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●Friday, August 29, 2008

Time	Session	Theme (Speaker)	Chair	Co-Chair
8:30-9:30	KN28	Structural pharmacology and drug discovery: Using crystallography to explore biological and chemical space Tom Blundell	(to be announced)	——
	KN29	Crystal design and synthesis: Reticular chemistry Omar M. Yaghi	Mohamed Eddaoudi	——
	KN30	Studies of new multiferroic materials Paolo Radaelli	Juan Rodriguez-Carvajal	——
9:30-9:55	Break			
9:55-12:30	MS71	Biophysical techniques for detecting ligand binding to pharmaceutical targets	Rod Hubbard	Roderick E. Hubbard
	MS72	Micro-SAXS for nanoscience and medicine	Peter Fratzl	Jean Doucet
	MS73	Structure-functions relationships of MOF	Mohamed Eddaoudi	Stuart L. James
	MS74	Multiferroic materials	Tsuyoshi Kimura	Loreynne Pinsard-Gaudart
	MS75	Charge, spin and momentum density studies in material science	Beatrice Gillon	Piero Macchi
	MS76	Diffractive imaging	Fu-Rong Chen	Helen Faulkner
	MS77	Diffuse scattering in partially ordered/disordered systems	Hiroshi Abe	Campbell Branton
12:30-14:45	Lunch Break and Poster Display			
14:45-17:20	MS78	Crystallization of membrane proteins	Eva Pebay-Peroula	Shinya Yoshikawa
	MS79	Motion in macromolecular machines	Michael Rossmann	Hao Wu
	MS80	Understanding and controlling polymorphism	Susan M. Reutzel-Edens	Urszula Rychlewska
	MS81	New neutron sources	Shane Kennedy	Yukio Noda
	MS82	Magnetic Compton scattering	Yoshiharu Sakurai	Hiroshi Kawada
	MS83	Femto-second diffraction: Time resolved studies	Simone Techert	Robert Feidenhans'l
	MS84	Quasicrystals and related giant crystalline alloys	Eiji Abe	Ronan McGrath
17:20-17:30	Break			
17:30-18:30	KN31	Bacterial membrane proteins (to be determined)	Brian Matthews	——
	KN32	Crystal engineering for developing new materials, pharmaceutical Michael John Zaworotko	Nair Rodriguez-Hornedo	——
	KN33	Quasicrystals: Structures, properties and applications An Pang Tsai	Walter Steurer	——

Diffuse Scattering in Partially Disordered Systems (MS77)

Richard Welberry (Australia) reviewed a wide-range of diffuse scattering phenomena in many different systems, and demonstrated the use of single-crystal X-ray diffuse scattering to extract local correlations in disordered molecular systems. Monte Carlo simulations employing inter- and intramolecular spring constants reproduced all of the key features in the experimental patterns. Miwako Takahashi (Japan) measured magnetic diffuse scattering at KENS in Pt-rich PtMn alloys (the new ABC6 structure) and identified diffuse incommensurate satellites with intermediate-range incommensurate spin-density waves induced by Fermi-surface nesting. Sonia Francoual (USA) identified diffuse-scattering signatures of phason diffuse scattering in X-ray patterns of icosahedral Zn-X-Sc (X = Co, Ag, Mg) quasicrystals, and successfully measured the phason elastic coefficients (for zero phason-phonon coupling) that were insightfully related to the electronic structure and composition and atomic radius of element X. Thomas Weber (Switzerland) demonstrated novel 3D PDF analysis techniques for extracting local structure information from quasicrystal diffuse scattering patterns. Clever data reduction strategies that isolate one type of feature at a time in Q-space greatly simplify the preparation and interpretation of the PDF. In photochromic cuprous-halide nanocrystals embedded in a glassy boro-alumino-silicate matrix, doped with Cd and Sn, Sylvio Haas (Germany) showed that the analysis of multi-resonant small-angle X-ray scattering data can recover complicated core/shell/matrix composition profiles.

H. Abe and C. Branton