

Physics and Chemistry of Actinides seen by X-rays



| Wednesday, 10 th February 2021 - Microsymposium UDM3 Virtual Symposium | | |
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| 9:00 | Introduction by the organizers | |
| | Session I - Chair: G. Lander | |
| 09:05 – 9:45 | Keynote talk 1 Actinide Research with Hard Synchrotron Radiation | Roberto Caciuffo JRC Karlsruhe, Germany |
| 09:45 – 10:05 | Anisotropic phonon line-broadening in UO ₂ below room temperature | Luigi Paolasini ESRF Grenoble, France |
| 10:05 – 10:25 | Tuneable Correlated Disorder in γ-(U1-xMox) | Daniel Chaney University of Bristol, UK |
| 10:25 – 10:45 | X-ray studies revealing the 5f electron duality in UM2Si2 compounds | Andrea Severing University of Cologne, Germany |
| 10:45 – 11:00 | Break | |
| | Session II – Chair: L. Paolasini | |
| 11:00 – 11:40 | Keynote talk 2 : <u>CANCELLED</u> The Role of X-ray Spectroscopy in the Renaissance of Actinide Coordination Chemistry | Kasper Pedersen Technical University of Denmark, Denmark |
| 11:40 – 12:00 | Resonant and non-resonant inelastic x-ray spectroscopy on UO ₂ | Martin Sundermann University of Cologne, Germany |
| 12:00 – 12:20 | URu ₂ Si ₂ : recent findings by resonant X-ray diffraction | Guillaume Beutier Univ. Grenoble Alpes, France |
| 12:25 – 14:00 | Break | |



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| | Session III – Chair: K. Kvashnina | |
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| 14:00 – 14:40 | Keynote talk 3: Chemistry behind actinide colloids and nanoparticles: application to environmental behavior and nuclear waste management | Stepan Kalmykov Moscow State University, Russia |
| 14:40 – 15:00 | Size vs. Local Structure Relationship for ThO $_2$ and PuO $_2$ Nanoparticles | Matthieu Virot ICSM, Univ Montpellier, France |
| 15:00 – 15:20 | Probing actinide electronic structure and speciation with high energy resolution X-ray spectroscopy | Tonya Vitova Karlsruhe Institute of Technology, Germany |
| 15:20 – 15:40 | Extended X-ray Absortion Fine Structure and Theoretical Models to describe actinides and fission products in the nuclear fuel cycle | Thomas Dumas CEA Marcoule, France |
| 15:40 – 16:00 | Break | |
| | Session IV – Chair: J.P. Sanchez | |
| 16:00 – 16:30 | Keynote talk 4: Electronic structure of actinide compounds as probed by advanced x-ray spectroscopy: experiment and theory | Sergei Butorin Uppsala University, Sweden |
| 16:30 – 17:00 | Keynote talk 5: Correlated Quasiparticle Dispersion and ARPES Spectra in UTe2 | Alexander Shick Institute of Physics, Czech Republic |
| 17:00 – 17:15 | Conclusion | Kristina Kvashnina ESRF, France Gerry Lander European Commission Karlsruhe, Germany Jean-Pierre Sanchez CEA Grenoble, France Fabrice Wilhelm ESRF, France |
| | End of the meeting | |