

2nd World Conference on

ENVIRONMENTAL AND EARTH SCIENCES &

World Conference on

RECYCLING AND WASTE MANAGEMENT

Hosting Organization:

Eurasia Conferences, Kemp House, 152-160 City Road, London, EC1V 2NX

08:50- 09:00 @ Introduction,
Welcome note and Conference
Inauguration
Conference Room: "Concorde"

DAY 1
May 15, 2023

Keynote Sessions

Title: Climate change adaptation through natural base solutions to improve the reuse of wastewater: An African case study

09:00-09:40 Paul J Oberholster & Anna-Maria Botha, Centre for Environmental Management, Faculty of Natural and Agriculture Science, University of the Free State, Bloemfontein, South Africa

Title: Green Hydrogen Energy Based Economy to Decrease Climate Changes for Environmental Friendly-Sustainable Development

09:40-10:10 Nevenka R. Elrzovic, Center of Excellence for Green Technologies, Institute for Multidisciplinary Research, University of Belgrade, Serbia

Title: Supporting Multi-Stakeholder-Partnerships for Regional Transformations through Innovation Labs: An Organizational Education Approach

10:10-10:40 Tobias Klös, Philipps University of Marburg, Germany

Tea and Refreshments Break 10:40-11:00

Title: Regional competitiveness under climate change - model based approach

11:00-11:30 Urszula Bronisz, Institute of Socio-Economic Geography and Spatial Management, Faculty of Earth Sciences and Spatial Management, Maria Curie-Skłodowska University, Poland

Title: The Gordian Knot: The Nuclear Waste Dilemma

11:30-12:00 Denise DeGarmo, Professor Emerita, Southern Illinois University, Edwardsville, Illinois USA

Speaker Sessions

Session Chair: Paul J Oberholster & Anna-Maria Botha, Centre for Environmental Management, Faculty of Natural and Agriculture Science, University of the Free State, Bloemfontein, South Africa

Title: To rewrite Forever, Luxury in Oyster

12:00-12:20 BALAGTAS Carmelo, SOS Pacific/Founder, Philippines

Title: Choice for Precious Metals Recovery Process from Electronic Boards: Case of SIT-Mauricie (Canada, Qc)

12:20- 12:40 Caroline Blais, Department of Industrial Engineering, Université du Québec à Trois-Rivières, Canada

Title: BIOCIRCULARCITIES project: Regulatory gap and opportunity analysis for a circular bioeconomy

12:40- 13:00 Karin Meisterl, Fundació ENT, Vilanova I la Geltrú, Barcelona, Spain

Lunch Break 13:00- 14:00

14:00- 14:20 **Title: Fertilizer produced with wastes modulates antioxidant compounds and activities in Tomato**

Dr. Adele Muscolo, Department of AGRARIA. "Mediterranea" University, Italy

14:20- 14:40 **Title: The Effects of Green Innovation on Startups' Green Success: Which Role Associated to Entrepreneurial Orientation and Leadership ?**

Omrane amina, Department of Management Science, University of Sfax, ECSTRA Research Center, Tunisia

Poster Session 14:40-16:00

Poster 1 **Title: A subsurface structure identification method combining stochastic and deep learning models**

Chuanjun Zhan, College of Construction Engineering, Jilin University, China

Poster 2 **Title: An upscaling approach to predict mine water inflow from roof sandstone aquifers**

Lulu Xu, College of Construction Engineering, Jilin University, China

Poster 3 **Title: Hydrogen geologic storage in China: feasibility and challenges**

Zhengyang Du, College of Construction Engineering, Jilin University, China

Poster 4 **Title: Uncertainty and sensitivity analysis of radionuclide migration through fractured granite**

Zhijie Yang, College of Construction Engineering, Jilin University, China

Poster 5 **Title: Upscaling dispersivity for conservative solute transport in naturally fractured media**

Sida Jia, Key Laboratory of Groundwater Resources and Environment, Ministry of Education, Jilin University, China

Poster 6 **Title: Combination of Processes to Obtain Zn from Jarosite Waste**

Vesna Conić, Mining and Metallurgy Institute Bor, Serbia

Poster 7 **Title: Flotation Tailings as a Raw Material for Copper Recovery**

Ljiljana Avramović, Mining and Metallurgy Institute Bor, Serbia

Poster 8 **Title: From Mining Wastewater to Final Cathode Copper**

Dragana Božić, Mining and Metallurgy Institute Bor, Serbia

Poster 9 **Title: Hazardous Industrial Waste from Steel Production as Raw Material for Zinc Recovery**

Vanja Trifunović, Mining and Metallurgy Institute Bor, Serbia

Closing and Award Ceremony 16:00-16:20

Tea and Refreshments Break 16:20-16:40

DAY 2

(Virtual Session via Zoom) May 16, 2023

09:20-09:30 @ **Introduction and Welcome note**

Title: Woolly rhinoceros in the environmental setting of Pleistocene Europe

09:30-10:00 **Kamilla Pawłowska**, Department of Palaeoenvironmental Research, Institute of Geology, Adam Mickiewicz University in Poznań, Poznań, Poland

Title: A Framework of Recycling and Waste Management for Establishing Resource Circulation Society

10:00-10:30

Prof. Dai-Yeun Jeong, Director of Asia Climate Change Education Center and an emeritus prof. of environmental sociology at Jeju National University in South Korea

Title: A Fuzzy Weighted Moving Average with Applications to Actual Warming on the Truth of Climate Change

10:30-11:00

Jianmin Jiang, Key Laboratory of Desert and Desertification, Chinese Academy of Sciences, China

Title: Artificial geopolymer aggregates – A one-stone-for-two-birds solution for sustainable construction

11:00-11:30

Jian-Guo Dai, The Hong Kong Polytechnic University, Hong Kong

Tea and Refreshments Break 11:30-11:50

Title: Modeling Photovoltaic Elements

11:50-12:10

Dr. Jose Manuel Lopez-Guede, Department of Systems Engineering and Automatic, Faculty of Engineering of Vitoria-Gasteiz, University of the Basque Country, Spain

Title: Next Era in Recycling Concrete

12:10-12:40

Prof. Vivian W. Y. Tam, Director of Centre for Infrastructure Engineering, Western Sydney University, School of Engineering, Design and Built Environment, Australia

Title: Some Indicators of Climate Change on the Eastern Adriatic Coast

12:40-13:00

Anita Filipčić, Division of Physical Geography, University of Zagreb, Croatia

Title: Measurement of risk perception of using recycled water for toilet flushing among urban residents

13:00-13:20

Yizhe Ding, School of Management, Xi'an University of Architecture and Technology, CHINA

Title: Mineralization of chlorophenols mixture by means of combination of ozonation and biodegradation in continuous mode with recycling of treated water

13:20-13:40

Pamela Guerra-Blanco, Environmental Chemical Engineering Lab, SEPI-ESIQIE, National Polytechnic Institute, Mexico

Title: Fungal pretreatment of lignocellulosic wastes to improve biogas production during their anaerobic digestion

13:40-14:00

Mariem ELLOUZE, Laboratory of Environmental Bioprocesses, Centre of Biotechnology of Sfax, University of Sfax, PO Box 1177, 3018 Sfax, Tunisia

Closing Ceremony 14:00-14:10

World Conference on

Recycling and Waste Management

May 15-16, 2023 | Paris, France



From Mining Wastewater to Final Cathode Copper

**Dragana Božić¹, Radmila Marković¹, Ljiljana Avramović¹, Vanja Trifunović¹,
Zoran Stevanović¹, Vesna Conić¹, Mile Bugarin¹**

¹Department of Science, Mining and Metallurgy Institute Bor/Affiliation, Bor, Serbia

Global mining activities (mineral and metal production processes) produce several billion tons of solid inorganic wastes or by-products, including liquid waste. These waste materials have common characteristics; they contain a part of the sulfide and an increased part of the oxide mineralization of metals. During the more than one hundred years of copper ore mining activities in southeast Serbia, the mine drainage water has been released to the downstream without any treatment through tributaries of Danube River and has provided the negative environmental impact on the Danube. Acid Mine Water (AMD) are characterized by low pH due to the high content of residual sulphuric acid and heavy metals, such as Cu, Cd, Zn, Pb, Ni, Co, Mn, etc. In this paper real AMD sample from area of copper mining activities in southeast Serbia, was used for test operation. AMD was feed to the neutralization equipment and pH was set: for a first step on pH 4 and for a second step on pH 8. For the neutralization process, the experiment results revealed that two-step pH control neutralization and precipitation method was effective and recovered Fe and Cu separately in the sludge generated along the process. After neutralization, the obtained sludge was subjected to leaching, solvent extraction and re-extraction in order to obtain cathode copper.

Biography:

Dragana Božić was born on April 1, 1980. in Bor, Serbia, where she finished elementary school and grammar school "Bora Stanković". She graduated in 2006, earning the title of Bachelor of Metallurgy, and received her doctorate in 2016 at the Technical Faculty in Bor. Now at the Institute of Mining and Metallurgy Bor, she work on research, development, design and application of new technologies in processes: adsorption, neutralization, leaching, bioleaching, solvent extraction and electrolytic extraction of metals from primary and secondary raw materials, obtaining metals of increased degree of purity, wastewater treatment and environmental protection.

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