

PARALLEL SESSIONS

I	I.1 Parallel session I - room 1 (auditorium)	A Diego Hayashi Alonso Topology optimization design considering the Wray-Agarwal turbulence model	I.2 Parallel session I - room 2 (mezzanine)	A Bruno Navarro Impact of the ScRAVI-mediated growth acceleration on sugar accumulation and biomass production of sugarcane	I.3 Parallel session I - room 3 (mezzanine)	A Alexandre de Barros Gallo Using MCDA techniques to organize standardization priorities: The hydrogel case study	I.4 Parallel session I - room 4 (mezzanine)	A Thaiz da S. Vescovi Chedid Elaboração de propostas de normalização internacional e serviços de advocacia para implantação e consolidação de marcos legais, regulatórios e de normas para contribuir com os
	B Bruno Souza Carmo Towards the end of the project STMI: achievements and way forward	B Luana Oliveira e Leandro Oliveira Strategies to improve the growth and yield of sugarcane plants: amino acids and hormonal profile	B Alberto J. Fossa Standardization of Carbon Dioxide Capture, Transportation, Utilization and Storage (CCUS) – Current developments at ABNT and ISO	B Helen Tatiana Takamitsu IDENTIFICATION OF TWITTER'S DIGITAL INFLUENCERS ON ENERGY TRANSITION FOR THE DEVELOPMENT OF EFFECTIVE SCIENTIFIC COMMUNICATION STRATEGIES.				
	C Jonas Mendonça Targino An automated approach to generate 2D datasets for seismic data	C Marcos Buckeridge Sugarcane and new bioenergy resources	C Cylon Liaw Building a CCUS standardization observatory – First steps towards an insightful tool	C Karen Louise Mascarenhas Social Perception and Science Diplomacy on Technology Transitions towards a low carbon society (applications associated with NBS, CCU, GHG and BECCS)				
	D Andre Kubagawa Sato Estimation of forest fire source term in the Brazilian Amazon	D Vitor Favaretto Pinoti A vector toolbox for CRISPR-mediated genome editing in sugarcane	D Renato V. Goncalves Light-driven Water Splitting to Produce Solar Fuels	D Karen Louise Mascarenhas Key factors of social perception and acceptance of energy low-carbon solutions				
II	II.1 Parallel session II - room 1 (auditorium)	A Anderson Soares On the topology optimization of rotor and stator 2D-swirl labyrinth seal design considering forward and backward laminar fluid flow	II.2 Parallel session II - room 2 (mezzanine)	A Bernardo Lemos PERFORMANCE OF POLYNOMIAL EXPANSION IN THE DETERMINATION OF THE 2D VECTOR FIELD OF A BUBBLE FLOW IN AN ELECTROLYZER: AN ANALYSIS BY SYNTHETIC IMAGES	II.3 Parallel session II - room 3 (mezzanine)	A Heberton Wender Spontaneous conversion of CO ₂ and sulfite to energy using a photocatalytic fuel cell	II.4 Parallel session II - room 4 (mezzanine)	A Pedro Brancalion Restoration of native vegetation for carbon sequestration – Restore.C
	B Shahin Ranjbarzadeh Design of Labyrinth Seals for Carbon Capturing Compressors: Topology Optimization and Experimental Approaches	B Alex Marchezini Graça Protonic conductive electrolytes for high-temperature solid oxide electrochemical cells.	B Primaggio Silva Mantovi Studying Supported Cu & Ag Nanoparticles on 2D MXenes to Enhance C ₂₊ Products at CO ₂ RR	B Mauricio Roberto Cherubin Soil carbon sequestration through integrated agricultural systems in Brazil				
	C Renato Picelli Sanches Towards Structural Topology Optimization of Rotating Machinery Considering Fluid-structure Interaction, Turbulence models and 2D-swirl Fluid Flow	C Thiago Lopes Development of an Electrolytic Concentrator of Vinasse	C Antonio Carlos Roveda Jr. Electrochemical CO ₂ reduction on functional molecule-modified copper surfaces	C Chukwudi Nwaogu Integrated Agricultural Systems: the solution to the global FEES challenges				
	D André Dantas Freire Baseline and worn labyrinth seals geometry effect on the leakage evaluation using a numerical approach	D Nelson Alexandre Galiete Electrocatalysts for hydrogen production by ethanol electrochemical reforming	D Louise Hase Gracioso Greenhouse gas-based microalgae bioproducts: A potential biotechnology strategy	D Danielle Mendes Thame Denny Nature-based solutions: Sustainable development of Latin America				
III	III.1 Parallel session III - room 1 (auditorium)	A Caetano Rodrigues Miranda Computational design of nanomaterials by coupling molecular simulations with topology optimization	III.2 Parallel session III - room 2 (mezzanine)	A Felipe Berto Ometto Green hydrogen production in ethanol-fed SOEC systems	III.3 Parallel session III - room 3 (mezzanine)	A Dielle Pierotti Procópio Conversion of CO ₂ into biopolymers by the regulation of polyhydroxyalkanoates (PHAs) biosynthetic pathway using the photosynthetic cyanobacteria <i>Synechocystis</i> sp.	III.4 Parallel session III - room 4 (mezzanine)	A Wanderlei Bieluczyk Greenhouse gas emissions in crop-livestock and crop-livestock-forestry systems in Brazil: a bibliometric analysis
	B Diego Silva Prado Topology Optimization for Temperature Swing Adsorption Multi-Stage Fluidized Bed	B Colombo Celso Gaeta Tassinari CO ₂ geological storage in Rio Bonito Formation: contribution for negative CO ₂ emissions through BECCS in southeast Brazil	B Leticia Oliveira Bispo Cardoso Unraveling the potential of blue-green algae biomass for bioethanol production	B Martha Lustosa Carvalho Nature-based solutions for climate change mitigation: a literature overview				
	C Marcelo Seckler Post-combustion CO ₂ capture from biomass flue-gas through adsorption process	C Germano Tremilosi Filho Development of materials for hydrogen production via ethanol reform	C Camylle Guimarães Scheliga BIOPROSPECTION AND IDENTIFICATION OF MICROALGAE FROM MANGROVES AS FEEDSTOCK FOR BIOETHANOL PRODUCTION	C Carlos Eduardo Cerri Improving pasture management as NBS for soil carbon sequestration in Brazil				
	D Helio Henrique Santomo Villanueva Turbulent oxy-combustion flame stability diluted with CO ₂	D Richardson M. Abraham-A CO ₂ storage efficiency considering the sandstone units of the Rio Bonito Formation within southwest São Paulo.	D Antonio C. B. Burtoloso A new protocol for the synthesis of carbamates and isocyanates from CO ₂	D Carlos Eduardo Pelegrino Cerri Estoque de carbono orgânico do solo (C) em fitossionomias campestres ou de savana não antropizadas nos biomas do Brasil, uma revisão sistemática de dados publicados				
IV	IV.1 Parallel session IV - room 1 (auditorium)	A Diana Azevedo Impact of competitive adsorption of H ₂ O and SO ₂ on CO ₂ capture by 13X zeolite	IV.2 Parallel session IV - room 2 (mezzanine)	A Alessandro Kirch The role of water for the CO ₂ uptake in clays	IV.3 Parallel session IV - room 3 (mezzanine)	A Luciano Honorato Chagas The role of the oxygen vacancies in the isobutene synthesis from ethanol	IV.4 Parallel session IV - room 4 (mezzanine)	A Migue Vera Moreno A Citizen Science Approach to improving public perception of low carbon society
	B Diego Zilli Lima Numerical structural analyses of centrifugal compressors operating with CO ₂ in a supercritical state	B Haline V. Rocha CO ₂ geological storage in Rio Bonito Formation coalbeds integrating a BECCS system	B Gabriel L. Catuzo Catalytic conversion of CO ₂ to higher alcohols	B Thiago Brito Science Diplomacy in the context of Climate Change: a bibliometric analysis				
	C Leandro Oliveira Salviano Design Strategy for Enhanced Oil Recovery Compression Systems Operating with S-CO ₂	C Jessica Santos Rego Multiscale modelling of reactive transport and CO ₂ mineral trapping mechanisms at the Rio Bonito geological formation	C Adolfo Figueiredo CO ₂ conversion into ethanol using catalyst based on combinations of rhenium and noble metals.	C Mariana Ciotta Low-carbon technologies and their association with sustainable development goals				
	D Felipe Silva Maffei Topology optimization of compressible flows using TOBS-GT method	D Bernardo Luiz Harry Diniz Lemos Recovery of alkali metals using electrodiagnosis cell: a computer fluid dynamics analysis	D Lais Reis Borges CO ₂ hydrogenation over Fe oxides catalyst: the effect of pretreatment synthesis on hydrocarbons selectivity	D Carlos Alberto Labate Improving the industrial ethanol fermentation using metabolomics and MALDI-TOF				
V	V.1 Parallel session V - room 1 (auditorium)	A Paulo Eduardo Batista de Mello Thermodynamic analysis of multistage carbon dioxide compressor: life cycle condition	V.2 Parallel session V - room 2 (mezzanine)	A Rômulo Luz Cortez Structural Topology Optimization Including Smooth Boundaries Representation	V.3 Parallel session V - room 3 (mezzanine)	A Liane M. Rossi Introducing the Carbon Capture and Utilization (CCU)-RCGI Programme	V.4 Parallel session V - room 4 (mezzanine)	A Matheus Serra de Holanda Synthesis and characterization of nanostructured materials for application in nanofiltration membranes
	B Wallace Gusmão Ferreira STRUCTURAL VIBRATION ANALYSES AND OPTIMIZATION OF CENTRIFUGAL COMPRESSORS FOR SUPERCRITICAL CO ₂ APPLICATIONS	B Fereshteh Razmara Topology optimization of non-isothermal PEM fuel cell cathode flow field	B Maitê Lippel Gothe Rhenium-based catalysts for the conversion of CO ₂ to higher alcohols	B Andressa Mota-Lima Electrochemical Technologies for Direct Lithium Extraction from Geothermal Sources and their Industrial Processes				
	C Emilio Carlos Nelli Silva TOPOLOGY OPTIMIZATION OF COMPRESSIBLE SUBSONIC TURBULENT FLOW CONSIDERING FLUID-STRUCTURE INTERACTION	C Dagoberto de Oliveira Silva MOF's to "Agrotechnology": CO ₂ Capture and Nutrients delivery	C Raphael da Silva Alvim DFT Simulation of the CO ₂ Reduction Mechanism on the Mixed-Oxide Catalysts	C Suani Teixeira Coelho LCA study of the uses of vinasse produced in the sugar-energy sector				
	D Lucas Oliveira Siqueira Topology Optimization of Fluid-Structure Interaction Problems Considering Natural Frequency Constraints	D Daniel de Carvalho Santos Computational study of homogeneous catalysts based on non-noble metals in the production of C ₂₊ molecules using CO ₂ as the primary source of C ₁ .	D Dyovani Bruno Lima dos Santos Investigating the performance of molybdenum catalysts in the CO ₂ hydrogenation for higher alcohols production	D Suani Teixeira Coelho CO ₂ CAPTURE POTENTIAL IN THE SUGAR AND ETHANOL SECTOR IN BRAZIL AND SÃO PAULO STATE				
	E Nathália Florença Barros Azeredo Understanding and optimizing the functioning of selected locally available oxygen carriers for Chemical Looping Combustion (CLC)	E Evandro H.Figueiredo Moura da Silva Enhancing crop system models for C and N balances: long-term scenarios to improve sustainable agricultural management practices	E Alvaro Torrez A machine learning model for adsorption energies of chemical species applied to CO ₂ electroreduction	E Carlos Alberto Martins Junior Molecular Simulations of Boric Acid Filtration by Carbon Structures				