

CONFERENCE SCHEDULE

Thursday 13/11: Morning sessions

	Room 1	Room 2
9:00	WTM 05	EE 01
9:15	WTM 06	EE 02
9:30	WTM 07	EE 03
9:45	Coffee break	
10:30	Keynote 2: Dr. Gianluca Li Puma	
11:30	SCC 01	EE 04
11:45	SCC 02	EE 05
12:00	SCC 03	
12:15	Award for excellence ceremony	
13:15	Lunch	

Friday 14/11: Morning sessions

	Room 1	Room 2
9:45	WTM 08	EE 06
10:00	WTM 09	EE 07
10:15	WTM 10	EE 08
10:30	Coffe Break	
11:00	SCC 04	BMS 01
11:15	SCC 05	BMS 02
11:45	Keynote: Dr. Mangalaraja Ramalinga	
12:45	Conference end	

Wednesday 12/11: Afternoon sessions

14:00	Registration	
15:00	Welcome	
16:00	Keynote: Dr. Vítor Jorge Pais Vilar	
	Room 1	Room 2
17:00	WTM 01	REC 01
17:15	WTM 02	REC 02
17:30	WTM 03	REC 03
17:45	WTM 04	REC 04
18:00	Coctail	

Thursday 13/11: Afternoon sessions

	Room 1	Room 2
14:30	MEE 01	SES 01
14:45	MEE 02	SES 02
15:00	Coffee break / Poster session	
17:00	MEE 03	SES 03
17:15	MEE 04	SES 04
20:00	Conference Dinner	

EE:	Energy Efficiency
SES:	Sustainable Energy Systems
REC:	Renewable Energy Conversion
MEE:	Materials for Energy and Environmental Applications
BMS:	Bioprocess and Biomaterials for Sustainability
WTM:	Wastewater Treatment and Sustainable Water Management
SCC:	Sustainability and Climate Change

ABSTRACTS SUMMARY

EE: Energy Efficiency

First author	Title	Key
Jhoan Contreras Rincón	Energy Efficiency Assessment of Domestic Gas Stoves Using Hydrogen–Natural Gas Blends	EE 01
Andrea Torrejón-Fontana	Exergy Destruction Analysis of a Large Wind Farm over a 24-Hour Diurnal Cycle Using the Johns Hopkins Turbulence Database	EE 02
Ignacio Leyton Valenzuela	Real-time optimization of data center cooling using thermodynamic modeling and machine learning	EE 03
Juan Pablo Agudelo Escobar	Analysis of energy consumption in data centers using Computational Fluid Dynamics and Machine Learning	EE 04
Léa Décultot	Numerical simulation: A key tool for the energy transition	EE 05
Tomas Venegas	Thermal Behavior Analysis of CLT Buildings Enhanced with Phase Change Materials (PCMs) through Computational Simulation	EE 06
Luciano Poblete	Dynamic insights of a Liquid Air Energy Storage/Organic Rankine Cycle system under weather variations	EE 07
Natalia Osorio Álvarez	Thermal Behavior Analysis of CLT Buildings Enhanced with Phase Change Materials (PCMs) through Computational Simulation	EE 08

SES: Sustainable Energy Systems

First author	Title	Key
Vicente del Escoval von Johnn-Marteville	Microclimatic Assessment and Thermal Comfort in Low-Infrastructure Housing: A Case Study in Valdivia, Chile	SES 01
Isidora Vásquez Araneda	Identification of Optimal Areas for Green Hydrogen Production in Chile Using Random Forest and Spatial Data	SES 02
Martín Alegría	Thermodynamic and Multi-Objective Optimization of Solar-Assisted Brayton and sCO ₂ Cycles for Cogeneration-Based Desalination	SES 03
Cristian Lira Saavedra	Exergoeconomic Assessment of a Solar Desalination System with Auxiliary Gas Boiler: HDH Technology Applied in the Coquimbo Region, Chile	SES 04

REC: Renewable Energy Conversion

First author	Title	Key
Verónica Goitia Gimenez	Complementarity of Renewable Solar and Wind Resources as a Driver of Stable and Cost-Effective Green Hydrogen in Coastal Chile	REC 01
Arunachalam Arulraj	Engineering 2D Nanostructured Nickel Chalcogenide Nanocatalysts for Hydrogenbased Renewable Energy Conversion	REC 02
Andrea Oyarzún Aravena	Chemical engineering perspective on data-driven opportunities for ammonia and e-fuels hubs: Chile as a use-case	REC 03
Kaushlendra Pandey	Substrate Temperature Impact and High White Light Sensitivity of RF Magnetron Sputtered Cu ₂ ZnSnS ₄ Thin Films for Solar Cell Applications	REC 04

MEE: Materials for Energy and Environmental Applications

First author	Title	Key
María Guíñez	Development of BiOCl/CuO heterostructured photocatalyst supported on zeolite for the removal of recalcitrant organic compounds under solar-like irradiation	MEE 01
Pugazhenthiran Nalandhiran	MXene - {001}-Facet Anatase TiO ₂ nanostructures: Sunlight-Driven Photocatalytic Degradation of Endocrine Disruptors	MEE 02
Santhoshkumar Mahadevan	High-energy product rare-earth-free permanent magnets for wind turbine applications	MEE 03
Alejandro San Martín Bravo	Thermal and mechanical properties of recycled UBC aluminium foams fabricated by sand casting	MEE 04

BMS: Bioprocess and Biomaterials for Sustainability

First author	Title	Key
Gerardo Díaz	Production and characterization of syngas and biochar from gasification of heterogeneous feedstocks: a practical step toward the circular bioeconomy	BMS 01
Nicolas Gajardo-Parra	Rational solvent design and selection framework for in-situ product recovery in bioprocesses	BMS 02

WTM:**Wastewater Treatment and Sustainable Water Management**

First author	Title	Key
Juan C. Durán Álvarez	Optimization and photocatalytic performance of Bi ₅ O ₇ I nanoflakes for the visible- light degradation of oxytetracycline	WTM 01
Mauricio Ortíz	Optimization of Synthesis and Evaluation of BiOCl/CuO Heterostructure for Photocatalytic Degradation of Pharmaceutical Micropollutants by Photocatalytic Ozonation	WTM 02
Rawlings A. Timothy	Photodegradation Mechanism of Alizarin Dye on Fe, Co, Ni-Encapsulated Graphene/h- AlN: A DFT Study	WTM 03
Juan C. Durán Álvarez	Enhanced visible-light photocatalysis by Bi ₂ S ₃ /Au/BiOBr heterojunctions: Toward realistic treatment of ibuprofen-contaminated water	WTM 04
Erwin Sepúlveda	Estimating Water Demand for the Green Hydrogen Industry in Chile by 2040	WTM 05
Adriana Mera	Detection of Pharmaceutical Residues in Water Sources of the Coquimbo Region: Analytical Evaluation and Associated Risks	WTM 06
Valeria Araya	Mining tailings for the treatment of wastewater from the Pisco production industry	WTM 07
Karla Rigueti-DelRosario	Numerical analysis of fixed-bed adsorption columns for direct lithium extraction	WTM 08
Paula Acevedo-López	Transient Numerical Analysis of Reject-Brine Reinjection from Direct Lithium Extraction: A Case Study in the Salar de Atacama Aquifer	WTM 09
Elías Masihy	An experimental study of pressure drop for different fog collector meshes	WTM 10

SCC:**Sustainability and Climate Change**

First author	Title	Key
Jorge Petit	Effects of heat waves on electricity demand in Chile in the context of climate change	SCC 01
Rafale Quezada	Impact of Climate Change on photovoltaic power availability: Differences between subtropical and temperate Chile	SCC 02
Marcela Lizana-Vial	Integrated Indicator Monitoring Systems for Sustainable Local Management: Lessons from Rural Municipalities in Chile	SCC 03
Valeria M. Cabello	Teacher Education for Climate Change Literacy and Sustainability	SCC 04
Diego Venegas	From Classroom to Carbon Footprint: Sustainable Paper Use in University Administration and Teaching	SCC 05

POSTERS SUMMARY

First author	Title	Key
Juan Pablo Sepúlveda Quiroz	Optimization of LED Light Spectrum in Mizuna Microgreens: Energy Efficiency and Functional Quality in Vertical Farming Systems	EE-P-01
Rubén Arévalo Ramírez	Thermoeconomic assessment of poultry litter valorization for heat and power generation	SES-P-01
Gabriela Pallauta Pérez	Understanding the main drivers of cloud evolution to support solar energy applications in coastal regions	SES-P-02
Juan Jaime	Exergy and Energy Analysis of Non-Newtonian Blueberry Pulp Freezing by Turbulent Natural Convection	SES-P-03
José Luis Muñoz Pincheira	Optimization of Off-Grid Hybrid Renewable Energy Systems (HRES) with Wind– Solar Resources and Storage Using Genetic Algorithms: Impact of Temporal Complementarity	REC-P-01
Loreto Topp Leal	Analysis of the electrical performance of a dye-sensitized solar cell through the incorporation of bacterial pigments applied as sensitizers	REC-P-02
Camila Silva	Development of dye-sensitized solar cells based on Aristotelia chilensis pigments and iron oxide/biocarbon composite	REC-P-03
Christian Muñoz	Experimental and Comparative Evaluation of Vertical Axis Wind Turbines for Urban Applications	REC-P-04
Amit Kumar Gangwar	Scalable Gas Sensors from Magnetron-Sputtered MAX/MXene Thin Films: Toward Energy-Efficient and Sustainable Solutions	REC-P-05
Victor Vinoth	A Novel AuNPs/Ti3C2Tx MXene Platform for Enhanced Electrochemical Detection of Guanine and Adenine	MEE-P-01
Durga Prasad Pabba	Boosting Energy Harvesting Performance of Highly Flexible PVDF-Fe3O4 Magnetoelectric Composites	MEE-P-02
Govinda raj Muniyandi	Hierarchical MoS2/Ti3C2Heterojunction: A High-Performance and Durable Catalyst for Solar-Powered Hydrogen Production	MEE-P-03

Andrés Escalona	High-Temperature Fuel Cells for Decarbonizing Combined-Cycle Power Plants in Chile	MEE-P-04
Aurora del Valle	Synthesis of a high entropy alloy FeNiCoMnM (M=Cu, Cr) by mechanical alloying applied as a metallic support for MS-SOFC	MEE-P-05
Luis Rojas	Comparative Analysis of Conventional And Microwave Heating of Copper Slag for Thermal Energy Storage Applications	MEE-P-06
Raúl Pastén	Design of High-Reliability Welds for Thermal Energy Storage Tanks in CSP systems	MEE-P-07
Arun Thirumurugan	Exploring the Role of Precipitating Agents in Tuning the Electrochemical Properties of Fe ₃ O ₄ Nanoparticles	MEE-P-08
Felipe Torres	Fabrication of Composite Material for Structural Applications Using Polymeric Waste and Oyster Shells from Northern Chile	MEE-P-09
Thais Gonzalez	Iron-Doped Zeolite Modified Anodes as Advanced Materials for Enhanced Bioelectrochemical Energy Generation	MEE-P-10
Krishnamoorthy Shanmugaraj	Pd nanoparticles anchored on three-dimensional carbon framework for environmental remediation applications	MEE-P-11
Almendra Dominguez-Peña	Red-light-driven photocatalytic and antibacterial activities of photosensitized chlorine E6-black-titania. Role of photoinduced reactive oxygen species	MEE-P-12
Mudaliar Mahesh Margoni	Synthesis of Ni _x Fe _{1-x} Co ₂ O ₄ where x = 0, 0.3, 0.5 and 0.7 as a cathode material by Co-precipitation method for Intermediate Temperature Solid Oxide Fuel Cells	MEE-P-13
Daniel Becker	Synthetic zeolite modification for CO ₂ capture: On the role of the compensation cations.	MEE-P-14
Francisca Henriquez	Thermal Performance Assessment of a New Solid-State Energy Storage Material	MEE-P-15
Karla Garrido	Physicochemical and Functional Properties of Poly(3-hydroxybutyrate) Bionanocomposites Reinforced with Clay, Biochar, and Essential Oils	BMS-P-01
Juana Fernandes	Aerobic composting with goat manure to degrade ciprofloxacin waste	BMS-P-02

Diego Perez	Development of an enrichment method for the selection of electrogenic bacteria from the rhizosphere of Typha sp	BMS-P-03
María José Vargas-Straube	In vitro study of the bioaccessibility of ferulic acid present in enzymatically hydrolyzed brewer spent grain and its effect on the modulation of the intestinal microbiome	BMS-P-04
Mathias Seguel	Photocatalytic Degradation of Naproxen in Aqueous Medium Using MoO ₃ /CuO and MoO ₃ /Fe ₂ O ₃ -Based Semiconductor Composites	WTM-P-01
Luis Pino-Soto	Upcycled Hybrid Ultrafiltration Membranes Incorporating Aquaporin Z and IPNs for Selective Ion Removal from Groundwater	WTM-P-02
Tamara Aiyapan	Sustainable structural lightweight concrete using plastic waste aggregates and nanotechnology: A path to green construction	SCC-P-01
Javiera Ríos	LCA for Literature Review in Seashell Waste	SCC-P-02
Camila Osorio	Systemic Transition Pathways of Circular Business Models in Chile's Construction Sector	SCC-P-03