5th Workshop on Speciation, Techniques and Facilities for Radioactive Materials at Synchrotron Light Sources

Actinide-XAS-2008

July 15-17th, 2008, Auditorium, Synchrotron SOLEIL
L'Orme des Mérisiers, Saint-Aubin, France

Programme

Tuesday Morning, July 15th

8:30 - 9:30	*Reception*
9:30 – 9:45	**M. van der Rest** – Synchrotron Soleil - France *Welcome and Soleil presentation*

Session 1 - Solution and Coordination Chemistry of the Radionuclides

Chair: T. Reich, University of Mainz

9:45 - 10:25	**S. Suzuki** - Japan Atomic Energy Agency - Japan *EXAFS Investigations for the Extraction Chemistry of Actinide and Technetium*
10:25 - 11:05	**O. P. Lam** - University of Erlangen-Nuremberg - Germany *Systematic XAS Studies on Uranium Coordination Complexes Featuring the U^{3+} to U^{6+} Series*
11:05 – 11:35	*Coffee Break*
11:35 - 12:15	**C. A. Sharrad** - The University of Manchester - United Kingdom *Understanding Actinide Behaviour in High Temperature Molten Salts*
12:15 - 12:35	**H. Maatsura** - Tokyo Institute of Technology - Japan *XAFS analysis on the molten chlorides containing uranyl ions*
12:35 - 12:55	**L. Giachini** – CNRS, University of Bourgogne - France *X-ray Absorption Studies of the Interaction between Uranium(VI) and Silica-Gel-Bound Tetraazamacrocycles*
12:55 - 13:15	**C. Hennig** - Forschungszentrum Dresden-Rossendorf - Germany *Combining EXAFS, UV-Vis And XRD To Extract Uranyl Chloride Speciation And Coordination In Solution*
13:15 – 14:30	*Lunch*

Tuesday Afternoon, July 15th

Session 2 - Radionuclides in Environmental and Life Sciences

Chair: M. Denecke, Forschungszentrum Karlsruhe

14:30 - 15:10	**R. Dähn** - Paul Scherrer Institute - Switzerland *Soft X-ray Scanning Transmission Spectromicroscopy of Metal Uptake by Nuclear Waste Repository Materials*
15:10 - 15:50	**S. Selenska-Pobell** - Forschungszentrum Dresden-Rossendorf - Germany *The Impact of Microorganisms on the Behaviour of Actinides in Natural Environments*
15:50 – 16:20	*Coffee Break*
16:20 - 17:00	**O. Batuk** - Forschungszentrum Karlsruhe / Moscow State University - Russia *Colloid-mediated radionuclide transport: investigation of model and natural samples by XAFS*
17:00 - 17:20	**H. Moll** - Forschungszentrum Dresden-Rossendorf - Germany *Uranium(VI) Complexation with Pyoverdins and Related Model Compounds Studied by EXAFS*
17:20 - 17:40	**A. Costello** - Los Alamos National Laboratory – United States *Structural Determination of Biogenic Actinide-Oxides using X-Ray Absorption Spectroscopy*

Poster Session

17:40 – 19:00	Poster presentations
19:00 – 20:00	*Dinner (Buffet)*

Wednesday Morning, July 16th

Session 3 - Solid State Chemistry and Physics of Radionuclides

Chair: S. Kalmykov, Moscow State University

9:00 - 9:40	**H. Yamagami** - Kyoto Sangyo University - Japan *Fermiology of f-Electron Systems Based on Soft X-ray Photoemission Spectra and Band Calculations*
9:40 - 10:20	**C. Booth** - Lawrence Berkeley National Laboratory – United States *Probing radiation damage in plutonium alloys, especially the PuCoGa5 superconductor*
10:20 - 11:00	**P. Martin** - Commissariat à l'Energie Atomique, Cadarache - France *Nuclear fuels studies using synchrotron radiation*
11:00 – 11:15	**Group photograph**
11:15 – 11:45	*Coffee Break*
11:45 - 12:05	**M. E. Manley** - Lawrence Livermore National Laboratory - United States *Lattice Vibrations in alpha-Uranium: Nonlinearity, Localization, and Impurity Stiffening*
12:05 - 12:25	**J. G. Tobin** - Lawrence Livermore National Laboratory - United States *Soft X-ray Studies of Pu Electronic Structure: Past Lessons and Future Directions*
12:25 - 12:45	**S. Butorin** – Uppsala University - Sweden *RIXS spectra of actinides*
12:45 – 14:00	*Lunch*

Wednesday Afternoon, July 16th

Session 4 - Modelling and Simulation Tools

Chair: C. Den Auwer, Commissariat à l'Energie Atomique, Marcoule

14:00 - 14:40	**G. van der Laan** - Diamond Light Source – United Kingdom *Nature of the electronic and magnetic ground state of actinide metals*
14:40 - 15:20	**S. Tsushima** - Forschungszentrum Dresden-Rossendorf - Germany *Structures and Stoichiometry of Actinide Complexes: Challenges of Combining EXAFS and Quantum Chemistry*
15:20 – 15:50	*Coffee Break*
15:50 - 16:30	**P. Yang** - Los Alamos National Laboratory – United States *Theoretical studies of covalent interactions in actinide-ligand bonds*
16:30 - 16:50	**A. Rossberg** - Forschungszentrum Dresden-Rossendorf - Germany *The Structure of Polynuclear Uranyl Sorption Complexes at the Gibbsite/Water Interface*
16:50 - 17:10	**R. Spezia** - CNRS, University of Evry – France *A Dynamical Model to Understand Hydration across the Lanthanide Series: Bridging the Gap between XAS Experiments and Microscopic Structure*
17:10 – 18:45	**Visit of SOLEIL and of MARS beamline**
18:45	*Departure by bus for Conference Evening*

Thursday Morning, July 17th

Session 5 - Facility Tools and Upcoming Techniques

Chair: B. Sitaud, Synchrotron Soleil

9:00 - 9:15	**I. Alliot – Llorens** – Commissariat à l'Energie Atomique, Grenoble - France *High Resolution Spectroscopy Using A Crystal Analyzer System*
9:15 - 9:30	**C. Bessada** – CNRS, Orléans - France *A Double Barrier Cell for High Temperature EXAFS Experiments in Molten Actinides Fluorides Mixtures*
9:30 - 9:50	**P. L. Solari** – Synchrotron Soleil - France *Advances on the MARS beamline at Soleil*
9:50 – 10:10	**H. Funke–** Forschungszentrum Dresden-Rossendorf - Germany *The Rossendorf Beamline at ESRF: The next 10 years of Actinide XAFS*
10:10 - 10:30	**B. Brendebach** - Forschungszentrum Karlsruhe - Germany *The INE-Beamline for Actinide Research at ANKA*
10:30 - 11:00	*Coffee Break*
11:00 - 11:20	**D. Grolimund** - Paul Scherrer Institut – Switzerland *Beaming In On Radioactive Materials: The microXAS Beamline Project At The Swiss Light Source*
11:20 - 11:40	**D. K. Shuh** - Lawrence Berkeley National Laboratory – United States *Scientific Capabilities of the Advanced Light Source for Radioactive Materials Investigations*
11:40 - 12:00	**T. Yaita** - Japan Atomic Energy Agency - Japan *Recent Development of the Beamlines in the Spring-8 and Topics*

Discussion and Conclusions

12:00 - 12:30	**S. Conradson** - Los Alamos National Laboratory – United States *Synthesis*
12:30 – 13:00	Round Table and Closing Remarks
13:00 – 14:15	*Lunch*