

SCHEDULE

		MONDAY SEPT. 2	TUESDAY SEPT. 3	WEDNESDAY SEPT. 4	THURSDAY SEPT. 5
TOPICS	8:00	CONFERENCE REGISTRATION – SALLE DES GARDES			
<i>Salle du Conclave</i>	9:00	OPENING CEREMON <i>Salle du Conclave</i>		8:30	8:30
ACTINIDE AND FISSION PRODUCTS SEPARATION		9:00 A. GELIS	9:00 H. DANIS	9:00 A. GEIST	9:00 F. LAMADIE
WASTE CONDITIONING AND GEOLOGICAL REPOSITORY	9:30	C. HILL (IAEA)		9:20 I. SANCHEZ-GARCIA	9:20 S. BRYAN
ACTINIDE MATERIALS AND NUCLEAR FUELS		9:40 S. MEZYK	9:40 R. LAFLOTTE	9:40 Y. SANO	9:40 A. CASTRO
<i>Cellier Benoit XII</i>	10:10	F. SUDREAU (CEA)		10:00 coffee break	
SAFEGUARDS AND ANALYTICAL CHEMISTRY		10:40 A. WILDEN	10:40 L. CAMPAYO	10:40 R. TAYLOR	10:40 S. PICART
PYROCHEMISTRY AND MOLTEN SALTS	10:50	coffee break		11:10 T. OKAMURA	11:10 S. POTTS
ACTINIDE AND FISSION PRODUCTS CHEMISTRY		11:30 E. MACERATA	11:30 O. DAUTAIN	11:30 A. HOLDSWORTH	11:30 P. ZSABKA
SUNDAY SEPT. 1	11:30	S. KUNG (DOE)		11:50 P. TKAC	11:50 H. CHO
CONFERENCE REGISTRATION		11:50 F. KOLESAR	11:50 N. YAW	11:50 P. TKAC	11:50 H. CHO
WELCOME COCKTAIL	12:10	P. NEVITT (NNL)		12:10 N. GOLLES	12:10 R. BES
<i>Grande Audience</i>		12:10 F. SAUERWEIN	12:10 N. DESCHANELS	12:10 N. GOLLES	12:10 R. BES
	12:50	Lunch		12:30 Lunch	
	14:20	14:20 K. MARSDEN	14:20 M. GUILPAIN	14:00 O. WALTER	14:00 G. BOURGES
		14:30 A. MASMOUDI	14:30 P. DE LAHARPE	14:30 T. GENEVES	14:30 A. HANDSCHUH
	14:50	14:50 G. GARZON LOSIK	14:50 C. CHABAL	14:50 G. MURPHY	14:50 J. CONSTANTINE
		15:10 C. MICHEAU	15:10 M. PINEDA	15:10 L. CLAPAREDE	15:10 J. SCHORNE-PINTO
	15:30	coffee break		15:30 coffee break	
	16:10	16:10 S. JANSONE POPOVA	16:10 C. THORPE	16:10 X. GUO	16:10 M. EDMONSON
		16:40 T. BLANC	16:40 N. DACHEUX	16:40 T. WISS	16:40 P. CHEVREUX
	16:40	16:40 R. TASHIRO	16:40 A. FRISKNEY	16:40 L. MULLER	16:40 J. JACKSON
		17:00 D. MAERTENS	17:00 M. TARON	17:20 A. DE AZEVEDO	17:20 T. CARETERO
	17:40	coffee break		17:40	
	18:00	CLOSING LECTURE <i>Salle du Conclave</i> E. PROUST (CEA) CLOSING CEREMONY			
	18:00	18:00			
		18:30	POSTER SESSION BUFFET <i>Grande Audience</i>		19:00
		23:00	<i>Grande Audience</i>		23:30
			CONFERENCE DINNER		

MONDAY SEPT. 2

SALLE DU CONCLAVE

9:00	OPENING CEREMONY
9:30	Clément Hill (IAEA)
Plenary	<i>Global Overview on the Nuclear Fuel Cycle Backend and IAEA Related Activities</i>
10:10	François Sudreau (CEA)
Plenary	<i>Status of The French Nuclear Fuel Cycle Program</i>
10:30	Coffee break – GRANDE AUDIENCE
11:30	Stephen Kung (DOE)
Plenary	<i>Nuclear Fuel Recycle Activities in the Office of Nuclear Energy</i>
12:10	Paul Nevitt (NNL)
Plenary	<i>Future Fuel Cycles – a UK Perspective</i>
12:50	Lunch – GRANDE AUDIENCE

TECHNICAL SESSIONS

	SALLE DU CONCLAVE	CELLIER BENOIT XII
	ACTINIDE AND FISSION PRODUCTS SEPARATION	WASTE CONDITIONING AND GEOLOGICAL REPOSITORY
14:20	Kenneth C Marsden (INL): <i>Overview of the Material Recovery and Waste Form Development Program</i>	Mathilde Guilpain (ORANO): <i>REGAIN project – Recycling of Zirconium from Nuclear Hulls</i>
14:50	German Garzon Losik (CEA): <i>Lab-scale pulsed columns trials for a new nuclear fuel recycling process</i>	Caroline Chabal (CEA): <i>Successful lasergrammetry operation in an ATALANTE hot cell: first step for deploying digital technologies on hot cells in operation</i>
15:10	Cyril Micheau (JAEA): <i>Potential of aggregation control for solvent extraction separation</i>	Miguel Pineda (University College London): <i>Effects of radiolysis products and acidic media on the aggregation behaviour of nuclear fuel debris nanoparticle simulants via stochastic simulations</i>
15:30	Coffee break – GRANDE AUDIENCE	
16:10	Jansone Popova (ORNL): <i>Evolution of Uranium Recovery: Past, Present, and Future Perspectives</i>	Clare Thorpe (University of Sheffield): <i>Insights into glass alteration mechanisms from the study of long term burial experiments</i>
16:40	Thibau Blanc (CEA): <i>Experimental and modeling study of uranium(VI) and nitric acid extraction with a N,N-dialkylamide solvent</i>	Nicolas Dacheux (ICSM): <i>Impact of lanthanide and PGM elements on the chemical durability and surface modifications during the leaching tests of FP doped pellets mimicking interim repository</i>
17:00	Ririka Tashiro (Tokyo institute of technology): <i>Feasibility Study on PUREX-NUMAP Hybrid Reprocessing: Precipitation-Based Recovery of U(VI) from Organic Phases with 30% TBP</i>	Aidan Friskney (University of Sheffield): <i>The impact of hot isostatic pressing on U speciation and local coordination in simulant Pu ceramic wastefoms</i>
17:20	Dominic Maertens (SCK CEN): <i>Demonstration of U(VI)/Pu(IV) separation by solvent extraction in modified lab-scale annular centrifugal contactors using D2EHIBA extractant</i>	Mélanie Taron (CEA): <i>Impact of gamma dose rate on the alteration of nuclear glass in geological disposal conditions</i>

TUESDAY SEPT. 3

SALLE DU CONCLAVE		CELLIER BENOIT XII	
ACTINIDE AND FISSION PRODUCTS SEPARATION		WASTE CONDITIONING AND GEOLOGICAL REPOSITORY	
8:30 Keynote	Christian Sorel (CEA): Current TRL status and strategy for the development of the next generation of reprocessing plant		Sou Watanabe (JAEA): Low-temperature condensation and solidification of radioactive liquid waste by freeze-drying
9:00	Artem Gelis (University of Nevada): Towards a Single-Solvent Process for U/TRU Recovery and Minor Actinide/Lanthanide Separations: Speciation and Partitioning of Tetravalent (Th, Pu) and Hexavalent (U) Actinides with HEH[EHP] and T2EHDGA		Hugo Danis (CEA): Investigation of cement-based materials with dihydrogen sequestration properties
9:20	Chris Maher (NNL): Horizon 2020 PuMMA: Studies considering reprocessing of 40 45 %Pu Fast reactor MOx		Isabelle Broadfield Smith (University of Sheffield): Development of cement encapsulants from naturally abundant supplementary cementitious materials
9:40	Stephen P. Mezyk (California State University at Long Beach): Reactions of the nitrate radical (NO ₃ •) in condensed organic media: Kinetics and implications for actinide separations in used fuel reprocessing		Richard Laflotte (CEA): Search for a cement matrix for ITER beryllium radwaste conditioning
10:00	Coffee break – GRANDE AUDIENCE		
10:40 Keynote	Andreas Wilden (FZ Jülich): Demonstration of the Single Cycle Am(III) Separation AmSEL Process in Laboratory-scale Annular Centrifugal Contactors		Lionel Campayo (CEA): Repercussions of solubility for the conditioning of fission products and minor actinides in borosilicate glasses
11:10	Vincent Vanel (CEA): Flowsheets for the validation of the reference AmSEL system		Lewis Blackburn (University of Sheffield): Progress Towards the Immobilisation of the UK Plutonium Inventory in Titanate Ceramics
11:30	Elena Macerata (Politecnico di Milano): Novel water-soluble and CHON-compliant ligands for selective Americium Separation from PUREX raffinate		Olivier Dautain (CIRIMAT): Elaboration and characterization of iodate and/or carbonate-doped apatites for long-lived radionuclides conditioning
11:50	Filip Kolesar (SCK CEN): Extraction and speciation studies of new diglycolamides with varying alkyl chains for selective americium partitioning		Natalie Yaw (WSU): The effect of cation substitution and valency on formation energetics of brannerite ceramics for nuclear waste applications
12:10	Fynn S. Sauerwein (FZJ Jülich): Selective Americium separation: New insights into the complexation of SO ₃ -Ph-BTBP with trivalent f-elements		Xavier Deschanel (ICSM): Densification of mesoporous silicas induced by radiation damage – New perspectives for the treatment of radioactive effluents
12:30	Lunch – GRANDE AUDIENCE		
ACTINIDE AND FISSION PRODUCTS SEPARATION		WASTE CONDITIONING AND GEOLOGICAL REPOSITORY	
14:00 Keynote	Laetitia H. Delmau (ORNL): Purification of Neptunium and Plutonium by Ion Exchange for Plutonium-238 Production at Oak Ridge National Laboratory		Anamul Haq Mir (University of Huddersfield): A Historical Overview of Corroded Microstructures and Present-day Best Practices
14:30	Abderrazak Masmoudi (CEA): Experimental Studies and Molecular Modeling of the Physico-chemical Properties of Pure Monoamides Extractants		Pierre de Laharpe (ICSM): Compared radiation stability of mesoporous silica and nuclear glass alteration gels
14:50	Masahiko Nakase (Tokyo Institute of Technology): Development of integrated actinide chemistry application, AACE, for acceleration of actinide chemistry experiments		Daniil Shirokiy (FZJ): Insights into the Structural and Redox Chemistry of Cr-doped (Ln,U)O ₂ Materials
15:10	Jarrold M. Gogolski (SRNL): Actinide Oxide Dissolution in Tributyl Phosphate		Hélène Arena (CEA): Simulating auto-irradiation of glass using external irradiation beams: impact on glasses structure and properties
15:30	Coffee break – GRANDE AUDIENCE		
16:10 Keynote	Gabriel B. Hall (PNNL): Direct Extraction of Uranium from Used Nuclear Fuel with DEHiBA		Stellan Holgersson (Chalmers University of Technology): The influence of pH, ionic strength and temperature on Cs, Ba, Co, and Eu sorption on biotite – experiments and modelling
16:40	Cécile Marie (CEA): New monoamide based extractants for U(VI) and Pu(IV) efficient separation		Duoqiang Pan (Lanzhou University): Colloids Pose an Enhanced Transport Risk of Uranium in Saturated Porous Media: A Challenge for Immobilization Remediation of Uranium Contaminated Site
17:00	Tom Shaw (University of Leeds): Efficient Manufacture of DEHiBA Through Industry 4.0		Irene Cardaio (HZDR): Processes driven by iron reducing bacteria on technetium immobilization
18:30	GRANDE AUDIENCE POSTER SESSION & BUFFET		

WEDNESDAY SEPT. 4

SALLE DU CONCLAVE		CELLIER BENOIT XII	
ACTINIDE AND FISSION PRODUCTS SEPARATION		SAFEGUARDS AND ANALYTICAL CHEMISTRY	
8:30 Keynote	Tatsuro Matsumura (JAEA): MA separation process using solvent extraction technique with CHON extractant	Amanda Lines (PNNL): Real-time and automated process control via on-line monitoring	
9:00	Andreas Geist (KIT INE): Americium Separation Processes Developed within the European PATRICIA Project	Fabrice Lamadie (CEA): Photonic lab-on-a-chip, a versatile and powerful tool for R&D studies on spent fuel reprocessing	
9:20	Ivan Sanchez-Garcia (CIEMAT): Interinstitutional Study of the New EURO-GANEX Process Resistance by Gamma Irradiation Test Loops	Samuel Bryan (PNNL): Real-Time Solution Analysis in Microfluidic Devices using Optical Spectroscopy	
9:40	Yuichi Sano (JAEA): Optimization of Minor Actinides Recovery Conditions by Combining Mathematical Analysis and Process Simulation	Alonso Castro (LANL): Rapid isotopic analysis of the actinides by cavity ring-down spectroscopy	
10:00	Coffee break – GRANDE AUDIENCE		
10:40 Keynote	Robin Taylor (NNL): Recent results from lab scale testing of advanced aqueous separation processes for the future recycling of spent nuclear fuels	Sebastien Picart (CEA): A New Plutonium Metal Certified Reference Material at CETAMA: the MP4 Standard	
11:10	Tomohiro Okamura (Tokyo Institute of Technology): Research on Sustainable Nuclear Energy Use with Actinide Management. Scenario Study on High-Level Waste Generation with MA Separation and Intermediate Storage Technology Implementation	Shannon Potts (FZJ): Development of Uranium Oxide-based Reference Microparticles for Particle Analysis in Nuclear Safeguards	
11:30	Alistair F. Holdsworth (University of Manchester): Recovery of Strategic High-Value Fission Products from Spent Nuclear Fuel during Reprocessing	Peter Zsabka (Studsvik Nuclear AB): Laser ablation- ICP-MS method development for a self-consistent calibration in Post Irradiation Examination of Spent Fuels	
11:50	Peter Tkac (ANL): Demonstration of Advanced Voloxidation and Direct Extraction Using Irradiated UO ₂	Hyejin Cho (KAERI): Burnup Determination of Irradiated U-Mo Alloy Fuel by ¹⁴⁸ Nd Monitor Method	
12:10	Nicolas Golles (ORANO): Zirconium Molybdate rinsing with carbonate: from R&D to industrialization in the La Hague plants	René Bes (University of Helsinki): On L-edges X-ray emission spectroscopy as a tool to study actinide's electronic structure: the case of Uranium in U _x O _y compounds	
12:30	Lunch – GRANDE AUDIENCE		
ACTINIDE MATERIALS AND NUCLEAR FUELS		PYROCHEMISTRY AND CHEMISTRY FOR MOLTEN SALTS	
14:00 Keynote	Olaf Walter (JRC): The potentials of nano-scaled Actinide dioxides	Gilles Bourghès (CEA): Overview of Plutonium pyroprocessing by-products management	
14:30	Thomas Genevès (ORANO): Influence of uranium oxide nature on MOX fuel fabrication process	Alan Handschuh (NAAREA): Spent Fuel Reprocessing for molten salts fast neutron reactors	
14:50	Gabriel Murphy (FZJ): New Insights in the Structural-Redox Chemistry of Cr, Mn, Fe and V doped-UO ₂ Nuclear Fuel Materials	Joelle Costantine (IJCLab): Pyrochemical treatment for molten salt nuclear reactor	
15:10	Laurent Claparede (ICSM): ESEM-monitored dissolution of (U,Th)O ₂ heterogeneous mixed oxides for spent fuel modeling	Juliano Schorne-Pinto (University of South Carolina): Evaluation and thermodynamic modeling of fission products evolution in the molten fluoride reactors	
15:30	Coffee break – GRANDE AUDIENCE		
16:10 Keynote	Xiaofeng Guo (WSU): Defect Chemistry, Thermal Oxidation, and Thermodynamics of metal-doped UO ₂	Michael Edmonson (NNL): Molten Salts and Pyrochemical Processing Progress at the UK's National Nuclear Laboratory	
16:40	Thierry Wiss (JRC): Heat capacity measurements of self-damaged mixed actinide oxides: a method to assess defects in spent fuels	Pierrick Chevreux (CEA): Synthesis of actinide chlorides as fuel for fast molten salt reactor	
17:00	Lucas Muller (CEA): Conversion of U(VI) and Pu(IV) by peroxide precipitation and hydrothermal treatment	Jessica Jackson (Colorado School of Mines): Molten Salt Spectroelectrochemistry in Chloride Based Eutectic Systems with Uranium	
17:20	Antonin De Azevedo (CEA): Densification study of Cr-doped UO ₂ fuel pellets with addition of fission products surrogates	Théo Caretero (CNRS): Influence of nitrogen on uranium metal stability in molten LiCl-KCl	
19:00	CONFERENCE DINER		

THURSDAY SEPT. 5

SALLE DU CONCLAVE		CELLIER BENOIT XII	
ACTINIDE MATERIALS AND NUCLEAR FUELS		ACTINIDE AND FISSION PRODUCTS CHEMISTRY	
8:30 Keynote	Nicolas Clavier (CNRS): Hydrothermal reducing conversion of uranium(VI) oxalate into oxides	Gregory Holmbeck (INL): Elucidating the Radiation-Induced Redox Chemistry of Plutonium Under Used Nuclear Fuel Reprocessing Conditions	
9:00	Sheridon Kelly (LBNL): Actinide thioamidates as precursors for actinide sulfide nanomaterials	Quentin Hervy (CEA): How Plutonium "Brown" Peroxo complex emerges from aerated electrolysis experiments	
9:20	Paul Estevenon (CEA): Synthesis of PuO ₂ and (U,Pu)O ₂ solid solution by citric acid assisted Combustion Synthesis	Jeffrey McLachlan (LBNL): The Redox Chemistry of $[M(IV/III)(3,4,3-LI(1,2-HOPO))]^{0/-}$ Complexes in Acidic Aqueous Media	
9:40	Gordon Thorogood (ANSTO): Phase Separation in Fluorite-Related U _{1-y} Ce _y O _{2-x} : New Insights via Variable Temperature Neutron Diffraction	Julien Margate (ICSM): Chronicles of peroxide plutonium species: structural characterization of new Pu(IV) green peroxide	
10:00	Coffee break – GRANDE AUDIENCE		
10:40 Keynote	Eva de Visser-Týnová (NRG): Fabrication and Dissolution of Americium Plutonium Oxide Fuels	Koichiro Takao (Tokyo Institute of Technology): Development of Water-Compatible N ₃ O ₂ -Pentadentate Planar Ligands for Uranium Harvesting from Seawater	
11:10	Rafael Caprani (CEA): Fission Products speciation in irradiated MOx fuel during interim storage accidental scenarios	Emma Archer (Colorado School of Mines): Complexation and Solvent Extraction Properties of the N, N, N', N'-tetraethyl-1,10-phenanthroline-2,9-diamide extractant with Ln(III) and An(III)	
11:30	Jérémie Manaud (JRC): Synthesis and characterisation of CeO ₂ and PuO ₂ pellets with representative microstructure for General Purpose Heat Sources	Diego Moreno Martinez (CEA): Speciation of Uranium(VI) with amido-phosphonate ligands in organic phase and at the solid/liquid interface studied by Molecular Dynamics	
11:50	Lionel Desgranges (CEA): Incorporation of fission products into oxide nuclear fuel: towards a new paradigm?	Thomas Sittel (KIT INE): Probing the metal ion-ligand interaction in An(III) and Ln(III) complexes: an overview about recent advancements	
12:10	Christophe D'Angelo (CEA): Quantification of the morphology and roughness of oxide powder particles in relation to their manufacturing history and flow properties	Mathilde Goujet (CEA): Reactivity of actinides mono-cations with NH ₃ in gas phase: A study using ICP-MS and quantum chemistry	
12:30	Lunch – GRANDE AUDIENCE		
ACTINIDE MATERIALS AND NUCLEAR FUELS		ACTINIDE AND FISSION PRODUCTS CHEMISTRY	
14:00 Keynote	Robert Harrison (University of Manchester): Field Assisted Sintering of UO ₂ Based Nuclear Fuels	Hans-Conrad Zur Loye (University of South Carolina): Crystal Growth of New Uranium and Transuranic Phases via High Temperature Solution and Mild Hydrothermal Methods: Exploration of New Materials as Potential Nuclear Waste Forms	
14:30	Priscilla Berenguer-Besnard (CEA): Characterization of the phases formed during the high temperature oxidation of (U,Pu)O ₂ mixed oxides	Ryoma Ono (Tokyo Institute of Technology): Molecular and Crystal Structures of Pu(IV)-Nitrate Complexes with Double-Headed 2-Pyrrolidone Derivatives in HNO ₃ (aq)	
14:50	Sarah Finkeldei (University of California, Irvine): Fundamental insights into defect generation and transport phenomena at grain boundaries in nuclear fuel	Joshua Turner (NNL): The adsorption of Pu(IV) in the presence of cesium phosphomolybdate, barium-strontium nitrate, zirconium molybdate and zirconium hydrogen phosphate	
15:10	Stéphanie Szenknect (ICSM): Impact of Ru, Rh, Pd and Mo metallic particles on the dissolution kinetics of UO ₂	Simon Orlat (CEA): Performance and design of HotXAS: the future in-house XAS apparatus at Atalante	
15:30	Emma Kindall (WSU): Thermal Oxidation and High Temperature Structures of Uranium Carbide: in situ X-Ray Diffraction Studies	Jun Tang (Science and Technology on Surface Physics and Chemistry Laboratory): Investigation of the microcosmic dynamics behaviors of hydrogen and oxygen in plutonium oxide via ab initio molecular dynamics simulations	
15:50	Coffee break – GRANDE AUDIENCE		
SALLE DU CONCLAVE			
CLOSING LECTURE			
16:30	Eric Proust (CEA) Nuclear energy for space exploration		
17:30	CLOSING CEREMONY		