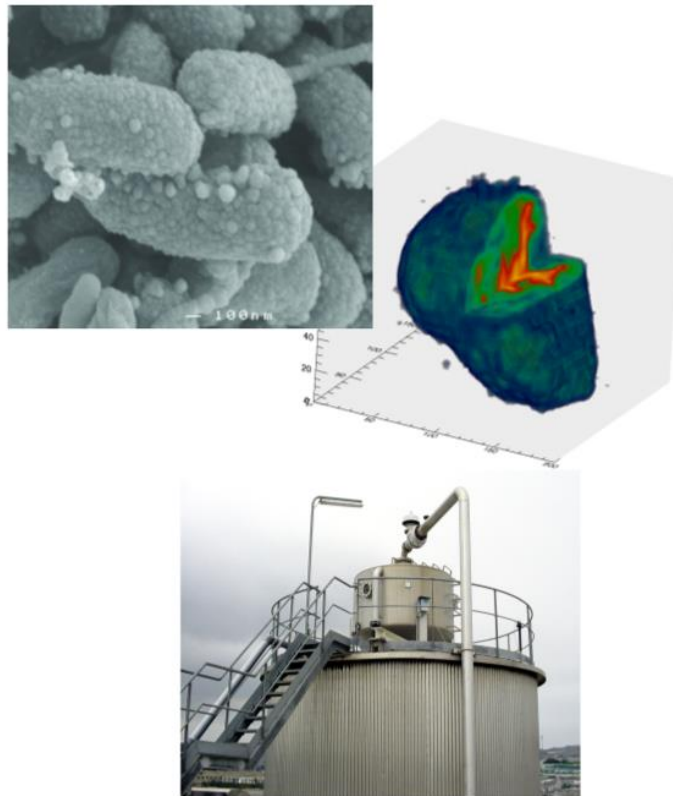


**7<sup>th</sup> INTERNATIONAL CONFERENCE ON  
RESEARCH FRONTIERS IN  
CHALCOGEN CYCLE SCIENCE & TECHNOLOGY**



**December 10 – 11<sup>th</sup>, 2020**

**(Online conference)**

**Zoom links given in schedule below**

**Time schedule in Greenwich Mean Time**

**Department of Microbiology**

**National University of Ireland Galway**

**Galway, Ireland**

**Day 1: December 10 (Times in GMT)**

Link for Session I:

<https://nuigalway-ie.zoom.us/j/93083517513?pwd=OHM5REJ3bINiWnJtb0xlUWM2eIZWZz09>

**10.00: Opening of G16 conference**

Chair person: Piet Lens (National University Ireland Galway, Galway, Ireland)

**10.10 Keynote: Natural nanoparticles from selenium and related chalcogens**

Claus Jacobs (Saarland State University, Saarbruecken, Germany)

**Part I. Analytics**

**10.40-11.00: Hotspots analysis of trace elements in areas affected by illegal mining activities**

Emmanuel Arhin (C.K. Tadam University of Technology and Applied Sciences, Navrongo, Ghana)

**11.00-11.20: Chromium availability and mobility in soils affected by mining activities**

Viviana Bolaños (University College Dublin, Ireland)

**11.20-11.40: Environmental dispersion scenarios of radioactive selenium and tellurium**

Teba Gil Diaz (Friedrich-Schiller-Universität Jena, Jena, Germany)

**11.40-12.00: Experimental approaches to reveal the dynamics of trace metals on anaerobic digestion**

Adriana Braga (University Sao Paulo, Brazil)

**Lunch Break 12.00-13.00**

**Part II. Sulfur and nitrogen interactions**

Chair person: Uddandarao Priyanka (National University Ireland Galway, Galway, Ireland)

Link for Session II:

<https://nuigalway-ie.zoom.us/j/97163782110?pwd=ZERPMkFBZFNZTG9WVWN5bkduZV2UT09>

**13.00-13.20: Biotransformation of thiosulphate by haloalkaliphilic *Thioalkalivibrio versutus***

Reka Hajdu-Rahkama (Tampere University, Finland)

**13.20-13.40: Comparative analyses of sulfurous electron donors for autotrophic denitrification**

M. F. Carboni (National University Ireland Galway, Galway, Ireland)

**13.40-14.00: Biological reduction of nitrate in saline environment in the presence of metal ions: Experimental results and model development**

Artin Hatzikioseyan (National Technical University of Athens, Zografou, Greece)

**14.00-14.20: Analytical Challenges in Determination of Ionic, Volatile, and Elemental Selenium: The Good, the Bad, and the Ugly**

Hakan Gurleyuk (Brooks Applied Labs, Bothell, USA)

**14.20-14.50: Keynote: Acid Rock Drainage or Not—Oxidative vs. Reductive Biofilms—A Microbial Question**

Margarete Kalin (Boojum Research Ltd., Toronto, Canada)

**14.50: End of Day 1**

**Day 2: December 11 (Times in GMT)**

**Link for Session III:**

<https://nuigalway-ie.zoom.us/j/97287301629?pwd=Q0h5YVFDQ2FNenVFNVBmSWE4dEU3Zz09>

Chair person: Eldon Raj (IHE Delft, Delft, The Netherlands)

**10.00 Keynote: Tellurium (bio)geochemistry in surface environments**

Owen Missen (Monash University, Australia)

**Part III. Chalcogen removal and recovery**

**10.30-10.50: Analysis of extracellular substances and microbial community of anaerobic granular sludge for continuous selenate, cadmium and zinc removal**

Taotao Zeng (University of South China, Hengyang, China)

**10.50-11.10: Biological Synthesis of Metal Selenide Nanoparticles and their Applications**

Raj Mohan (National Institute of Technology Karnataka, India)

**11.10-11.30: Removal of nickel from wastewater by adsorption using biogenic selenium nanoparticles**

Sudeshna Saikia (National University Ireland Galway, Galway, Ireland)

**11.30-12.00: Challenges in metal bio-recovery from wastewater by sulfide precipitation**

Kannan Pakshirajan (Indian Institute of Technology Guwahati, Guwahati, India)

**Lunch Break 12.00-13.00**

**Part IV. Chalcogen based environmental technologies**

Chair person: Arindam Sinharoy (National University Ireland Galway, Galway, Ireland)

**Link for Session IV:**

<https://nuigalway-ie.zoom.us/j/94780581054?pwd=WEsrY0JTSWp0NHk5aU9kTINBN3hoUT09>

**13.00-13.20: A novel membrane bioreactor configuration for H<sub>2</sub>S removal from biogas**

Jewel Das (National University Ireland Galway, Galway, Ireland)

**13.20-13.40: Bioleaching process from waste printed circuit boards**

Arrate Santaolalla (University of the Basque country, Spain)

**13.40-14.00: A novel integrated approach for simultaneous methane production and selenium remediation through anaerobic co-digestion of lipid- and selenium-rich wastewaters**

Mohanakrishnan Logan (National University Ireland Galway, Galway, Ireland)

**14.00-14.20: Microbial reduction of selenate, selenite, and sulfate**

Joshua P. Boltz (Arizona State University, USA)

**14.20-14.50: Keynote: Research frontiers in chalcogen science and technology**

Piet Lens (National University Ireland Galway, Galway, Ireland)

**14.50: End of Conference**

### ONLINE CONFERENCE

In light of the COVID-19 pandemic, it was decided to conduct the 7<sup>th</sup> edition of Chalcogen G-16 conference using online mode via video link. The modalities for conducting this conference is currently being developed and participants will be informed about the details way ahead of the actual conference dates. In addition, any support needed by participants to present their work in this conference will be provided by the organizer.

### INFORMATION ON BOOK DISCOUNTS

At the time of the G16 conference, two books will be released:

- **Environmental Technologies to Treat Sulfur Pollution**, 2<sup>nd</sup> edition, edited by Piet Lens
- **Environmental Technologies to Treat Selenium Pollution**, edited by Piet Lens & Kannan Pakshirajan

Both books, and also the 1<sup>st</sup> edition of the book Environmental Technologies to Treat Sulfur Pollution, are published open access by IWA Publishing ([www.iwapublishing.com](http://www.iwapublishing.com)). All G16 participants are entitled to a 25% discount on the purchase of the hardcopy of any of the three titles. The hard copies of the books can be ordered directly from: [sales@portland-services.com](mailto:sales@portland-services.com) (Key code: **G16LENS25**).

### SCIENTIFIC COMMITTEE

Piet Lens, NUI Galway (Chair)  
Kannan Pakshirajan, IIT Guwahati (Co-chair)  
Rachel Costa, Sao Paulo State University, Brazil  
Francesco Di Capua, University of Naples Federico II, Italy  
Giovanni Esposito, University of Naples Federico II, Italy  
Eugênio Foresti, Universidade de São Paulo, Brazil  
Karel Keesman, Wageningen University, The Netherlands  
Christian Kennes, University of La Coruña, Spain  
John Lloyd, University of Manchester, UK  
Stefano Papirio, University of Naples Federico II, Italy  
Jukka Rintala, Tampere University of Technology, Finland  
Eldon Rene, IHE Delft, The Netherlands  
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