

B. Lee, P. Thiyagarajan, S. Narayanan, A. Sandy, C.-T. Lo, V. Pol, D. Bohnsack, *Argonne National Laboratory, Argonne, IL*

WEDNESDAY PM

XRD

HANAWALT AWARD SESSION

NANOSTRUCTURE STUDIES USING THE ATOMIC PAIR DISTRIBUTION FUNCTION

Chair: **E. Bozin**, Brookhaven National Laboratory, Upton, NY

EVERGREEN D

All presentations are invited

1:20 Presentation of the 2010 Hanawalt Award

Presented to **Takeshi Egami**, *University of Tennessee, Knoxville, TN and* **Simon Billinge**, *Columbia University, New York, NY*

Presented by **Robert L. Snyder**, *Chairman of the Denver X-ray Conference*

1:30 D-87 Recent Advances in the PDF Technique (2)

T. Egami, *University of Tennessee, Knoxville, TN*

2:15 D-100 Structure at the Nanoscale: Atomic Pair Distribution Function Analysis of Nanostructured Materials

S. Billinge, Columbia University, New York, NY

3:00 Break

3:30 D-92 Structure of Crystallographically Challenged Hydrogen Storage Materials

H.J. Kim, *Los Alamos National Laboratory, Los Alamos, NM*

3:55 D-97 PDF Analysis of Glassy and Nanocrystalline Metallic Materials

W. Dmowski, Y. Iwashita, T. Egami, *University of Tennessee, Knoxville, TN*
S.H. Overbury, *ORNL, Oak Ridge, TN*

4:20 D-89 Force Measurement of DNA with Pair Distribution Function

X. Qiu, *National Institutes of Health, Bethesda, MD*

4:45 D-83 Element-Specific Structure of Nanosized Materials by High-Energy Resonant X-ray Diffraction and Differential Atomic Pair Distribution Functions

V. Petkov, *Central Michigan University, Mt. Pleasant, MI*
S. Shastri, *APS- Argonne National Laboratory, Argonne, IL*

5:10 D-98 Progress with the GSAS-II Software Package for Crystallography

B.H. Toby, R.B. Von Dreele, *APS - Argonne National Lab, Argonne, IL*

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