

Society of Economic Geologists Annual Conference (SEG 2023)

Resourcing the Green Transition

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For permission requests, please contact Society of Economic Geologists (SEG)
at the address below.

Society of Economic Geologists (SEG)
7811 Shaffer Parkway
Littleton, CO 80127-3732
USA

Phone: +1(720) 981-7882
Fax: +1(720) 981-7874

www.segweb.org

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Curran Associates, Inc.
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Phone: 845-758-0400
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Technical Program

DAY 1 – SATURDAY, AUGUST 26, 2023

Global Challenges I

5:00 pm - 5:30 pm **Supply Chain Issues: Importing Metals and Minerals into Europe/UK in the Next 15 Years**
Rebecca Major (Global Challenges Speaker) 1

Global Challenges II

5:30 pm - 6:00 pm **Managing and Benefiting from ESG Challenges in the Development of Critical Minerals in the UK**
Kate Harcourt (Global Challenges Speaker) 2

Presidential Address

6:00 pm - 6:30 pm **Presidential Address and Brian G. Hoal Tribute**
Stuart Simmons (SEG 2023 President) N/A

Welcome Reception and Exhibit and Poster Viewing

6:30 pm - 9:00 pm Welcome Reception

DAY 2 – SUNDAY, AUGUST 27, 2023

Opening Ceremony

8:30 am - 8:45 am **Welcome and Conference Chair Remarks**
Bob Foster, SEG 2023 Conference Chair
Jennifer Craig, SEG Executive Director N/A

Plenary Session 1

8:45 am - 9:15 am **Does the Energy Transition Start and End with Metals?**
Julian Kettle (Plenary Speaker) N/A

9:15 am - 9:45 am **Financing Sustainability**
Katya Gorbatiouk (Plenary Speaker) N/A

9:45 am - 10:15 am **The Green Transition Squeezes As It Embraces**
John Elkington (Plenary Speaker) 3

10:15 am - 11:00 am **Poster Viewing: Saturday and Sunday Posters**

11:00 am - 11:15 am Break

Oral Session 01 Copper - Red Metal for a Green Future I

11:15 am - 11:30 am **Central African Copper Belt**
Michael Daly (Keynote Speaker) N/A

Oral Session 02 Battery Metals I

Critical Battery Mineral Resources in the United States: Past, Present and Potential
Jane Hammarstrom 8

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11:45 am - 12:00 pm	Copper-Hosting Basins at the Edge of Cratons – the Yeneena Basin in Western Australia as a Case Study <i>Weronika Gorczyk 4</i>	Canadian Perspective on REE Deposits Hosted by Carbonatite and Alkaline Complexes and Its Implication for Carbonatite and Alkaline Magmatism in Europe <i>Anne-Aurélie Sappin 10</i>
12:00 pm - 12:15 pm	Numerical Modelling of Basin-Scale Fluid Flow and Cu Transport in the Katangan Basin, Central African Copperbelt <i>Meissam Bahlali 5</i>	Trace Element Department in Sphalerite Across the Bathurst Mining Camp, New Brunswick, Canada <i>Foteini Drakou 11</i>
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12:30 pm - 12:45 pm	Experimental Insights Into the Mobility and Extraction of Metals in Sedimentary Basin-Hosted Copper Systems <i>Julia Woitischek 7</i>	Occurrence and Spatial Distribution of Cobalt in Skarn Deposits: A Case Study from the Middle-Lower Yangtze River Valley Metallogenic Belt (MLYB) in East China <i>Taofa Zhou 13</i>
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DAY 3 – MONDAY, AUGUST 28, 2023 (Continued)

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DAY 4 - TUESDAY, AUGUST 29, 2023

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8:30 am - 8:45 am	Gold: Responsible Discovery and Mining in the 21st Century <i>Mark Bristow (Keynote Speaker) N/A</i>	Trace Element Geochemistry of Pyrite and Marcasite as a Vector Towards Mineralization in Irish-Type Zn-Pb Deposits <i>Claire Geel 75</i>
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Gold - Responsible Discovery and Mining in the 21st Century III****Oral Session 16
Advances in Geoscience III**

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Anna Bidgood (Invited Speaker) 101

3:30 pm - 4:00 pm **Closing Ceremony and Concluding Remarks**
Bob Foster, SEG 2023 Conference Chair
Steve Piercey, SEG 2024 President
Anna Nguno, SEG 2024 Conference Chair N/A

Posters

Posters will be on display in two cohorts, with an “A” designation for Saturday and Sunday and “B” for Monday and Tuesday. Poster sessions are posted online.

The presenting author’s name is underlined below.

Session A: Saturday and Sunday

Battery Metals - the Drivers of Future Energy Supply

- A001 Potential Sources of Rare Earth Elements (REEs) in Loch Borralan, Northwest Highlands, Scotland: Geochemical and Mineralogical Controls on REE Distribution in Carbonatite (*Student*)
Abdulkadir Mohamed Abdulkadir
- A002 Mineralogy and Whole-Rock Geochemistry as Exploration Tools for Lithium Pegmatites in Ghana: Examples from the Biriwa-Ewoyaa Pegmatite Fields (*Student*)
Elizabeth Agyekum, Kofi Adomako-Ansah
- A003 Structural-Chemical Vectors to LCT-pegmatites in the Varuträsk Area, Sweden
Joel Andersson, Edward P. Lynch, Martiya Sadeghi, Samuel Lundsten, Tobias E. Bauer
- A004 Molybdenite from the Palaeoproterozoic REE-line in Bergslagen, Sweden: Textural Relations, Trace Element Chemistry and Re-Os Age Data
Stefan S. Andersson, Erik Jonsson, Thomas Zack, Martiya Sadeghi
- A005 The Iberian Pyrite Belt as a Strategic Source of “Green” and Critical Minerals: The Co Enrichment in VMS (*Student*)
Gonzalo Ares, Carmen Conde, Fernando Tornos
- A006 Reassessment of Rare-Metal Potential of the Karagaily-Aktas Deposit (Kazakhstan)
Akmaral Baisalova, Yerlan Akbarov, Alla Dolgopolova, Reimar Seltmann
- A007 Finding and Quantifying Li Bearing Mineralisations Using the GeoCore X10 Drill Core Scanner
Mikael Bergqvist, Alexander Hansson, Mikael Kördel, Karin Högdahl, Erik Jonsson, Magnus Leijd, Jaroslaw Majka, Pauline Jeanneret
- A008 The Yin Deposit, A New REE Discovery in the Gifford Creek Carbonatite Complex, Gascoyne Province, Western Australia
Luke Blais
- A009 Investigating Aeration and Filtration as Pre-Treatment Methods for Flowback and Produced Water Prior to Ion-Exchange for Lithium Extraction (*Student*)
Bennett Braun, Karthik R. Shivakumar, Daniel Alessi
- A010 Battery Metal Exploration: Integrating Satellite, Airborne, Drone and Field Data with Machine Learning Outputs in Cornwall
Mark Broadley
- A011 Scientific Drilling at a REE-Mineralised Carbonatite
Sam Broom-Fendley, Kathryn Goodenough, Michael Marks, John Spear
- A012 Mineralogy and Composition of Vanadium-Bearing Shales at the Van Property, Mackenzie Mountains, Northwest Territories
Stefanie M. Brueckner, Turner Green, Merilie A. Reynolds, Daniel Gregory
- A013 The Mineralogy and Mineral Associations of Platinum-Group Elements and Base Metal Sulfides in the Down-Dip Critical Zone at Sand-sloot, Northern Bushveld Complex (*Student*)
Kate R. Canham, David Holwell, Iain McDonald, Hannah Hughes, Andy Lloyd, Lara Du Preez, Kofi Acheampong
- A014 Stream Sediments as an Exploration Tool for Spodumene Pegmatites
Lawrence C. Carter, Julian Menuge, Ben J. Williamson, Teimoor Nazari Dehkordi, Gavyn K. Rollinson
- A015 Mapping Critical Minerals in Mineral Systems with the Critical Minerals in Ores (CMiO) Database
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- A016 Cobalt Mineralization in the Central African Copperbelt: Preliminary Insights from Petrography and LA-ICP-MS Analyses (*Student*)
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- A017 REE Enriched Migmatites and Gneisses of
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- A018 Integration of Multiscale Hyperspectral Data,
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- A023 Controls on the High-Grade Gold-Cobalt Mineralisation at Rajapalot, Finland (Student)
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- A024 The Shavazsay Deposit (Uzbekistan) – a Large
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- A025 The Successful Application of Stream Sediment
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- A026 LREEs, Zr and Th Enrichment of Autometamorphic
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- B005 226 Assessing the Petrogenesis and Magmatic Sulfide Prospectivity of the Southwestern Laurentia Large Igneous Province (SWLLIP) (Student)
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- B016 237 The Natural Enrichment of Phosphatic Sediments: Insights from the Moroccan High Atlas Phosphate Series
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- B018 239 Interpreting Machine Learning Neural Network Patterns of an Orogenic Gold Deposit, Yilgarn Craton, Western Australia
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