

International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle

**Innovation for Sustaining Future Resources
and Production**

8 – 12 May 2023

PROGRAMME

Organized by the
International Atomic Energy Agency (IAEA)

IAEA Headquarters Vienna, Austria

Programme Committee:

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Location of the Event:

International Atomic Energy Agency
Vienna International Centre (VIC)
Building M, BR-A/M3

Wagramer Strasse 5
A-1400 Vienna, Austria
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Working Language: English

Resolutions: No resolutions may be submitted for consideration on any subject; no votes will be taken.

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Participate in voting during sessions



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TIMETABLE

Monday, 8 May 2023

Time	Session No.	Session Title / Break	Venue
8:00–10:00		Registration	M-Building – Ground Floor
10:00–12:30		Opening Session AM	Board Room A
12:30–14:00		<i>Lunch Break</i>	
14:00–16:00		Opening Session PM-1	Board Room A
16:00–16:30		<i>Coffee/Tea Break</i>	
16:30–18:00		Opening Session PM-2	Board Room A
18:00–20:00		<i>Welcome Reception</i>	M-Building – Ground Floor

Tuesday, 9 May 2023

Time	Session No.	Session Title / Break	Venue
09:00–10:20	1/1	Applied geology and geometallurgy of uranium and associated metals	Board Room A
09:00–10:20	2/1	Tailings and waste management	M3
10:20–10:50		<i>Coffee/Tea Break</i>	
10:50–12:10	1/2	Applied geology and geometallurgy of uranium and associated metals	Board Room A
10:50–12:10	2/2	Tailings and waste management	M3
12:10–13:30		<i>Lunch Break</i>	
13:30–14:50	1/3	Applied geology and geometallurgy of uranium and associated metals	Board Room A
13:30–14:50	2/3	Health, safety, environment and social responsibility	M3
14:50–15:30		<i>Coffee/Tea Break</i>	
15:30–16:50	1/4	Applied geology and geometallurgy of uranium and associated metals	Board Room A
15:30–16:50	2/4	Health, safety, environment and social responsibility	M3
16:50–18:00		Poster Session 1	

Wednesday, 10 May 2023

Time	Session No.	Session Title / Break	Venue
09:00–10:20	1/5	Applied geology and geometallurgy of uranium and associated metals	Board Room A
09:00–10:20	2/5	Health, safety, environment and social responsibility	M3
<i>10:20–10:50</i>		<i>Coffee/Tea Break</i>	
10:50–12:10	1/6	Advances in uranium and thorium exploration	Board Room A
10:50–12:10	2/6	Health, safety, environment and social responsibility	M3
<i>12:10–13:30</i>		<i>Lunch Break</i>	
13:30–14:50	1/7	Advances in uranium and thorium exploration	Board Room A
13:30–14:50	2/7	Uranium from unconventional resources	M3
<i>14:50–15:30</i>		<i>Coffee/Tea Break</i>	
15:30–16:50	1/8	Advances in uranium and thorium exploration	Board Room A
15:30–16:50	2/8	Uranium production by the in situ leaching (ISL)/ in situ recovery (ISR) process	M3
16:50–18:00		Poster Session 2	

Thursday, 11 May 2023

Time	Session No.	Session Title / Break	Venue
09:00–10:20	1/9	Strategic considerations: uranium exploration and production	Board Room A
09:00–10:20	2/9	Underground and open pit uranium mining, milling and processing	M3
<i>10:20–10:50</i>		<i>Coffee/Tea Break</i>	
10:50–12:10	1/10	Advances in uranium and thorium exploration	Board Room A
10:50–12:10	2/10	Underground and open pit uranium mining, milling and processing & Uranium newcomers	M3
<i>12:10–13:30</i>		<i>Lunch Break</i>	
13:30–15:10		Panel Session	Board Room A
<i>15:10–15:30</i>		<i>Coffee/Tea Break</i>	
15:30–16:30	1/11	Advances in uranium and thorium exploration	Board Room A

Time	Session No.	Session Title / Break	Venue
15:30–16:50	2/11	Uranium newcomers	M3
16:30–18:00		WiN IAEA Panel Session	Board Room A
18:00–19:30		WiN IAEA Reception	M-Building – Ground Floor

Friday, 12 May 2023

Time	Session No.	Session Title / Break	Venue
09:00–10:40		Closing Session AM-1	Board Room A
10:40–11:10		<i>Coffee/Tea Break</i>	
11:10–12:45		Closing Session AM-2	Board Room A
12:45		<i>Conference Close</i>	

MONDAY, 8 MAY 2023

10:00-12:30 OPENING SESSION AM

Venue BR-A

Chairperson: S. Hall, United States of America
Scientific B. Moldovan, IAEA
Chair:

Time	Name	Designating Member State/Organization	Title
10:00-10:10	R. M. Grossi	IAEA	Welcome address and opening remarks
10:10-10:20	B. Moldovan	IAEA	Opening remarks
10:20-10:30	S. Hall	U.S. Geological Survey	Opening remarks
	B. Moldovan	IAEA	Administrative Remarks
10:30-11:00	N. Carter	UxC	Global uranium supply and demand dynamics amid heightened geopolitical risk
11:00-11:30	A. Florea	European Commission	Taxonomy, SMRs and uranium markets
11:30-12:00	P. Costes	World Nuclear Association	Fuel cycle - security of supply
12:00-12:30	M. Mihalasky	IAEA	The OECD-NEA/IAEA Uranium Group & the "Red Book"
12:30-14:00	<i>Lunch Break</i>		

MONDAY, 8 MAY 2023

14:00-16:00 OPENING SESSION PM-1

Venue BR-A

Chairperson: S. Hall, United States of America
Scientific B. Moldovan, IAEA
Chair:

Time	Name	Designating Member State/Organization	Title
14:00-14:15	F. Gitteh	The Gambia	Awareness and interest among youths in the uranium raw materials industry - challenges and proposed solutions
14:15-14:30	C.J. Guembou Shouop	Cameroon	Addressing the future of uranium exploration, mining, and production: the global concern and perspectives

Time	Name	Designating Member State/Organization	Title
14:30–15:00	W. Cheng	China National Uranium Corporation (CNUC)	Innovation and achievements of uranium exploration and exploitation in China
15:00–15:30	A.Akzholova	NAC Kazatomprom JSC	Kazatomprom: Ready to meet the growing demand
15:30–16:00	G. Schneider	Namibian Uranium Institute	Uranium supply, demand and production in Africa
<i>16:00–16:30 Coffee/Tea Break</i>			

MONDAY, 8 MAY 2023

16:30-18:00 OPENING SESSION PM-2 **Venue BR-A**

Chairperson: **S. Hall, United States of America**

Scientific **B. Moldovan, IAEA**

Chair:

Time	Name	Designating Member State/Organization	Title
16:30–16:45	D. Rahayu	Indonesia	Youth and uranium: challenges and concrete solutions
16:45–17:00	D. Ashimov	Kazakhstan	Future of Uranium Mining
17:00–17:25	D. Kozak	European Commission	ESA's perspective of nuclear market and security of supply of nuclear fuel
17:25–17:50	J. Romero & A. Hanly	IAEA / IAEA	Supporting Member States in the front end of the nuclear fuel cycle – Technical Cooperation and Nuclear Fuel Cycle and Materials Section Milestones approach
17:50–18:00	S. Hall	U.S. Geological Survey	Daily closing remarks
18:00	<i>Welcome Reception</i>		

TUESDAY, 9 MAY 2023

9:00–10:20 **SESSION 1/1:**
Applied geology and geometalurgy of
uranium and associated metals

Venue BR-A

Chairperson: **S. Hall, United States of America**
Scientific **M. Mihalasky, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	29	M. Cuney	France	The diversity of geochemical types of Erzgebirge granites and their potential for hosting uranium deposits: Comparison to the French Variscan district
9:20–9:40	84	M.B Verma	India	Uranium Metallogeny in Southern India
9:40–10:00	36	D.K Sinha	India	Uranium Mineralisation associated with magmatic albitite in Geratiyon ki Dhani, district Sikar, Rajasthan, India
10:00–10:20	38	S. Baskaran	India	Characteristics of uranium mineralisation hosted in Dhanjori Group in Pathargora area, Singhbhum Shear Zone, Eastern India
<i>10:20–10:50 Break</i>				

TUESDAY, 9 MAY 2023

9:00–10:20 **SESSION 2/1:**
Tailings and waste management

Venue M3

Chairperson: **F. Mattos Tavares, Brazil**
Scientific **C. Good, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	70	H. Jung	Germany	Extraction of Radionuclides from Uranium tailings
9:20–9:40	22	N.A Fatimah	Malaysia	Tailored-design of radiation modified ion imprinted polymer adsorbent for selective removal of uranium and thorium

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:40–10:00	152	K. Bonstrom	Canada	Rook I Project - Integrated Waste and Water Management
10:00–10:20	154	B. Martel	Canada	Rook I Project - Rook I Project as an ideal technical setting for underground tailings disposal
<i>10:20–10:50 Break</i>				

TUESDAY, 9 MAY 2023

10:50–12:10 **SESSION 1/2:** **Venue BR-A**
Applied geology and geometalurgy of uranium and associated metals

Chairperson: **M. Cuney, France**
Scientific **A. Hanly, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	77	S. Hall	United States of America	New insights into the formation of sandstone-hosted uranium of the Colorado Plateau Uranium Province, USA
11:10–11:30	158	E. Y. Bos Orent	United States of America	Characterization of U(-V) deposits in the La Sal District, UT and CO (USA) and their relationship to Paradox Basin fluid flow
11:30–11:50	41	M. M. F. Ghoneim	Egypt	The main geological features of uranium provinces in Egypt with emphasis on the role of Nuclear Materials Authority of Egypt
<i>11:50–12:10</i>				
<i>12:10–13:30 Lunch Break</i>				

TUESDAY, 9 MAY 2023

10:50–12:10 **SESSION 2/2:**
Tailings and waste management

Venue M3

Chairperson: D. Bellifemine, Australia
Scientific B. Moldovan, IAEA
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	153	A. Lieu	Canada	Rook I Project – Novel source-term derivation for cemented uranium paste tailings disposal in a purpose-built underground tailings storage facility
11:10–11:30	157	N. Bezuidenhout	Canada	Rook I Project - The use of Features, Events, and Processes analyses to support the development of a mine waste safety case
11:30–11:50	58 (V)	Y. Dang	China	Current situation and regulatory suggestions for evaporation pond of in-situ leach mining projects in China
11:50–12:10	141	A. Cardenas Nino	Portugal	Sequential extraction of major and trace elements in soil and stream sediments of an old uranium mine (Portugal)
12:10–13:30	<i>Lunch Break</i>			

TUESDAY, 9 MAY 2023

13:30–14:50 **SESSION 1/3:**
Applied geology and geometalurgy of uranium and associated metals

Venue BR-A

Chairperson: Z. Li, China
Scientific M. Mihalasky, IAEA
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
13:30–13:50	49	Q. Tong	China	Extraction of Mineral Information Using Hyperspectral Data and Prediction of Favorable Areas for Uranium Exploration in the Benbatu Area, Bayingobi Basin, China

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
13:50–14:10	62	F. He	China	Study on metallogenic mechanism of sandstone-hosted uranium deposit in the Lower Cretaceous of northwest Ordos Basin, Northwestern China
14:10–14:30	87	K. Wang	China	Indosinian Epoch Hydrothermal Uranium Mineralization in Northwest China
14:30–14:50	61	Z. Li	China	Geotectonic Characteristics of Uranium-producing Sedimentary Basins and Mineralization of Sandstone-type Uranium Deposits in Northern China
<i>14:50–15:30 Break</i>				

TUESDAY, 9 MAY 2023

13:30–14:50 **SESSION 2/3** **Venue M3**
Health, safety, environment and social responsibility

Chairperson: **H. B. Okyar, IAEA**
Scientific **C. Good, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
13:30–13:50	91	J. Hondros	Australia	An All-Hazards Approach in Uranium Mining and Processing
13:50–14:10	162	D. Bellifemine	Australia	Implementing a risk based framework and developing an effective regulatory approach
14:10–14:30	163	H. H. Silver Medrado	Brazil	Unusual Event Classification for a Mining and Milling Uranium Facility – Preliminary Results
14:30–14:50	100	N. Perwira	Indonesia	Safety Analysis Assessment for Severe Accident in Nuclear Fuel Cycle Facilities
<i>14:50–15:30 Break</i>				

TUESDAY, 9 MAY 2023

15:30–16:50 **SESSION 1/4**
Applied geology and geometallurgy of
uranium and associated metals

Venue BR-A

Chairperson: **A. Akzholova, Kazakhstan**
Scientific **A. Hanly, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	145	V. Pryvalov O. Panova	Ukraine	The transcrustal shear zone of the Ukrainian shield and its control on the distribution of Ukrainian uranium deposits
15:50–16:10	117	G. Milesi	France	Structural and lithological controls on unconformity uranium deposits of the Athabasca Basin region (Canada)
16:10–16:30	119	P. Bruneton	France	2023 IAEA geological classification of uranium deposits
16:30–16:50	151	A. Kaczowka	Canada	Geometallurgical and evolutionary ore characterization of the high-grade polymetallic Cigar Lake uranium deposit

TUESDAY, 9 MAY 2023

15:30–16:50 **SESSION 2/4**
Health, safety, environment and social
responsibility

Venue M3

Chairperson: **G. Schneider, Namibia**
Scientific **A. Khamzayeva, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	155	A. Engdahl M. Scansen	Canada	Rook I Project - Engagement as a Core Value
15:50–16:10	83 (V)	H. Garba	Niger	Update of uranium production activities in Niger
16:10–16:30	156	J. Henderson	Canada	NexGen Energy – Advancing the Rook I Project through the licensing application process for a new uranium mine and mill
16:30–16:50		S. Pickett	IAEA	An introduction to Safeguards

POSTER SESSION

TUESDAY, 9 MAY 2023

16:50–18:00 POSTER SESSION 1

Venue: In front of BR-A

WEDNESDAY, 10 MAY 2023

9:00–10:20 SESSION 1/5
Applied geology and geometallurgy of
uranium and associated metals

Venue BR-A

Chairperson: M. Cuney, France
Scientific M. Mihalasky, IAEA
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	68	A. da Silva	Brazil	Mineralogical and geochemical footprints of the uranium deposits of the Lagoa Real Uranium Province, São Francisco Craton, Brazil
9:20–9:40	11	Z. Li	China	A new exudation metallogenic model for the Hadatu uranium deposit in the red-mottled sedimentary sandstone system of Erlian Basin, northern China
9:40–10:00	113	P. Bruneton	France	UDEPO: The IAEA uranium deposits database – 2023 update
10:00–10:20	17	S. Selambak-kannu	Malaysia	Economic assessment on adsorption performance of thorium using amine-based ion imprinted polymer: response surface modelling
<hr/> <i>10:20–10:50 Break</i> <hr/>				

WEDNESDAY, 10 MAY 2023

9:00–10:20 **SESSION 2/5**
Health, safety, environment and social
responsibility

Venue M3

Chairperson: **D. Bellifemine, Australia**
Scientific **C. Good, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	46	H. Okyar	IAEA	IAEA tools for occupational radiation protection in the uranium mining and processing industry (Safety Report, training package and data exchange platform)
9:20–9:40	44	P. Sola	Thailand	Assessment of internal dose, external dose, and hazard index of workers surrounding the waste and monazite material storage facility of Thailand Institute of Nuclear Technology (TINT)
9:40–10:00	131	F. Deeba	Bangladesh	Radon and natural radioactivity at the coastal environment of Bangladesh: Implication for assessing radiation hazard and the possible uranium mineralization
10:00–10:20	85	C. J. Guembou Shouop	Cameroon	Radon/thoron in water, air, and soil assessment in the uranium bearing area of Poli – Cameroon
10:20–10:50	<i>Break</i>			

WEDNESDAY, 10 MAY 2023

10:50–12:10 **SESSION 1/6** **Venue BR-A**
Advances in uranium and thorium exploration

Chairperson: P. Ledru, France
Scientific Chair: A. Hanly, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	75	A. Boytsov	Russian Federation	Wings – new sandstone type uranium deposit for ISL mining in Namibia
11:10–11:30	144	J. Mercadier	France	Geological model and exploration concepts of unconformity-related uranium deposits in Canada: the approach of the GeomIn3D program
11:30–11:50	146	C. Keller	Canada	Geophysical advancements for uranium exploration in the Athabasca Basin, Canada
11:50–12:10	133	J. Sykes	Canada	Baselode Energy Corp.'s Recent ACKIO uranium discovery as a proof of concept for the Athabasca Basin 2.0 Thesis: Exploring for overlooked near surface, high-grade ranium deposits outside of the basin
<hr/> <i>12:10–13:30 Lunch Break</i> <hr/>				

WEDNESDAY, 10 MAY 2023

10:50–12:10 **SESSION 2/6:** **Venue M3**
Health, safety, environment and social responsibility

Chairperson: H. B. Okyar, IAEA
Scientific Chair: A. Khamzayeva, IAEA

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	71	J. Blake	United States of America	Approaches to geochemical fingerprinting of uranium in water and solids

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
11:10–11:30	59 (V)	G. Zheng	China	Research on soil remediation of decommissioned uranium mining and milling sites in China
11:30–11:50	9	I. Opoku-Ntim	Ghana	Measurement of radium and rado exhalation rates in soil samples from Obuasi Municipality a mining town in Ghana using the sealed can technique
11:50–12:10		Z. Fan	IAEA	IAEA perspective on safety of uranium production activities
12:10–13:30 <i>Lunch Break</i>				

WEDNESDAY, 10 MAY 2023

13:30–14:50 **SESSION 1/7** **Venue BR-A**
Advances in uranium and thorium exploration

Chairperson: **A. Boytsov, Russian Federation**
Scientific Chair: **M. Mihalasky, IAEA**

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
13:30–13:50	129	T. Obin	France	Graphitic lithologies and related structures linked to unconformity-related uranium deposits of the Athabasca basin (Saskatchewan, Canada)
13:50–14:10	167	I. R. Annesley	Canada	Deep-seated, crustal structural controls on monazite mineralization at Alces Lake, SK (Canada): Characteristics, evidence, and exploration implications
14:10–14:30	114	K. Poliakovska	Ukraine	UDEPO: Exploring new data functionalities
14:30–14:50	51	C. Bonnetti	France	Trace element mapping by LA-ICP-MS on uraninite: A new tool to decipher the genesis of uranium mineral systems
14:50–15:30 <i>Break</i>				

WEDNESDAY, 10 MAY 2023

13:30–14:50 **SESSION 2/7** **Venue M3**
Uranium from unconventional resources

Chairperson: S. Hall, United States of America
Scientific N. Haneklaus, IAEA
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
13:30–13:50	109 (V)	W. Huang	China	A modelling methodology for the evaluation of exploiting uranium-bearing coal deposits using fluidization synergetic mining technology
13:50–14:10	93	D. A. Mwalongo	United Republic of Tanzania	Unconventional uranium resources in phosphate rocks and mineral fertilizers in East Africa: Plant food for thought
14:10–14:30	39	J. Manrique	Ecuador	Content distribution of uranium and rare earth elements and yttrium in the Puyango deposit, Ecuador
14:30–14:50	116 (V)	S. Sihana	Indonesia	Study on the potential of uranium recovery from phosphoric acid production in Indonesia
<i>14:50–15:30 Break</i>				

WEDNESDAY, 10 MAY 2023

15:30–16:50 **SESSION 1/8** **Venue BR-A**
Advances in uranium and thorium exploration

Chairperson: F. Mattos Tavares, Brazil
Scientific A. Hanly, IAEA
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	43	H. Polo	Brazil	Continental-scale favourability for uranium deposits in Brazil
15:50–16:10	95	I. Sousa Lima Cosra	Brazil	An artificial intelligence approach to detect uranium anomalies in airborne geophysical data

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
16:10–16:30	28	P. Ledru	France	Exploration and evaluation techniques for sandstone-type deposits
16:30–16:50	137	H. Toubon	France	Access new resources through innovation

WEDNESDAY, 10 MAY 2023

15:30–16:50 **SESSION 2/8** **Venue M3**
Uranium production by the in situ leaching (ISL)/ in situ recovery (ISR) process

Chairperson: **A. Boytsov, Russian Federation**
Scientific **B. Moldovan, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	104 (V)	Z. Sun	China	Uranium in-situ bioleaching in the KJET deposit, North West China
15:50–16:10	69	F. Guerin	France	ISR mining: lessons learned from various geological and environmental conditions
16:10–16:30	108	A. Omirgali	Kazakhstan	Associated gold recovery during In-situ leaching of uranium
16:30–16:50	107	Z. Amankeldina	Kazakhstan	Scientific, technological and innovative progress NAC Kazatomprom JSC in the production of rare and rare earth metals from uranium solutions

POSTER SESSION

WEDNESDAY, 10 MAY 2023

16:50–18:00 **POSTER SESSION 2** **Venue: In front of BR-A**

THURSDAY, 11 MAY 2023

9:00–10:20 **SESSION 1/9**
Strategic considerations: uranium
exploration and production

Venue BR-A

Chairperson: **A. Aubin, Canada**
Scientific **A. Hanly, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	14	L. E. Lopez	Argentina	Uranium exploration, resources, demand and supply in Argentina. An update.
9:20–9:40		F. Mattos Tavares	Brazil	Strategies for promoting uranium exploration and production activities in Brazil
9:40–10:00		J. Hondros	Australia	The upcoming review of the ICRP system of protection and its potential impacts on uranium production
10:00–10:20				
<i>10:20–10:50 Break</i>				

THURSDAY, 11 MAY 2023

9:00–10:20 **SESSION 2/9:**
Underground and open pit uranium
mining, milling and processing

Venue M3

Chairperson: **M. Al-Shannag, Jordan, IAEA**
Scientific **N. Haneklaus, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:00–9:20	32	A. Rao Kacham	India	Studies on development of hybrid leaching scheme for recovery of uranium from a medium-grade brecciated limestone type Indian uranium ore

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
9:20–9:40	48	W. Dong	China	Optimization and its application of mining production techniques for Husab open-pit uranium mine, Namibia
9:40–10:00	52	Q. Wu	China	Seismic prospecting technology for the evaluation of metallogenic environment of sandstone-hosted uranium deposits, northeastern China
10:00–10:20	89	M. Alnaief	Jordan	Evaluation of two commercial resins for the concentration and purification of uranium solutions resulting from the alkaline leaching process of central Jordan uranium deposits
<i>10:20–10:50 Break</i>				

THURSDAY, 11 MAY 2023

10:50–12:10 **SESSION 1/10:** **Venue BR-A**
Advances in uranium and thorium exploration

Chairperson: **P. Ledru, France**
Scientific **M. Mihalasky, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	45 (V)	Y. Meng	China	Characteristics and Distribution of Typical Thorium Deposits in China
11:10–11:30	132	M. Aranha	India	Towards a quantitative mineral resource assessment of global uranium resources
11:30–11:50	53	P. Moeyaert	France	Towards a digital twin for uranium liquid-liquid extraction operations for Somair plant
11:50–12:10	118	M. Serdoun	France	An efficient workflow for predicting various logging variables using simple Machine-Learning programs
<i>12:10–13:30 Lunch Break</i>				

THURSDAY, 11 MAY 2023

10:50–12:10 **SESSION 2/10** **Venue M3**
Underground and open pit uranium
mining, milling and processing & Uranium
newcomers

Chairperson: **C. Polak, France**
Scientific **C. Good, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
10:50–11:10	161	J. Adams	Canada	Maximizing uranium production using data analysis and modelling tools
11:10–11:30	98	I. Shafer	United States of America	United States Department of Energy Office of Legacy Management's Uranium Leasing Program
11:30–11:50	164	S. Richet	IAEA	Evaluation of Member States additional protocol declarations regarding uranium mining
11:50–12:10	136	M. Maley	Australia	Development of the Tiris Uranium Flowsheet
12:10–13:30	<i>Lunch Break</i>			

THURSDAY, 11 MAY 2023

13:30-15:10 **PANEL SESSION** **Venue BR-A**

Moderator: **I. Chatzis, IAEA**
Co- **B. Moldovan, IAEA**
Moderator:

Time	Name	Designating Member State/Organization	Title
13:30–13:35	B. Moldovan / I. Chatzis	IAEA / IAEA	Lead, Global Uranium Resources and Production / Communication Officer
13:35–13:45	L. Grancea	TradeTech	Director Policy & Strategy
13:45–13:55	B. Suijs	WMC Energy	Senior Advisor and Co-founder of WMC Energy

Time	Name	Designating Member State/Organization	Title
13:55–14:05	D. Bellifemine	South Australia Environment Protection Authority	A/Director
14:05–14:15	G. Schneider	Namibian Uranium Institute	Executive Director
14:15–14:25	A. Boytsov	TENEX	Executive Vice President Exploration
14:25–14:35	C. Polak	ORANO Mining	Senior Advisor Strategy & Partnership
14:35–15:05	Q&A Session		
15:05–15:10	Panel Closing Remarks		

THURSDAY, 11 MAY 2023

15:30–16:30 **SESSION 1/11** **Venue BR-A**
Advances in uranium and thorium exploration

Chairperson: **A. Boytsov, Russian Federation**
Scientific **M. Mihalasky, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	50	K. Poliakovska	Ukraine	Overview of selected pegmatoid-related complex REE-TH-U mineralized areas within the Canadian and Ukrainian precambrian shields
15:50–16:10	73	H.A Kalambuka	Kenya	Deep learning modeling of rare earths as a proxy for uranium proceptivity in carbonatites

THURSDAY, 11 MAY 2023

15:30–16:50 **SESSION 2/11:**
Uranium newcomers

Venue M3

Chairperson: **A. Aubin, Canada**
Scientific **N. Haneklaus, IAEA**
Chair:

Time	Paper No.	Name	Designating Member State/Organization	Title of Paper
15:30–15:50	80	M. Al-Shannag	Jordan	Jordan Uranium Project: Toward Commercial Production
15:50–16:10	10	R. Soja	Nigeria	Harnessing Uranium Potentials for Peaceful application: Nigeria's Preparedness and the Journey so far
16:10–16:30	140	D. A. Mwalongo	United Republic of Tanzania	Practical IAEA assistance for Tanzania in the development of national infrastructure for the uranium production cycle based on the newly developed milestones approach
16:30–16:50	124	M. Rajib	Bangladesh	Potential occurrence of U-Th and associated minerals in the geological environment of Bangladesh

THURSDAY, 11 MAY 2023

16:30–18:00 **SESSION WiN: PANEL EVENT**
Women in Uranium Exploration and Mining: Past, Current and Future Perspectives

Venue BR-A

Moderator: **A. Hanly, IAEA**

Co-Moderator: **S. Hall, United States of America**

Time	Name	Designating Member State/Organization	Title
16:30–18:00	A. Hanly	IAEA WiN Executive Committee/IAEA	Education and Mentoring Officer IAEA WiN Exec Committee Uranium Production Specialist Chair and Panel Moderator
	S. Hall	United States Geological Survey	URAM-2023 Symposium Chair Panel co-Moderator

J. Donner	IAEA Win Executive Committee	President IAEA WiN Intro remarks for WiN IAEA Chapter
O. Mykolaichuk	IAEA	Director NEFW Intro remarks for NEFW IAEA
C. Polak	ORANO Mining	Senior Advisor Strategy and Partnership
A. Akzholova	NAC Kazatomprom JSC	Acting Chief Operating Officer
G. Schneider	Namibian Uranium Institute	Executive Director
B. Reilly	Cameco Corporation	Senior Vice-President and Chief Operating Officer
C. Good	IAEA	Project Officer LEU Bank
D. Rahayu	Research Center for Nuclear Reactor Technology	Young Scientist of Nuclear Security and Safeguards Research Group
K. Poliakovska	National Taras Shevchenko University of Kyiv	PhD candidate at universities in France and Ukraine
<i>18:00–19:30 WiN IAEA Reception</i>		

FRIDAY, 12 MAY 2023

9:00–10:40 CLOSING SESSION AM-1

Venue BR-A

Chairperson: C. Polak, France
Scientific Chair: B. Moldovan, IAEA

Time	Name	Designating Member State/Organization	Title
9:00–9:20	L.C Rodrigues Machado da Silva	Brazilian Nuclear Industries	Mining Production in Brazil - Santa Quiteria Project
9:20–9:40	L. Moger	NexGen Energy Ltd.	Delivering clean energy fuel for the future
9:40–10:00	A. Adnani (V)	Uranium Energy Corp	Uranium Energy Corp. is enabling the Green Energy Transition
10:00–10:20	A. Boytsov	TENEX	Uranium industry: History, status, outlook and challenges

Time	Name	Designating Member State/Organization	Title
10:20–10:40	D. Cates (V)	Denison Mines Corp.	Denison Mines: Uranium development and exploration
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10:40–11:10 <i>Break</i>			
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FRIDAY, 12 MAY 2023

11:10–12:45 CLOSING SESSION AM-2

Venue BR-A

Chairperson: C. Polak, France, A. Akzholova, Kazakhstan
Scientific Chair: B. Moldovan, IAEA

Time	Name	Designating Member State/Organization	Title
11:10–11:40	C. Polak	ORANO Mining	Orano's long-term strategy to meet utilities' security of supply
11:40–12:10	B. Reilly	Cameco Corporation	Cameco's Sustainable Path to Energizing a Clean-Air World
12:10–12:25	S. Hall	U.S. Geological Survey	Symposium closing remarks
12:25–12:45	M. Chudakov	IAEA	IAEA's closing remarks
12:45 <i>Conference Close</i>			
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(v) = virtual presentation

Posters

TUESDAY, 9 MAY 2023

16:50–18:00 POSTER SESSION 1:

Venue

In front of BR-A

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
56	S. Sawe	United Republic of Tanzania	Uranium newcomers: The case of Tanzania
57	M. Montaser	Egypt	Uranium Recovery from Commercial Phosphoric Acid using Active Carbon-Based Waste Packaging Materials
101	P. Oktavianto	Indonesia	Uranium Potential in Indonesia: For Energy Independence
147	C. A. B. Dath	Senegal	Knowledge management in the context of growing interests on uranium resources and the introduction of nuclear power in Africa: the importance of regional and international cooperation
20	N. Haneklaus	IAEA	Potential unconventional uranium recovery from phosphates and desalination brine in the Kingdom of Saudi Arabia
66	A. Perez	Philippines	Uranium geochemical map of the Philippines
81	S. Aladaileh	Jordan	The Jordan Uranium Project 2013-Present: A Progress Report
122	F. Boujelbane	Tunisia	$^{234}\text{U}/^{238}\text{U}$ activity ratios in Tunisian phosphates
21	A. Sayerdayer	Egypt	Uranium production challenges- Egyptian experience
72	B. Aregga	Ethiopia	Regulatory Framework and Environmental Monitoring at Uranium Abundant Sites in Ethiopia
55	Y. Khawassek	Egypt	Uranium(VI) sorption from aqueous solution using commercial anion exchange resins; towards sustainable applications in future circular economy and to achieve UN-SDGs
37	N. Ahmadi	Tunisia	Review on potential uranium and rare earth elements extraction from Tunisian Sra Ouertane Phosphate Ore

149	M. Quessandier	France	Structural and petrophysical characterisation of a fault zone hosting uranium mineralization: new data from the Cigar North prospect (Athabasca, Canada)
6	I. Opoku-Ntim	Ghana	The health effects of radon on the population of the Ga South Municipality of the Greater Accra Region, Ghana

WEDNESDAY, 10 MAY 2023

16:50–18:00 POSTER SESSION 2:

Venue

In front of BR-A

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
168	L. Manu	IAEA	Estimation of nuclear materials in the nuclear fuel cycle
30	N. Haneklaus	IAEA	Potential Recovery of Uranium Resources from Phosphate Fertilizers Utilized in India
82	L. Mejri	Tunisia	Uranium potential in Tunisia, challenges and opportunities
126	M. Marijanski	IAEA	Circular Economy Considerations for the Uranium Mining Industry
90	B. Bulut Acar	Türkiye	Possible Extraction and Energy Potential of Uranium Reserves at the Temrezli Deposit in Turkey
102	C. Yu	China	Geochronology of the Hongshiquan uranium deposit in the Longshoushan Uranium Metallogenic Belt, Northwestern China
115	A. Davletiyarova; N. Bokovaya; I. Nurimanova	Kazakhstan	Kazatomprom's experience in accounting and control of natural uranium
67	F. Rukundo	Uganda	Potential Health Risk Assessment associated with uranium mining in Eastern Uganda
99	P. A. Kuswanto	Indonesia	Managing security and safety risk in nuclear fuel cycle facilities
65	K. Mubiri	Uganda	Multiobjective budgetary planning of uranium production for the nuclear fuel cycle
111	A. Saputra	Indonesia	Uranium Recovery from The Effluent of Purification and Conversion

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
			Process at Uranium Purification and Conversion Pilot Plant (PCP) in Indonesia
134	I. Abdurrosyid	Indonesia	Indonesia Sea Water Uranium as Feasible Nuclear Fuel Supply to Meet Indonesia's Future NPP Requirement
112	J. Rachmadetin	Indonesia	Adsorption of Uranium (VI) Sulfate Complexes onto Anion Exchange Resin: Experiment and PHREEQC Modelling
13	L. Freihat	Jordan	Radioactive Minerals in Jordan
139	F. Nie	China	Contrasting mineralization conditions of sandstone-type uranium deposits between the eastern and western basins, North China
86	C. J. Guembou Shouop	Cameroon	Liquid –gas equilibrium for radon concentration in water assessment: a rapid and simple in-situ procedure using SARAD EQF 3200
138	Y. Bensedik	France	Development and deployment of a gamma ray connected stick for in situ uranium grade measurement at Somair Mine, Niger

Posters - Virtual

Venue:

Screens In front of BR-A

& in the Conference App

Paper No.	Author(s) [presenting author in bold]	Designating Member State/Organization	Title of Paper
8	I. Azab	Egypt	Improvement of Uranium Surface Mining Operations in Gabal Gattar, North Eastern Desert, Egypt.
40	DPS. Rathore	India	Simple and reliable analysis of uranium in mineralised rocks, ores, beneficiation products and other diverse matrices: application of differential technique in laser-induced fluorimetry/pulsed led-fluorimetry -A green methodology
125	Z. Xiuxiang	China	Study on heap leaching technology of uranium ore
12	D. Rattanaphra	Thailand	Study on the determination of uranium, thorium and rare earth elements in coal and coal ash by acid wet digestion method
79	M. Yannah	Cameroon	Tectonic evolution as a guide for uranium exploration in Cameroon
4	I. C. Popescu	Romania	Research concerning the environmental impact of former uranium mining activities on the protected areas in Arad county, Romania
103	B. Tolawak	Ethiopia	Uranium and Thorium Activity Concentration and Their Associated Radiological Hazards in Raw Material, Waste and Final Product of the Bombawha Kaolin Factor
128	A. Muzongomerwa	Zimbabwe	Zimbabwe's programme for management of future health and safety issues arising from uranium exploitation
15	I. Salameh	Jordan	Uranium Recovery from Qatrana Phosphorite Member (QP), Jordan
148	B. Tolawak	Ethiopia	An Overview of Uranium Exploration and to use it for power production in Ethiopia
92	N. Aziz	Indonesia	Managing radiation exposure in nuclear fuel cycle facilities
27	K. Wang	China	Geology, geochemistry and origin of volcanic type uranium deposit in East Kunlun Orogen, Western China

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Governments of Member States and those organizations whose activities are relevant to the conference subject matter are invited to designate participants. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Scientists interested in participating in any of the IAEA conferences should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

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2023

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15-19 May, Vienna, Austria

International Conference on Computer Security in the Nuclear World: Security for Safety (CN-313)
19-23 June, Vienna, Austria

International Symposium on Isotope Hydrology (CN-320)
3-7 July, Vienna, Austria

Second International Conference on Climate Change and the Role of Nuclear Power (CN-315)
9-13 October, Vienna, Austria

29th IAEA Fusion Energy Conference (CN-316)
16-21 October, London, United Kingdom

International Conference on Waste and Environmental Safety: Integrated Approach to Strengthening Sustainable Development (CN-318)
6-10 November, Vienna, Austria

International Conference on Research Reactors: Achievements, Experience and the Way to a Sustainable Future (CN-319)
27-30 November, Dead Sea, Jordan

2024

International Conference on Enhancing Operational Safety of Nuclear Power Plants (CN-284)
15 – 19 April 2024, Beijing, China

International Conference on Nuclear Security ICONS 2024 (CN-321)
20 – 24 May 2024, Vienna, Austria

International Symposium on Food Safety and Quality Assurance (CN-322)
27 – 31 May 2024, Vienna, Austria

International Conference on the Management of Spent Fuel from Nuclear Power Reactors (CN-323)
10 – 14 June 2024, Vienna, Austria

International Conference on Nuclear Knowledge Management and Human Resources Development: Challenges and Opportunities (CN-324)
2 – 5 July 2024, TBC

International Conference on Hybrid Imaging (IPET 2024) (CN-326)
7 – 11 October 2024, Vienna, Austria

International Conference on Small Modular Reactors and their Applications (CN-327)
28 – 31 October 2024, Vienna, Austria

Ministerial Conference on Nuclear Science and Technology for Development (CN-328)
12 – 14 November 2024, Vienna, Austria

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSO) in Enhancing Nuclear Safety and Security: Enhancing science and adaptability in a changing world and creating perspective for a young generation (CN-329)
2 – 6 December 2024, Vienna, Austria

PUBLICATIONS

Proceedings

The proceedings of the conference containing all presentations and posters delivered at the conference, as well as the findings and recommendations, will be published by the IAEA as soon as possible after the conference.

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[Milestones in the Development of National Infrastructure for the Uranium Production Cycle | IAEA](#)

Management of Residues Containing Naturally Occurring Radioactive Material from Uranium Production and Other Activities

[Management of Residues Containing Naturally Occurring Radioactive Material from Uranium Production and Other Activities | IAEA](#)

The International Working Forum on the Regulatory Supervision of Legacy Sites

[The International Working Forum on the Regulatory Supervision of Legacy Sites | IAEA](#)

World Distribution of Uranium Provinces

[World Distribution of Uranium Provinces | IAEA](#)

A Preliminary Inventory and Assessment of Uranium Resources in Mine Wastes

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Occupational Radiation Protection in the Uranium Mining and Processing Industry

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Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues (URAM-2018)

[Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues \(URAM-2018\) | IAEA](#)

Descriptive Uranium Deposit and Mineral System Models

<https://www.iaea.org/publications/14687/world-uranium-geology-exploration-resources-and-production>

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Uranium Resources as Co- and By-products of Polymetallic, Base, Rare Earth and Precious Metal Ore Deposits

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The Environmental Behavior of Uranium

[The Environmental Behaviour of Uranium \[IAEA Preprint\]](#)

Uranium Resources, Production and Demand (Red Book)

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