NATIONAL RESEARCH AND DEVELOPMENT INSTITUTE
FOR INDUSTRIAL ECOLOGY

ECOIND

EXCELLENCE IN RESEARCH AND ENVIRONMENTAL SERVICES

INTERNATIONAL SYMPOSIUM

„THE ENVIRONMENT AND THE INDUSTRY”

SIMI 2026

CONFERENCE AGENDA

CONNECTING SCIENCE WITH INDUSTRY

29 - 30 OCTOBER 2026

Library of the Romanian Academy • 125 Calea Victoriei, Bucharest

SIMI 2026 • CONFERENCE PROGRAMME

THURSDAY / 29 OCTOBER

Day 1 • Opening & keynote talks

Registration, conference opening, keynote presentations

08:40-09:10 — **Registration of participants**

09:10-09:25 — **SIMI 2026 Opening**

Dr. Luoana Florentina Pascu (General Manager) and Dr. Olga Tiron (Scientific Director), National R&D Institute for Industrial Ecology-ECOIND, Romania

09:25-09:55 — **Urban stormwater runoff (re)use: From source to resource!**

Florian Burnar, Dan Rădulescu, APPFE - STORMWATER Romania
Keynote speakers

09:55-10:20 — **Between life and temperature: The science of transforming a contaminated site. From bioremediation to thermal desorption: two technological answers to the same challenge, hydrocarbon contamination**

Iulius Claudiu Faur, STILO EVORA
Keynote speaker

10:20-10:40 — **Bioaugmentation for municipal and industrial wastewater treatment plants**

Mihai Mincu, SC INSTANT SOFTNET SRL
Keynote speaker

10:40-10:55 — **Emerging Contaminants: Advancing the Analysis of PFAS, Ethylene Oxide and Microplastics**

Aaron Davies, Markes

10:55-11:25 — **Coffee Break & Poster Session**

Talent Pass Bucharest Workshop, Circularity in Practice: Water, Energy and Materials for a Resilient Future

11:25-11:30 — **Opening Session**
Dr. Olga Tiron, National R&D Institute for Industrial Ecology - ECOIND, Romania

SIMI 2026 • CONFERENCE PROGRAMME

THURSDAY / 29 OCTOBER

Day 1 • Talent Pass workshop

Circularity in Practice: Water, Energy and Materials for a Resilient Future

Session 1: Building Synergies: Circular Economy Regulation and Collaborative Project Insights

11:30-11:50

From Compliance to Impact: How Circular Economy Policies Shape Sustainable Innovation - Legislative Trends and Industry Initiatives

Dr. Andra Onaș, **RUCODEM, Romania**
Keynote speaker

11:50-12:10

Research mobility as a bridge to intersectoral collaboration: The ERA SHUTTLE experience

Dr. Anna Wcisło, University of Gdańsk, **Poland**

12:10-12:30

NANOEMCA: Bridging Advanced Nanomaterials and Environmental Research

Dr. Claudia Maria Simonescu, **National University of Science & Technology POLITEHNICA Bucharest, Romania**
Keynote speaker

12:30-12:50

High-performance equipment for electric disinfection of water

Dr. Daniela Simina Ștefan, **National University of Science & Technology POLITEHNICA Bucharest, Romania**
Keynote speaker

Session 2: Sustainable Solutions for Environmental Safety

12:50-13:10

Implementing Safe-and-Sustainable-by-Design (SSbD) Principles in the Formulation of Bio-Based Products

Dr. Uroš Novak, **National Institute of Chemistry (NIC), Slovenia**

13:10-13:30

Biopolymer-based Microencapsulation: Towards Sustainable Agriculture

Dr. António Aguiar, **Instituto Superior Técnico, University of Lisbon, Portugal**

13:30-14:20 **Lunch Break & Networking Session**

THURSDAY / 29 OCTOBER

Day 1 • Afternoon sessions

Sustainable Solutions / Talent Pass in Action

Continue Session 2: Sustainable Solutions for Environmental Safety

14:20-14:40

Near-Infrared Reflective Pigments for Exterior coatings: A review of Cooling Performance and Environmental Impacts

Dr. Mirica Karlovits, National Institute of Chemistry (NIC), Slovenia

14:40-15:00

New eco-friendly materials design for Proto-Opto-Electro-Mechanical devices

Dr. Mihai Niță-Lazăr, National R&D Institute for Industrial Ecology-ECOIND, Romania

Session 3: Talent Pass in Action: Secondees & Trainees

15:00-15:15

From Natural Polymers to Magnetic Functional Materials: Sustainable Solutions for Wastewater Treatment

Dr. Andra Enache, Petru Poni Institute of Macromolecular Chemistry (ICMPP), Romania

15:15-15:30

Optimisation and scalability of metal-pillared clays for industrial CO_2 capture in the cement sector

Dr. Tânia Frade, Instituto Superior Técnico, University of Lisbon, Portugal

15:30-15:45

Microplastic-associated organic contaminants in the Black Sea coastal environment: occurrence of OPFRs, PFAS and Bisphenols

Drd. Ioana-Antonia Mînzar, National R&D Institute for Industrial Ecology-ECOIND, Romania

15:45-16:00

Mathematical modelling of odorous air pollutant dispersion using AERMOD: from national industrial case studies to international simulations through the Talent Pass programme

Drd. Cristian Constantin, National R&D Institute for Industrial Ecology-ECOIND, Romania

— **Closing 1st day Sessions & Talent Pass workshop Sessions**

FRIDAY / 30 OCTOBER

Day 2 • Morning programme

Conference presentations, coffee break and Talent Pass workshop

09:00-09:30	**Registration of participants**
09:30-09:50	**Beyond disposal: a novel circular material from residues for wastewater decontamination** Dr. Iolanda Ganea, National R&D Institute of Isotopic and Molecular Technologies, Cluj-Napoca, Romania Keynote speaker
09:50-10:10	**Occurrence of emerging organic contaminants in Romanian rivers** Dr. Florentina Laura Chiriac, National R&D Institute for Industrial Ecology-ECOIND, Romania
10:10-10:30	**Adsorption of Cd(II) Ions onto Schiff Base-Functionalized Periodic Mesoporous Organosilica** Dr. Gianina-Gabriela Oprea (Hîrjanu), National University of Science & Technology POLITEHNICA Bucharest, Romania Keynote speaker
10:30-10:50	**Environmental Impact and Legislative Framework regarding the Analysis of Biogas emitted from Municipal Waste in Romania** Dr. Andreea Cozea, National R&D Institute for Industrial Ecology-ECOIND, Romania
10:50-11:05	**Solutions for Environmental Laboratories and Industry** Lucian Ștefan, Avantor
11:05-11:35	**Coffee Break & Poster Session**

Talent Pass Bucharest Workshop, Circularity in Practice: Water, Energy and Materials for a Resilient Future

FRIDAY / 30 OCTOBER

Day 2 • Green materials

Talent Pass workshop: advances in materials and chemical processes

Session 1: Advances in Green Materials and Chemical Processes

11:35-11:55

Ecofriendly Hydrogels - the new frontier in sustainable agriculture

Dr. Daniela Ivanov, Petru Poni Institute of Macromolecular Chemistry (ICMPP), Romania

11:55-12:15

Center of Excellence in Water Management and Valorization of Materials, By-products, and Waste for the Implementation of the Circular Bioeconomy

Dr. Gabriela Geanina Vasile, National R&D Institute for Industrial Ecology-ECOIND, Romania

12:15-12:35

Synthesis of Sodium Carbonate by the CODA Method

Dr. Claudia Popescu, Chimcomplex SA, Romania

12:35-12:55

From Insect Biomass to Sustainable Chitosan: Circular Materials and Green Metrics for Biowaste Valorisation

Dr. Ana Paula Ribeiro, Instituto Superior Técnico, University of Lisbon, Portugal

12:55-13:40 **Lunch Break & Networking Session**

Session 2: Talent Pass in Action: Secondees & Trainees

FRIDAY / 30 OCTOBER

Day 2 • Afternoon & closing

Talent Pass in Action and final conference presentations

13:40-13:55	**Antarctic Nanoworlds: Decoding Glacial Diatoms Through Advanced Microscopy**	Dr. Ioana Alexandra Ionescu, National R&D Institute for Industrial Ecology-ECOIND, Romania
13:55-14:10	**CO_2 capture from Cement Industry by PSA Processes with Pillared Clays as Adsorbent**	Dr. Abeer Mohtar, Instituto Superior Técnico, University of Lisbon, Portugal
14:10-14:25	**Exploring the Potential Biodegradation of Selected Perfluoroalkyl Carboxylic Acids in Biologically Active Wastewater**	Drd. Victor Cojocaru, National R&D Institute for Industrial Ecology-ECOIND, Romania
14:25-14:40	**Noise Attenuation by Natural Barriers: A Study Case on Weather-Dependent Propagation**	Dorin Babeu, National R&D Institute for Industrial Ecology-ECOIND, Romania
–	**Closing Talent Pass workshop Sessions**	
14:45-15:00	**Sustainability in Analytical Chemistry: BioRenewable solvents for chromatography and greener alternative products**	Ciprian Vatca, Merck Romania
15:00-15:15	**Antibacterial Activity of Salvia officinalis Essential Oil obtained by Enzyme-Assisted Hydrodistillation: Comparison with a Commercial Sage Essential Oil**	Dr. Mihai Niță-Lazăr, National R&D Institute for Industrial Ecology-ECOIND, Romania
15:15-15:30	**Analytical investigations for determining air quality in urban and peri-urban areas. Study case**	Drd. Simona Mariana Călinescu, National R&D Institute for Industrial Ecology-ECOIND, Romania

POSTER SECTION

Sustainable Environmental Technologies

ADSORPTIVE REMOVAL OF PB(II) FROM AQUEOUS SOLUTIONS USING MAGNETIC BIOCHAR
Ionut Adrian Radulescu, Claudia Maria Simonescu, Daniela Cristina Culita, Vildan Erci, Doğan Çetin, Madalina-Andreea Pandele, Lucian-Gabriel Petrescu

ADVANCED MULTIFUNCTIONAL BIOCHAR-BASED MATERIALS FOR EMERGING POLLUTANT REMOVAL FROM WASTEWATER
Laurentiu Gabriel Nicolae Ivanoiu, Mihaela Emanuela Craciun, Claudia Maria Simonescu

ANTIMICROBIAL ACTIVITY OF AN ECOFRIENDLY BEE-DERIVED PRODUCT
Marcela Popa, Cosmin Herta, Mihai Nita-Lazar

ATRAZINE ATTENUATION AND MICROBIAL RESILIENCE DURING INTENSIVE IN-VESSEL COMPOSTING OF BIODEGRADABLE WASTE
Lidia Kim, Costel Bumbac, Vasile Ion Iancu

BALANCING MELT FLOW AND MECHANICAL RESPONSE IN MINERAL-FILLED SIBS COMPOSITES
Marius Bumbac, Cristina-Mihaela Nicolescu, Germano Craia, Stefan-Cosmin Gherghinoiu, Costel Bumbac, Lidia Kim, Bogdan-Catalin Serban, Simona Mihai

CARBON NANO-ONION/POLYVINYLPYRROLIDONE FILMS ON FLEXIBLE SUBSTRATES: THERMISTOR PARAMETERS AND PERCOLATION-BASED DESIGN RULES FOR TEMPERATURE SENSING
Bogdan Catalin Serban, Marius Bumbac, Cristina-Mihaela Nicolescu, Maria Ruxandra Salagean, Octavian Buiu

DEVELOPMENT AND CHARACTERIZATION OF AN ALGINATE-BASED BIOSORBENT FROM RESIDUAL MICROALGAL–BACTERIAL BIOMASS
Tatiana Dragomir (Buse), Olga Tiron, Mihai Nita-Lazar

EFFECT OF FEEDING STRATEGY ON FUNCTIONAL MICROBIAL COMMUNITIES DURING INTENSIVE IN-VESSEL COMPOSTING OF URBAN BIOWASTE
Costel Bumbac, Lidia Kim

ELECTRODE SPACING AND HUMIDITY RESPONSE IN CARBON NANO-ONION OXIDIZED NANOHORN POLYVINYLPYRROLIDONE COMPOSITES
Bogdan Catalin Serban, Marius Bumbac, Cristina Mihaela Nicolescu, Maria Ruxandra Salagean, Octavian Buiu

MINERAL LOADING AND DEFORMABILITY IN BIO TPU COMPOSITES WITH BARIUM SULFATE
Cristina-Mihaela Nicolescu, Marius Bumbac, Germano Craia, Stefan-Cosmin Gherghinoiu, Costel Bumbac, Lidia Kim, Bogdan-Catalin Serban, Simona Mihai

OXIDIZED CARBON NANOHORN/NANO-ONION/ CARBOXYMETHYLCELLULOSE COATINGS FOR SURFACE ACOUSTIC WAVE ACETONE SENSING: DESIGN AND SENSITIVITY ANALYSIS
Bogdan Catalin Serban, Marius Bumbac, Cristina-Mihaela Nicolescu, Maria Ruxandra Salagean, Octavian Buiu

OXIDIZED CARBON NANOHORNS AND FLUORINATED GRAPHENE OXIDE ON POLYIMIDE: A RESISTIVE ACETONE SENSING CONCEPT
Bogdan Catalin Serban, Marius Bumbac, Cristina-Mihaela Nicolescu, Maria Ruxandra Salagean, Octavian Buiu

PRELIMINARY SCREENING OF FOOD-WASTE-DERIVED BIOADSORBENTS FOR CARBAMAZEPINE REMOVAL
Daniela Ion, Florentina Laura Chiriac, Vasile-Ion Iancu, Ana Maria Luntraru, Mihai Nita-Lazar

POSTER SECTION

REMOVAL OF METHYLENE BLUE DYE FROM AQUEOUS SOLUTIONS USING LEMON POWDER AND DERIVED ADSORBENTS
Gabriel-Valentin Serban, Vasile Ion Iancu, Ana-Maria Luntraru, Ioana Ionescu, Florentina Laura Chiriac, Daniela Simina Stefan

UNLOCKING THE POTENTIAL OF NEW SPINEL-TYPE MIXED OXIDES FOR RAPID AND EFFICIENT REMOVAL OF HAZARDOUS AQUEOUS CONTAMINANTS
Ionela Grecu, Corneliu Cojocaru, Petrisor Samoila, Bogdan-Constantin Condurache, Bogdan-George Rusu, Andra-Cristina Enache

Pollution Assessment & Management Systems

AN OVERVIEW OF FUNCTIONALIZED CELLULOSE-BASED ADSORBENTS FOR Cu(II) REMOVAL FROM AQUEOUS SYSTEMS
Claudiu Spinu, Catalin Manea, Ancuta Diaconu

FROM DIRECT OBSERVATION TO ENVIRONMENTAL DNA: A COMPARATIVE ANALYSIS OF BIODIVERSITY ASSESSMENT METHODS
Catalina Stoica, Cristina Iftode, Daniel Gheorghe Rudaru, Mihai-Nita-Lazar

OXYFLUORINATED CARBON NANO-ONIONS AND FLUORINATED REDUCED GRAPHENE OXIDE: PREPARATION ROUTE AND SENSING CONCEPT FOR ROOM-TEMPERATURE ACETONE DETECTION
Bogdan Catalin Serban, Marius Bumbac, Cristina-Mihaela Nicolescu, Maria Ruxandra Salagean, Octavian Buiu

SHORT-TERM TOXICITY OF SUNSCREEN-RELATED: UV FILTERS TO *CYPRINUS CARPIO*
Andreea-Valentina Petre, Camelia Ungureanu, Stefania Gheorghe, Florentina-Laura Chiriac

Pollution Control and Monitoring

ASSESSMENT OF MICROBIOLOGICAL RISK OF SWIMMING POOL WATER USING MONTHLY MONITORING DATA
Oana Ivascu-Vilcu, Laura Feodorov, Marcela Popa, Eugen Csaszar, Marian Haralambie Mircea, Cristina Iftode, Alina Roxana Banciu

ASSESSMENT OF OVERALL MIGRATION AND METAL CONTRIBUTION FROM PLASTIC FOOD CONTACT MATERIAL
Alexandra Madalina Ghita, Daniela Simina Stefan

COMPARATIVE STUDY OF SURFACTANT LOADS AND PHYSICOCHEMICAL CHARACTERISTICS OF CAR WASH WASTEWATER
Alina Silvia Pintilescu, Elena Adriana Albu, Mariana Tudor, Irina Dumitrescu, Daniel Gheorghe Rudaru, Denisa Andreea Caraman, Alina Roxana Banciu, Stefania Gheorghe

DETERMINATION OF AZOLE COMPOUNDS IN ENVIRONMENTAL SAMPLES: THE INFLUENT AND EFFLUENT OF WASTEWATER TREATMENT PLANTS
Ana-Maria Luntraru, Vasile Ion Iancu, Florentina Laura Chiriac, Florinela Pirvu, Iuliana Paun, Andreea Valentina Petre, Victor Cojocaru, Gabriel-Valentin Serban

EVALUATION OF ARSENIC SPECIATION IN GROUNDWATER SAMPLES FROM THE WESTERN ROMANIAN AQUIFER
Adina Pacala, Dorian Gabriel Neidoni, Iasmina Ionela Rus, Alexandru Paul Rus, Cristina Dinu

MOLECULAR APPROACHES FOR THE IDENTIFICATION AND DIFFERENTIATION OF TILLETIA SPECIES CAUSING WHEAT BUNT
Diana Mihaela Anghel, Oana Alina Boiu-Sicuia, Indira Galit

POSTER SECTION

OCCURRENCE AND DISTRIBUTION OF METALS IN THE AQUATIC ECOSYSTEMS OF THE DANUBE RIVER AND SELECTED TRIBUTARIES
Marilena Valentina Stinga (Bujoreanu), Alexandru Paul Rus, Cristina Dinu, Gabriela Geanina Vasile*, Catalina Stoica, Stefania Gheorghe, Gheorghita Tanase

OZONE PRECURSOR MONITORING: SUPPORTING THE REQUIREMENTS OF THE EUROPEAN AMBIENT AIR QUALITY DIRECTIVE (EU) 2024/2881
Hannah Calder, Aaron Davies

REGULATORY GAPS IN MICROPLASTIC POLLUTION CONTROL: CHALLENGES FOR AQUATIC ENVIRONMENTAL PROTECTION
Florinela Pirvu, Iuliana Paun, Florentina Laura Chiriac

RELEASE OF POTENTIALLY TOXIC METALS FROM CIGARETTE BUTTS IN SIMULATED ENVIRONMENTAL MEDIA
Alexandru Paul Rus, Ana-Maria Luntraru, Marilena Valentina Stinga (Bujoreanu), Cristina Dinu, Vasile Ion Iancu, Gabriela Geanina Vasile, Florentina Laura Chiriac

RIBOFLAVIN AS AN INHIBITOR OF AQUATIC OXIDATIVE: SELF-PURIFICATION
Angela Lis, Viorica Gladchi, Elena Bunduchi, Vladislav Blonschi

SEASONAL DYNAMICS OF ACTIVATED SLUDGE QUALITY IN A MUNICIPAL WASTEWATER TREATMENT PLANT: AN INTEGRATED PHYSICOCHEMICAL AND MICROBIOLOGICAL ASSESSMENT
Daniel Rudaru, Laura Feodorov, Marcela Popa, Denisa Caraman, Catalina Stoica, Alina Roxana Banciu

THE CONTRIBUTION OF SAMPLING ACTIVITIES TO OBTAINING RELIABLE DATA IN ENVIRONMENTAL STUDIES
Marian Haralambie Mircea, Marcela Popa

TWO-YEAR GROUNDWATER QUALITY EVOLUTION AT TWO CLOSED NON-COMPLIANT LANDFILLS IN ROMANIA
Catalin Manea, Claudiu Spinu, Ancuta Diaconu

Green Sustainable Development, Climate Change and Energy

CLIMATE IMPACT AND ECOTOXICITY IN POLAR THERMOPLASTIC BIOCOMPOSITES
Marius Bumbac, Cristina Mihaela Nicolescu, Gabriela Zinca, Daniela Cristiana Alexandrescu, Costel Bumbac, Lidia Kim, Cosmin Stefan Gherghinoiu, Germano Craia, Bogdan Catalin Serban, Octavian Buiu

FOOD WASTE DYNAMICS IN ROMANIA: A SECTORAL AND COMPARATIVE PERSPECTIVE WITHIN THE EUROPEAN UNION
Ruxandra-Eugenia Pop, Steliana Rodino

PROTEINS AS FUNCTIONAL FILLERS IN THERMOPLASTIC ELASTOMER BLENDS: A DESIGN STRATEGY AGAINST PROCESSING-INDUCED DENATURATION
Marius Bumbac, Cristina Mihaela Nicolescu, Mihaela Valentina Savu, Ana Maria Hossu1, Costel Bumbac, Lidia Kim, Cosmin Stefan Gherghinoiu, Germano Craia, Bogdan Catalin Serban, Octavian Buiu

SERVICE LIFE AND ENVIRONMENTAL SAFETY OF BIOMASS-FILLED SBS THERMOPLASTIC COMPOSITES
Cristina Mihaela Nicolescu, Marius Bumbac, Gabriela Zinca, Daniela Cristiana Alexandrescu, Costel Bumbac, Lidia Kim, Cosmin Stefan Gherghinoiu, Germano Craia, Bogdan Catalin Serban, Octavian Buiu

Romanian Journal of Ecology & Environmental Chemistry (RJEEC)

AI-BASED AIR QUALITY PREDICTION USING IOT SENSOR DATA FOR URBAN ENVIRONMENTAL MONITORING
Robert-Alexandru Streche, Andrei-Bogdan Danila, Theodor Pintilie, Cristina Dobre, George Suciu

POSTER SECTION

Growth recovery and functional responses of Vibrio fischeri during repeated tetracycline exposure
Laura Feodorov, Marcela Popa, Mihai Nita-Lazar, Calina Petruta Cornea

Tracking Microplastic Pollution through the Water Cycle: Occurrence, Identification, and Ecotoxicological Risks
Stefania Gheorghe, Catalina Stoica, Ioana Ionescu, Antonia Minzar, Aida Pantazi, Marius Enachescu