

The European Union –
Latin America and
Caribbean Foundation

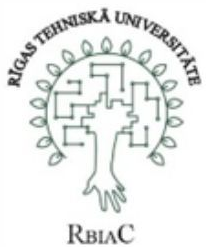


European Union
European Regional
Development Fund

Hi-Water project Closing Week

24-28 May, 2021 | Online

**«Efficient and Affordable Water
Treatment Technologies to
Minimize Waterborne Diseases»**




HI-WATER



MONDAY, May 24

16:00 - 16:30 pm CET
(9:00 - 9:30 am Quito)

Welcome & Introduction

- Arturo Luque (Ikiam's Vicerector, Ecuador)
- Talis Juhna (RTU Vice Rector for Research, Latvia)
- Carolina Proaño (Ikiam Research Coordinator, Ecuador)
- Carolina Bolaños (Ikiam's Director of Foreign Affairs, Ecuador)



Miguel Herrera-Robledo, Ikiam

16:30 - 17:00 pm CET
(9:30 - 10:00 am Quito)

Structure of Membrane Biofouling

Dr. Miguel Herrera-Robledo - Universidad Regional Amazónica Ikiam, Ecuador



Linda Mezule, RTU

17:00 - 17:30 pm CET
(10:00 - 10:30 am Quito)

Biotechnologies in Engineering Systems

Dr. Linda Mezule - Riga Technical University, Latvia

17:30 - 18:00 pm CET
(10:30 - 11:00 am Quito)

Synthesis, Characterization and Efficiency of BiOX Nanoparticles

Dr. Pablo Cisneros - Universidad Regional Amazónica Ikiam, Ecuador



Pablo Cisneros, Ikiam

TUESDAY, May 25

16:00 - 16:05 pm CET
(9:00 - 9:05 am Quito)

Opening

- Markus Stommel (IPF Director Institute of Polymer Materials, Germany)

16:05 - 16:30 pm CET
(9:05 - 9:30 am Quito)

Ceramic technologies

Dr. Janis Locs - Riga Technical University, Latvia



Janis Locs, RTU

16:30 - 17:30 pm CET
(9:30 - 10:30 am Quito)

Section 1 MATERIALS

16:30 - 16:45
(9:30 - 9:45)

Application of chitosan nanoparticles in drinking water disinfection

Viktorija Denisova, Riga Technical University, Latvia

16:45 - 17:00
(9:45 - 10:00)

Coating feedside of membranes with BiOX-particles and antifouling testing

Akshay Kulkarni, Leibniz Institute of Polymer Research Dresden, Germany

17:00 - 17:15
(10:00 - 10:15)

Biomaterials for wastewater treatment

Abhishek Indurkar, Riga Technical University, Latvia

17:15 - 17:30
(10:15 - 10:30)

Deposition of BiOX nanoparticles over ceramic membranes

Bryan Rosero, Universidad Regional Amazónica Ikiam, Ecuador

17:30 - 17:40
(10:30 - 10:40)

Break

17:40 - 18:10 pm CET
(10:40 - 11:10 am Quito)

Membrane Preparation Processes

Dr. Jochen Meier Haack - Leibniz Institute of Polymer Research Dresden, Germany

18:10 - 19:10 pm CET
(11:10 - 12:10 am Quito)

Section 2 MATERIALS

18:10 - 18:25
(11:10 - 11:25)

SmartLIX proposal (Hybrid membranes for landfill leachate)

Andrea Salgado, Universidad Regional Amazónica Ikiam, Ecuador

18:25 - 18:40
(11:25 - 11:40)

Theory of constant-pressure filtration and the structure of membrane deposits

Carlos Cuenca, Universidad Regional Amazónica Ikiam, Ecuador

18:40 - 18:55
(11:40 - 11:55)

Membrane fouling during UF of surface water – Pore-blocking evolution

Lisette Díaz, Universidad Regional Amazónica Ikiam, Ecuador

18:55 - 19:10
(11:55 - 12:10)

Theory on biofouling development during UF of surface water

Shirley Tello, Universidad Regional Amazónica Ikiam, Ecuador

19:10 - 19:25
(12:10 - 12:25)

Study of bimetallic Pt-based catalysts as anodes for low temperature fuel cells and its performance to CO oxidation

Orlando Ugalde, Universidad Regional Amazónica Ikiam, Ecuador



Viktorija Denisova, RTU



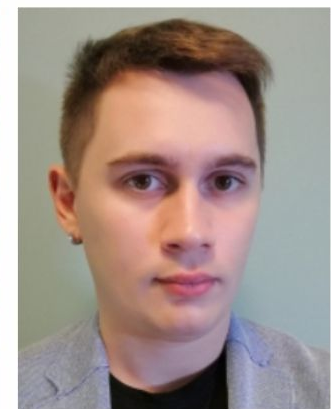
Jochen Meier Haack, IPF



Wednesday, May 26



Yeimi Rojas, Ikiam



Ralfs Vevers, RTU



RTU Pilot System



Electrochemical disinfection device

16:00 - 16:30 pm CET
(9:00 - 9:30 am Quito)

Microbiology and Water Quality of Tena River

M.Sc. Yeimi Rojas - Universidad Regional Amazónica Ikiam

16:30 - 17:45 pm CET
(9:30 - 10:45 am Quito)

Section 3 **WASTEWATER**

16:30 - 16:45
(9:30 - 9:45)

Removal of phosphorous from wastewater

Aigars Lavrinovics, Riga Technical University, Latvia

16:45 - 17:00
(9:45 - 10:00)

Microalgae harvesting after tertiary wastewater treatment

Anna Civzele, Riga Technical University, Latvia

17:00 - 17:15
(10:00 - 10:15)

Analysis of the soluble microbial products in the effluent of MBR wastewater treatment plant

Kevin Miño, Universidad Regional Amazónica Ikiam, Ecuador

17:15 - 17:30
(10:15 - 10:30)

Inactivation of cyanotoxins by photocatalytic membrane reactor

Virginia Rivadeneyra, Universidad Regional Amazónica Ikiam, Ecuador

17:30 - 17:45
(10:30 - 10:45)

Dairy wastewater treatment by using coupled coagulation-adsorption

Basanti Ekka, Riga Technical University, Latvia

17:45 - 18:00
(10:45 - 11:00)

Break

18:00 - 19:15 pm CET
(11:00 - 12:15 am Quito)

Section 4 **MEMBRANES**

18:00 - 18:15
(11:00 - 11:15)

Effect of particle deposition on operational parameters of ultrafiltration and on the structure of membrane fouling

Gabriela Urresta, Universidad Regional Amazónica Ikiam, Ecuador

18:15 - 18:30
(11:15 - 11:30)

Precipitation process of hydrophilic polymers

Marcel Glomba, Leibniz Institute of Polymer Research Dresden, Germany

18:30 - 18:45
(11:30 - 11:45)

Assessment of coated-membranes in water treatment

Ralfs Vevers, Riga Technical University, Latvia

18:45 - 19:00
(11:45 - 12:00)

Fouling mechanisms during the UF of pisciculture ponds

Pablo Guerra, Universidad Regional Amazónica Ikiam, Ecuador

19:00 - 19:15
(12:00 - 12:15)

The set up of a tubular ceramic membrane photocatalytic reactor & video

Michael Suarez, Universidad Regional Amazónica Ikiam, Ecuador

Thursday, May 27

16:00 - 16:15 pm CET
(9:00 - 9:15 am Quito)

Hi-Water intro & video

Dr. Linda Mezule - Riga Technical University, Latvia



Luis Quishpe, Ikiam

16:15 - 16:45 pm CET
(9:15 - 9:45 am Quito)

Capacity building associated to Hi-Water at Ikiam University & video

Luis Quishpe - Universidad Regional Amazónica Ikiam, Ecuador



Tim Oddoy, IPF

16:45 - 17:10 pm CET
(9:45 - 10:10 am Quito)

Hydrophilic carboxylated Pes membranes coated by polyelectrolytes & video

Tim Oddoy - Leibniz Institute of Polymer Research Dresden, Germany

17:10 - 17:35 pm CET
(10:10 - 10:35 am Quito)

Ceramic electrodes for water treatment & video

Dr. Kristaps Rubenis - Riga Technical University, Latvia



Kristaps Rubenis, RTU

17:35 - 18:00 pm CET
(10:35 - 11:00 am Quito)

VIS-light active BiOX nanoparticles: Functionalisation of carboxylated PES membranes for application in a photocatalytic membrane reactor

Poojesh Bertram-Mohammadi - Universidad Regional Amazónica Ikiam/Leibniz Institute of Polymer Research Dresden, Ecuador/Germany



Poojesh Bertram-Mohammadi, Ikiam/IPF

18:00 - 18:30 pm CET
(11:00 - 11:30 am Quito)

Technical Questions and Answers

Friday, May 28

16:00 - 16:30 pm CET
(9:00 - 9:30 am Quito)

Immobilisation of Photoactive Nanoparticles

Dr. Jan Spengler - Universidad Regional Amazónica Ikiam, Ecuador



Jan Spengler, Ikiam

16:30 - 17:30 pm CET
(9:30 - 10:30 am Quito)

Section 5 Tailor made nanoparticles

16:30 - 16:45
(9:30 - 9:45)

Photocatalytic oxidation of ammonia

Marcos Hidalgo, Universidad Regional Amazónica Ikiam, Ecuador

16:45 - 17:00
(9:45 - 10:00)

Photocatalytic reduction of nitrate

Angelica Navarrete, Universidad Regional Amazónica Ikiam, Ecuador

17:00 - 17:15
(10:00 - 10:15)

Inactivation of CEC by BiOX nanoparticles

Damián Tuba, Universidad Regional Amazónica Ikiam, Ecuador

17:15 - 17:30
(10:15 - 10:30)

TiO₂ photodoping, its modification and uses

Raivis Eglitis, Riga Technical University, Latvia



17:30 - 18:00 pm CET
(10:30 - 11:00 am Quito)

Discussion, future perspectives



18:00 pm CET
(11:00 am Quito)

Closing Ceremony, Awards



Scientific committee

Chair: Dr. Linda Mezule (Riga Technical University, Latvia)

Co-chair: Dr. Miguel Herrera-Robledo - Universidad Regional Amazónica Ikiam, Ecuador

Dr. Janis Locs (Riga Technical University, Latvia)

Dr. Jochen Meier Haack (Leibniz Institute of Polymer Research Dresden, Germany)

Dr. Jan Spengler (Universidad Regional Amazónica Ikiam, Ecuador)

Organising committee

Dr.sc.ing. Linda Mezule (Riga Technical University, Latvia)

M.sc.ing. Viktorija Denisova (Riga Technical University, Latvia)

Iveta Lauva (Riga Technical University, Latvia)