



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

Environmental and Earth Sciences

May 15-16, 2023 | Paris, France

**Nevenka R. Elrzovic**

University of Belgrade, Institute for Multidisciplinary Research, Center of Excellence for Green Technologies, Kneza Viseslava 1, 11000 Belgrade, Serbia

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

Intensive fossil fuel application leads to the growing environment pollution, causing the "greenhouse effect". During the 20th century the CO₂ concentration increased about 20%, being the main reason for average temperature increase on Earth. This fact has already caused undesirable climate changes. United Nations has recognized environment pollution effects and global actions have already been taken. From Stockholm conference held in 1972 to COP 2022, United Nations announced several declarations to stabilize gas emission and decrease greenhouse effect. European Union has established main targets until 2030, in the frame of Climate and Energy Package, to increase alternative power sources usage and save environment. Thus, the further development of green hydrogen production and fuel cells catalysts as environmental friendly-green technologies are extremely desirable, to achieve sustainable economic development. Hydrogen – high efficiency and environmental friendly fuel, produced by water electrolysis is used in low temperature fuel cells, while oxidative agent is oxygen from air. In this work novel nanostructured materials with noble metal nanoparticles deposited onto ceramics based supports have been investigated as the catalysts for fuel cells, promising alternative power sources. Several ceramic supports were developed - Ti, Sn and W based oxides, doped by Ru or Nb to improve conductivity. Physical-chemical and electrochemical characterization of these novel materials confirmed higher efficiency and long term stability to decrease the costs and increase life time of fuel cells acceptable for commercial application.

Biography:

Dr Nevenka R. Elrzovic completed her PhD in 2005, from University of Belgrade. She is currently Research Professor at the Institute for Multidisciplinary Research, University of Belgrade. Her research interests: Nanostructured materials and alloys for low temperature fuel cells and water electrolysis applications – environmental friendly green energy production. Since 2013 she has been serving as national representative of Serbia and member of the European board in European Academy of Surface Technology: <http://www.east-site.net>. She has published more than 50 papers in high impact peer reviewed international journals and more than 70 conference papers.