



PROGRAMME

2ND RENEWABLE HYDROGEN ENERGY CONVENTION,
RH2EC-2023 MAY 24-26, 2023

WEDNESDAY – FRIDAY
09:00 – 15:00

BMW
EXHIBITION

WEDNESDAY, 24th MAY 2023

08:30 – 09:00

09:00 – 09:30

REGISTRATION
OPENING CEREMONY
Moderator: Ankica Kovač

ZDENKO TONKOVIĆ Dean of Faculty of Mechanical Engineering and Naval Architecture

JULIJE DOMAC Special Advisor on Energy and Climate of the Croatian President of Republic

BORIS MILJAVAC Managing Director of Siemens Energy d.o.o.

PLENARY SESSION 1

09:30 – 10:00

Session chair:
Amela Ajanovic

FRANO BARBIR

Why hydrogen critics are both right and wrong

PANEL 1

10:00 – 11:30

HYDROGEN – A MYTH OR A HIT?!

Moderator: Mladen Iličković

LAURENT ANTONI International Partnership for Hydrogen and fuel cells in the Economy – IPHE

FRANO BARBIR University of Split

AXEL KALTWASSER BMW Group

BORIS MILJAVAC Siemens Energy Croatia

RODOLFO TACCANI University of Trieste

ALEXANDER TRATTNER HyCentA Research GmbH

BERT VAN DER TOORN European Investment Bank

11:30 – 12:30

Lunch

PLENARY SESSION 2

12:30 – 13:30

Session chair:
Milutin Smiljanić

LAURENT ANTONI

Hydrogen: A new player at the service of the environment and the economy

SESSION 1

13:30 – 15:00

Session chair:
Ivana Perović

#1 Systemic analysis of hydrogen production potentials and costs in Europe and exporting countries (*F. Radner et al.*)

#2 The effects of hydrogen blended fuel on combustion and emission characteristics of an industrial burner (*S. Byrne et al.*)

#3 Energy performance and research challenges on hydrogen-based turbines and compressors (*M. Genovese et al.*)

#4 Advanced experimental characterization of polymer electrolyte membrane electrolysis stacks (*M. Höglinger et al.*)

#5 Impact of hydrogen injection limits on day-ahead market performance (*N. Čović et al.*)

#6 Securing electrical energy in the case of climate extremes and natural disasters / Advanced methods of green hydrogen production and its transportation (*M. Paranos et al.*)

SESSION 2

15:00 – 16:30

Session chair:
Sean Byrne

#1 Intermittent operation of a 55 kW PEM electrolyzer: Test protocols and experimental insights on system flexibility efficiency and durability (*E. Nguyen et al.*)

#2 Eco-design and environmental performance of solid oxide technology (*Mitja Mori et al.*)

#3 Environmental performance of recovered platinum from aged PEMFC membrane electrode assembly (*R. Stropnik et al.*)

#4 Numerical investigation of an annular combustor fueled with hydrogen for next generation emission free gas turbines (*M. Patel et al.*)

#5 Study of a novel non-pgm electrocatalyst for oxygen evolution reaction in PEM water electrolysis (*F. Giacobello et al.*)

#6 Life cycle assessment of a integrated power-to-methanol/ SOFC plant fed by green hydrogen (*V. Tola et al.*)

18:00 – 20:00

Social Event: Welcome Reception
Technical Museum Nikola Tesla

REMZI CAN SAMSUN

Production of hydrogen-based synthetic renewable fuels

10:00 – 10:30

Coffe Break

SESSION 3

10:30 – 12:00

Session chair:

Martin Hoeglinger

#1 Nickel doped bismuth germanate as efficient electrocatalyst for hydrogen production (*S. Saha et al.*)#2 Co-Mo in situ ionic activators for her – energy consumption and reaction mechanism (*I. Perović et al.*)#3 Development of an agent-based model for global hydrogen trade (*D. Hjejij et al.*)#4 Washcoating of Ni-based systems on alumina open cell foams for CO² methanation (*R. Canales et al.*)#5 Towards advanced electrocatalytic composites for hydrogen evolution reaction (*M. Smiljanić et al.*)#6 Investigation of favourable operating conditions for electrochemical hydrogen compressors by simulation (*M. Richter et al.*)#7 Electroreduction of carbon monoxide to multi-carbon products as an alternative to Fischer-Tropsch process (*M. Iuliano et al.*) - poster**PLENARY SESSION 4**

12:00 – 13:00

Session chair:

Rok Stropnik

ADOLFO IULIANELLI

The impact of the membrane engineering in the decarbonized H2 economy

13:00 – 14:00

Lunch

PLENARY SESSION 5

14:00 – 15:00

Session chair:

Michael Richter

ARIANNA BIONDA

Hydrogen-fuelled ferries: design proposals and experimentation in tackling normative gaps

20:00 – 23:00

Social Event: Gala Dinner
Hotel Zonar**FRIDAY, 26th MAY 2023**

09:00 – 10:00

PLENARY SESSION 6

Session chair: Fabian Radner

AMELA AJANOVIC

Energy crisis: new chance for hydrogen fuel cell electric vehicles?!

SESSION 4

10:00 – 11:30

Session chair:

Sanjit Saha

#1 Experimental investigation of electrochemical hydrogen compressor performance under different humidity levels (*A. S. Pavasović et al.*)#2 Impact of different activation procedures on PEM electrolyzer performance (*A. Z. Tomić et al.*)#3 The computational study on hydrogen storage with reaction heat recovery by phase change material (*A. P. Shrivastav et al.*)*video presentation*#4 A novel flat coil heat exchanger with a spiral fin for enhancing the performance of metal hydride-based hydrogen storage reactor (*K. V. Krishna et al.*)*video presentation*#5 Femtosecond laser enhancement of conical based medium entropy alloy for an overall water splitting (*S. Ahmad et al.*)*video presentation*#6 Design of a new nanocomposite electrode for large power enzymatic H₂/O₂ biofuel cells (*C. Luciano et al.*)*video presentation*

11:30 – 12:00

CLOSING REMARKS

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