*Preliminary Agenda*

| **6th Annual SSRL School on Synchrotron X-ray Scattering Techniques in Materials and Environmental Sciences: Theory and Application** | | |
|---|---|---|
| **Tuesday - Thursday May 29-31 2012** | | |
| **Tuesday, 29th – Bldg. 48 (ROB), Redwood Rooms (A/B/C/D)** | | |
| 8:00 - 8:50 | Registration, with coffee and light refreshments | |
| 8:50 - 9:00 | Welcome and introductory comments (M Toney) | |
| 9:00 - 9:40 | Introduction to SR-based scattering techniques at SSRL (M. Toney) | |
| 9:40 - 10:20 | Everything you wanted to know about SAXS (J. Pople) | |
| 10:20 - 10:40 | Coffee break | |
| 10:40 - 11:40 | What use is reciprocal space? Introduction and Interpretation (J. Bargar/A. | |
| 11:40 - 12:00 | Introduction to SSRL diffractometers and scattering geometries (C. Miller) | |
| 12:00 - 12:10 | **Photo** | |
| **12:10 - 1:30** | **Lunch** (lunch not provided - time is allotted for participants to go off-site, if desired) | |
| ***Parallel sessions addressing technical aspects of techniques*** | | |
| 1:30 - 2:15 | **Bulk-Structure Techniques**<br><br>Intro (A. Mehta)<br>Bulk structure characterization, including Rietveld - Part I (A. Mehta) | **Surface/Thin Film Techniques**<br><br>Intro (M. Toney)<br>Epitaxial Thin film scattering (A. Vailionis) |
| 2:15 - 3:00 | Bulk structure characterization, including Rietveld – Part II (L. Lim) | X-ray reflectivity and Crystal Truncation Rods (C. Miller) |
| 3:00 - 3:30 | Cookies and refreshments | |
| 3:30 - 4:15 | Pair distribution function (M. Michel) | X-ray scattering from polycrystalline monolayers and thin films (S. Mannsfeld) |
| 4:15 - 5:00 | In-situ resonant X-ray diffraction on energy-storage/conversion materials (Y. Shi, M. Suhoman) | In-situ X-ray scattering experiments with thin films (C. Tassone) |

*Preliminary Agenda*

| **Wednesday, 30th – Bldg. 48 (ROB) from 8:30-11:30 am/Please meet escorts at Gate 17, 1:00 pm(prompt) after lunch** | | |
|---|---|---|
| 8:30 - 9:00 | Coffee and light refreshments | |
| 9:00 - 9:30 | Beam lines at SSRL (B. Johnson) | |
| 9:30 - 10:15 | Data collection strategies and detectors (A. Mehta) | |
| 10:15 - 10:30 | Coffee break | |
| 10:30 - 11:30 | Data collection and reduction Software: SPEC & co. (S. Mannsfeld) | |
| 11:30 - 12:00 | Future experimental chambers & capabilities for the Material Science beamlines (D. van Campen) | |
| **12:00 - 1:00** | **Lunch** (not provided - time is allotted to go off-site, if desired) | |
| ***Beam Line Practical Sessions (3:00 - 3:30 Break)*** | | |
| 1:00 - 5:00 | Afternoon concurrent hands-on practical sessions: | |
| BL 1-4 | SAXS | J. Pople |
| BL 2-1 | X-ray reflectivity | A. Mehta, M. Bibee, C. Miller |
| BL 7-2 | Polycrystalline thin film scattering | M. Toney, C. Miller |
| BL 11-3 | Transmission x-ray diffraction with area Detector | S. Mannsfeld, D van Campen |
| **Thursday, 31th - Please meet escorts at Gate 17, 9:00 am (prompt)** | | |
| ***Beam Line Practical Sessions*** | | |
| 9:00 - 12:00 | Morning concurrent hands-on practical sessions: | |
| BL 1-4 | GISAXS | J. Pople |
| BL 2-1 | High resolution powder diffraction | A. Mehta, M. Bibee |
| BL 7-2 | Epitaxial thin film scat.; reciprocal scans | C. Miller, Vallionis |
| BL 11-3 | Thin film scattering, GIXD | S. Mannsfeld, C. Tassone |
| **12:00 – 1:00** | **Lunch** (not provided - time is allotted for participants to go off-site, if desired) | |
| ***Bldg. 48 (ROB) - Beam Line Hands-on Practical Sessions - Data Analysis Methods*** | | |
| 1:30 - 3:15 | Afternoon ***part I*** hands-on practical sessions: | |
| Redwood A | SAXS | J. Pople |
| Redwood B | Rietveld refinement strategies for bulk polycrystalline materials | A. Mehta |
| Redwood C | X-ray reflectivity fitting | C Miller, M Bibee |
| Redwood D | Area detector diffraction: thin films – data reduction ) | S Mannsfeld, A.Ayzner |
| 3:30 - 5:00 | Afternoon ***part II*** hands-on practical sessions: | |
| Redwood A | SAXS, GISAXS data analysis | C. Miller |
| Redwood B | Area detector diffraction: thin films, pole figures, small molecule organic films | S. Himmelsberger, G. Giri |
| Redwood C | Warren Averbach analysis of peak shapes | A. Ayzner, R. Noriega |