

March 15, 2018

HALL - A	
08:00-09:00	Registration
09:00-09:30	Opening Talks Hilmi Yurdakul (<i>Congress Chair</i>) İbrahim Dincer (<i>President, National Hydrogen Energy Association</i>) Ahmet Pinarbasi (<i>Rector, Alanya Alaeddin Keykubat University</i>)
09:30-10:15	Overview Talk- İbrahim Dincer Alternative Dimensions of Hydrogen Energy and Future Directions
10:15-11:00	Keynote Speaker - Richard Baker Substituted Ceria-Based Materials for Applications in Solid Oxide Fuel Cell Electrolytes and Electrodes Chair: İbrahim Dincer
11:00-11:15	Coffee Break
11:15-12:00	Keynote Speaker - Wei-Hsin Chen Recent Development in Hydrogen Separation and Purification through Pd-based Membrane Systems Chair: Richard Baker
12:00-13:30	LUNCH

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HALL - A	
13:30-15:00	Session 1A: Biological Hydrogen Production Chair: Filiz Karaosmanoglu
13:30-13:45	(004) Hydrogen Production by Agar-Immobilized R. Capsulatus in Panel Photobioreactor Kamal Elkahlout, <u>Emrah Sagir</u> , Siamak Alipour, Harun Koku, Ufuk Gunduz, Inci Eroglu, Meral Yucel
13:45-14:00	(0050) Effect of Operational Variables on Biological Hydrogen Production by Dark Fermentation from Palm Oil Mill Effluent Using Response Surface Methodology <u>Azam Akhbari</u>
14:00-14:15	(0053) Multi-Objective Evolutionary Polynomial Regression Technique in Prediction of Bio-Hydrogen Production by Dark Fermentation Process <u>Azam Akhbari</u> , Shaliza Ibrahim, Mohsen Vafaeifard, Isa Ebtehaj, Milad Khosravi, Hossein Bonakdari
14:15-14:30	(0157) HHO Enrichment of Bio-Diesohol Fuel Blends in a Single Cylinder Diesel Engine Mustafa Kaan Baltacioğlu, <u>Raif Kenanoğlu</u> , Kadir Aydın
14:30-14:45	(0072) Direct Current Assisted Dark Fermentative Hydrogen Gas Production from Acid Hydrolysed Waste Paper Towel Gulizar Onaran, <u>Hidayet Argun</u>
15:00-15:30	Coffee Break

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HALL - B	
13:30-17:30	Workshop – Hikmet Karakoc
	Opening Remarks
13:30-15:00	<p>Session-I</p> <p>Session Chair: Adnan Midilli</p> <ul style="list-style-type: none"> • Battery Technology Overview – Fatih Mutluel, TUBITAK MAM • Battery Thermal Management System (TMS) – Cihad Furkan Salman, TUBITAK MAM • Battery Module/Package Development – Ahmet Yayli, TUBITAK MAM • Battery Management System (BMS) – Turev Sarikurt, TUBITAK MAM
15:00-15:30	Coffee Break
15:30-17:00	<p>Session-II</p> <p>Session Chair: C. Ozgur Colpan</p> <ul style="list-style-type: none"> • Analysis and Selection of Effective Battery Management System Architectures for Safety – Melih Yildiz (Atilim University), T. Hikmet Karakoc (Anadolu University) • Electric Mobility and Li Ion Based BMS Adaptation in Bozankaya Buses – Emrah Dal (Bozankaya), Dursun Cicek (Bozankaya) • Electrification Options in Aviation Systems – Nader Javani (Yildiz Tech. University) • Maintainability and Safety Parameters for Battery Design – Melih Yildiz (Atilim University), T. Hikmet Karakoc (Anadolu University)

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HALL - C	
13:30-15:00	Session 1C: Renewable Hydrogen Production Chair: Hadi Ganjehsarabi
13:30-13:45	(0192) Integrating of PEM Electrolyzer for Hydrogen Production in a Kalina Cycle Driven by Low-Grade Geothermal Energy <u>Hadi Ganjehsarabi</u>
13:45-14:00	(0097) Performance of Ni Incorporated Silica and Alumina Based Catalysts in Hydrogen Production from Biomass <u>Birce Pekmezci Karaman</u> , Nurbanu Çakiryilmaz, Huseyin Arbag, Nuray Oktar, Gülşen Dogu, Timur Dogu
14:00-14:15	(0030) Investigation of a Solar Driven Integrated TEG with PEM Electrolyzer System for Hydrogen Production <u>Murat Emre Demir</u> , Ibrahim Dincer
14:15-14:30	(0060) Hydrogen Production from Water as Photoelectrochemical by using Solar Light Irradiation <u>Rana Muhammad Zunain Ayaz</u> , Duygu Akyüz, Özlem Uğuz, Irem Tanışık, Cevat Sarıoğlu, Fatma Karaca Albayrak, Ali Rıza Özkaya, Atıf Koca
14:30-14:45	(0202) A Parametric Study on Exergetic Performance of Hydropower Integrated Hydrogen Production: A Case Study for East Black-Sea Region of Turkey <u>Adnan Midilli</u> and <u>Mert Ozsaban</u>
15:00-15:30	Coffee Break

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HALL - A	
15:30-17:15	Session 2A: Pyrolysis, Gasification and Plasma Hydrogen production Chair: <u>Inci Eroglu</u>
15:30-15:45	(0027) In-situ and Downstream Desulfurization Ability of PbO and ZnO During Pyrolysis and Hydrogenation of a High-sulfur Lignite <u>Arzu Kanca</u> , Deniz Uner
15:45-16:00	(0089) Ni Catalyzed Methane Pyrolysis for H2 Generation under Concentrated Solar Irradiation Celal Guvenç Ogulgonen, Atalay Çalışan, Deniz Uner, Serkan Kincal
16:00-16:15	(0068) Energy and Exergy Analyses of an Integrated Solar and Coal Gasification Combined Cycle for Hydrogen and Ammonia Production <u>Ahmed Hasan</u> , Ibrahim Dincer
16:15-16:30	(0098) Gasification of Sewage Sludge Enriched with Virginia Mallow for Higher Hydrogen Content in Syngas <u>Anna Poskart</u> , Monika Zajemska, Stanisław Szwaja
16:30-16:45	(0021) The Effects of Equivalence Ratio on a Downdraft Plasma Coal Gasifier <u>Zeki Yilmazoglu</u> , Beycan Ibrahimoglu, Onurhan Gokalp
16:45-17:00	(0155) Electrochemical Characterization of Carbon-Supported Bimetallic Pd-Zn Nanoparticles as Anode Catalyst for Direct Borohydride Fuel Cells <u>Ramiz Gultekin Akay</u> , Merve Dogan Ozcan, Cenk Celik, Ayse Nilgün Akın
17:00-17:15	(0222) Biohydrogen Production From Fruit And Vegetable Wastes Through Dark Dry Anaerobic Fermentation Under Thermophilic Condition <u>Haris Nalakath Abubackar</u> , Okyanus Yazgın, Bensu Gunay, Kubra Arslan, Tugba Keskin Gundogdu, Nuri Azbar
17:15-17:30	Coffee Break

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HALL - C	
15:30-17:15	Session 2C: Hydrogen Fuel Cells Chair: Mehmet Suha Yazici
15:30-15:45	(0014) Microwave Assisted Synthesis of Pt/MWCNT Catalyst for High Temperature PEM Fuel Cell <u>Elif Damla Arica</u> , Yilser Devrim
15:45-16:00	(0085) Performance of CVD Graphene Supported PtCoY Electrocatalysts for PEM Fuel Cell <u>Fatma Gül Boyacı San</u> , Mehmet Suha Yazıcı
16:00-16:15	(0005) A Field Application of a Fuel Cell Microgeneration Unit <u>Cigdem Iyigün Karadag</u> , Atilla Ersöz, Fatma Gül Boyacı San, Betül Erdör Türk, Emin Okumuş, Murat Kılıç, Egemen Akar, Nilüfer Topuz, Salih Obut, Özgür Can Korkmaz, Derya Aydemir
16:15-16:30	(0153) A Labview-FPGA Based Process Control and Power Conditioning Prototype Application of a Fuel Cell Powered Range Extender for Unmanned Aerial Vehicles <u>Betul Erdor Turk</u> , Mustafa Hadi Sarul
16:30-16:45	(0174) System Design and Optimization of a Hydrogen Fuel Cell Vehicle in the Different Road Models Yakup Hames, <u>Kemal Kaya</u>
16:45-17:00	(0016) Development of Effective Cooling System for High Temperature PEM Fuel Cell <u>Yilser Devrim</u> , Kubra Pehlivanoglu, Omer Erdemir, Celal Yılmaz, Huseyin Devrim
17:00-17:15	(0181) The Impact of Boron Nitride Nanoparticles on Hydrogen Uptake Capacity over MWCNTs <u>Songul Kaskun</u> , Muhammet Kayfeci
17:15-17:30	Coffee Break

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17:45-18:30		POSTER Session 1 Chair: Ugur Akbulut
0055	Modeling of Syngas Production from Biogas via Tri-reforming Process <u>Reiyu Chein</u> , Wen Hwai Hsu	
0058	Active Photocatalysts Designed by Sulphurization Method for Hydrogen Production <u>Irem Tanışık</u> , Duygu Akyüz, Rana Muhammad Zunain Ayaz, Özlem Uğuz, Cevat Sarioğlu, Fatma Karaca Albayrak, Ali Rıza Özkaya, Atf Koca	
0093	Comparison of LFS of H ₂ , CH ₄ at Elevated Temperatures <u>Karol Grab Rogalinski</u> , Stanislaw Szwaja, Michal Pyrc, Michal Gruca	
0095	A Low Cost, Continuous H ₂ -CH ₄ Sensor Assembly <u>Celal Güvenç Oğulgönen</u> , Atalay Çalışan, Deniz Üner, Serkan Kınçal	
0099	Optimization of hydrogen release from anaerobic thermal processing of Virginia Mallow <u>Anna Poskart</u> , Monika Zajemska, Stanislaw Szwaja, Aneta Magdziarz, Dorota Musiał	
0103	Influence of Hydrogen Addition to Diesel Fuel on Smoke and Combustion Phases in a Compression Ignition Engine <u>Stanislaw Szwaja</u> , Romualdas Juknelevicius, Michal Gruca, Michal Pyrc	
0105	A Comparative Thermodynamic Analysis of Alternatively Proposed Different Fuel System Models using Jet A Fuel <u>Muhammet Yilanlı</u> , Önder Altuntaş, Emin Açıkalp	
0107	The Effect of Support Material on the Hydrogen Adsorption-Desorption Characteristics of Ru/SiO ₂ and Ru/Vulcan Catalysts <u>Mustafa Yasin Aslan</u> , Deniz Üner	
0110	Metal-Organic Frameworks as Hydrogen Evolution Catalysts <u>Selçuk Demir</u> , Emine Ülker	
0112	Empirical Models for the Energy Consumption of Oil-in- Water Emulsion Treatment by Electro-coagulation Process <u>Mohamed Tir</u>	
0115	Management of Hybrid System Operating in Grid-connected and Standalone Mode <u>Houria Boumaaraf</u> , <u>Billel Boumaaraf</u> , Abdelaziz Talha, Omar Bouhali	
0117	Power Generation System Control of a Hybrid Renewable System PVT-diesel with Storage <u>Billel Boumaaraf</u> , Houria Boumaaraf, Abdelaziz Talha, Mohamed Salah Ait Cheikh	
0119	The Relationship Between Fuel Flow Rate and Pressure Drop in a Direct Methanol Fuel Cell with Parallel Channels <u>Anil Can Turkmen</u> , Didem Demirtas, Hatice Esen, <u>Çenk Celik</u>	
0122	Hydrogen Permeation Characteristics Through Palladium Membrane with/without Vacuum <u>Shang Wei Lin</u> , <u>Wei Hsin Chen</u>	
0069	Heat Transfer and Pressure Drop Characteristics of Different Structured Micro-Pin-Fin Reactors <u>Evren Yılmaz Yakin</u> , Sinan Eren Yalcin, Tahir Hikmet Karakoc	
0190	The Role of Temperature on Aluminium Oxide Embedded MWCNTs for Hydrogen Adsorption <u>Songül Kaskun</u> , Muhammet Kayfeci	

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HALL - A	
09:30-10:15	Keynote Speaker: Bruno G. Pollet Current Status of Hydrogen and Fuel Cells in Norway Chair: Richard Baker
10:15-10:30	Coffee Break
10:30-12:00	Session 3A: Thermodynamic Analysis of Hydrogen Technologies Chair: Güngör Tuncer
10:30-10:45	(0044) Thermodynamic and Economic Analyses of a Renewable Energy Based Hydrogen Production System <u>Fatih Sorgulu</u> , Ibrahim Dincer
10:45-11:00	(0047) Thermodynamic Performance Assessment of Integrated Solar Energy System with Hydrogen Production <u>Fatih Yilmaz</u> , Murat Ozturk, Resat Selbas
11:15-11:30	(0064) Geothermal and Solar Driven Multigeneration System for Sustainable Buildings: A Thermodynamic Analysis <u>Tahir Abdul Hussain Ratlamwala</u> , Hamed Alimoradiyan
11:30-11:45	(0184) Thermodynamic Analysis of a New Solar Power Tower Based Integrated System for Hydrogen Production and Liquefaction <u>Yunus Emre YukseI</u> , Murat Ozturk, Ibrahim Dincer
11:45-12:00	(0221) Thermodynamic Analysis of a Unique Integrated Photoelectrochemical System for Multigeneration Purposes Canan Acar, Ibrahim Dincer
12:00-13:30	LUNCH

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HALL - B	
10:30-12:00	Session 1B: Exergy Analysis of Hydrogen Energy Systems Chair: Hikmet Karakoc
10:30-10:45	(0096) Diagnosis and Improvement of Hydrogen Demand/Supply Processes using Combined Pinch and Exergy Analysis Fatma Alyer, Zehra Özçelik
10:45-11:00	(0023) Optimum Energy and Life Cycle Cost Evalautaiion of an Advanced Hydrogen Liquefaction Cycle Using Geothermal Power <u>Ceyhun Yılmaz</u>
11:00-11:15	(0065) Energy and Exergy Analyses of a Novel Ammonia Combined Power Plant Operating with a Gas Turbine and a Solid Oxide Fuel Cell <u>Muhammad Ezzat</u> , Ibrahim Dincer
11:15-11:30	(0079) A Parametric Study of the Performance of a Polymer Electrolyte Membrane Electrolyzer: Energy and Exergy Analyses Ehsan Baniasadi, Ebrahim Afshari, Faeze Moradi Nafchi, <u>Nader Javani</u>
11:30-11:45	(0041) Exergoeconomic Analysis and Optimization of a Concentrated Sunlight-based Integrated Photoelectrochemical Hydrogen and Ammonia Production System <u>Yusuf Bicer</u> , Ibrahim Dincer
12:00-13:30	LUNCH

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HALL - C	
10:30-12:00	Session 3C: Hydrogen Fuel Combustion Chair: Stanislaw Szwaja
10:30-10:45	(0092) Analysis of the Turbocharged Internal Combustion Engine with Over-expanded Cycle Fueled with CNG and Hydrogen <u>Karol Grab Rogalinski</u> , Stanislaw Szwaja
10:45-11:00	(0102) Dilution of Fresh Charge for Reducing Combustion Knock in the Internal Combustion Engine Fuelled with Hydrogen Rich Gases <u>Stanislaw Szwaja</u>
11:00-11:15	(0147) Simulation of a Novel Alternative Fueled Hybrid Electric Vehicle (AF-HEV) with Hydrogen Enriched Internal Combustion Engine <u>Hüseyin Turan Arat</u>
11:15-11:30	(0196) A Numerical Study of Mild Flameless Combustion of Methane/hydrogen Mixtures in a Furnace <u>Mehmet Salih Cellek</u>
11:30-11:45	(0150) Colloidal Synthesis and Characterization of CuInS₂ Nanoparticle for Solar Hydrogen Production Cigdem Tuc Altaf, <u>Nurdan Demirci Sankir</u>
11:45-12:00	(0131) Catalytic and Non-Catalytic Hydrogen Generation from Chemical Hydrides <u>Mehmet Sankir</u> , Nazrin Abdullayeva
12:00-13:30	LUNCH

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HALL - A	
13:30-15:00	Session 4A: Borohydride Fuel Cells Chair: Ramazan Solmaz
13:30-13:45	(0215) Langmuir–Hinshelwood Kinetic Model to Capture the Manganese(0) Nanoparticles Supported on Ceria-catalyzed Hydrolysis of Sodium Borohydride Sibel Duman, Saim Özkar
13:45-14:00	(0148) Preparation And Characterization of Polyvinyl Alcohol/ Chitosan Blended Anion Exchange Membranes for Direct Borohydride Fuel Cells <u>Tuncay Kadioglu</u> , Ramiz Gultekin Akay, Kursat Can Ata, Cenk Celik
14:00-14:15	(0151) Novel Pd-Co/C Bimetallic Alloy Electrocatalyst for Direct Borohydride Fuel Cell Anode <u>Cem Gozlu</u> , Cenk Celik, Ayse Nilgun Akın, Ramiz Gultekin Akay
14:15-14:30	(0152) A Comparative Study on the Determination of Borohydride Permeability of Cation Exchange Membranes for DBFC <u>Kursat Can Ata</u> , Tuncay Kadioglu, Ramiz Gultekin Akay, Cenk Celik
14:30-14:45	(0241) Effect of Inlet Air Temperature on Exergetic Performance of Hydrogen Production from Car Tires via Plasma Gasification Handan Demirçay, Merve Mehan, Muhammed Emin Topal, Yildiz Kalinci, Senol Bayraktar, Ugur Akbulut, Haydar Kucuk, Hayati Olgun, Adnan Midilli, Ibrahim Dincer
15:00-15:30	Coffee Break

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HALL - B	
13:30-18:20	Workshop – C. Ozgur Colpan
	Session Chair: İnci Eroğlu
13:30-13:35	Welcoming Remarks / C. Özgür Çolpan
13:35-13:55	Overview of Hydrogen and Fuel Cell Related Research at CERL in UOIT / Ibrahim Dincer
13:55-14:15	The Development and Production of Fuel Cell from TEKSIS's Point of View / Hüseyin Devrim
14:15-14:35	PEM Type Fuel Cell Research at TOBB ETU / Mehmet Sankır
14:35-14:55	Advances in the Fuel Cell Research in Dokuz Eylül University / C. Özgür Çolpan
14:55-15:15	Hydrogen & Fuel Cell Research in Atılım University / Yilser Devrim
15:15-15:35	Advances in the Fuel Cell Research in Sen Research Group (SRG), Dumlupınar University / Fatih Şen
15:35-16:00	Coffee Break
	Session Chair: T. Hikmet Karakoç
16:00-16:20	Fuel Cell Research in Atatürk University / Ayşe Bayrakçeken Yurtcan
16:20-16:40	Hydrogen & Fuel Cell Research and Demonstration Activities at MAM Energy Institute / Suha Yazıcı
16:40-17:00	Studies on the Development of Directly Fed Fuel Cell Catalysts at Van YYU / Hilal Demir Kıvrak
17:00-17:20	PEMFC Studies in Recep Tayyip Erdogan University / Adnan Midilli
17:20-17:40	Advances in the Fuel Cell Research in Çukurova University Ebru Erünal
17:40-18:00	Direct Borohydride Fuel Cell Studies in Kocaeli University Cenk Çelik and R. Gültekin Akay
18:00-18:20	Research and Development of Microbial Fuel Cell Technology at Yıldız Technical University / Bestami Özkaya

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HALL - C	
13:30-15:00	<p>Session 4C: Material Applications for Hydrogen Energy Technologies Chair: Emmanuel Iheanyichukwu Iwuoha</p>
13:30-13:45	<p>(0091) Wireless High-Speed Continuous Sensing of Hydrogen Leak by a Quadrotor Drone Kazuo Matsuura, Masahiro Inoue, Yuta Segawa, Takaya Kimura</p>
13:45-14:00	<p>(0216) Green Dehydrogenation of Dimethylamine Borane Catalyzed by Nickel(0) and Copper (0) Nanoparticles Hakan Demir, Ali Ozdemir, <u>Sibel Duman</u></p>
14:00-14:15	<p>(0229) Graphene Oxide/Metal Organic Framework Nanocomposite with Improved Electrocatalytic Activity for Hydrogen Evolution Reaction Emmanuel Iheanyichukwu Iwuoha, Mogwasha Daphney Makhafola, Kabelo Edmond Ramohlola, Thabang Ronny Somo, Gobeng Release Monama, Mpitloane Joseph Hato, Kerileng Midred Molapo, Kwena Desmond Modibane</p>
14:15-14:30	<p>(0228) Copper(II) Phthalocyanine/Metal Organic Frameworks (Cupc/MOF) Composite with Improved Electrocatalytic Efficiency for Hydrogen Production Emmanuel Iheanyichukwu Iwuoha, Gobeng Release Monama, Kwena Desmond Modibane, Kabelo Edmond Ramohlola, Kerileng Mildred Molapo, Mpitloane Joseph Hato, Mogwasha Daphney Makhafola, Gloria Mashao Mashao Mashao, Siyabonga Beizel Mdluli</p>
14:30-14:45	<p>(0218) Highly Effective PVP-stabilized Rh-Ru Bimetallic Nanoparticles for the Dehydrogenation of Methylamine-borane in Water Mehmet Gulcan, Yaşar Karatas</p>
14:45-15:00	<p>(0128) Investigation of Hydrogen Fuel Usage Affects On Exergetic and Exergeeconomic Performances of a Turbojet Engine Ozgur Balli, Yasin Şöhret, T. Hikmet Karakoc</p>
15:00-15:30	<p>Coffee Break</p>

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HALL - A	
15:30-17:00	Session 5A: Modelling and Analysis of Hydrogen Energy Technologies Chair: Canan Acar
15:30-15:45	(0070) Kinetic and Electrochemical Analyses of a CuCl/HCl Electrolyzer <u>Reza Soltani</u> , Ibrahim Dincer, Marc A. Rosen
15:45-16:00	(0119) The Relationship Between Fuel Flow Rate and Pressure Drop in a Direct Methanol Fuel Cell with Parallel Channels Anil Can Turkmen, Didem Demirtas, Hatice Esen, <u>Cenk Celik</u>
16:00-16:15	(0088) Exergetic and Sustainability Analyses of Ammonia Usage in a Gas Turbine <u>Suleyman Kagan Ayaz</u> , Onder Altuntas
16:15-16:30	(0188) Thrust Modelling for a Solid Oxide Fuel Cell and Gas Turbine (SOFC/GT) Hybrid Propulsion System <u>Yasin Sohret</u> , Arif Hepbasli, T. Hikmet Karakoc
16:30-16:45	(0124) Exergetic Comparison of Various Flow Patterns in PEMFCs <u>Suha Orcun Mert</u> , Muhammed Mucahit Toprak
17:00-17:15	Coffee Break

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HALL - C	
15:30-17:00	Session 5C: Hydrogen Production-1 Chair: Figen Kadirgan
15:30-15:45	(0028) Maturity Impact on Hydrogen Production from Natural Gas and Coal: Examples from Dadaş Shale and Zonguldak Coals Samil Sen, Huseyin Kozlu, Ilyas Erdal Kerey, Gungor Celik
15:45-16:00	(0031) Investigation of Hydrogen Production through Thermochemical Cycles <u>Fatih Yilmaz</u> , Resat Selbas, Murat Oztruk
16:00-16:15	(0062) Photoelectrochemical Hydrogen Production Using cd(1-x) znxs and Its Modifications with Graphene Derivatives <u>Ozlem Uguz</u> , Duygu Akyuz, Rana Muhammad Zunain Ayaz, Irem Tanisik, Cevat Sarioglu, Fatma Karaca Albayrak, Ali Riza Ozkaya, Atif Koca
16:15-16:30	(0073) Hydrogen Production from Melon and Watermelon Mixture by Dark Fermentation Savas Turhal, Mansurali Turanbaev, Hidayet Argun
16:30-16:45	(0166) Photocatalytic Hydrogen Production with Metal Oxide Bulk Structures <u>Gizem Yanalak</u> , Abdalaziz Aljabour, Emre Aslan, Faruk Ozel, Imren Hatay Patir
16:45-17:00	(0211) Hydrogen Gas Production from Wastewater by Electro-hydrolysis <u>Serkan Eker</u> , Fikret Kargi
17:00-17:15	Coffee Break

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17:00-18:00	POSTER Session 2 Chair: Suha Orcun Mert
0145	Ordered Mesoporous Carbons (OMC) Synthesized by Self-assembly Method and the Effects of Acidity and Carbon Source to Surfactant Ratio <u>Silver Güneş, Fatma Çiğdem Güldür</u>
0159	Bio-ethanol Reforming for Hydrogen and Methane Production <u>Yuji Ando</u>
0168	Electricity Generation and Wastewater Treatment with Microbial Fuel Cells Using Homemade Beer Wastewater <u>Ömer Faruk Coşkun, Kürşat Can Ata, Ramiz Gültekin Akay</u>
0182	Synthesis of Active and Reusable Nano Catalyst from Graphene Oxide (GO) Stabilized Pt-Ir Nanoclusters for DMAB Dehydrogenation Reaction at Room Temperature <u>Fatih Sen, Esra Kuyuldar, Betül Sen</u>
0183	Synthesis of Highly Active Pt-Rh Nanoclusters Stabilized on Graphene Oxide for Hydrogen Evolution Reaction <u>Fatih Sen, Esra Kuyuldar, Betül Sen</u>
0187	Energy and Exergy Analyses of an Integrated Hydrogen Production and Liquefaction System with Waste Material Gasification <u>Yunus Emre Yüksel, Murat Öztürk, İbrahim Dinçer</u>
0191	A Comparative Study of Control Strategies for Vehicles with Hydrogen Fuel Cell/Battery/ Supercapacitor in the Electrical Grid-Independent Applications <u>Yakup Hameş, Kemal Kaya</u>
0200	Wood Char - Active Carbon Production for H ₂ Adsorption and Storage <u>Yıldırım Tosun</u>
0209	Biohydrogen Upgrading Towards a Cleaner Energy Production <u>Emre Oguz Koroglu, Bestami Ozkaya, Ahmet Demir</u>
0217	Hydrogen Generation from the Hydrolysis of Dimethylamine-borane at Room Conditions by Using Polyvidone Protected Ruthenium Nanocatalyst <u>Mehmet Gülcan, Yaşar Karataş</u>
0224	Optimization of Thermal Pre-treatment Conditions By Box-Wilson Method For Dark Fermentative Biohydrogen Production From Fruit and Vegetable Wastes <u>Bensu Günay, Okyanus Yazgın, Kubra Arslan, Haris Nalakath, Tugba Keskin, Nuri Azbar</u>
0225	Analysis of Biohydrogen Production via Dry Anaerobic Digestion of Fruit and Vegetable Waste <u>Okyanus Yazgın, Bensu Günay, Haris Nalakath Abubackar, Tuğba Keskin Gündoğdu, Nuri Azbar</u>
0230	Phase Transition and Photoelectrochemical Properties of Copper Oxide Photoelectrodes Fabricated by Electrodeposition <u>İbrahim Y Erdoğan, Meral Balık, Veysel Bulut</u>
0231	Enhanced Photoelectrocatalytic Performance of ZnO/Cu ₂ O Photoelectrodes <u>İbrahim Y Erdoğan, Ako Mahmood Qadir</u>
0239	The Investigation of Three-dimensional Copper Nanodomes as Anode Materials for Direct Methanol Fuel Cells <u>Fatih Baştürk, Handan Yüksel, Ramazan Solmaz</u>
0240	Pt, Pd and Ag Modified NiCuZn Raney Electrodes for Alkaline Water Electrolysis <u>Ramazan Solmaz, Ayşe Ongun Yüce, Ali Döner, İbrahim Şahin, Gülfeza Kardeş</u>
0104	Energy and Exergy Analysis of 1 kW Self-humidified PEM Fuel Cell <u>Tayfun Özgür, Ali Cem Yakarıılmaz, Erdi Tosun, Mustafa Atakan Akar, Mustafa Özcanlı</u>
0244	Mg60Ni40 Alloy Synthesis and Investigation of Hydrogen Storage Properties <u>Gözde Bayazit, Sefa Emre Sünbül, Sultan Öztürk, Kürşat İcin, Şadan Özcan</u>

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HALL - A	
09:00-10:30	Session 6A: Hydrogen Energy Applications-1 Chair: Can Ozgur Colpan
09:00-09:15	(0007) H₂ Adsorption on Cu(I)-ZSM-5: Exploration of Cu(I)-exchange in Solution Ismihan Altıparmak, Busra Karakaya, <u>Bahar Ipek</u>
09:15-09:30	(0082) Coke Minimization over Mesoporous Alumina Supported Ni Catalyst in Dry Reforming of Methane Huseyin Arbag
09:30-09:45	(0212) Electrohydrolysis Application on Metal Plating Wastewater to Produce Hydrogen Gas <u>Ebru Çokay</u> , Yasin Gürler
09:45-10:00	(0040) Bimetallic Particles for Ethanol Electro-oxidation <u>Hilal Demir Kivrak</u> , Ebru Ozkan, Burak Yapıcı, Sumeyye Dogan, Shekiba Muhammady, Ozlem Sahin
10:00-10:15	(0134) Synthesis and Characterization of Electrocatalyst with Graphene and Multi-Walled Carbon Nanotube Support Material <u>Guvenc Umur Alpaydin</u> , Elif Damla Arica, Yilser Devrim, Can Ozgur Colpan
10:15-10:30	(0108) SnS Photo-electrodes Produced by Sulfurization of Electrodeposited Sn Films for Photo-electrochemical Water Splitting Sercan Soyoz, Bulut Sahin, Selim Demirci, <u>Cevat Sarıoğlu</u>
10:30-10:45	Coffee Break

March 17, 2018

HALL - B	
09:00-10:30	Session 2B: Hydrogen Evolution Chair: Kazuro Matsuura
09:00-09:15	(0057) The Effect of Co-catalyst and Novel Heterogeneous Active Photocatalysts for Hydrogen Evolution under Solar Energy <u>Duygu Akyuz</u> , Ozlem Uguz, Irem Tanisik, Rana Muhammad Zunain Ayaz, Cevat Sarioglu, Fatma Karaca Albayrak, Ali Riza Ozkaya, Atif Koca
09:15-09:30	(0094) Water Splitting through the Pb/PbO Cycle <u>Atalay Calisan</u> , Celal Guvenc Ogulgonen, Deniz Uner, Serkan Kincal
09:30-09:45	(0037) Comparison of Alcohol Electro-oxidation in Alkaline Medium <u>Ozlem Sahin</u> , Ebru Ozkan, Hilal Demir Kivrak
09:45-10:00	(0109) Zirconium Metal-Organic Framework Platform as a Heterogeneous Catalysts for Electrochemical Hydrogen Evolution <u>Emine Ulker</u> , Selcuk Demir
10:00-10:15	(0170) Hydrogen Evolution at the Water/DCE Interface Catalyzed by Cu₂WS₄ Faruk Ozel, <u>Emre Aslan</u> , Adem Sarilmaz, Imren Hatay Patir
10:15-10:30	(0171) The Hydrogen Evolution Reaction Catalyzed by Metal Oxide and Metal Sulfide Catalysts at Soft Interfaces Emre Aslan, Gizem Yanalak, <u>Imren Hatay Patir</u>
10:30-10:45	Coffee Break

March 17, 2018

HALL - C	
09:00-10:30	Session 6C: Hydrogen Energy and Technologies-1 Chair: Tanay Sıdkı Uyar
09:00-09:15	(0038) Electrocatalytic Performance of Pd Based Bimetallic Catalysts for Methanol Oxidation Reaction <u>Özlem Şahin</u> , Ebru Özkan, Rabia Esra Takır, Abdullah Nadeesh, Hilal Demir Kıvrak
09:15-09:30	(0039) Structure Sensitivity of Direct Alcohol Electro-oxidation Reaction Catalysts <u>Hilal Demir Kıvrak</u> , Ebru Ozkan, Ozlem Sahin
09:30-09:45	(0013) Effect of Bipolar Plate Gas Flow Channel Pattern on Proton Exchange Membrane Fuel Cells Performance <u>Celal Yılmaz</u> , Muhittin Bilgili, Yılser Devrim
09:45-10:00	(0136) Performance Analysis of Compressor Assisted Single Effect Absorption Refrigeration Cycle Coupled with Helio-stat Field <u>Chinedu Frank Okwose</u>
10:00-10:15	(0175) Integration of Renewable Energy Systems with Hydrogen Technologies <u>Alper Saydam</u> , Tanay Sıdkı Uyar
10:15-10:30	(0243) Design of Thin Film Membranes for Intermediate-Temperature Hydrogen Separation <u>Fatih Pişkin</u> , Tayfur Öztürk
10:30-10:45	Coffee Break

March 17, 2018

HALL - A	
10:45-12:00	Session 7A: Hydrogen Energy Policies and Strategies Chair: <u>Sudi Apak</u>
10:45-11:00	(0075) A Renewable Pathway Towards Increased Utilization of H₂ in Diesel Engines <u>Saket Verma</u> , Abhishek Suman, Lalit M Das, Shubhash C Kaushik, Sudhir K Tyagi
11:00-11:15	(0015) Turkey's Hydrogen Scenario and Hydrogen Production in the Thrace Basin versus Hydrogen Regulations and Standards Erhan Atay, <u>Sudi Apak</u>
11:15-11:30	(0090) Recent Trends of Hydrogen Utilization in Transportation <u>Kadir Aydın</u>
11:30-11:45	(0087) Maritime Industry and Future Hydrogen Production Preeti Parikh, <u>Yaqub Amani</u> , Charles Munsch
12:00-13:30	LUNCH
13:30- 18:00	SOCIAL PROGRAME (Damlataş Cave, Telpher Trip, Alanya Castle)

March 17, 2018

HALL - B	
10:45-12:00	Session 3B: Hydrogen Production-2 Chair: Yilser Devrim
10:45-11:00	(0071) Steam Methane Reforming in Micro-reactors under Concentrated Solar Irradiation <u>Atalay Çalışan</u> , Celal Guvenc Ogulgonen, Deniz Uner, Serkan Kincal
11:00-11:15	(0081) Hydrogen Generation from Solid State NaBH₄ by Using FeCl₃ Catalyst for Portable PEMFC Applications <u>Inci Eroglu</u> , Asli Boran, Serdar Erkan
11:15-11:30	(0100) Improvement of Operational Characteristics of Sesame Oil in a Compression Ignition Engine with Small Fraction of Hydrogen Enrichment <u>Tayfun Ozgur</u> , Safak Yildizhan, Ceyla Ozgur, Kadir Aydın, Hasan Serin
11:30-11:45	(0177) Effective TiO₂ Supported Cu-Complex Catalyst in NaBH₄ Hydrolysis Reaction to Hydrogen Generation <u>Dilek Kilinc</u>
11:45-12:00	(0195) Investigation of Hydrogen Generation from Sodium Borohydride Hydrolysis Reaction with Different Catalyst <u>Arife Saglam</u> , Elif Damla Arica, Yilser Devrim
12:00-13:30	LUNCH
13:30- 18:00	SOCIAL PROGRAME (Damлатаş Cave, Telpher Trip, Alanya Castle)

March 17, 2018

HALL - C	
10:45-12:00	Session 7C: Hydrogen Energy and Technologies-2 Chair: Nader Javani
10:45-11:00	(0083) Preparation of Nanostructured α -Fe ₂ O ₃ Films from Electrodeposited Fe Films for Photoelectrochemical Water Splitting Performance <u>Selim Demirci</u> , Cevat Sarioğlu
11:00-11:15	(0078) Experimental Characterization of Thin Electrolyte for Intermediate Temperature Solid Oxide Electrolysis Cell <u>Abdullah A. Alzahranj</u> , Ibrahim Dincer
11:15-11:30	(0084) Investigation of the Effect of Single Stage and Four-stage Clamping Pressure on Electrical Resistance of GDL <u>Mert Taş</u> , Gülşah Elden
12:00-13:30	LUNCH
13:30- 18:00	SOCIAL PROGRAME (Damlatas Cave, Telpher Trip, Alanya Castle)

March 18, 2018

HALL - A	
09:00-11:00	Session 8A: Hydrogen Energy and Technologies-3 Chair: Kadir Aydın
09:00-09:15	(0061) Hydrogen Storage Capacity Investigations of Pd Loading Ratio on MW-CNTs via Supercritical Fluid Deposition Method <u>Ebru Erunal</u> , Fatma Ulusal, Sinan Büyükbayram, Selda Odabaşı, Bilgehan Güzel, Deniz Üner
09:15-09:30	(0113) Enhancement of Hydrogen Charging in Metal Hydride-Based Storage Systems by Using Heat Pipe <u>Muhammet Kayfeci</u> , Fawzi Elhamshri
09:30-09:45	(0132) Artificial Neural Network Modelling of Hydrogen Storage Properties of LaNi_{4.75}Al_{0.25} alloys based metal hydride vessels Muhammet Kayfeci, Fevzi Bedir, <u>Umrhan Elmas</u>
09:45-10:00	(0074) Electrochemical Impedance Modelling of a SOFC Button Cell and Parametric Analysis of the Cell Electrical / Electrochemical Performance <u>Yaser Mollaei Barzi</u> , Rafat Mohammadi
10:00-10:15	(0135) Axane Commitment for a Sustainable, Reliable, and Field Proven Power Source through Partnership with Laboratories and Design Efforts <u>Johan Andre</u> , Marian Chatenet, Frédéric Maillard, Laetitia Dubau, Lionel Flandin, Corine Bas, Gilles De Moor, Olivier Lottin, Eric Claude, Elisabeth Rossinot, Nicolas Caqué
10:15-10:30	(0160) A Design of Automated HHO System for Optimum Volumetric Efficiency Mustafa Kaan Baltacioglu, <u>Raif Kenanoglu</u> , Kemal Kaya, Yakup Hames, Ertugrul Baltacioglu
10:30-10:45	(0172) Effect of Channel Bend in Serpentine Flow Field Design Pattern for PEMFC <u>Mohammad Ziauddin Chowdhury</u> , Yahya Erkan Akansu, Omer Genc, Serkan Toros, Yusuf Sahin
10:45-11:00	(0234) Effects of Rice Husk Particle Size on Biohydrogen Production under Solid State Fermentation Serpil Özmiñçi, Zülfiye Veliöđlu Tosuner
11:00-12:00	World Hydrogen Day and Closing Ceremony

March 18, 2018

HALL - B	
09:00-11:00	Session 4B: Applications on Hydrogen Energy and Technologies Chair: Johan Andre
09:00-09:15	(0197) An Investigation of the Mild Flameless Combustion Behaviour of Methane and Hydrogen Fuels under the Various Preheating Levels in a Furnace Mehmet Salih Cellek
09:15-09:30	(0173) Numerical Investigation of Conventional Flow Field Patterns in Proton Exchange Membrane Fuel Cell Mohammad Ziauddin Chowdhury
09:30-09:45	(0205) Metal-Schiff Base Complex Catalyst in KBH₄ Hydrolysis Reaction for Hydrogen Generation Dilek Kılınc, Ömer Şahin
09:45-10:00	(0233) Bio-Hydrogen Production from Waste Rice Husk Using Co-Culture Serpil Özmişçi, Gülsün Gizem Taylan
10:00-10:15	(0199) Mathematical Modeling of a Flowing Electrolyte-Direct Methanol Fuel Cell Using Comsol Multiphysics Omer Faruk Atacan, David Ouellette, Deniz Yimaz, Pasa Yaman, <u>Can Ozgur Colpan</u>
10:15-10:30	(0042) Development of a Mathematical Model for a HT-PEMFC Stack Based Cogeneration System Yagmur Nalbant, Can Ozgur Colpan, Yilser Devrim
10:30-10:45	(0125) Quasistatic Model Based Analysis of Direct Methanol Fuel Cell System for Hybrid Vehicular Applications Mustafa Umut Karaoğlan, <u>Alper Can Ince</u> , Can Özgür Çolpan, Nusret Sefa Kuralay
10:45-11:00	(0232) Turkey's Hydrogen Scenario and Hydrogen Production in the Thrace Basin versus Hydrogen Regulations and Standards Sudi Apak
11:00-12:00	World Hydrogen Day and Closing Ceremony in Hall A