CatScience 2025- Tentative Program	
July 21-23, 2025 | Budapest University of Technology and Economics, Hungary	
	DAY – 1, 21 July, 2025
08:00 - 09:00	Registrations
09:00-9:15	Opening Remarks by the Conference Chair
	Gyorgy Keglevich, Budapest University of Technology and Economics, Hungary
Plenary Session	
Session Chair	
	Title: Emerging Technologies and AI to Answer to Electronics and Energy Digitalization Demands
9:15-9:45	Rodrigo Martins, Universidade NOVA de Lisboa, Portugal
	Title: Molecular Redox Catalysts for the Generation of Solar Fuels
9:45-10:15	Antoni Llobet, Institute of Chemical Research of Catalonia, Barcelona Institute of Science and Technology (BIST), Spain
	Title: Carbon-based Metal-free Electrocatalysts for Energy and Chemical Conversions
10:15-10:45	Liming Dai, University of New South Wales, Australia
10:45 - 11:00	Coffee Break
	Title: A New Generation of Modified TiO2-Based Photocatalytic Hybrid Structures
11:00 - 11:30	George Kiriakidis, Head of TCM Group IESL, Greece
	Title: Application of Ionic Liquids in Organic Catalysis
11:30-12:00	Rita Skoda Foldes, University of Pannonia, Hungary
	Session Chair
	Keynote Talk: Organic Nanoparticles for Biohybrid Photocatalysis
12:00-12:25	Haining Tian, Uppsala University, Sweden
	Invited Talk: Enhancing Photocatalytic Hydrogen Production: Modification of TiO_2 by coupling with semiconductor Nanoparticles
12:25-12:45	Saud Alshammari, University of Leeds, United Kingdom
	Invited Talk: From Ionic Liquids to Functional Poly(Ionic Liquid) Aerogels: Green and Catalytic
12:45-13:05	Marta. C. Corvo, NOVA School of Sciences and Technology, Portugal
13:05-14:30	Lunch Break
	Session Chair
	Keynote Talk: Synthetic Fuel Production based on CCU technologies
14:30-14:55	Andras Sapi, University of Szeged, Hungary
	Title: TBA
14:55-15:15	Kotaro Takeyasu, Hokkaido University, Japan
	Invited Talk: Semiconductor Photocatalysts in Advanced Reduction Processes
15:15-15:35	Joanna Kisała, University of Rzeszow, Poland
	Invited Talk: Preparation, Modification and Performance of Low-Temperature SCR Catalysts
15:35-15:55	Jyh-Cherng Chen, Feng Chia University, Taiwan
15:55 Onwards	Networking Cocktails

	DAY – 2, 22 July, 2025
Plenary Session	
	Session Chair
8:30-9:00	Title: Towards Direct Electro-catalytic Production of Ammonia

	Douglas Macfarlane, Monash University, Australia
9:00-9:30	Title: Biomass/waste valorisation into high-added value products: from energy vectors to pharmaceuticals Rafael Luque, National University of Science and Technology Polytehnica, Romania
9:30-10:00	Title: Green Methods for the Synthesis of Phosphonates, Phosphonates and Phosphine Oxides Gyorgy Keglevich Tibor, Budapest University of Technology and Economics, Hungary
10:00-10:30	Title: Battery Innovation Empowered by Lithium Bond and Artificial Intelligence Qiang Zhang, Tsinghua University, China
	Session Chair
10:30-10:55	Keynote Talk: Iron Catalysis: Developing Reactions for Conjugated Material Synthesis Rui Shang, The University of Tokyo, Japan
10:55-11:15	Coffee Break
11:15-11:40	Keynote Talk: Effect of strong metal-support interaction on the improvement of Mo-doped titania-carbon composite supported Pt electrocatalysts performance András Tompos, HUN-REN Research Centre for Natural Sciences, Hungary
11:40-12:00	Invited Talk: Iron Catalysis: P-alkyl esters and methods to obtain them without the use of transition metals and halides Jacek Nycz, University of Silesia in Katowice, Poland
12:00-12:20	Invited Talk: Mechanochemistry and Photochemistry: Novel Synthetic Strategies Bartlomej Furman, Institute of Organic Chemistry Polish Academy of Sciences, Poland
	Session Chair
12:20-12:40	Invited Talk: Operando NAP-XPS During Electrochemical Methane Formation on Ni(Cu)/YSZ: A Model Approach Bernhard Klotzer, University of Innsbruck, Austria
12:40-13:00	Invited Talk: Photoassisted radical-mediated regeneration of saturated activated carbons Conchi Ania, Univ. Orleans, France
13:00-14:30	Lunch Break
14:30-14:50	Invited Talk: Recent advances in MBE-grown GaAsSb nanowires for near-infrared photodetector applications Priyanka Ramaswamy, North Carolina A&T State University, USA
14:50-15:10	Invited Talk: TBA Themba Tshabalala, Sol Plaatje University, South Africa
15:10-16:00	Posters and Coffee Break
CAT01	Efficient oxidation of organic pollutants using Ni(II)@SiO_2–PDS: A study on reaction pathway and kinetics Justin Abraham Romiyo Vijayakumar, Ariel University, Israel
CAT02	A Magnesium Catalyzed Fenton-Like Process: Radical Pathways in Peroxymonosulfate Oxidations for Environmental Remediation Gayathri Jeevanandham, Ariel University, Israel
CAT03	B/Co/Carbon-Catalyzed Pyrolysis of Plastic Waste for Enhanced Hydrogen Generation Monica Calero, University of Granada, Spain
CAT04	Development of Non-Critical Metal-Based Electrocatalysts for Enhanced OER Activity in Anion Exchange Membrane Water Electrolyzers Mireya Carvela Soler, ITECAM, Spain
CAT05	Engineering High-Performance PTLs for Next-Generation AEM Electrolyzers Jesús Roman Barranco, ITECAM, Spain

	DAY – 3, 23 July, 2025
	Session Chair
8:30-8:50	Invited Talk: Design of core-shell catalysts for CO2 /syngas conversion and hydrogen production Chen Luwei, A*STAR Technology and Research, Singapore
8:50-9:10	Invited Talk: Single Atom Catalysts for the Efficient and Selective Synthesis of Fuel Additives Samy El-Shall, Virginia Commonwealth University, USA
09:10-9:30	Invited Talk: Nanostructured Optical Materials for Energy and Biosensing Applications(online) Luca Vattuone, University of Genoa & IMEM- CNR, Italy
9:30-9:50	Oral Talk: Synthesis of Multi-metallic Sub-nanocatalysts Using a Dendrimer Reactor Kimihisa Yamamoto, Tokyo Institute of Technology, Japan
	Session Chair
9:30-9:50	Invited Talk: New Frontiers in Telomerization: Disruption by Aryl Boronic Species Belén Lerma-Berlanga, Instituto de Tecnología Química, Spain
10:10-10:30	Invited Talk: Shaping the Future of Catalysis: AI and Molecular Modeling for Superior Selectivity Izabela Czekaj, Cracow University of Technology, Poland
10:30-10:50	Invited Talk: Catalytic CO Oxidation and Photocatalytic Methylene Blue Degradation Using ZIF-8 Materials Khaled Mohammad Saoud, Virginia Commonwealth University, Qatar
10:30-10:50	Invited Talk: The atomically precise Au-Ag nanoclusters catalyzed chemical conversion of CO_2 Haizhu Yu, Anhui University, China
10:50-11:10	Title: Imagine! A World Free from Fossil Fuels Jyri-Pekka Mikkola, Abo Akademi University, Finland
11:10-11:30	**Coffee Break**
11:30-11:50	Title: Lactic acid bacteria-based synergistic in situ bioconversion of lactose and galactose for lactulose synbiotics production from alkaline isomerized lactose syrup Wenlong Ma, Yangzhou University, China Dr. Haspel Henrik, University of Szeged, Hungary
11:50-12:10	Invited Talk: Atomically Precise Size-and Composition-Selected Subnanometer Cu, Pd and CuPd clusters in Oxidative Dehydrogenation Reactions Dr. Stefan Vajda, J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences, Czech Republic
12:10-12:30	Invited Talk: : Experimental Setups for Electrocatalysis in Magnetic Fields Dr. Haspel Henrik, University of Szeged, Hungary
12:30-12:50	Invited Talk: Patrycja Jutrzenka Trzebiatowska
	Session Chair
12:50-13:10	Invited Talk: Zhen Yang, Peking University, China
13:10-14:40	**Lunch Break**
14:40-15:00	Invited Talk: Stefan Chassaing, University of Strasbourg, France
15:00-15:20	Invited Talk: Góral-Kowalczyk, University of Lublin, Poland
15:20-15:40	Invited Talk: Alina M. Balu, Universidad de Cordoba, Spain
15:40-16:00	Invited Talk: Pawel Kowalczyk, ul. Instytucka , Poland

16:00 onwards	**Coffee and Guided University Tour**