

Session Program

13-17 Sept 2021

**EUROPEAN CONGRESS AND EXHIBITION ON
ADVANCED MATERIALS AND PROCESSES -
EUROMAT 2021**

E6_Materials for hydrogen technologies

Virtual

Thursday 16 September

14:40

E6_Materials for hydrogen technologies: E6_1_Novel electrode materials for SOFCs, SOECs and H2 sensors I

Session | Location: Room 13

14:40–15:20

Structure and Electrochemical Performance Modulation of $\text{SmBaMn}_{2}\text{O}_{5+\delta}$ as Electrode Material in Symmetrical Solid Oxide Fuel Cells (Keynote)

Speaker

Hailei Zhao

15:20–15:40

Molybdenum-doped ferrites as promissory materials for anodic layer in SOFEC

Speaker

Prof. Yevgeniy Naumovich

15:40–16:00

Ruddlesden-Popper Type Oxides as Air Electrodes for Solid Oxide Cells (Highlight)

Speaker

Prof. Werner Sitte

16:00–16:20

Experimental evaluation of the porosity impact on concentration polarization in anode-supported solid oxide fuel cells

Speaker

Dr Marcin Blesznowski

16:20

16:40

E6_Materials for hydrogen technologies: E6_2_Novel electrode materials for SOFCs, SOECs and H2 sensors II

Session | Location: Room 13

16:40–17:00

Impact of cathode support porosity on the electrochemical performance of Solid Oxide Electrolyser Cells

Speaker

Dr Anna Niemczyk

17:00–17:20

Application of Cu-based complex oxides as air electrodes for Solid Oxide Cells

Speaker

Mr Keyun Li

17:20–17:40

Excellent electrochemical performance of double perovskites as stable air electrode materials in reversible fuel electrode-supported SOCs

Speaker

Dr Kun Zheng

17:40–18:00

Nanostructured Materials Based on Thin Films and Nanoclusters for Hydrogen Gas Sensing

Speaker

Stanislav Haviar

18:00

Friday 17 September

09:50

E6_Materials for hydrogen technologies: E6_3_Advanced design, fabrication and characterization of materials for hydrogen technologies I

Session | Location: Room 13

09:50–10:30

Porous Electrodes of Solid Oxide Fuel Cells: Correlation between Structure and Performance via Transport Phenomena and Reactions (Keynote)

Speaker

Prof. Hiroshi Iwai

10:30–10:50

Cryogenic sample preparation for atom probe tomography of hydrogen at crystal defects in metals

Speaker

Ms Martina Heller

10:50–11:10

Ab initio Mechanistic Insight into the Stability, Diffusion and Storage Capacity of H₂, CH₄ and CO₂ in sl Clathrate Hydrate

Speaker

Ahmed Omran

11:10

11:50

E6_Materials for hydrogen technologies: E6_4_Advanced design, fabrication and characterization of materials for hydrogen technologies II

Session | Location: Room 13

11:50–12:10

Estimation of Microstructural Free Energy Decay in a Solid Oxide Cell Stack after a Long Term Performance Experiment

Speaker

Tomasz Prokop

12:10–12:30

Investigation of H sorption and corrosion properties of $\text{Sm}_{2-x}\text{Mn}_x\text{Ni}_{7-x}$ ($0 \leq x < 0.5$) intermetallic compounds forming reversible hydrides

Speaker

Dr Judith Monnier

12:30–12:50

Fabrication of CoP Thin Layers for Efficient Hydrogen Evolution Reaction via a Codeposition-Annealing Route

Speaker

Dr Roberto Bernasconi

12:50–13:10

Fe-Mn-Mo electrodes for use in seawater electrolysis

Speaker

Ms Marisol Maril

13:10–13:30

Bimodal pore-size distribution in solid oxide fuel cell anode and its effect on gas permeability**Speaker**

Kohei Yamazaki

13:30

14:40

E6_Materials for hydrogen technologies: E6_5__Advances in hydrogen generation and storage I**Session** | **Location:** Room 13

14:40–15:20

Electrochemical characterization of Pr(A)MnO₃ perovskites as oxygen electrodes for fuel-assisted solid oxide electrolysis cells (Keynote)**Speaker**

Dr Aleksey Yaremchenko

15:20–15:40

Biogas dry reforming over La_{0.8}X_{0.2}NiO₃ perovskites (X = Ce, Pr, Sm)**Speaker**

Prof. Maria Goula

15:40–16:00

Dry hydrogen production in a tandem water photoelectrolysis cell**Speaker**

Dr Stefano Trocino

16:00–16:20

Biomass-derived activated carbons for hydrogen storage**Speaker**

Mr Sebastian Stock

16:20

16:40

E6_Materials for hydrogen technologies: E6_6__Advances in hydrogen generation and storage II**Session** | **Location:** Room 13

16:40–17:00

Industrial production and characterisation of TiFe_{0.85}Mn_{0.05} alloy for a large-scale hydrogen storage plant**Speaker**

Jussara Barale

17:00–17:20

All Gas-Phase Synthesis and Deposition of Novel Fused Metalloporphyrin Films for Clean Hydrogen Production**Speaker**

Dr Drialys Cardenas-Morcoso

17:20–17:40

Hydrogen embrittlement resistance of steels and welds in natural gas pipelines**Speaker**

Mr Stefan Fink

17:40–18:00

Advanced in-situ electrochemical nanoindentation testing for understanding rate-depending plastic deformation under hydrogen influence

Speaker

Mrs Anna Ebner

18:00–18:20

First experiments on the new Oxcart atom probe

Speaker

Mr Benedict Ott

18:20