



Agenda


Venue: Rosalind Franklin Room and the Annex, At-Bristol Science Centre, Anchor Rd, Harbourside, Bristol BS1 5DB

Tuesday 19th April		
Time	Title	Presenter
10:00	Delegate Registration, Poster Board Set Up and Arrival Refreshments	
11:00	Introduction and Housekeeping	Prof. Michael Fairweather University of Leeds
11:10	Projecting Risk into the Future: Failure of a Geologic Repository and Sinking of the Titanic	Prof. Rodney Ewing Stanford University
Structural Integrity <i>Chairs: Prof. Rebecca Lunn, University of Strathclyde & Dr. Bryony Livesey, Costain</i>		
11:50	Use of Colloidal Silica Grout for Ground Barriers in Decommissioning: A Project Overview	Dr. Matteo Pedrotti University of Strathclyde
12:10	Hydro-mechanical Characterisation of Colloidal Silica Grout	Christopher Wong University of Strathclyde
12:30	3D Semantic Reconstruction in an Industrial Environment	Henry (Cheng) Zhao University of Birmingham
12:50	Q&A Panel	Session Chairs
13:10	Lunch and Poster Session	
PuO₂ and Fuel Residues <i>Chairs: Prof. Colin Boxall, Lancaster University & Prof. Nik Kaltsoyannis, University of Manchester & Dr. James Marra, SRNL</i>		
14:10	Direct Mass Analysis of Water Absorption onto Ceria, Urania and Thoria Thin Films	Dr. Dominic Laventine Lancaster University
14:30	Radiolysis of H ₂ -O ₂ Gas Mixtures of Relevance to Long Term PuO ₂ Storage	Dr. Luke Jones University of Manchester
14:50	Water Adsorption on Actinide Oxide Surfaces	Dr. Bengt Tegner University of Manchester
15:10	Real-time Fast-neutron Plutonium Assay for Storage and Ageing Applications	Rashed Sarwar Lancaster University
15:30	Afternoon Break and Poster Session	
16:00	Computational Studies of Water Adsorption on UO ₂ and PuO ₂ Surfaces	Joseph Wellington UCL
16:20	Ceramic Wasteforms for Actinide Disposition	Dr. Shi-Kuan Sun University of Sheffield

16:40	Q&A Panel	Session Chairs
17:00	Break	
18:30	Drinks Reception	ss Great Britain NATIONAL NUCLEAR LABORATORY 
19:15	Call to Dinner	ss Great Britain NATIONAL NUCLEAR LABORATORY 
22:00	End of Day	

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Wednesday 20th April		
Time	Title	Presenter
08:30	Delegate Registration and Arrival Refreshments	
09:00	U.S. Closed Nuclear Fuel Cycle Waste Management Research	Dr. John Vienna PNNL
Legacy Ponds and Silo Wastes <i>Chairs: Dr. Joseph Hriljac, University of Birmingham & Mike Angus, NNL</i>		
09:40	Measurement and Modelling of Sludge Mobilisation and Transport	Dr. Hugh Rice and Dr. Derrick Njobuenwu University of Leeds
10:00	Glass Formulations to Effectively Condition and Immobilise Radioactive Waste – Sheffield MIDAS Facility to B-170 NNL Central Labs	Luke Boast University of Sheffield
10:20	Degradation of International Simple Glass	Dr. Rama Krishna Chinnam Imperial College London
10:40	Morning Break and Poster Session	
11:10	An X-ray Tomography Study of Gas Retention and Release from Nuclear Legacy Waste	Michael Johnson University of Leeds
11:30	Tailored Cs/Sr Ion Exchange in Sn-Umbite by Framework Substitution	Dr. Evin (Tzu-Yu) Chen University of Birmingham
11:50	Q&A Panel	Session Chairs
12:10	Lunch and Poster Session	
AGR, Magnox and Exotic Spent Fuels <i>Chairs: Dr. Tom Scott, University of Bristol & Dr. Carwyn Jones, Nuclear Technologies</i>		
13:10	Thin Film Applications for Investigation of the Evolution of Spent Nuclear Fuel	Dr. James Darnbrough and Dr. Leila Costelle

	Micro-probe Corrosion, Hydride Formation, Damage Effects and Dissolution	University of Bristol
13:30	Microstructural Characterisation of AGR Cladding Materials	Chiara Barcellini University of Manchester
13:50	Immobilisation Options for Exotic Carbide Fuels	Claudia Gasparrini Imperial College London
14:10	Q&A Panel	Session Chairs
14:30	Afternoon Break and Poster Session	
Cross-cutting Themes Chair: Prof. Neil Hyatt, University of Sheffield		
14:50	Basic Research on Technetium in Alkali Oxide Glasses	Prof. John McCloy Washington State University
15:10	An Update on Impact	Prof. Neil Hyatt, Dr. Claire Corkhill and Dr. Matthew Cotton University of Sheffield
15:30	An Overview of the NNL Survey	Mike Angus NNL
15:40	NDA PhD Student Awards	 Nuclear Decommissioning Authority Dr. Rick Short NDA
15:50	Closing Remarks	Prof. Michael Fairweather University of Leeds
16:00	End of Day/IAG Feedback Meeting	IAG Members Only
17:00	Close for IAG	

Posters

The following posters will be presented throughout the event:

Poster Number	Researcher	Poster Title	Leading Institution
1	Dr. James Darnbrough	Evolution of Uranium Metal Oxide Interface in a Hydrogen Rich Environment	Bristol
2	Dr. Leila Costelle	Localized Corrosion Behaviour of Uranium Based Materials	Bristol
3	Sophie Rennie	Dissolution at the UO_2 / Water Interface: The Impact of Crystal Orientation and Ion Implantation	Bristol
4	Claudia Gasparrini	Immobilisation Options for Exotic Carbide Fuels	Imperial
5	Elizabeth Howett	AGR Cladding Corrosion: Investigation of the Effect of Temperature on Sensitised and Unsensitised Steel	Lancaster
6	James Goode	Transitioning of Spent AGR Fuel from Wet to Dry Storage	Leeds
7	Dr. Oliver Preedy	Uranium Speciation by Time-resolved Laser Induced Fluorescence Spectroscopy	Loughborough
8	Matthew Druce	Characterising the Chemical and Physical Properties of Depleted, Natural and Low-enriched Uranium with Regard to the Suitability of Alternative Disposal Routes	Loughborough
9	Chiara Barcellini	Micro-structural Characterisation of AGR Cladding Material	Manchester
10	Andrea Paulillo	A Life Cycle Approach to Nuclear Waste Management	UCL
11	Nathan Palmer	Computational Modelling of PuO_2 Ageing and Fuel Residues	Birmingham
12	Dr. Dominic Laventine	Direct Mass Analysis of Water Absorption onto Ceria, Urania and Thoria Thin Films	Lancaster
13	Rashed Sarwar	Real-time Fast-neutron Plutonium Assay for Storage and Ageing Applications	Lancaster
14	Dr. Bengt Tegner	Water Adsorption on Actinide Oxide Surfaces	Manchester
15	Sophie Sutherland-Harper	Adsorption of Chloride and Water on CeO_2 as a precursor to PuO_2 studies	Manchester
16	Dr. Luke Jones	Radiolysis of H_2 - O_2 Gas Mixtures of Relevance to Long Term PuO_2 Storage	Manchester
17	Dr. Shi-Kuan Sun	Ceramic and Glass-ceramic Wasteforms for Actinide Disposition	Sheffield
18	Stephanie Thornber	The Development of Glass-Ceramic Wasteforms for Pu-bearing Waste-Streams	Sheffield
19	Antonia Yorkshire	Understanding Actinide Sorption and Binding to Cement Materials	Sheffield
20	Joseph Wellington	Computational Studies of Water Adsorption on UO_2 and PuO_2	UCL

21	Ryan George	Synthesis and Ion Exchange of Zirconogermanates	Birmingham
22	George Day	Synthesis and Studies of Barium Doped Cs ₂ TiNb ₆ O ₁₈ - A New Cs-Waste Form	Birmingham
23	Dr. Evin (Tzu-Yu) Chen	Tailored Cs/Sr Ion Exchange in Sn-Umbite by Framework Substitution	Birmingham
24	Antonios Banos	Uranium Wet Oxidation Under Contained Conditions	Bristol
25	Kate Wyness	Remote Raman Analysis of Storage Ponds	Bristol
26	Dr. Rama Krishna Chinnam	Degradation of International Simple Glass	Imperial
27	Dimitri Pletser	Low Temperature Immobilisation of Spent Adsorbents from Fukushima	Imperial
28	Eleonora Cali	Nanoscale Investigation and Control of Radionuclides in Waste Management	Imperial
29	Olivia Lynes	Computational Investigations into the Effect of Temperature on Hydrated Magnesium, Calcium and Strontium	Lancaster
30	Alastair Tonge	Novel Characterisation of Flocculated Dispersions Using Acoustic Backscatter Systems	Leeds
31	Michael Johnson	Gas Retention and Release from Nuclear Legacy Waste	Leeds
32	Dr. Derrick Njobuenwu	Simulation of Particle-particle Interactions in Turbulent Pipe Flow	Leeds
33	Dr. Hugh Rice	In-line Rheometry and Flow Characterisation of Dense Slurries in Pipe Flow Using Acoustic Methods	Leeds
34	Johannes Andries Botha	A Novel Technology for Complex Rheological Measurements	Leeds
35	Keith Schou	Enhanced Shear Micro and Ultrafiltration	Loughborough
36	Olusola Ayoola	In situ Monitoring of the Legacy Ponds and Silos at Sellafield	Manchester
37	Mel O'Leary	Irradiated Sludges	QUB
38	Conrad Johnston	Hydrogen Evolution in Magnox Sludges	QUB
39	Luke Boast	Thermal Treatment of Plutonium Contaminated Materials	Sheffield
40	Eszter Makkos	Modelling the Interaction of Corroded Magnox Surfaces with Nuclear Fission Products	UCL
41	Henry (Cheng) Zhao	3D Dense Reconstruction in Industrial Environment	Birmingham
42	Toby Lord	Re-use and Volume Reduction of Scabbled Contaminated Concrete from Nuclear Decommissioning	Leeds
43	Ryan Kavanagh	Atomistic Simulation of Cement-Based Materials for Nuclear Waste Disposal	QUB
44	Thomas Mullan	Development of Novel, Low Cost Biomineral Permeable Reactive Barriers for Radionuclide Remediation	Strathclyde

45	Christopher Wong	Mechanical characterisation of colloidal silica grout	Strathclyde
46	Dr. Matteo Pedrotti	Use of Colloidal Silica Grout for Ground Barriers in Decommissioning: A Project Overview	Strathclyde
47	Luca Rizzo	Radionuclide Immobilisation into Calcium Silicate Hydrates	Strathclyde
48	Anthony Collins	Analysis of Partner Engagement in the DISTINCTIVE Consortium	NNL