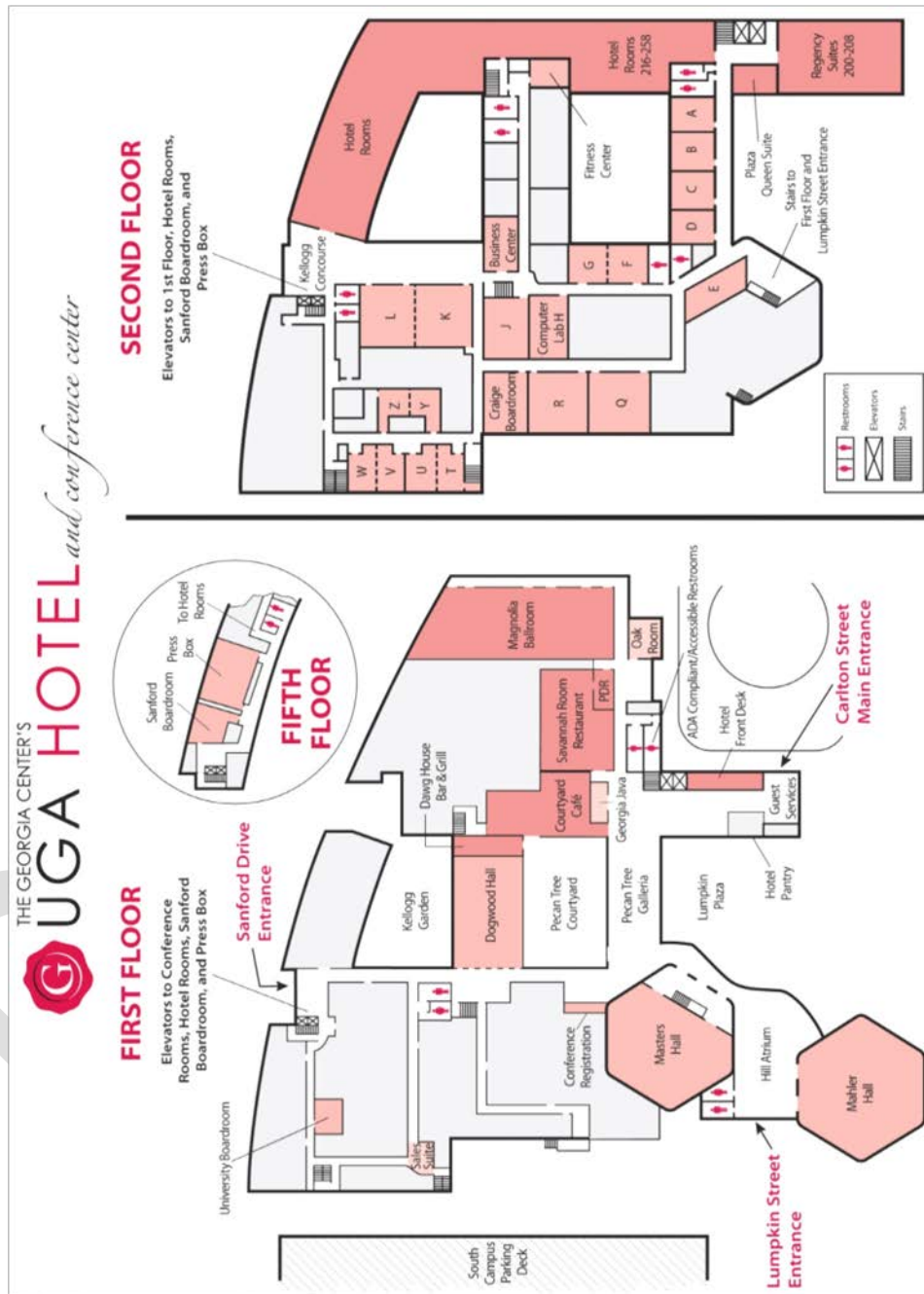


**2018 International Conference on
Heavy Metals
in the Environment (ichmet2018usa.org)**

**July 22-25, 2018
Athens, GA USA
University of Georgia
Center for Continuing Education & Hotel
(www.hotel.uga.edu)**

GA Center Map



ICHMET Welcome

The conference organizing committee cordially invite you to participate in the scientific and social programs of the 19th International Conference on Heavy Metals in the Environment (ICHMET). The 2018 ICHMET takes place in Athens, Georgia, on the campus of The University of Georgia, founded in 1785 as the United States' first state-chartered university.

The 19th ICHMET is a continuation of the highly successful conference series that started in 1975 in Toronto, Canada. Recent ICHMET conferences were held in Ghent, Belgium (2016), Guiyang, China (2014), Rome, Italy (2012) and Gdansk, Poland (2010). The 2020 ICHMET conference will be held in the Republic of Korea.

You will find the conference program to be highly diverse in research areas ranging from the environmental impact of manufactured nanoparticles to the bioavailability of trace elements in the environment, with more than 225 presentations representing 38 different countries. We are also pleased to have three distinguished plenary speakers.

Finally, we wish to thank all participants, symposia organizers, and sponsors for making this meeting possible.

With best wishes,

John C. Seaman
Co-Chair
Savannah River Ecology Lab

Anna Knox
Co-Chair
Savannah River National Lab

Kimberly A. Price
Organizing Secretary
Savannah River Ecology Lab

ICHMET Social Schedule

Conference Mixer

Sunday Evening 7:00-9:00 PM
Magnolia Banquet Area

Monday-Wednesday Coffee Breaks

9:20-9:30 AM (Hill Atrium)
10:40-11:00 AM (Hill Atrium and Kellogg
Concourse)
3:00-3:20 PM (Hill Atrium and Kellogg
Concourse)

Monday-Wednesday: Lunch

12:00-1:30 PM, Magnolia Ballroom

Monday-Tuesday: Poster Sessions

Heavy hors d'oeuvres and cash bar
5:00-6:30 PM, Magnolia Ballroom

Graduate Student Mixer

Monday Evening 7:30-10:00 PM, Offsite

Committee Meeting

Tuesday and Wednesday, 12:00-1:30 PM
Room D

Closing Ceremony

Wednesday Evening 5:00-6:30 PM, Mahler Hall
GA Center

Conference Banquet

Wednesday Evening 8:00-10:00 PM
Magnolia Ballroom

Special Symposia

Analysis of Nanoparticulates and Colloidal Metals Using Advanced ICP-MS Techniques

Organizer: James Ranville (USA-Colorado School of Mines)

Bioavailability

Organizer: Nicholas Basta (USA-Ohio State University)

Biogeochemistry of Heavy Metals in Flooded Soils and Sediments

Organizers: Jörg Rinklebe (Germany) and Anna Knox (USA-SRNL)

Environmental Electromicrobiology and Metal Interactions: Mechanisms and Applications

Organizer: Charles Turick (USA-SRNL)

Heavy Metals in Aquatic Environments

Organizers: Anna Knox (USA-SRNL) and Filip Tack (Belgium)

Heavy Metals Interactions with Biochar

Organizers: Yong Sik Ok (Republic of Korea, ICHMET Host 2020), Deyi Hou (China), Meththika Vithanage (Sri Lanka/Australia), Shih-Hao Jien (Taiwan) and Jörg Rinklebe (Germany)

Mercury in the Environment

Organizers: Xiaoyu Xu (USA-SREL), Jörg Rinklebe (Germany), Michael Bank (Norway), Xingbin Feng (China) and Jerry Lin (USA)

Metal Accumulation in Biofilms

Organizer: Robin Brigmon (USA-SRNL)

Metal Transfer from Soil to Plants: Accumulation Properties and Nutritional Needs Versus Food Safety

Organizers: Irena Twardowska (Poland) and Filip Tack (Belgium)

"Omics" to the Rescue: (Meta)Genomics, (Meta)Transcriptomics and (Meta)Proteomics Based Understanding on Metal-Microbe Interactions in the Environment

Organizer: Ashvini Chauhan (USA-FAMU)

Radionuclides in the Environment

Organizers: Dan Kaplan (USA-SRNL) and Nik Qafoku (USA-PNNL)

Remediation of Metal Contaminated Environments

Organizers: Fanny Coutelot (USA-SREL) and David F. Alden, P.E. (USA-Tersus Environmental)

Retention and Release of Metals in Soils: Modeling Approaches

Organizer: Magdi Selim (USA-LSU)

Synchrotron Analysis of Metals in the Environment

Organizers: Kirk Scheckel (USA-EPA) and Dien Li (USA-SRNL)

ICHMET Schedule Highlights

Conference Mixer

Sunday Evening 7:00-9:00 PM, Magnolia Banquet Area

Monday, July 23

Welcome to UGA (TBD)

Conference Plenary I: 8:15 to 9:20 AM, Mahler Hall

Plenary Speaker: Jörg Rinklebe (8:40-9:20 AM)

Metals in Wetland Soils

Tuesday, July 24

Conference Plenary II: 8:30 to 9:20 AM, Mahler Hall

Plenary Speaker: Robert Mason (8:40-9:20 AM)

Sources, Cycling and Bioaccumulation of Methylmercury in the Ocean

Wednesday, July 25

Conference Plenary III: 8:30 to 9:20 AM, Mahler Hall

Plenary Speaker: Henning Prommer (8:40-9:20 AM)

Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales

Closing Ceremony

Wednesday Evening 5:00-6:30 PM, Mahler Hall GA Center

Conference Banquet

Wednesday Evening 8:00-10:00 PM, Magnolia Ballroom

ICHMET Program at a Glance

Time	Sun. July 22	Mon-Tue	Monday July 23			
8:00		Open Conference Registration and Check-In	Coffee Available			
8:10			Daily Welcoming Session			
8:20			<i>Mahler Hall</i> Plenary Speaker 1 (8:40-9:20): Jörg Rinklebe "Metals in Wetland Soils"			
8:30			10 Min. Break			
8:40			MM1 Bioavailability, <i>Room K</i> 9:30-10:40	MM1 Aquatic Environments, <i>Mahler Hall</i> 9:30- 10:40	MM1 Radionuclides in the Environment, <i>Room L</i> 9:30-10:40	MM1 Electromicrobiology, <i>Room Q</i> 9:30-10:20
8:50						
9:00			20 Min. Coffee Break			
9:10			MM2 Bioavailability, <i>Room K</i> 11:00-12:00	MM2 Aquatic Environments, <i>Mahler Hall</i> 11:00- 12:00	MM2 Radionuclides in the Environment, <i>Room L</i> 11:00-12:00	MM2 Electromicrobiology, <i>Room Q</i> 11:00-11:40
9:20						
9:30			Daily Conference Luncheon (12:00 - 13:20)			
9:40			MA1 Bioavailability, <i>Room K</i> 1:30-2:50	MA1 Aquatic Environments, <i>Mahler Hall</i> 1:20-2:50	MA1 Combined Session: Rads/Evaluation of Microbial Communities, <i>Room L</i> 1:20-2:50	
9:50						
10:00			20 Min. Coffee Break			
10:10			MA2 Bioavailability, <i>Room K</i> 3:10-3:50	MA2 Aquatic Environments, <i>Mahler Hall</i> 3:10-4:50	MA2 Radionuclides in the Environment, <i>Room L</i> Hall 3:10- 4:50	MA2 Biofilms, <i>Room</i> <i>Q</i> 3:10-4:20
10:20						
10:30			Monday Poster Sessions (17:00 - 18:30) <i>Hill Atrium</i> : Analytical Methodology, Bioavailability; Remediation of Contaminated Environments, Aquatic Environments, Radionuclides in the Environment, SREL Radioecology REU Posters			
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19:30	Opening Mixer 7:00-9:00					
20:00						
20:30						
21:00						

Time	Tuesday July 24			
8:00	Coffee Available			
8:10				
8:20	Daily Welcoming Session			
8:30				
8:40				
8:50	Mahler Hall Plenary Speaker 2 (8:40-9:20): Robert Mason "Sources, Cycling and Bioaccumulation of Methylmercury in the Ocean"			
9:00				
9:10				
9:20	10 Min. Break			
9:30	TM1 Flooded Soils, <i>Mahler Hall</i> 9:30-10:40	TM1 Metal Transfer to Plants, <i>Room K</i> 9:30-10:40	TM1 Synchrotron Analysis of Metals in the Environment, <i>Room L</i> 9:30-10:40	TM1 Retention and Release of Metals: Modeling Approaches, <i>Room Q</i> 9:30-10:40
9:40				
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10:40	20 Min. Coffee Break			
10:50				
11:00	TM2 Flooded Soils, <i>Mahler Hall</i> 11:00-12:00	TM2 Metal Transfer to Plants, <i>Room K</i> 11:00-12:00		TM2 Retention . . . : Modeling Approaches, <i>Room Q</i> 11:00-11:40
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12:00	Daily Conference Luncheon (12:00 - 13:20)			
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13:20	TA1 Flooded Soils, <i>Mahler Hall</i> 1:20-2:50	TA1 Metal Transfer to Plants, <i>Room K</i> 1:30-2:50	TA1 Nanomaterials, <i>Room L</i> 1:20-2:50	
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14:50	20 Min. Coffee Break			
15:00				
15:10	TA2 Spatial Issues, <i>Mahler Hall</i> 3:10-4:30	TA2 Metal Transfer to Plants, <i>Room K</i> 3:10-4:50	TA2 Nanomaterials, <i>Room L</i> 3:10-3:50	TA2 General Technical Session - Novel Sorbents, <i>Room Q</i> 3:30-4:50
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17:00	Tuesday Poster Sessions (17:00 - 18:30) <i>Hill Atrium</i> : Flooded Soils, Biochar, Mercury, Metal Transfer to Plants			
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20:00	Grad Student Mixer, Offsite 7:30-10:00			
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22:00				

Time	Wednesday July 24			
8:00	Coffee Available			
8:10	Coffee Available			
8:20	Daily Welcoming Session			
8:30	Daily Welcoming Session			
8:40	Plenary Speaker 3 (8:40-9:20): Henning Prommer "Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales"			
8:50	Plenary Speaker 3 (8:40-9:20): Henning Prommer "Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales"			
9:00	Plenary Speaker 3 (8:40-9:20): Henning Prommer "Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales"			
9:10	Plenary Speaker 3 (8:40-9:20): Henning Prommer "Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales"			
9:20	10 Min. Break			
9:30	WM1 Biochar, Mahler Hall 9:30-10:40	WM1 Mercury, Room K 9:30-10:40	WM1 Remediation, Room L 9:30-10:40	
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10:40	20 Min. Coffee Break			
10:50	20 Min. Coffee Break			
11:00	WM2 Biochar, Mahler Hall 11:00-12:00	WM2 Mercury, Room K 11:00-12:00	WM2 Remediation, Room L 11:00-12:00	WM2 Metal/Trace Element Hazards, Room Q 11:00-11:40
11:10				
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12:00	Daily Conference Luncheon (12:00 - 13:20)			
12:10	Daily Conference Luncheon (12:00 - 13:20)			
12:20	Daily Conference Luncheon (12:00 - 13:20)			
12:30	Daily Conference Luncheon (12:00 - 13:20)			
12:40	Daily Conference Luncheon (12:00 - 13:20)			
12:50	Daily Conference Luncheon (12:00 - 13:20)			
13:00	Daily Conference Luncheon (12:00 - 13:20)			
13:10	Daily Conference Luncheon (12:00 - 13:20)			
13:20	WA1 Biochar, Mahler Hall 1:20-2:50	WA1 Mercury, Room K 1:20-2:50	WA1 Remediation, Room L 1:30-2:50	WA1 Metal/Trace Element Hazards, Room Q 1:20-2:50
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14:50	20 Min. Coffee Break			
15:00	20 Min. Coffee Break			
15:10	WA2 Biochar, Mahler Hall 3:10-4:10	WA2 Mercury, Room K 3:10-4:50	WA2 Remediation, Room L 3:10-3:50	WA2 Metal/Trace Element Hazards, Room Q 3:10-4:50
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17:00	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
17:30	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
18:00	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
18:30	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
19:00	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
19:30	ICHMET Closing Ceremony 5:00-6:30 Mahler Hall			
20:00	ICHMET Conference Banquet 8:00-10:00			
20:30	ICHMET Conference Banquet 8:00-10:00			
21:00	ICHMET Conference Banquet 8:00-10:00			
21:30	ICHMET Conference Banquet 8:00-10:00			
22:00	ICHMET Conference Banquet 8:00-10:00			

ICHMET Technical Schedule

Monday Sessions

Welcome and Conference Plenary I: 8:15 to 9:20 AM, Mahler Hall

Plenary Speaker I: Jörg Rinklebe (8:40-9:20 AM)

Metals in Wetland Soils

Mahler Hall: Heavy Metals in Aquatic Environments

Organizers: Anna Knox (USA-SRNL) and Filip Tack (Belgium)

Room K: Bioavailability

Organizer: Nicholas Basta (USA-Ohio State University)

Room L: Radionuclides in the Environment

Organizers: Daniel Kaplan (USA-SRNL) and Nik Qafoku (USA-PNNL)

Room L: "Omics" to the Rescue: (Meta)Genomics, (Meta)Transcriptomics and (Meta)Proteomics Based Understanding on Metal-Microbe Interactions in the Environment

Organizer: Ashvini Chauhan (USA-FAMU)

Room Q: Environmental Electromicrobiology and Metal Interactions: Mechanisms and Applications

Organizer: Chuck Turick (USA-SRNL)

Room Q: Biofilms

Organizer: Robin Brigmon (USA-SRNL)

Monday Room K

Bioavailability

Monday Morning Session 1 (Bioavailability MM1) Room K, Moderator: Nicholas Basta

Abstract No.	Time	Title
135	9:30 AM	Invited: Bioavailability: Advances in Science and Implementation for Adjusting Human and Ecological Exposure <i>Nicholas Basta</i>
039	10:00 AM	Copper and Fluoride Accumulations in Lettuce Grown in Copper and Fluoride Contaminated Soils: Antagonism Relationship of the Contaminants <i>Yasin Senkondo, Stalin Mkumbo, Paula Sospeter</i>
003	10:20 AM	Physico-Chemical, Heavy Metal and Microbial Profile of Some Abandoned Gold Mine Tailings in Krugersdorp, South Africa <i>Muibat Omotola Fashola, Veronica-Mpode Ngole-Jeme, Olubukola Oluranti Babalola</i>

Monday Morning Session 2 (Bioavailability MM2) Room K, Moderator: ????

Abstract No.	Time	Title
152	11:00 AM	Incorporating Diet into In Vitro Methods to Improve Prediction of Lead Bioaccessibility in Wildlife <i>Alyssa Zearley, Nicholas Basta, Nelson Beyer, Milton González-Serrano</i>
134	11:20 AM	Effect of Size and Natural Organic Material on the Uptake of Platinum Nanoparticles in Freshwater Snail, <i>Lymnaea stagnalis</i> <i>Mithun Sikder, David Barasch, Marie-Noele Croteau, Brett A. Poulin, Mohammed Baalousha</i>
170	11:40 AM	Single Cell ICP-MS: Quantification of Metal Content in Individual Unicellular Microorganism <i>Chady Stephan, Ruth Merrifield</i>

Monday Afternoon Session 1 (Bioavailability MA1) Room K, Moderator: ????

Abstract No.	Time	Title
017	1:30 PM	Grain Cd Concentration in Zn Biofortified Wheat Grown on Cd Contaminated Soil <i>Abdul Wakeel, Aysha Kiran, Muhammad Ishfaq</i>
025	1:50 PM	Association of Cadmium and Dioxin-Like Chemicals Measured in Human Blood with Diabetic Nephropathy <i>Charles Everett</i>
151	2:10 PM	Copper and Fluoride Immobilization Prospects of Organic and Inorganic Amendments in Soils <i>Yasin Senkondo, Stalin Mkumbo, Paula Sospeter</i>
015	2:30 PM	Mitigation of Cadmium Contaminated Indo-Gangetic Alluvial Soil Under Rice-Spinach Cropping Sequence Using Farmyard Manure and Zinc Ameliorants <i>Sanmay Kumar Patra, Somsankar Das</i>

Monday Afternoon Session 2 (Bioavailability MA2) Room K, Moderator: ????

Abstract No.	Time	Title
028	3:10 PM	Barium, Cadmium and Chromium in Soils Amended with Sewage Sludge for 18 Years and Cropped with Maize <i>Wanderley Melo, Antonio Rocha, Gabriel Melo, Liandra Bertipaglia, Paulo Dian, Kathery Brenecke, Valeria Melo</i>
085	3:30 PM	Factors Controlling Vegetation Succession and Establishment on Ni-Cu Mine Tailings Near Sudbury, ON <i>Kimber Munford</i>

**Monday Mahler Hall
Aquatic Environments****Monday Morning Session 1 (Aquatic Environments MM1) Mahler Hall, Moderator: Anna Knox**

Abstract No.	Time	Title
047	9:30 AM	Invited: Estimating the Ecological Risks of Metal Contamination in Aquatic Ecosystems <i>Michael Paller, Susan Blas, Anna Knox</i>
122	10:00 AM	Heavy Metal Sediment Quality Assessment of Brisbane River Estuary, Australia <i>Godfred Duodu, Ashantha Goonetilleke, Godwin Ayoko</i>
121	10:20 AM	Anthropogenic Metal Loads in Estuarine Sediment and Bioaccumulation in Shellfish Along an Urbanization Gradient <i>Xun Liu, Tongtong Zhou, Peiji Chen, Yang Zhang, Shen Yu, Yong Niu</i>

Monday Morning Session 2 (Aquatic Environments MM2) Mahler Hall, Moderator: Anna Knox

Abstract No.	Time	Title
203	11:00 AM	Trace Metals Accumulation in Tissues by Danube River Fish Species <i>Marius Matache, Alin Tudorache, Constantin Marin, Laurentiu Rozylowicz</i>
072	11:20 AM	Mercury, Silver and Other Trace Elements in Three Cyprinid Fish Species from the Vaal Dam, South Africa <i>Christof Plessl, Martin F Sigmund, Beric M Gilbert, Sarah Theiner, Annemarié Avenant-Oldewage, Bernhard K Keppler, Franz Jirsa</i>
155	11:40 AM	Trace Elements Shed in Exuviae Versus Exported from Contaminated Wetlands by Emerging Dragonflies <i>Dean Fletcher, Angela Lindell, Danielle Pitt, Paul Stankus, Brooke Lindell</i>

Monday Afternoon Session 1 (Aquatic Environments MA1) Mahler Hall, Moderator: Michael Paller

Abstract No.	Time	Title
021	1:20 PM	Environmental Impact of Ongoing Sources of Metal Contamination on Remediated Aquatic Ecosystems <i>Anna Knox, Michael Paller</i>
018	1:50 PM	Dumped Munitions as a Source of Bioavailable Mercury to Marine Environment <i>Jacek Beldowski, Marta Szubska, Magdalena Beldowska, Grzegorz Siedlewicz, Urszula Kwasięroch, Jacek Fabisiak</i>
069	2:10 PM	Cadmium Accumulation in Nile Tilapia (<i>Oreochromis niloticus</i> , Linnaeus) <i>Zinia Rahman, Ibrahim Rashid, Istiyak Ahmad</i>
062	2:30 PM	Effects of Soil Drying-Rewetting Cycles on Leaching of Heavy Metals <i>Sidra Khan, Peter Hooda, Martin Blackwell, Rosa Busquets</i>

Monday Afternoon Session 2 (Aquatic Environments MA2) Mahler Hall, Moderator: Michael Paller

Abstract No.	Time	Title
107	3:10 PM	A Novel Device for Chromium(VI) Determination in Water Based on a Microfluidic Chip <i>Ming Zhang, Liheng Xu, Cheng Qian, Li Shi</i>
059	3:30 PM	High Efficient Removal of Toxic Heavy Metals in Waste Water by Nanostructured MgO Particles <i>Xiang Luo, Tao Wu, Gang Yang, Cheng Heng Pang</i>
055	3:50 PM	New Approach in Removing Pollutants from Contaminated Aquatic Systems <i>Hua Peng, Xionghui Ji, Wei Wei, Elena Bocharnikova, Vladimir Matichenkov</i>
014	4:10 PM	Bioremediation of Manganese using Aquatic Hydrophytes <i>Fatima Tuj Johora Nazia, Harunur Rashid</i>
054	4:30 PM	Decontamination of Polluted Sediments Using Si-Activated Capping Materials <i>Wei Wei, Hua Peng, Xionghui Ji, Elena Bocharnikova, Vladimir Matichenkov</i>

Monday Room L

Radionuclides in the Environment/Microbial Communities

Monday Morning Session 1 (Radionuclides in the Environment MM1) Room L, Moderator: Daniel I. Kaplan

Abstract No.	Time	Title
164	9:30 AM	Invited: Influence of Natural Organic Matter on Pu Subsurface Migration <i>Nathan Conroy, Melody Maloubier, Daniel I. Kaplan, Philip M. Almond, Hilary P. Emerson, Mavrik Zavarin, Annie B. Kersting, Brian Powell</i>
048	10:00 AM	Biogeochemistry of Depleted Uranium in US Army Shooting Site and Potential Remediation <i>Fengxiang Han, Steven Larson, John Ballard</i>
123	10:20 AM	Effects of Environmental Radioactivity on Plants and Animals <i>David Coplestone, Neil Fuller, Jessica Goodman, Katherine Raines, Jim Smith, Craig Anderson, Stuart Auld, Nicol Caplin, Alex Ford, Abhinand Jha, Adélaïde Lereboursa, Tom Scullion, Matt Tinsley, Emily Vernon, Neil Willey</i>

Monday Morning Session 2 (Radionuclides in the Environment MM2) Room L, Moderator: Dien Li

Abstract No.	Time	Title
159	11:00 AM	Radionuclides in Wetland Ecosystems Within the Chernobyl Exclusion Zone <i>Dmitri Gudkov, Sergey Kireev, Alexander Kaglyan, Sergey Obrizan</i>
102	11:20 AM	Seasonal Changes in Uranium Porewater Chemistry in a Contaminated Wetland <i>Daniel I. Kaplan, Chen Xu, Peter Santschi, Dien Li, John Seaman, Peter Jaffe</i>
109	11:40 PM	Metal-Organic-Frameworks (MOFs) for Sequestration and Stabilization of Pertechnetate (TcO_4^-) from Groundwater and Liquid Nuclear Wastes <i>Dien Li, Natalia Shustova, Kathryn Taylor-Pashow, Daniel Kaplan, Tom Bennett, Jake Amoroso</i>

Monday Afternoon Session 1 (Rads/Omics Session MA1) Room L, Moderator: Dien Li

Abstract No.	Time	Title
168	1:20 PM	Invited: "Omics" to the Rescue: Evaluation of Microbial Community Structure and Functions in Uraniferous Soils of the Savannah River Site (SRS), USA <i>Ashvini Chauhan, Ashish Pathak, Rajneesh Jaswal, Victor Ibeanusi, Charles Jagoe, John C. Seaman</i>
177	1:50 PM	Proteomics Analysis of <i>Burkholderia</i> sp. Strain SRS-S-25 in Response to Uranium Stress <i>Meenakshi Agarwal, Rajesh Singh Rathore, Rajneesh Jaswal, Om Prakash Sharma, Rakesh Kumar Singh, John C. Seaman, Ashvini Chauhan</i>
139	2:10 PM	Insights into Uranium Tolerance of <i>Microbacterium oleivorans</i> A9 by Proteogenomic Analyses. <i>Virginie Chapon, Nicolas Gallois, Beatrice Alpha-Bazin, Philippe Ortet, Mohamed Barakat, Justine Long, Laurie Piette, Severine Zirah, Adrienne Kish, Jean Armengaud, Catherine Berthomieu</i>
023	2:30 AM	Bioremediation of Uranium Contaminated Sites from Former Mining Activities by Microorganisms - A Microscopic and Spectroscopic Approach <i>Evelyn Krawczyk-Bärsch, Ulrike Gerber, Katharina Müller, Henry Moll, André Rossberg, Robin Steudtner, Mohamed Larbi Merroun</i>

Monday Afternoon Session 2 (Radionuclides in the Environment MA2) Room L, Moderator: Larry Bryan

Abstract No.	Time	Title
166	3:10 PM	Structural Organo-Modified Feldspathoid for Selective Removal of Technetium-99 and Iodine-129 <i>Johnbull (John) Dickson, Nathan Conroy, Brian Powell, John C. Seaman, Dien Li, Daniel I. Kaplan</i>
011	3:30 PM	Using Porous Iron Composite (PIC) Material to Reduce Rhenium as an Analogue for Technetium in Environmental Batch Experiments <i>Robert J. Thomas, John C. Seaman, Fanny M. Coutelot, Emily Dorward</i>
118	3:50 PM	Direct Analysis of Radium-226 by ICP-MS in Sediment After a Simple Acidic Digestion: An Analytical Challenge <i>Hamza Ben Yaala, Delphine Foucher, Olivier Clarisse</i>
195	4:10 PM	Radiocesium (¹³⁷ Cs) Accumulation by Fish Within a Legacy Reactor Cooling Canal System on the Savannah River Site <i>Christina Fulghum, Elizabeth DiBona, Christopher Leaphart, Alexis Korotasz, James Beasley, Larry Bryan</i>
178	4:30 PM	Altitudinal Distribution of Caesium-137 in Soils: Case Study of Armenia <i>Olga Belyaeva, Nona Movsisyan, Gevorg Muradyan, Konstantin Pyuskyulyan</i>

Monday Room Q Electromicrobiology

Monday Morning Session 1 (Electromicrobiology MM1) Room Q, Moderators: ????

Abstract No.	Time	Title
143	9:30 AM	Invited: Electrochemical Techniques for Real Time, In-situ Monitoring of Biogeochemistry <i>Charles Turick, Pongsarun Satjaritanun, Blake Devivo, Hector Colon-Mercado, Scott Greenway, Sirivatch Shimpalee, John Weidner</i>
208	10:00 AM	Electron Transfer Between Iron Minerals and Water-Soluble Quinones <i>Olga Taran</i>

Monday Morning Session 2 (Electromicrobiology MM2) Room Q, Moderators: ????

Abstract No.	Time	Title
207	11:00 AM	Electrochemical Analyses Highlight Multiple Pathways of Electron Transport in Dissimilatory Metal-Reducing Bacteria Grown on Electrodes <i>Sudeep Popat, Rachel Yoho, Bradley Lusk, César Torres</i>
130	11:20 AM	Enhanced Microbial Reduction of Vanadium (V) in Groundwater with Bioelectricity from Microbial Fuel Cells <i>Yufeng Jiang, Baogang Zhang, Liting Hao</i>

Biofilms

Monday Afternoon Session 1 (Biofilms MA1) Room Q, Moderator: Robin Brigmon

Abstract No.	Time	Title
149	3:10 PM	Invited: Extracellular Polysaccharides of Cryptoendolithic Biofilms Concentrate Metals in an Oligotrophic Environment <i>Harry Kurtz, Sukhpreet Kaur</i>
106	3:40 PM	Using the Membrane Biofilm Reactor (MBfR) to Recover Platinum Group Metals (PGMs) as Nanoparticles from Wastewater <i>Bradley Lusk, Chen Zhou, Andy Tomaswick, Bruce Rittmann</i>
044	4:00 PM	Monitoring Atmospheric Metals in Cooling Tower Biofilms <i>Robin Brigmon, Daniel I. Kaplan, Heather Brant, Dien Li, Stephaney Leskinen, Elizabeth Kearns, Daniel Lim</i>

Monday Poster Session (M) 5:00 to 6:30 PM; Hill Atrium

Posters should be mounted each day before the morning plenary session.

Abstract No.	Title
General Technical Submissions – Session Organizer: John C. Seaman (SREL)	
150	Improvement of Cyanobacterial-Killing Biologically Derived Substances (BDSs) using an Ecologically Safe and Cost-Effective Naphthoquinone Derivative <i>Jae-Hyoung Joo, Jin Ho Kim, Bum Soo Park, Hye Jeong Choi, and Myung-Soo Han</i>
General Technical Submissions – Analytical Methodology	
034	Multi Isotopic Nd Analysis: A New Tool to Fingerprint Anthropogenic Materials <i>Nina Bothamy and Albert Galy</i>
182	Identifying and Controlling Sources of Ultra-Trace Metals in Control Blanks and Ensuring High Quality Data for Sensitive Environmental Risk-Based Decisions <i>Lester Dupes, Rock Vitale, Alyssa Reed, and Michael McAnulty</i>
198	Precise Quantification of Heavy Metals in Environmental Matrices Using the Universal Collision-Reaction Gas Technology on The NexION® ICP-MS Instrumentation <i>Chady Stephan, Eve Kroukamp, Fadi Abou-Shakra, Pritesh Patel</i>
087	Colorimetric Detection of Cobalt Ions Using PVA-Based Hydrogels <i>Daewon Kim, Jongho Kim, Taek Seung Lee</i>
General Technical Submissions – Lead (Pb)	
007	Foliar Application of Salicylic Improves Growth and Yield Attributes of <i>Brassica campestris</i> Grown under Lead-Contaminated Soils by Upregulating the Antioxidant Defense System <i>Mirza Hasanuzzaman</i>
120	Lead Exposure and Toxicity in Children from the Colombian Caribbean <i>Neda Alvarez-Ortega, Karina Caballero-Gallardo, Jesus Olivero-Verbel</i>
Bioavailability - Session Organizer: Nicholas Basta (USA-Ohio State University)	
089	Bioaccessibility and Human Health Risk of Heavy Metals in Road Dusts Around Steel Industrial Region, China <i>Lu Shenggao</i>
153	Heavy Metal(Oid)s Bioavailability in an Ultisol Soil and Nutritional Effects in Ryegrass by Wood Ash Application <i>Yeni Rodriguez, Belgica Maudier, Erick Zagal, Pedro Hernandez</i>

Remediation of Metal Contaminated Environments – Session Organizers: Fanny M. Coutelot (USA-SREL) and David F. Alden, P.E. (USA-Tersus Environmental)	
141	Impact of Organic Composts on Phytoremediation of Chromium Contaminated Soil by Rice (<i>Oryza sativa</i> L.) <i>Pramod Sharma, Ramaya Krishna</i>
181	Uptake of Heavy Metals by Enhanced Tobacco Grown in Industrially Polluted Soils in Bulgaria <i>Violina Angelova</i>
196	Development of Microbial Mechanisms to Predict Mineralization of Uranium of Nuclear Sites and the Impacts to the Environment <i>Tyrik Cooper, Jada Hoyle-Gardner, Landon Tucker, Haley Howard, Victor Ibeanusi, Benjamin Mwashote</i>
Heavy Metals in Aquatic Environments – Session Organizers: Anna Knox (USA-SRNL) and Filip Tack (Belgium)	
067	Micronutrients Leaching as Affected by the Intensity, Duration, and Frequency of Soil Drying Rewetting Cycles <i>Sidra Khan, Peter Hooda, Martin Blackwell, Rosa Busquets</i>
074	Zn (II) Removal by Amino-Functionalized Magnetic Nanoparticles: Kinetics, Isotherm, and Thermodynamic Aspects of Adsorption <i>Vinod Kumar Gupta</i>
076	Prussian Blue Attached to Polyacrylonitrile Nanofibers for Effective Cesium Ion Removal <i>Young Jin Gwon, Taek Seung Lee</i>
097	Mercury Persistence in Sediments from Cartagena Bay, an Industrial Area in Northern Colombia <i>Karina Caballero-Gallardo, Maria Alcala-Orozco, Diana Barraza-Quiroz, Jesus Olivero-Verbel</i>
115	Remove Strontium and Barium from “Flowback” Fluids by Reeds <i>Lin Guo</i>
137	Variability of Trace-Element Accumulation Among Invertivorous Fishes from a Coastal Plain Stream Contaminated by Coal Combustion Waste <i>Brooke Lindell, Angela Lindell, Christina Fulghum, J McArthur, Dean Fletcher</i>
157	Intermittent Saline Flow Simulations of Mangrove and Cadmium Contamination in Young Plants of <i>Avicenna schaueriana</i> Stapf & Leechm. ex Moldenke <i>Janaina Garcia, Pedro Mangabeira, Marcel Costa França</i>
158	Hydrogeochemical Behaviour and Speciation of Arsenic in Groundwater of Punjab, Pakistan <i>Nabeel Khan Niazi, Muhammad Bilal Shakoor, Irshad Bibi, Muhammad Shahid, Muhammad Farrakh Nawaz</i>
Radionuclides in the Environment – Session Organizers: Daniel I. Kaplan (USA-SRNL) and Nik Qafoku (USA-PNNL)	
065	Geochemistry of Heavy Metals in Global Wetlands Systems <i>Spencer Gilbert-Parkes</i>
100	Graphene-Based Materials for the Extraction of Uranium and Cesium from Contaminated Water <i>Chao Wang</i>
103	Influence of Aqueous Radioiodine Speciation on Uptake by Silver-Granulated Activated Carbon <i>Daniel I. Kaplan, Peter Santschi, Toshihiko Ohnuki, Kimberly Roberts, Dien Li, Kimberly A. Price, Chen Xu, Peng Lin, Kazuya Tanaka, John C. Seaman</i>
173	Analysis of Growth Dynamics and Protein Expressions of Microbial-Mediated Biomineralization of Uranium Contaminated Soils at Savannah River Site, Aiken SC <i>Victor Ibeanusi, Jada Hoyle-Gardner, Haley Howard, Ashvini Chauhan, Rajneesh Jaswal, Charles Jagoe, John C. Seaman</i>
176	Phytoremediation of Tritium at the SRS: Seventeen Years of Experience <i>Kimberly A. Price, John C. Seaman, Matthew Baker</i>
211	Immobilization of Uranium in Terrestrial Environment Through the Mineralization of Inositol Hexaphosphate <i>Jarad Cochran, Ashvini Chauhan, Benjamin Parrott, Travis Glenn, John C. Seaman</i>

Monday SREL REU Poster Session (M) 5:00 to 6:30 PM; Hill Atrium

Posters should be mounted each day before the morning plenary session.

Abstract No.	Title
	Radioecology – Session Organizer: Stacey Lance (SREL) and Tracey Tuberville (SREL)
301	Title <i>Author</i>
302	Title <i>Author</i>
303	Title <i>Author</i>
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305	Title <i>Author</i>
306	Title <i>Author</i>
307	Title <i>Author</i>

DRAFT

Tuesday Sessions

Conference Plenary II: 8:30 to 9:20 AM, Mahler Hall

Plenary Speaker II: Robert Mason (8:40-9:20 AM)

Sources, Cycling and Bioaccumulation of Methylmercury in the Ocean

Mahler Hall: Biogeochemistry of Heavy Metals in Flooded Soils and Sediments

Organizers: Jörg Rinklebe (Germany) and Anna Knox (USA-SRNL)

Room K: Spatial Issues

Organizer: ????

Room K: Metal Transfer from Soil to Plants: Accumulation Properties and Nutritional Needs Versus Food Safety

Organizers: Irena Twardowska (Poland) and Filip Tack (Belgium):

Room L: Synchrotron Analysis of Metals in the Environment

Organizers: Kirk Scheckel (USA-EPA) and Dien Li (USA-SRNL)

Room L: Analysis of Nanoparticulates and Colloidal Metals Using Advanced ICP-MS Techniques

Organizer: James Ranville (USA-Colorado School of Mines)

Room L: General Technical Session – Novel Sorbents

Organizer: ????

Room Q: Retention and Release of Metals: Modeling Approaches

Organizer: ????

Tuesday Mahler Hall

Biogeochemistry of Heavy Metals in Flooded Soils and Sediments

Tuesday Morning Session 1 (Flooded Soils and Sediments TM1) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
024	9:30 AM	Invited: Global Distribution of Ni in Sediments <i>Anna Sophia Knox, Michael H. Paller, Dien Li</i>
005	10:00 AM	Flooding Induced Changes in the Mobility and Bioaccessibility of Potentially Harmful Elements <i>Diana McLaren, David Copplestone, Joanna Wragg</i>
019	10:20 AM	Fate of Silver Nanoparticles in Constructed Wetland Microcosms <i>Hannele Auvinen, Diederik Rousseau, Ralph Kaegi, Gijs Du Laing</i>

Tuesday Morning Session 2 (Flooded Soils and Sediments TM2) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
043	11:00 AM	The Biogeochemistry of Metal Contaminated Peatlands <i>Shaun Watmough</i>
061	11:20 AM	Influence of Flooding Induced Reducing Conditions on Solubilization of Heavy Metals <i>Sidra Khan, Peter Hooda, Martin Blackwell, Rosa Busquets</i>
117	11:40 AM	Biogeochemistry of Iron and Carbon During Redox Oscillations in a Humid Tropical Forest Soil from Puerto Rico <i>Diego Barcellos, Aaron Thompson</i>

Tuesday Afternoon Session 1 (Flooded Soils and Sediments TA1) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
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127	1:20 PM	Health Risk Assessment of Trace Elements in Soils Along the Elbe River, Germany, as a Model Region <i>Jörg Rinklebe, Sabry Shaheen, Vasileios Antoniadis, Oliver Rosche, Manfred Altermann</i>
136	1:50 PM	Arsenic in Soils and Waters Around the Kori Kollo Gold Mine on the Bolivian Altiplano: Redox-Induced Speciation and Mobilization <i>Sabry Shaheen, Gijs Du Laing, Jörg Rinklebe</i>
154	2:10 PM	Mobility and Phytoavailability of Arsenic and Lead in a Contaminated Soil Stabilized with Pine Sawdust Biomass and Biochars Under Flooded Conditions <i>Jingzi Beiyuan, Yasser M. Awad, Felix Beckers, Daniel C.W. Tsang, Yong Sik Ok, Jörg Rinklebe</i>
156	2:30 PM	Cadmium-Induced Tolerance Mechanisms in Seedlings of <i>Avicennia schaueriana</i> Stapf & Leechman ex Moldenke (Acanthaceae) <i>Marcelo Mizuchima, Pedro Mangabeira, Alex-Alan Almeida, Marcel França, Priscila Cortez, Raildo Mota de Jesus, Jose Victor Silva</i>

Tuesday Afternoon Session 2 (Spatial Issues TA2) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
042	3:10 PM	Atmospheric Deposition of Cosmic Dust Studied by Moss Analysis Using Nuclear and Related Analytical Techniques <i>Marina Frontasyeva, Vladimir Tselmovich, Eiliv Steinnes</i>
142	3:30 PM	Spatial Patterns and Temporal Trends of Heavy Metal Deposition Studied by Analysis of Moss Samples, Natural Surface Soils, and Peat Cores <i>Eiliv Steinnes</i>
148	3:50 PM	Spatial Distribution of Heavy Metals Contamination in Soils Using Remote Sensing and GIS Techniques <i>Ahmed Harb Rabia</i>
088	4:10 PM	Digital Mapping of Heavy Metals Distribution Across the Conterminous US <i>Kabindra Adhikari, Larry West, Phillip Owens, David Miller</i>

Tuesday Room K

Metal Transfer from Soil to Plants: Accumulation Properties and Nutritional Needs Versus Food Safety

Tuesday Morning Session 1 (Metal Transfer from Soil to Plants TM1) Room K, Moderators: Irena Twardowska (Poland) and Filip M. G. Tack (Belgium)

Abstract No.	Time	Title
171	9:30 AM	Towards a Coherent Toxicity Prediction Framework for Metals and Metalloids: Competitive, Multi-Species and Other Models for Terrestrial Environments <i>D. Lamb, L. Wang, S. Abbasi, M. Kader, M. Megharj, R. Naidu</i>
046	10:00 AM	Appraisal of the Risk to Exceed Limits of Cd in Cultivated Spinach on Soils with Normal Cd Contents <i>Filip M. G. Tack, Céline Vaneckhaute, Tomas Van De Sande, Marleen Seynnaeve, Ludwig De Temmerman, Karine Vandermeiren, Veerle Rijckaert</i>
095	10:20 AM	Screening for Cd-Excluder Soybean (<i>Glycine max</i> L. Merrill) Cultivars for Assuring Prospective Food Safety <i>Jie Zhan, Irena Twardowska, Siqi Wang, Shuhe Wei, Yanqiu Chen, Ljupco Mihajlov</i>

Tuesday Morning Session 2 (Metal Transfer from Soil to Plants TM2) Room K, Moderator: ????

Abstract No.	Time	Title
165	11:00 AM	Understanding Cadmium Uptake by Cocoa Plants Via High Precision Concentration and Stable Isotope Ratio Measurements <i>Rebekah Moore, Ihsan Ullah, Mark Rehkamper, Jim Dunwell</i>
026	11:20 AM	<i>Miscanthus</i> Seed-Based Hybrids Versus <i>M. x giganteus</i> - Performance on Heavy Metal Contaminated Sites and Phytoremediation Abilities <i>Jacek Krzyżak, Marta Pogrzeba, Szymon Rusinowski, John Clifton-Brown, Jon Paul McCalmont, Andreas Kiesel, Anja Mangold, Michal Mos</i>
197	11:40 AM	Capability of Biowastes in Reducing the Transfer of Cd from Soil to Plants <i>Shamim Al Mamun, Niklas Lehto, Jo Cavanagh, Richard McDowell, Munmun Aktar, Ebrahim Benyas, Brett Robinson</i>

Tuesday Afternoon Session 1 (Metal Transfer from Soil to Plants TA1) Room K, Moderator: ????

Abstract No.	Time	Title
037	1:30 PM	Effect of Sewage Sludge Application on Accumulation of Heavy Metals in Soil Under Rice –Wheat Cropping System <i>Satish Kumar Singh, Ashish Marotrao Latare</i>
052	1:50 PM	Main Mechanisms of Si-Cd Interactions in the Paddy Soil-Rice System <i>Vladimir Matichenkov, Elena Bocharnikova, Xionghui Ji, Hua Peng, Wei Wei</i>
098	2:10 PM	Alfalfa (<i>Medicago sativa</i> L.) Safe Use as a Forage Crop and Zn Hyperaccumulator <i>Huiping Dai, Irena Twardowska, Shuhe Wei, Hua Zhao, Dejing Chen</i>
114	2:30 PM	Will Long-Term Normal Fertilization Produce Cadmium Rice in Subtropical China? <i>Shaoxian Wang, Jia Liu, Tianyu Zhang, Zhijian Xie, Wenxue Zhang, Zengbing Liu</i>

Tuesday Afternoon Session 2 (Metal Transfer from Soil to Plants TA2) Room K, Moderator: ????

Abstract No.	Time	Title
036	3:10 PM	The HARVEST Initiative: Assessment of Heavy Metals in Produce from a Northeast Georgia, USA Organic Farmers' Market and The Soil, Irrigation Water, Compost/Biological Soil Amendments of Animal Origin from The Farms Where it was Grown <i>Anne Marie Zimeri, Madeleine Spitzler, Kelli Hiatt</i>
160	3:30 PM	Establishing Guidelines for Healthy Food Production in an Urban Brownfield: Is Aquatic Vegetation in the Augusta Canal, Augusta, GA, USA, Safe for Use as Compost? <i>Donna Wear, Bryaunna Barrera, Rhiley Greene, Sheena Mondeddu</i>
027	3:50 PM	Assessment of Health Risk due to Heavy Metal Contamination in Long-term Sewage Irrigated Areas of Kolkata, India <i>Pabitra Kumar Mani, Sourav Bhattacharyya, Aritra Saha, Gora Chand Hazra, Tarik Mitran, Sushanta Saha, Chowdhury Monirul Haque</i>
008	4:10 PM	Heavy Metals Concentration of Soil and Vegetables in Urban and Peri-Urban Locations of Ile-Ife <i>Durodoluwa Oyedele, Olusegun Awotoye, Benjamin Anwadike</i>
191	4:30 PM	Using Trace Metals as Indicators of Tree Rooting Behaviour in Bituminous Soils <i>Marc La Fleche, William Shoty, Justine Karst</i>

Tuesday Room L

Synchrotron Analysis of Metals in the Environment

Organizers: Kirk Scheckel (USA-EPA) and Dien Li (USA-SRNL)

Tuesday Morning Session 1 (Synchrotron TM1) Room L, Moderators: ????

Abstract No.	Time	Title
108	9:30 AM	Invited: Sequestration of Pertchnetate (TcO_4^-), Iodide (I^-) and Iodate (IO_3^-) from Groundwater by Organoclays and Granular Activated Carbon: Capacity and Chemical Speciation <i>Dien Li, Daniel I. Kaplan, John C. Seaman, Anna Knox, Brian Powell, Allison Sams</i>
066	10:00 AM	Application of High Energy Resolution X-Ray Fluorescence Spectroscopy on Environmental Samples <i>Matthew Noerpel, Todd Luxton, Bruce Ravel, A. Jeremy Kropf, Ranju Karna, Derek Peloquin, Kirk Scheckel</i>
101	10:20 AM	In-situ Soil Amendments Alter Contaminant Speciation and Reduce Bioavailability <i>Kirk Scheckel, Ranju Karna</i>

Nanomaterials

Tuesday Afternoon Session 1 (Nanomaterials TA1) Room L, Moderator: ????

Abstract No.	Time	Title
129	1:20 PM	Invited: Routine Analysis of Trace Element Distributions Among Major Colloidal Species Using AF4-UV-ICPMS <i>Chad W Cuss, Lina Du, Miles Dyck, Marjan Ghotbizadeh, Chris Glover, Andrew Nagel, Tommy Noernberg, William Shotyk</i>
119	1:50 PM	Detection and Quantification of Engineered Nanomaterials in Surface Waters in South Carolina <i>Mohammed Baalousha, Frédéric Loosli, Zebang Yi, Jingjing Wang</i>
124	2:10 PM	Flux and Fate of Silver Nanoparticles in Small Watersheds Under Different Landuse <i>Marc Benedetti, Jia Lan Wang, Enrica Alasonati, Paola Fisticaro, Alexandre Gelabert, Yann Sivry</i>
169	2:30 PM	Innovations in Single Particle and Single Cell ICP-MS – Accurate Measurements of Particle Number in Cells <i>Chady Stephan, Ruth Merrifield, Tony Palermo</i>

Tuesday Afternoon Session 2 (Nanomaterials TA2) Room L, Moderator: ????

Abstract No.	Time	Title
206	3:10 PM	Measuring Natural, Incidental, and Engineered Nanoparticles and Associated Metals Using Single Particle ICP-MS <i>James Ranville, Katie Challis, Logan Rand, Ronald Lankone, Howard Fairbrother</i>
099	3:30 PM	Evaluation of the Effect of Carbon Nanofibres on Morphology and Biological Indices of <i>Lepidium sativum</i> <i>Saeideh Tasharrofi</i>

Tuesday Room Q

Retention and Release of Metals: Modeling Approaches

Tuesday Morning Session 1 (Modeling Approaches TM1) Room Q, Moderator: H. Magdi Selim

Abstract No.	Time	Title
133	9:30 AM	Invited: Modelling Sorption Kinetics of Lead and Cadmium by Aggregates of Two Tropical Soils of Southeastern Nigeria <i>Christopher Nwokocha, Anthony Ano, Charles Igwe</i>
209	10:00 AM	Freundlich Sorption Parameters of Heavy Metals for Different Soils: Influence of Kinetics <i>Tamer Elbana, H. Magdi Selim, Nazanin Akrami, April Newman, Sabry M. Shaheen, Jörg Rinklebe</i>
049	10:20 AM	Identification, Impact Strength and Seasonal Change of Sources of Heavy Metals in Road Dusts in Beijing, China <i>Cong Men, Ruimin Liu, Qingrui Wang, Lijia Guo, Zhenyao Shen</i>

Tuesday Morning Session 2 (Modeling Approaches TM2) Room Q, Moderator: ????

Abstract No.	Time	Title
210	11:00 AM	Kinetic Modeling of pH-Dependent Molybdenum(VI) Adsorption and Desorption on Iron Oxide: A Novel Multi-Reaction Model <i>Wenguang Sun, H. Magdi Selim</i>
144	11:20 AM	Sorption Modeling and Experiments for Uranium Recovery from Seawater <i>Austin Ladshaw, Alex Wiechert, Sotira Yiacomou, Costas Tsouris</i>

General Technical Session – Novel Sorbents

Tuesday Afternoon Session 2 (General Technical Session – Novel Sorbents TA2) Room L, Moderator: ????

Abstract No.	Time	Title
010	3:30 PM	Nanophase Mn Substituted Fe-oxide Medium for As Removal from Contaminated Aquatic Environments <i>Rajan Vempati, Darryl Corbin, Joel Blum, Andy Yaksic, Edward Biehl</i>
032	3:50 PM	Novel Chitosan Derivatives for Recovery of Platinum and Palladium from Aqueous Acidic Solutions <i>Tsegaye Girma Asere, Stein Mincke, Ivar Verheye, Christian V. Stevens, Gijs Du Laing</i>
081	4:10 PM	Heavy Metal Extraction from Aqueous Solutions Using Three Novel 3-Hydroxy-2-Naphthoate-Based Task-Specific Ionic Liquids <i>Philip Pirkwieser, Jose A Lopez Lopez, Wolfgang Kandioller, Bernhard K Keppler, Carlos Moreno, Franz Jirsa</i>
013	4:30 PM	Optimization and Design of a Continuous Biosorption Process Using Brown Algae and Chitosan/PVA Nano-Fiber Membrane for Removal of Nickel by a New Biosorbent <i>Akbar Esmaeili, Ali Aghababai Beni</i>

Tuesday Poster Session (T) 5:00 to 6:30 PM; Hill Atrium

Posters should be mounted each day before the morning plenary session.

Abstract No.	Title
	Heavy Metals Interactions with Biochar – Session Organizers: Yong Sik Ok (Republic of Korea, ICHMET Host 2020), Deyi Hou (China), Meththika Vithanage (Sri Lanka/Australia), Shih-Hao Jien (Taiwan) and Jörg Rinklebe (Germany)
040	Phosphoric Acid-Activated Biochar for Catalytic Conversion of Carbohydrates into Glucose and 5-Hydroxymethylfurfural <i>Leichang Cao, Iris K.M. Yu, Daniel C.W. Tsang, Shicheng Zhang</i>
053	Al-Impregnated Biochar as a Catalyst for Glucose Isomerization <i>Iris K.M. Yu, Xinni Xiong, Daniel C.W. Tsang</i>
080	Effects of Biochar on Retention of Nutrients in a Tropical Soil <i>Shih-Hao Jien, Jordan Kuo Yuan Yong</i>
082	Effects of Biochar on Soil Infiltration, Runoff and Sediment Production from a Clayey Slope Soil <i>Shih-Hao Jien, Jun-Yuan Chen</i>
092	Criteria for Characterization of Biochar for Remediation of Contaminated Soils <i>Cleide Abreu, Lindiamara Sertoli, Matheus Cipriano</i>
105	Copper Uptake by <i>Brassica</i> Plants in a Copper-Contaminated Soil Treated with Biochar <i>Maria Gonzaga, Amanda Nascimento, José Santos, Bruno Mendonça</i>
116	Characterization of Bioenergy Biochar and Its Utilization for Metal/Metalloid Immobilization in Contaminated Soil <i>Xiao Yang, Daniel C.W. Tsang, Yong Sik Ok</i>
147	Immobilization of Cu in Mining Waste with Lime, Phosphates and <i>Eichhornia crassipes</i> (Mart.) Biochar Mixture <i>Laura V. Nuñez, Claudia M.I. Hidalgo, Arturo Aguirre, Jorge D. Echevers</i>
185	Removal of Arsenic from Wastewater Using Pristine and Activated Rice Straw Biochar <i>Eman El Sayed, Ramesh Rudra, Shiv Prasher, Bassim Abbasi</i>
192	Ameliorating Cadmium Contamination in Leafy Greens with Locally Derived Soil Amendments <i>Lori Hoagland, Gustavo Mendizabel, Luz Marina Melgarejo, Lina Gonzalez, Tim Filley, Cliff Johnston</i>
	Mercury in the Environment – Session Organizers: Xiaoyu Xu (USA-SREL), Jörg Rinklebe (Germany), Michael Bank (Norway), Xingbin Feng (China) and Jerry Lin (USA)
033	Labile and Stable Fractions of Mercury in Invasive Crab <i>Eriocheir sinensis</i> <i>Magdalena Beldowska, Monika Normant-Saremba, Urszula Kwasigroch, Bartosz Wilman</i>
056	Uptake and Trophic Transfer of Mercury Along the Initial Links of Marine Food Chain in the Temperate Coastal Zone (Puck Lagoon, Baltic Sea) <i>Agnieszka Jędruch, Magdalena Beldowska</i>
057	Transformations of Mercury in Soil and its Impact on the Riverine Transport of Labile Form of Hg into the Sea <i>Karolina Gębka, Magdalena Beldowska, Dominika Saniewska</i>
058	Processes Affecting the Transformation of Hg in the Coastal Zone in the Vicinity of River Mouth (Southern Baltic Sea) <i>Dominka Saniewska, Magdalena Beldowska, Ewa Szymczak, Jacek Beldowski, Karol Kuliński</i>
075	Mercury Fractionation in the Surface Sediments of the Baltic Sea <i>Urszula Kwasigroch, Magdalena Beldowska, Jacek Beldowski</i>
189	Are Fish from New Haven Harbor Safe to Eat? A Study on Methylmercury Contamination of Locally Caught Fish in an Industrialized Embayment <i>Gunnar Hansen, Zofia Baumann, Lynne Bonnett, Mary Beth Decker, Robert Mason</i>
201	Determination of Total Hg in Natural Waters after Amalgamation of Hg ²⁺ on Cu Powder and Hg ⁰ on AuNPs <i>Merimee Kalumba, Nikolay Panichev, Khakhati Mandiwana, Malaika Mwepu Lunda</i>
205	The Bio-Availability of Mercury-Sulfide in Paddy Field-Rice Plant Ecosystem <i>Hong Li, Jiating Zhao, Yuxi Gao</i>

096	Mercury Pollution in Indigenous Communities Bordering the Coutuhe and Putumayo Rivers, Colombian Amazon <i>Maria Alcalá-Orozco, Karina Caballero-Gallardo, Victor Moreno-Rengifo, David Novoa-Mahecha, Jesus Olivero-Verbel</i>
162	A Novel Mechanism of Mercury Neurotoxicity: RNA Splicing <i>Bin He, Yiling Li, Ligang Hu, Guibin Jiang</i>
	Metal Transfer from Soil to Plants: Accumulation Properties and Nutritional Needs Versus Food Safety – Session Organizers: Irena Twardowska (Poland) and Filip Tack (Belgium)
068	Cadmium Guideline Values in Soil Developed Via Phytoavailability Based Empirical Model <i>Kwon-Rae Kim, Byoung-Hwan Seo, Hyun-Uk Kim</i>
110	Phytoextraction for the Removal of Chromium <i>Sandra Cutts, Robert Peters, John C. Seaman, Fanny M. Coutelot, Robin Brigmon</i>
045	Effects of Soil Amendments on a Native High Cd Soil on Spinach (<i>Spinacia oleracea</i> L.) and Radish (<i>Raphanus raphanistrum</i>) Yield and Cd Uptake <i>Eton Codling, Carrie Green</i>
112	Soil Quality Analysis, a Strategy for Identifying Sources of Trace Elements and Managing Urban Allotments for Urban Agriculture Production <i>Marc Legras, Caroline Dubois, Lisa Castel, Marie-Pierre Bruyant</i>
051	Calculation of Bioconcentration Factor of Heavy Metal(loid)s in Agricultural Products for Risk Assessment in Soil Environment <i>Won-Il Kim, Ji-Hyock Yoo, Sang-Won Park, Oh-Kyung Kwon, Seunghun Hyun, Jeong-Gyu Kim, Yong-Sik Ok</i>
050	Determination of Arsenic Speciation in Husked and Polished Rice Grains Grown at the Non-Contaminated Paddy Soils in Korea <i>Da-Young Kim, Ji-Young Kim, Kye-Hoon Kim, Kwon-Rae Kim, Jeong-Gyu Kim, Won-Il Kim</i>
	Metal Accumulation in Biofilms – Session Organizer: Robin Brigmon (USA-SRNL)
071	Bioaccumulation of Some Heavy Metals in <i>Oreochromis niloticus</i> and <i>Clarias gariepinus</i> Relevant to Their Concentrations in Water and Sediment of the Ojirami Reservoir, Edo State, Nigeria <i>Edward Izevbigie</i>
	Retention and Release of Metals in Soils: Modeling Approaches – Session Organizer: H. Magdi Selim (LSU)
020	Molybdenum-Phosphate Retention and Transport in Soils <i>Wenguang Sun, H. Magdi Selim</i>
094	Fingerprinting of Soil Anthropogenic Metal Contamination in Response to Land Uses in an Urban Watershed <i>Yong Niu, Bing Hong, Xun Liu, Tongtong Zhou, Yan Zhang, Shen Yu</i>
199	Strict Ion-Exchange Modeling for Cation Selective Adsorption on Na-Montmorillonite <i>Yayu Li, Cristian Schulthess</i>

Wednesday Sessions

Conference Plenary III: 8:30 to 9:20 AM, Mahler Hall

Plenary Speaker III: Henning Prommer (8:40-9:20 AM)

Developing and Applying Reactive Transport Modeling Approaches for Arsenic at Various Scales

Maher Hall: Heavy Metals Interactions with Biochar

Organizers: Yong Sik Ok (Republic of Korea, ICHMET Host 2020), Deyi Hou (China), Meththika Vithanage (Sri Lanka/Australia), Shih-Hao Jien (Taiwan) and Jörg Rinklebe (Germany)

Room K: Mercury in the Environment

Organizers: Xiaoyu Xu (USA-SREL), Jörg Rinklebe (Germany), Michael Bank (Norway), Xingbin Feng (China) and Jerry Lin (USA)

Room L: Remediation of Metal Contaminated Environments

Organizers: Fanny M. Coutelot (USA-SREL) and David F. Alden, P.E. (USA-Tersus Environmental)

Room Q: General Topic – Metal/Trace Element Hazards

Organizers: ????

Wednesday Mahler Hall

Heavy Metals Interactions with Biochar

Organizers: Yong Sik Ok (Republic of Korea, ICHMET Host 2020), Deyi Hou (China), Meththika Vithanage (Sri Lanka/Australia), Shih-Hao Jien (Taiwan) and Jörg Rinklebe (Germany)

Wednesday Morning Session 1 (Biochar WM1) Mahler Hall, Moderators: ????

Abstract No.	Time	Title
016	9:30 AM	Invited: Biochar Catalysts for Environmental Applications <i>Daniel C.W. Tsang, Dong-Wan Cho, Hocheol Song</i>
073	10:00 AM	Application of Cow Manure Biochar to Stabilize Cd and Zn in Smelter Contaminated Soil <i>Reinhart Van Poucke, Caleb E. Egene, Simon Allaert, Yong S. Ok, Erik Meers, Filip M. G. Tack</i>
078	10:20 AM	Effects of Co-Existing Perfluorooctane Sulfonate (PFOS) on Heavy Metals Sorption by Biochars <i>Fangjie Qi</i>

Wednesday Morning Session 2 (Biochar WM2) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
038	11:00 AM	Biochar Mediates Enhanced Plant Growth and Alleviates Chromium-Induced Phytotoxicity in <i>Ficus elastica</i> <i>Abhay Kumar, Ludmila Tsechansky, Stephen Joseph, Inga Schreiter, Christoph Schueth, Ellen Graber</i>
041	11:20 AM	Heavy Metal Sorption by Sugarcane Biochar – Effect of Feed Source, Pyrolysis Conditions, and Biochar Composition <i>Amir Hass, Isabel Lima</i>
064	11:40 AM	Reduction of Heavy Metal Uptake by Potato Grown in Hydrogel and Biochar Amended Soil Under Wastewater Irrigation <i>Jaskaran Dhiman, Shiv Prasher, Eman El Sayed, Christopher Nzediegwu, Ali Mawof</i>

Wednesday Afternoon Session 1 (Biochar WA1) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
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029	1:20 PM	Invited: Coordinating Engineered Biochar Production for Soil Quality Improvement, Mine Spoil Reclamation, and Nutrient Removal in Waste Streams <i>Jeff Novak, James Ippolito, Mark Johnson</i>
022	1:50 PM	Sulfur Modified Biochar Treatment of Hg Contaminated Soil: Stabilization Efficiency Under Simulated Accelerated Ageing Conditions <i>Devi Hou, David O'Connor</i>
138	2:10 PM	Effect of Manganese Oxide-Modified Biochar Addition on Methane Production and Heavy Metals Speciation During Anaerobic Digestion of Sewage Sludge <i>Changming Yang, Min Zhang, Jianhua Li</i>
006	2:30 PM	Sequential Extraction of Trace Metals in Sewage Sludge- or Biochar/Sewage Sludge-Amended Soil <i>Patryk Oleszczuk, Aleksandra Bogusz</i>

Wednesday Afternoon Session 2 (Biochar WA2) Mahler Hall, Moderator: ????

Abstract No.	Time	Title
035	3:10 PM	Unmodified and Mineral Enhanced Hardwood Biochars for the Removal of Copper and Nickel <i>Jovan Popovic, Kipp Sande, Sebastian Behrens</i>
125	3:30 PM	Effect of Particle Size of Feedstock and Temperature on Elemental Composition of Sawdust and Maize Stover Biochars <i>Emmanuel Dugan, Anne Verhoef, Steve Robinson Reading</i>
126	3:50 PM	Effects of Biochar on Copper Bioavailability and Soil Microbial Communities in Metal-Contaminated Soils Using Metallophytes and Agricultural Plants <i>Sebastian Meier, Francisca Moore, Maria Eugenia González, Alex Seguel, Jaime Mejias, Jorge Medina, Juan Hirzel</i>

Wednesday Room K Mercury in the Environment

Organizers: Xiaoyu Xu (USA-SREL), Jörg Rinklebe (Germany), Michael Bank (Norway), Xingbin Feng (China) and Jerry Lin (USA)

Wednesday Morning Session 1 (Mercury WM1) Room K, Moderators: ????

Abstract No.	Time	Title
077	9:30 AM	Invited: Stable Isotopic Evidence for Mercury Accumulation in the Montane Forests in Southwest China <i>Xinbin Feng</i>
172	10:00 AM	Atmospheric Speciation of Mercury at the Zeppelin Station, Spitsbergen <i>Torunn Berg, Pfaffhuber Katrine Aspmo</i>
084	10:20 AM	Atmospheric Deposition and Outflow of Mercury Emissions in Mainland China: A Comprehensive Modeling Assessment with Recent Observations of Atmospheric Mercury <i>Che-Jen Lin, Xun Wang, Jonas Sommar, Xinbin Feng</i>

Wednesday Morning Session 2 (Mercury WM2) Room K, Moderator: ????

Abstract No.	Time	Title
093	11:00 AM	Mobilization of Mercury Species Under Dynamic Redox Conditions in Contaminated Wetland Soils as Affected by Different Biochars and Sugar Beet Factory Lime <i>Jörg Rinklebe, Felix Beckers, Sibylle Mothes, Yong Sik Ok</i>
063	11:20 AM	Impact of Reservoir Water Level Management on Sediment Pore Water Chemistry and Methylmercury Production <i>Todd Luxton, Chris Eckley, John McKernan, Jennifer Goetz</i>

132	11:40 AM	Mercury Mobility in Tundra Soils and Pore Water <i>Daniel Obrist, Christine Olsen, Dinesh Adhikari, Yu Yang</i>
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Wednesay Afternoon Session 1 (Mercury WA1) Room K, Moderator:????

Abstract No.	Time	Title
180	1:20 PM	Invited: Impacts of Mercury Use in Artisanal Gold Mining in Cote d'Ivoire, West Africa <i>Robert Mason, Mariame Coulibaly, Koffi Marcellin Yao, Zosia Baumann, Gunnar Hansen</i>
060	1:50 PM	Mercury Partitioning in Two Different Types of Waterbodies <i>Christof Plessl, Christiane Christian, Thomas Zechmeister, Bernhard K. Keppler, Franz Jirsa</i>
086	2:10 PM	Biogeochemical Cycles of Mercury in Arctic and Antarctic <i>Zhouqing Xie</i>
079	2:30 PM	Linking Mercury, Carbon, and Nitrogen Stable Isotopes in Tibetan Biota: Implications for Using Mercury Stable Isotopes as Source Tracers <i>Xiaoyu Xu, Qianggong Zhang, Wen-Xiong Wang</i>

Wednesday Afternoon Session 2 (Mercury WA2) Room K, Moderator: ????

Abstract No.	Time	Title
091	3:10 PM	Seafood and Methylmercury Dynamics: Implications for the Minamata Convention <i>Michael Bank</i>
161	3:30 PM	Characterization of Mercury-Binding Proteins in Rat Blood <i>Ligang Hu</i>
187	3:50 PM	A Molecular Approach to Understand Bioavailability of Me-Hg Associated with Variable Sources of Natural Dissolved Organic Matter <i>Emily Seelen, Liem-Nguyen Van, Ulf Skyllberg, Robert Mason, Erik Björn</i>
204	4:10 PM	Mercury Immobilization by Nano-Elemental Selenium in an Aquatic-Plant System <i>Jiating Zhao, Yuxi Gao</i>
200	4:30 PM	Bioaccumulation of Mercury and Other Heavy Metals in Moss Specimens Due to Vegetation Structure <i>Stefan Nickel</i>
212	TBD	Sources of Elevated Atmospheric Mercury in the Vicinity of a Coal-Fired Power Plant with Recent Emission Controls <i>Lynne Gratz, Story Schwantes, Chris Eckley, Erick Mattson</i>

Wednesday Room L

Remediation of Metal Contaminated Environments

Wednesday Morning Session 1 (Remediation of Metal Contaminated Environments WM1) Room L,

Moderators:????

Abstract No.	Time	Title
	9:30 AM	Invited: Unassigned
140	10:00 AM	Arsenic Removal by As-Hyperaccumulator <i>Pteris vittata</i> from Three Contaminated Soils: A 6-Year Study <i>Evandro Barbosa Da Silva, Jason Thomas Lessl, Ann Christina Wilkie, Yungen Liu, Lena Q Ma</i>
175	10:20 AM	The Use of a Biochar Compost for Stabilising and Revegetating Metal-Mine Tailings <i>Heather De-Quincey, Iain Robertson, Alayne Street-Perrott, Sion Brackenbury</i>

Wednesday Morning Session 2 (Remediation of Metal Contaminated Environments WM2) Room L,**Moderators: ????**

Abstract No.	Time	Title
193	11:00 AM	Can Drinking Water Treatment Residuals be used as Material for In-Situ Capping of Metal Contaminated Sediments? <i>Jean-Claude Bonzongo, Jean-Francois Gaillard</i>
145	11:20 AM	Bioaccessibility and Extractability of Ecobond® LBP Lead Defender® Treated Lead Based Paint <i>Nicholas Basta, James Barthel, Shane Whitacre, Trevor Schwab</i>
146	11:40 PM	Porous Iron Composite Material for Removal of Uranium and Chromium from Groundwater <i>Emily Dorward, John C. Seaman, Fanny M. Coutelot</i>

Wesday Afternoon Session 1 (Remediation of Metal Contaminated Environments WA1) Room L,**Moderator: ????**

Abstract No.	Time	Title
012	1:30 PM	The Use of Phosphate Amendments for Chemical Immobilization of Uranium in Contaminated Soil. <i>Matthew Baker, Fanny M. Coutelot, John C. Seaman</i>
190	1:50 PM	Optimization of Melanoidin Production for Cu and Cd Complexation for use in Soil Wash <i>Ann-Sofie Gimlinge, Helle Marcussen, Linbo Qian, Mengfang Chen, Peter E. Holm</i>
163	2:10 PM	Curbing of Toxic Emissions After EDTA-Based Washing of Pb, Zn and Cd Contaminated Calcareous and Acidic Soil <i>Simon Gluhar, Erika Jez, Domen Lestan</i>
179	2:30 AM	Enhanced Electrokinetic Treatment of Marine Sediments Contaminated by Heavy Metals <i>Mohamed Tahar Ammami, Ahmed Benamar, Florence Portet-Kotalo, Céline Boulangé-Lecomte, Yue Song, Yue Tian</i>

Wednesday Afternoon Session 2 (Remediation of Metal Contaminated Environments WA2) Room L,**Moderators: ????**

Abstract No.	Time	Title
131	3:10 PM	Simultaneous Microbial and Electrochemical Reductions of Vanadium (V) with Bioelectricity Generation in Microbial Fuel Cells <i>Song Wang, Baogang Zhang</i>
104	3:30 PM	Prospect of Heavy Metal Immobilization as a Tool in Remediation of Contaminated Farmland <i>Zhi An Li, Peng Mao, Huan Ping Lu, Jing Tao Wu, Ping Zhuang</i>

Wednesday Room Q

Wednesday Morning Session 2 (General Topic – Metal/Trace Element Hazards WM2) Room Q,

Moderators:????

Abstract No.	Time	Title
202	11:00 AM	Concentrations of Trace Metals in <i>Permalia sulcata</i> Transplanted Around a Coal Fired Power Station in Pretoria, South Africa <i>Joshua Olowoyo</i>
113	11:20 AM	Influence of the Heavy Metal Ions from Soils on Children's Health and the New Treatment Methods <i>Maksim Khotimchenko, Maria Begun, Olga Savchenko</i>

Wednesday Afternoon Session 1 (General Topic – Metal/Trace Element Hazards WA1) Room Q,

Moderator:????

Abstract No.	Time	Title
128	1:20 PM	Invited: The Biological System of Elements - Lithium as Phase Stabilizer for Neurological Diseases/Effects on Reduction of Suicide Rates, Bipolar Disorders, Dementis, Alzheimer, and other Mental Related Diseases <i>Bernd Markert, Stefan Fränzle, Tarek Ammani, Simone Wünschmann, Jörg Rinklebe, Jean-Bernhard Diatta, Marinus Otte, Guntis Tabor, Jacek Namieśnik, Romania Djingova, Stefan Trapp, Eun-Shik Kim, Meie Wang, Steven McCutcheon, Marina Fronteseyeva, Piotr Szefer, Marina Vasconcellos, Jorge Marcovecchio, Elias Baydoun, Adnan Badran, Simo Pehkonen, John Hillman Naglaa Yousef</i>
Lead Contamination		
083	1:50 PM	The Environmental Consequences of Historical Battles on the Lead Contamination of Soils and Sediments <i>Aleksandra Ibragimow, Grzegorz Podruczny, Marcin Siepak</i>
174	2:10 PM	Lead (Pb) Based Paint: Production, Use, Exposure, Health Risk, and Management <i>Devi Hou, David O'Connor</i>
111	2:30 PM	Seasonal Variations in the Occurrence of Toxic Elements in the Landfill Surrounding of Metal Industry <i>Muhammad Zubair, Usama Anwar, Muhammad Ashfaq, Waqar Ahmed, Muhammad Usman</i>

Wednesday Afternoon Session 2 (General Topic – Metal/Trace Element Hazards WA2) Room Q,

Moderator:????

Abstract No.	Time	Title
183	3:10 PM	Pathway Analysis of Prenatal Exposure to Heavy Metals Related Child Motor Development <i>Dimosthenis Sarigiannis, Kinga Polanska, Wojciech Hanke, Athanasios Salifoglou, Nafsika Papaioannou, Evangelos Handakas, Caterina Gabriel, Spyros Karakitsios</i>
184	3:30 PM	Effects of Heavy Metals to Neurodevelopment in a Mother-Infant Cohort Study <i>Dimosthenis Sarigiannis, Nafsika Papaioannou, Maria Fafouti, Aikaterina Galonaki, Kinga Polanska, Michael Dickinson, Caterina Gabriel, Spyros Karakitsios</i>
070	3:50 PM	Heavy Metals Accumulation in Different Organs of Commonly Consumed Fishes in Bangladesh <i>Zinia Rahman, Shovon Neamul Hasan</i>
167	4:10 PM	Influence of Copper and Zinc on the Fate of Two Antibiotics in Soils <i>Aurore Andriamalala, Laure Vieublé-Gonod, Lorenzo Spadini, Valérie Dumény, Philippe Cambier</i>

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