

Wednesday 27.3.2019		Balling Hall	
From	To	Contribution	Speaker
11:00	13:00	Registration	
<i>Chairperson:</i>		Karel Bouzek	
13:00	13:20	Welcome & opening	Karel Bouzek, <i>UCT Prague, CZ</i> Karin Stehlík, <i>HYTEP, CZ</i>
13:20	13:40	Situation in Europe	Carlos Navas, <i>FCH 2 JU, BE</i>
13:40	14:00	Review of world and European hydrogen initiatives in transport and energy sectors	Guy Verkoeyen, <i>Hydrogenics, USA</i>
14:00	14:20	EU demonstration project - Giant Leap	Federico Zenith, <i>SINTEF, N</i>
14:20	14:40	Hydrogen & Local Energy Systems, a Case Study: BIG HIT Project	Enrique Troncoso, <i>Aragon Hyd. Found. ES</i>
14:40	15:20	<i>Coffee break + Poster session</i>	
<i>Chairperson:</i>		Karin Stehlík	
15:20	15:40	Moravian-Silesian Region the „Hydrogen Valley”: The Beginnings	Vladimír Maryška, <i>Moravian-Silesian Region, CZ</i> Daniel Minařík, <i>city Ostrava, CZ</i>
15:40	16:00	H2wo Cluster in Saxony - Fuel Cell components development for mobile applications	Thomas von Unwerth, <i>TU Chemnitz, DE</i>
16:00	16:20	United Hydrogen Group - Past, Present and Future	Martin Fišer, <i>United Hydrogen, USA</i>
16:20	16:40	Current advances in the field of hydrogen technologies in PL	Marek Skrzypkiewicz, <i>IEN, Dept. of HiTEP, PL</i>
16:40	17:00	Development of a High Performing Fuel Cell Drive System for Hybrid Regional Trains	Jochen Steinbauer, <i>Siemens M. GmbH, DE</i>
17:00	17:20	Large-Scale Green Hydrogen Storage -The greater Picture of Sectorcoupling	Stefan Bergander, <i>HYPOS, DE</i>
17:20	18:00	<i>Coffee break + Poster session</i>	
19:00	22:00	<u>Conference dinner - restaurant Profesni dum</u>	

Thursday 28.3.2019		Balling Hall	
From	To	Contribution	speaker
<i>Chairperson</i> Thomas von Unwerth			
9:00	9:20	Towards Introduction of Hydrogen Mobility in Bulgaria	Daria Vladikova, <i>IEES BAS, BG</i>
9:20	9:40	Novel Roll-Out Strategy for Hydrogen Refueling Stations, Applied to Eastern DE	Fabian Gruger, <i>RLI, FZ Julich, DE</i>
9:40	10:00	HyDiesel to reduce the GHG - emissions in conventional fuels	Werner Diwald, <i>DWV, DE</i>
10:00	10:20	Optimization of an FCEV shutdown strategy employing CO ₂ monitoring via mass spectrometry	Simon Erbach, <i>Daimler AG, DE</i>
10:20	10:40	Hydrogen Use in a Compression Ignition Engine - Potential for Road Transport Decarbonization	Ivan Bortel, <i>UCT Prague, CZ</i>
10:40	11:00	Size optimization of supercapacitors for direct hybridization with PEM fuel cell stack for transport applications	Divyesh Arora, <i>University Lorraine, France</i>
11:00	11:20	<i>Coffee break + Poster session</i>	
<i>Chairperson</i> Daria Vladikova			
11:20	11:40	Power-to-X: A Critical Review	Rolf Schicke, <i>Renewable Energies C., DE</i>
11:40	12:00	The source of renewable energy and its exploitation - an astrophysical point of view -	Robi Banerjee, <i>University of Hamburg, DE</i>
12:00	12:20	Future Potentials of High-Temperature (Co-)Electrolysis Systems based on Operation Results of an Industrial Prototype System and Lab Experiments	Konstantin Schwarze <i>Sunfire GmbH, DE</i>
12:20	12:40	Coupling of H ₂ and CO generation via co-electrolysis with Fischer-Tropsch synthesis	Matthias Jahn, <i>Fraunhofer IKTS, DE</i>
12:40	13:00	A study on biogas cogeneration plants with different H ₂ supply strategies to reduce hydrocarbon emissions	Florian Rau, <i>TU Freiberg, DE</i>
13:00	13:20	A study on hydrogen storages in solar urban districts	Madlow Anne, <i>IWTT TU Freiberg, DE</i>
13:20	14:30	<i>Lunch + Poster session</i>	
<i>Chairperson</i> Robi Banerjee			
14:30	14:50	Injecting The Hydrogen To Turkey & Natural Gas Distribution Network: Hydrogen Road Map	Ridvan Aydin, <i>Istanbul Gas Distribution Company, TR</i>
14:50	15:10	Mixed catalysts based on Ni and Co for alkaline electrolysis of water	Katerina Maksimova-Dimitrova <i>BAS, BG</i>
15:10	15:30	Hydrophilisation of separators for alkaline water electrolysis by plasma-induced grafting of polyacrylic acid	Michal Stano, <i>Comenius University, SK</i>
15:30	15:50	Optimization of the catalyst-coated membrane assembly for alkaline water electrolysis	Michaela Plevova, <i>UCT Prague, CZ</i>
15:50	16:10	Catalyst, substrate and membrane/separator in alkaline zero-gap water electrolysis – practical limitations and improvement of cell performance	Stefan Loos, <i>Fraunhofer IFAM, DE</i>
16:10	16:30	Characterization of the membrane alkaline water electrolysis stack under operational conditions	Karel Denk, <i>UCT Prague, CZ</i>
16:30	16:50	Closing ceremony	Karel Bouzek, <i>UCT Prague, CZ</i>

Friday 29.3.2019		NTK
9:30	13:30	<p style="text-align: center;">Technical Excursions</p> <ol style="list-style-type: none"> <p>1) LeanCat (Prague) Come and visit Leancat, a Czech hydrogen-driven technology startup. Our first interest was a new "lean cat-alyt", then we moved on to R&D new versions of complete PEM fuel cells for various applications. Out of need to properly test these FCs, we started to develop and sell our own sophisticated testing stations. We also develop an H₂ generator, a UPS, a forklift and other H₂ related products. [http://www.lean-cat.com]</p> <p>2) UCT (Prague) UCT Prague represents the biggest educational institution of its kind in Central Europe. UCT Prague is deeply involved into the research of hydrogen related technologies. It covers not only fuel cells and water electrolysis, but also broad spectra of related technologies, like purification, storage and safety. Excursion to UCT Prague will allow you to visit selected laboratories and to discuss with specialists involved in this interesting field of research. [http://uat.vscht.cz/en/research/]</p> <p>3) UJV Řež, a.s. is a reputable, renowned scientific-research and engineering company dedicated to nuclear technologies and their application in various fields. A key field of UJV Řež's interest is energy, where special attention is given to the development of long-term sustainable energy with minimum environmental impact. One of these activities is focusing on hydrogen technologies in energy and transportation, particularly high temperature processes (SOFC, SOEC), energy storage, hydrogen-based hybrid stand-alone systems and microgrids and their integration to the distribution network. [https://www.ujv.cz/en/products-and-services-1/research-development/hydrogen-technology]</p>

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Topic	No.	Title	Author
CCOI	P01	TeachHy project and its implementation into the hydrogen technologies education at University of Chemistry and Technology, Prague	Martin Paidar, <i>UCT Prague, CZ</i>
CCOI	P02	Recovery of industrial waste hydrogen by membrane technology	Alfredo Ortiz, <i>University of Cantabria, ES</i>
DDES	P03	Photocatalytic Hydrogen Evolution on the Hetero-system Polypyrrol/TiO ₂ Under Visible Light	Belabed Chemseddin, <i>Faculty of Physic USTHB, DZA</i>
DDES	P04	Hydrogen production from butyric acid photoreforming over Pt-TiO ₂	Gabriele Scandura, <i>Khalifa University, UAE</i>
DDES	P05	Hydrogen production and storage from hydrolysis of sodium borohydride: study of the recyclability of the by-product of reaction	Diogo Silva, <i>CEFT University of Porto, PT</i>
DDES	P06	Interplay of ions in the photocatalytic H ₂ S splitting	Habeebllah Oladipo, <i>Khalifa University, UAE</i>
DDES	P07	Methane Decomposition over Carbon Microfibers with Ni, Co, Cu Nanoparticles Modified Catalysts to Produce Hydrogen	Katarina Sisakova, <i>UPJŠ Košice, SK</i>
DDES	P08	A new electrochemical method to estimate the active site density on metal-free carbon-based catalysts	Manoj Neergat, <i>IITB Bombai, IN</i>
DDES	P09	Determination of electrochemical active site density of MoS ₂ catalyst for hydrogen evolution reaction	Manoj Neergat, <i>IITB Bombai, IN</i>
DDES	P10	CFD study of Ethanol Autothermal Reforming on Rh/CeO ₂ catalyst using detailed microkinetic mechanism	Renika Baruah, <i>IITG - Gandhinagar, IN</i>
DDES	P11	Catalytic methanation of biogas for SNG production	Lukas Polak, <i>UJV Rez, CZ</i>
DDES	P12	Carbon-free membrane electrode assemblies for electrolysis cells with anion exchange membrane (AEMEC)	Galin Borisov, <i>IEES BAS, BG</i>
DDES	P13	Dissolution kinetics of Pt nanoparticles integrated into the gas-diffusion electrode at conditions corresponding to high-temperature PEM fuel cell operation	Martin Prokop, <i>UCT Prague, CZ</i>
DDES	P14	Ionic liquid modified Pt/C catalysts for proton exchange membrane fuel cell application	Huixin Zhang, <i>University of Birmingham, GB</i>
DDES	P15	Electrochemical Pressure Impedance Spectroscopy: A new way of understanding transport processes inside fuel cells	Anantrao Vijay Shirsath, <i>University Lorraine, FR</i>
DDES	P16	Application of porous polypropylene membranes grafted by polyacrylic acid as interelectrode separators in alkaline water electrolysis cell	Lubomir Stano, <i>FMPH, Comenius University in Bratislava, SK</i>
DDES	P17	Nanocrystalline Ni-W alloy catalyst for alkaline water electrolysis	Matilda Zemanová, <i>IChTM, Bratislava, SK</i>
DDES	P18	Snowball-structured cathode for long-term electrochemical stability of proton conducting fuel cells	Baek Hyeon Woo, <i>Hanyang University, KR</i>
DDES	P19	New Generation Reversible Solid Oxide Fuel Cell	Daria Vladikova, <i>IEES BAS, Bulgaria</i>
DDES	P20	Kinetics of oxygen electrode reactions in solid oxide electrolysis cell	Michal Carda, <i>UCT Prague, CZ</i>
DDES	P21	Characteristics of hybrid glass seals applied in SOC stacks	Magdalena Kosiorek, <i>Institute of Power Engineering Warsaw, PL</i>

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Topic	No.	Title	Author
DDES	P22	Experiments exploring hydrogen combustion modes for energy recovery from PEMFC anode exhaust	Dhanurdhar Ramswamy, <i>IITG - Gandhinagar, IND</i>
DDES	P23	Optimization of multi-nozzle hydrogen flame burner for low NO _x emissions	Tomas Kozak, <i>FMPH, CU in Bratislava, SK</i>
DDES	P24	TVHT-reactor with Pebble Fuel Elements to Produce Hydrogen.	Jochen Michels, <i>Neuss, DE</i>
DDES	P25	Pebble Technology for HT Nuclear-Reactors to generate Heat for Industrial Processes and Electric Power - current status.	Jochen Michels, <i>Neuss, DE</i>
DDES	P26	Gemini plus: Design of high-temperature nuclear co-generation and hydrogen production	Karin Stehlík <i>Research Centre Řež, s.r.o., and HYTEP platform, CZ</i>
DDES	P27	Portable DC power supply with hydrogen fuel cell	Jirina Polakova, <i>UJV Rez, CZ</i>
DDES	P28	Economic analysis of electrolyser deployment in CCGT power plant in Pocerady	Jakub Krempasky, <i>UCT Prague, CZ</i>
DDES	P29	Assessment of hydrogen potential of co-gasification of municipal solid waste and biomass in a downdraft gasifier	Afsin Gungor, <i>Akdeniz University, TR</i>
DDT	P30	The viability of hydrogen to the transportation sector	Maria Ponce de Leao, <i>LNEG e FEUP, Portugal</i>
DDT	P31	Inertization of PEM fuel cell by nitrogen generated using membrane gas separation module	Jakub Malis, <i>UCT Prague, CZ</i>
DDT	P32	PEM fuel cells under cyclic exposure of frost in the worst-case scenario	Stanislav Gorelkov, <i>ZBT Duisburg, DE</i>
DDT	P33	Effect of fuel concentration and cell design on the performance of a passive Direct Methanol Fuel Cell	Catarina S. Moreira, <i>CEFT, University of Porto, PT</i>
DDT	P34	Methodology for construction and operation of refuelling stations for hydrogen vehicles	Filip Cesnak, <i>UJV Rez, CZ</i>
DDT	P35	Future European Fuel Cell Technology: Fit for Automatic Manufacturing and Assembly	Martin Biak, <i>MB TU Chemnitz, DE</i>
DDT	P36	SOFC Applications in Unmanned Underwater Vehicles	Sevgi Fettah, <i>Vestel Defence Inc., TR</i>