

RD 10 Agenda

Thursday, September 13

8:00 AM	0:30	8:30 AM	Registration	
8:30 AM	0:05	8:35 AM	Martin Fuchs (BNL, USA)	Welcome by Local Organisers
8:35 AM	0:15	8:50 AM	Elsbeth Garman (Oxford University, UK)	Setting the Scene for RD10

Basic Understanding of Radiation Damage Mechanisms. CHAIR: Bob Fischetti (APS)

Start	Time	End	Speaker	Title
8:50 AM	0:30	9:20 AM	Robert Thorne (Cornell University, USA)	Spatio-temporal Response of Protein Crystals in Intense X-ray Beams
9:20 AM	0:30	9:50 AM	Arwen Pearson (University of Hamburg, Germany)	Explorations in scavenger space: the role of endogenous amino acids in radiation Damage
9:50 AM	0:30	10:20 AM	Xiajing Yang (University of Chicago, USA)	Analysis of X-ray-induced and Light-induced Signals in Dynamic Crystallography
10:20 AM	0:20	10:40 AM	Break	
10:40 AM	0:30	11:10 AM	Joshua Dickerson (University of Oxford, UK)	Photoelectron escape and the implications for reducing radiation damage in MX
11:10 AM	0:30	11:40 AM	James Holton (UCSF, LBL and SSRL, USA)	Painting with X-rays: flat-top dose profiles from non-flat beams
11:40 AM	1:00	12:40 PM	Lunch	

Practical Aspects of Reducing Radiation Damage at Synchrotrons. CHAIR: Gerd Rosenbaum (U of Georgia)

Start	Time	End	Speaker	Title
12:40 PM	0:30	1:10 PM	Kathryn Shelley (University of Bristol, UK)	A "post-mortem" analysis of radiation damage in individual protein crystal structures using the RABDAM software
1:10 PM	0:30	1:40 PM	Go Ueno (SPring-8, Japan)	Low-Dose X-ray structure of cytochrome C oxidase utilizing high energy X-rays
1:40 PM	0:30	2:10 PM	Shibom Basu (PSI, Switzerland)	Advanced data collection strategies at the Swiss Light Source
2:10 PM	0:30	2:40 PM	Eugenio de la Mora (IBS Grenoble, France)	Experimental determination of dose-limitS in macromolecular serial crystallography
2:40 PM	0:30	3:10 PM	Martin Fuchs, Jean Jakoncic (BNL, USA)	Opportunities to Reduce Radiation Damage with the New NSLS-II MX Beamlines' Microfocus Beams
3:10 PM	0:20	3:30 PM	Break	

Biological Studies Affected by Radiation Damage: CHAIR: Bob Sweet (BNL)

Start	Time	End	Speaker	Title
3:30 PM	0:30	4:00 PM	Henry van Bedem (Stanford University, USA)	Gating non-equilibrium catalytically relevant motions by Cysteine modification
4:00 PM	0:30	4:30 PM	Ivo Tews (University of Southampton, UK)	Chromophoric Signatures can be Deceiving – Deconvoluting Radiation induced CHanges on the spectra of Enzyme Reaction intermediateS, Proteins and Buffers

Open Discussion. CHAIR: Ian Carmichael (NDRL)

Start	Time	End		
4:30 PM	0:45	5:15 PM	All participants	

Poster Session

Start	Time	End		
5:15 PM	0:20	5:35 PM	Poster presenters	Poster Bash
5:35 PM	2:30	8:05 PM	Posters and Dinner Buffet	

Friday, September 14

Damage at New Sources - XFEL and 4th Generation Synchrotrons. CHAIR: Vincent Olieric (PSI)

Start	Time	End	Speaker	Title
8:00 AM	0:30	8:30 AM	Hiroshi Sugimoto (SPring-8, Japan)	Structure analysis of radiation-sensitive NO-bound state of cytochrome P450nor using XFEL at SACLA.
8:30 AM	0:30	9:00 AM	Nicolas Foos (ESRF, France)	Turning weakness in success: Making radiation damage in micro crystals attractive
9:00 AM	0:30	9:30 AM	Robin Owen (DLS, UK)	Tracking damage on a moving target: Using serial crystallography to probe X-ray driven changes in metalloproteins

9:30 AM	0:30	10:00 AM	Beata Ziaja-Motyka (CFEL-DESY Hamburg, Germany)	Femtosecond DECAY of sulfur Dimer within irradiated Thaumatin Crystal as A signature of complex X-ray induced ionization dynamics
Tour of NSLS-II				
Start	Time	End		
10:00 AM	1:30	11:30 AM	Tour of NSLS-II	
11:30 AM	1:00	12:30 PM	Lunch	
Radiation Damage in Complementary Fields including Biological Imaging. CHAIR: Ana Gonzalez (MAXIV)				
Start	Time	End	Speaker	Title
12:30 PM	0:30	1:00 PM	Colin Nave (DLS, UK)	An assessment of radiation damage for x-ray imaging of biological cells at different photon energies
1:00 PM	0:30	1:30 PM	Jan-David Nicolas (University of Göttingen, Germany)	Radiation damage in scanning X-ray diffraction from biological cells and tissues
1:30 PM	0:30	2:00 PM	Raimond Ravelli (Maastricht University, The Netherlands)	Radiation damage in cryo-electron microscopy
2:00 PM	0:30	2:30 PM	Chris Russo (LMB, Cambridge, USA)	Determining the energy dependence of radiation damage in electron cryo-microscopy of biological specimens
2:30 PM	0:20	2:50 PM	Break	
2:50 PM	0:30	3:20 PM	Koji Yonekura (SPring-8, Japan)	Electron 3D crystallography and single particle cryo-EM of membrane proteins - analysis of charges and damage
3:20 PM	0:30	3:50 PM	Josiane Kaddissy (NDRL, USA)	Radiation induced damage in ancient materials
3:50 PM	0:30	4:20 PM	Ryan Tappero (BNL, USA)	A cryogenic sample environment for bioimaging applications using x-ray microprobe techniques
Open Discussion & Closeout. CHAIR: Sean McSweeney (BNL)				
Start	Time	End		
4:20 PM	1:00	5:20 PM	All participants	