Atomic-level response of materials to irradiation

Summer school organized by EFRCs at INL, LANL, and ORNL; sponsored by LANL Institutes

Santa Fe, June 20-25, 2010

	Monday	Tuesday	Wednesday	Thursday	Friday
8^{30}-9^{00} am	Welcome and school intro *M. A. Nastasi (LANL)*	-	-	-	-
9^{00}-10^{30} am	Crystallography, Nonstoichiometry and Defects in Ceramics *C. Stanek (LANL)*	Atomistic modeling methods *T. C. Germann (LANL)*	Energetic particle types and energy spectra *L. Snead (ORNL)*	Radiation damage in ceramics *B. P. Uberuaga (LANL)*	Irradiation creep and growth *G. Was (U. Michigan)*
10^{30}-10^{45} am	Break	Break	Break	Break	Break
10^{45} am-12^{15} pm	Defects in single component crystals *M. J. Demkowicz (MIT)*	Binary Collisions and Energy Partitioning during Energetic Particle-Solid Interactions *K. Sickafus (LANL)*	Mechanisms of microstructure evolution under irradiation: defect diffusion, aggregation, and interactions *Y. Osetsky (ORNL)*	Void swelling in irradiated materials *S. J. Zinkle (ORNL)*	Multiscale physics of irradiation effects on deformation and fracture *G. R. Odette (UCSB)*
12^{15}-1^{15} pm	Lunch	Lunch	Lunch	Lunch	5-minutes overviews by EFRC directors:
1^{15}-1^{45} pm	LANL postdoc program *M.-A. With (LANL)*	The importance of materials science to the future of nuclear energy *S. A. Maloy (LANL)*	Afternoon group outing to Bandelier National Monument, Bradbury Science Museum, Fuller Lodge	LANL Institutes *D. Thoma (LANL)*	**INL**: Materials science of nuclear fuel, *D. Wolf* **LANL**: Materials at irradiation and mechanical extremes, *M. A. Nastasi* **ORNL**: Defect physics in structural materials, *M. Stocks*
1^{30}-3^{00} pm	Electron microscopy and atom probe techniques *A. Misra (LANL)*	Collision cascade structure *R. E. Stoller (ORNL)*		Radiation-induced segregation (RIS) *J. A. Caro (LANL)*	
3^{00}-3^{15} pm	Break	Break		Break	
3^{15}-4^{45} pm	Scattering techniques for characterizing atomic-scale radiation effects *B. C. Larson (ORNL)*	Atomic mixing processes in energetic displacement cascades *R. S. Averback (UIUC)*		Phase stability under irradiation *A. El-Azab (FSU)*	Lunch, school ends

Special events:

Sunday evening, 6pm: registration, reception

Thursday evening, 6pm: banquet with speaker (TBD)