

The times mentioned in the program refer to the GMT+3 timezone.

## Wednesday, May 26, 2021

HALL A		
09:00-09:30	<b>Opening Talks</b> <b>Bora Timurkutluk</b> (Congress Chair) <b>Ibrahim Dincer</b> (President, National Hydrogen Energy Association) <b>Muhsin Kar</b> (Rector, Nigde Omer Halisdemir University)	
09:30-10:00	<b>Overview Talk- Ibrahim Dincer</b> NHA, hydrogen energy and future directions	
	<b>Keynote Speakers</b> Chair: <b>Ibrahim Dincer</b>	
10:00-10:45	<b>Keynote Speaker - Laurent Antoni</b> Recent European Advances in Electrolyzer and Fuel Cell Technologies	
10:45-11:30	<b>Keynote Speaker - Wei-Hsin Chen</b> Advances in Hydrogen Separation using Palladium-Based Membranes	
11:30-11:45	<b>Break</b>	
PARALLEL SESSIONS		
	HALL A	HALL B
11:45-13:30	<b>SESSION 1A: Hydrogen Production-1</b> Chair: <b>Adnan Midilli</b>	<b>SESSION 1B: Fuel Cells/ Electrolysis and Hydrogen Fuel Combustion-1</b> Chair: <b>C. Ozgur Colpan</b>
11:45-12:00	Hydrogen production over Ni-containing MgO supported catalyst: Effect of hydrothermal process duration in catalysts synthesis <b>Saleh Ahmat Ibrahim, Emine Kaya Ekinci, Birce Pekmezci Karaman and Nuray Oktar</b>	Development of a Zero-Dimensional Dynamic Model of a Solid Oxide Electrolyzer in Co-Electrolysis Mode Integrated with a PV System <b>Alper Can Ince, Ozgur Colpan and Mustafa Serincan</b>
12:00-12:15	Hydrogen Production by Solid Fuels with Different Gasification Methods <b>Mustafa Tolay, Cemil Koyunoglu and Andre Waterschoot</b>	Characterization of B-site Fe <sup>3+</sup> and Co <sup>3+</sup> Substituted La <sub>0.2</sub> Ca <sub>0.8</sub> Mn <sub>1-x</sub> B <sub>x</sub> O <sub>3</sub> (x= 0.2) Type Perovskite for Thermochemical Water Splitting <b>Ihsan Emre Yigiter, Seyfettin Berk Sanli, Fatih Piskin, Gulhan Cakmak and Berke Piskin</b>

12:15-12:30	Planning and Analysis of a Double Flash Geothermal Plant for Purpose of the Drying, Hydrogen, Hot Water, and Power Generation Aims <b>Fatih Yilmaz, Murat Ozturk and Resat Selbas</b>	NOx Emission Behaviors of Hydrogen/ Syngas/ Ammonia as Alternative and Clean Fuels <b>Mehmet Salih Cellek</b>
12:30-12:45	Modeling of the Solar Energy-Based Hydrogen and Freshwater Production System <b>Fatih Yilmaz, Murat Ozturk and Resat Selbas</b>	Investigation of Ni-MnxOy Coated SS316 Stainless Steel Mesh as a Gas Diffusion Layer Material for PEM Water Electrolyzer <b>Murat Kisti and Mehmet Fatih Kaya</b>
12:45-13:00	Feasibility Report of 5-6 MW Biomass (Forest and Agricultural waste) Power Generation Facility in Manisa Akhisar Region <b>Mustafa Tolay, Cemil Koyunoğlu and Andre Waterschoot</b>	Yeast Industry Wastewater Treatment with Microbial Fuel Cells: Effect of Electrode Materials and Reactor Configurations <b>Haris Nalakath Abubackar, Azize Ayol and Idris Biryol</b>
13:00-13:15	Effect of Green Synthesized Silver Oxide Nanoparticles on Biological Hydrogen Production <b>Oznur Yildirim, Dogukan Tunay, Bestami Ozkaya and Ahmet Demir</b>	Investigation and Modeling of Flow Channels for Direct Borohydride Fuel Cell <b>Anil Can Turkmen, Kursat Can Ata, Gozde Mentese and Cenk Celik</b>
13:15-13:30	Photofermentative Hydrogen Production by Agar Immobilized Co-Cultures of Purple Non-Sulfur Bacteria <b>Gorkem Baysal, Harun Koku, Inci Eroglu and Ayse Meral Yucel</b>	Low-Cost Membrane-Electrode-Assembly (MEA) Production for Direct Borohydride Fuel Cell <b>Kursat Can Ata, Ipek Caglayan, Anil Can Turkmen, Tuncay Kadioglu, Ramiz Gultekin Akay and Cenk Celik</b>
13:30-14:00	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	
	<b>Keynote Speakers</b> Chair: <b>Suha Yazici</b>	
14:00-14:45	<b>Keynote Speaker - John William Sheffield</b> A Student Design Project for Hydrogen Fuel Cell Electric-Drive Mining Trucks	
14:45-15:30	<b>Keynote Speaker - Mark Kirby</b> Update on Hydrogen and Fuel Cell Activity in Canada	
	<b>PARALLEL SESSIONS</b>	
	<b>HALL A</b>	<b>HALL B</b>
15:30-17:00	<b>SESSION 2A: Hydrogen Storage and Hydrogen Purification/Separation-1</b> Chair: <b>Tayfur Ozturk</b>	<b>SESSION 2B: Hydrogen Energy Technologies-1</b> Chair: <b>Sudi Apak</b>

<b>15:30-15:45</b>	A Two-Stage Metal Hydride Compressor Based on Commercial Alloys <b>Jussara Barale, Federico Nastro, Paola Rizzi, Carlo Luetto and Marcello Baricco</b>	Environmental Effects as a Result of The Use of Fuel Cell and as Hydrogen Alternative Fuel in UAVs <b>Duran Calisir, Selcuk Ekici, Adnan Midilli and T. Hikmet Karakoc</b>
<b>15:45-16:00</b>	Fundamental Hydrogen Storage Properties of TiFe-Alloy with Partial Substitution of Fe by Ti and Mn <b>Erika Michela Dematteis, David Dreistadt, Giovanni Capurso, Julian Jepsen, Fermin Cuevas, Michel Latroche and Marcello Baricco</b>	Electric Taxiing with Fuel Cell Hybrid Power Unit <b>Mustafa Kececi, Can Ozgur Colpan and Tahir Hikmet Karakoc</b>
<b>16:00-16:15</b>	Onboard Hydrogen Storage for Ships: An Overview <b>Omer Berkehan Inal, Caglar Dere and Cengiz Deniz</b>	Fuel Cell Systems for Submarines <b>Ibrahim Pamuk, Ugur Aydin, Selahattin Celik, Bora Timurkutluk, Serkan Toros and Yuksel Kaplan</b>
<b>16:15-16:30</b>	The Optimal Isosteric Heat of H <sub>2</sub> Adsorption on Co(II)- and Ni(II)-exchanged ZSM-5 and US-Y <b>Nurkan Sarohan and Bahar Ipek</b>	Comparison of PEM Fuel Cell vs. Lithium-Sulfur Battery Systems for Unmanned Aerial Vehicles <b>Nisa Erisen, Damla Eroglu, Harun Koku and Inci Eroglu</b>
<b>16:30-16:45</b>	Development of Cost-effective Dense Metallic Membranes for Hydrogen Separation <b>Fatih Piskin and Tayfur Ozturk</b>	Energy and Environmental Assessment of Transition to Hydrogen Vehicles <b>Merve Nur Dinc, Murat Kisti, Saltuk Selcuklu and Mehmet Fatih Kaya</b>
<b>16:45-17:00</b>	High Temperature Electrochemical Hydrogen Purification Using Polybenzimidazole Membrane <b>Gizem Nur Bulanik Durmus, Can Ozgur Colpan and Yilser Devrim</b>	Modeling of Hydrogen and Electric Powered Vehicle Filling Stations Using a Floating Photovoltaic System <b>Seyfi Bulduk and Mehmet Fatih Kaya</b>
<b>17:00-17:15</b>	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	<b>HALL B</b>
<b>17:15-18:30</b>	<b>SESSION 3A: PEM Fuel Cells-1</b> Chair: <b>Yilser Devrim</b>	<b>SESSION 3B: Hydrogen Storage and Hydrogen Purification/Separation-2</b> Chair: <b>Tayfur Ozturk</b>
<b>17:15-17:30</b>	A Numerical Study on Cooling Performance of Various Flow Field Designs of Cooling Plates <b>Mahmut Caner Acar and Bahadir Erman Yuce</b>	Hydrogen Adsorption on Metal (Na, K, Mg, Ca) Porphyrin Complexes: A DFT Study <b>Ahmet Kose, Numan Yoksel and Mehmet Ferdi Fellah</b>
<b>17:30-17:45</b>	Preparation of Polybenzimidazole-MOF Composite Membranes with Enhanced Proton Conductivity <b>Oguzhan Eren, Necati Ozkan and Yilser Devrim</b>	A Density Functional Theory Study of Hydrogen Adsorption on Ni Doped Carbon Nanocone <b>Ahmet Kose, Numan Yuksel and Mehmet Ferdi Fellah</b>

<b>17:45-18:00</b>	Chemically and Thermally Reduced Graphene Oxide Supported Pt Catalysts Prepared by Supercritical Deposition <b>Meryem Samanci and Ayse Bayrakceken Yurtcan</b>	Catalyst Development for Viability of Electrochemical Hydrogen Purifier and Compressor Technology <b>Yasemin Aykut and Ayse Bayrakceken Yurtcan</b>
<b>18:00-18:15</b>	High Performance Sulfonated Silica-Based Electrospun Membrane-Electrode-Assemblies (MEAs) for PEM Fuel Cells <b>Begum Yerar Kaplan, Naeimeh Rajabalizadeh, Bilal Iskandarani, Alp Yurum and Selmiye Alkan Gursel</b>	Surface Modification of 316L by Electrochemical Dealloying <b>Omer Ozcan and Fatih Piskin</b>
<b>18:15-18:30</b>	Enhanced Fuel Cell Performance and Durability of PVDF-based Sulfonated Silica-loaded Fibrous Electrodes <b>Bilal Iskandarani, Selmiye Alkan Gursel and Begum Yerar Kaplan</b>	Proposal of an Ocean Thermal Energy Conversion Based Subcritical CO <sub>2</sub> Power Cycle for Clean Hydrogen Production <b>Gamze Soy Turk, Serpil Celik Toker and Onder Kizilkan</b>

## Thursday, May 27, 2021

PARALLEL SESSIONS		
	HALL A	HALL B
<b>09:00-11:30</b>	<b>SESSION 4A: Materials for Hydrogen Energy Technologies-1</b> Chair: <b>Aysel Kanturk Figen</b>	<b>SESSION 4B: Hydrogen Economy</b> Chair: <b>Hikmet Karakoc</b>
<b>09:00-09:15</b>	Radiation-Grafted PVDF based Dual-Electrospun Membranes for Anion Exchange Membrane Fuel Cells <b>Ahmet Can Kirlioglu, Naeimeh Rajabalizadeh, Selmiye Alkan Gursel and Begum Yerar Kaplan</b>	Techno-Economic Analysis of a Solar Hydrogen Production Plant Using Textile Wastewater <b>Murat Emre Demir and Ibrahim Dincer</b>
<b>09:15-09:30</b>	Investigating the Hydrogen Bake-out Operation of Armor Steels conforming to MIL-DTL-12560 Class 4a and MIL-DTL-46100 Military Standards <b>Ferdi Caner Bayram, Burak Bal and Baris Cetin</b>	Hydrogen as A Renewable Energy Source <b>Sibel Demiroglu Mustafaov</b>
<b>09:30-09:45</b>	B-site Al Dopant Effect on The Structural Properties of La <sub>0.4</sub> Sr <sub>0.6</sub> Mn <sub>1-x</sub> Al <sub>x</sub> (x=0.4, 0.5 and 0.6) Perovskite Oxides <b>Seyfettin Berk Sanli, Ihsan Emre Yigiter, Fatih Piskin, Gulhan Cakmak and Berke Piskin</b>	Turkey's Offshore Hybrid Energy Potential and Techno-Economic Analysis in the Eastern Mediterranean <b>Soner Celikdemir and Mahmut Temel Ozdemir</b>
<b>10:00-10:15</b>	Hydrogen Evolving Studies over Pellet Type Catalyst for Decomposition of Ammonia Borane Solutions <b>Bilge Coskuner Filiz and Aysel Kanturk Figen</b>	The Importance of Hydrogen in Terms of Energy Diversity for Turkey's Energy Projection <b>Cengiz Amil and Zeki Yilmazoglu</b>

10:15-10:30	Increasing Activation of Aluminum by Alloying with Zn and Sn for Hydrogen Generation <b>Sevgin Koymen, Sevim Yolcular and Serdar Karaoglu</b>	Hydrogen Economy in the Light of Europe's Green Deal Plan and Green Jobs Opportunities <b>Erhan Atay and Sudi Apak</b>
10:30-10:45		Design and Economic Optimization of PV/Wind/Hydrogen Hybrid Power System <b>Duygu Kemeriz, Yagmur Budak, Serkan Eryilmaz and Yilser Devrim</b>
10:45-11:00	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	<b>HALL B</b>
11:00-13:00	<b>SESSION 5A: Fuel Cells/ Electrolysis and Hydrogen Fuel Combustion-2</b> Chair: <b>Yusuf Bicer</b>	<b>SESSION 5B: Hydrogen Production-3</b> Chair: <b>Inci Eroglu</b>
11:00-11:15	Peat Based Microbial Fuel Cells and Limiting Parameters <b>Ahmet Erensoy, Sefa Mulayim, Ayhan Orhan, Nurettin Cek and Namik Ak</b>	Co Nanoparticle on TiO <sub>2</sub> Mesh Support for Sodium Borohydride Hydrolysis to Generate Hydrogen <b>Valentina Minkina, Cigdem Tuc Altay and Nurdan Sankir</b>
11:15-11:30	Experimental Investigation of Hydrogen Enriched Propane in Terms of Emission Values and Flue Gas Temperature <b>Oguzhan Boztoprak and Murat Tastan</b>	Design Consideration of an Efficient Oxyhydrogen Generator under Lorentz Force <b>Hakan Kaplan, Mukerrem Sahin and Gulbahar Bilgic</b>
11:30-11:45	Development and Analysis of a Hydrogen-Powered Premix Burner <b>Yagmur Cagli and Mehmet Salih Cellek</b>	Effect of Catalyst Microstructures on Steam Methanol Reforming Process <b>Ayşe Ece Bedir Sezgin, Samet Sutcu, Nurbanu Cakiryilmaz Sahingoz, Yelda Ciflik, Ayşe Deniz Sirkeci, Elif Akbay, İbrahim Pamuk and Bora Timurkutluk</b>
11:45-12:00	Evaluation of Hydrogen Evolution Reaction Performance of Ni-Co Coated 3D Printed Electrodes Prepared by Electrochemical Deposition <b>Bulut Huner, Nesrin Demir and Mehmet Fatih Kaya</b>	Hydrogen Production from Agricultural Waste <b>Elif Ece Cagli and Nezihe Ayas</b>
12:00-12:15	Machine Learning Assisted Analysis of Photoelectrochemical Water Splitting <b>Burcu Oral, Elif Can and Ramazan Yildirim</b>	Investigation of Ni/Cu Impregnated Zeolite Catalysts for Hydrogen Production from Methanol Steam Reforming <b>Ozgecan Caglayan and Nezihe Ayas</b>
12:15-12:30	Integration of Methane Cracking and Direct Carbon Fuel Cell with CO <sub>2</sub> Capture for Hydrogen Carrier Production <b>Aliya Banu and Yusuf Bicer</b>	Hydrogen production through dehydrogenation of morpholine borane in the presence of PSSA stabilized Pd-based catalysts <b>Ceren Yuksel Alpaydin, Mülkiye Kaymaz, Senem Karahan Gulbay and C. Ozgur Colpan</b>

12:30-12:45	Design of an Optimization Based Adaptive Neural-Fuzzy Inference Systems (ANFIS) for Controlling Output Voltage of Double Chamber Microbial Fuel Cell <b>Mehmet Hakan Demir and Berkay Eren</b>	The Usage of Solid State NaBH <sub>4</sub> for Hydrogen Production with CoCl <sub>2</sub> Catalyst <b>Asli Boran, Serdar Erkan and Inci Eroglu</b>
12:45-13:15	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	
13:15-15:30	<b>Keynote Speakers</b> Chair: <b>Turan Arat</b>	
13:15-14:00	<b>Keynote Speaker - Chao-Jun Li</b> Combined Solar Energy Harvesting and Reversible Hydrogen Storage with Liquid Aromatics	
14:00-14:45	<b>Keynote Speaker - Xianguo Li</b> Degradation Mechanisms and Durability of Automotive PEM Fuel Cells	
14:45-15:30	<b>Keynote Speaker - Umit B. Demirci</b> Sodium Borohydride as Hydrogen Carrier, a 'Rough Diamond' That Has Entered into the Age of Prototypes	
	<b>PARALLEL SESSIONS</b>	
	<b>HALL A</b>	<b>HALL B</b>
15:30-17:00	<b>SESSION 6A: PEM Fuel Cells-2</b> Chair: <b>Selahattin Çelik</b>	<b>SESSION 6B: Hydrogen Production-4</b> Chair: <b>Nuri Azbar</b>
15:30-15:45	The Effects of Anisotropic Electrical Conductivity Depending on Operating Conditions on Gas Diffusion Layers in PEM Fuel Cell <b>Mert Tas and Gulsah Elden</b>	Biohydrogen Production from Lignocellulosic Wastes Pretreated by Rumen Microorganisms: An Overview <b>Gokce Kurt, Bestami Ozkaya and Ahmet Demir</b>
15:45-16:00	Pt and Pd Based Quaternary Metal Catalysts for the Cathode in PEM Fuel Cell <b>Cigdem Guldur, Esmâ Gümüş and Silver Günes</b>	Comparison of Pure-Hydrogen Production from Sodium Borohydride with Blast Furnace Slag, Fe <sub>2</sub> O <sub>3</sub> and Al Nano Metal Powder Catalysts <b>Mustafa Kaan Baltacıoğlu, Feride Cansu Iskenderoğlu, Fatih Bekmez and Berat Madenci</b>
16:00-16:15	Eco-Friendly Production of Graphene Fiber as Metal-Free Electrocatalyst for Hydrogen Evolution Reaction <b>M. Giray Ersozoglul, Hurmus Gursu, Selin Gumrukcu, A. Sezai Sarac and Yucel Sahin</b>	Hydrogen Production by Methanol Electrochemical Reforming in the Membrane System <b>Merve Gordesel Yildiz, Ozgü Yoruk, Duygu Uysal Ziraman, Ozkan Murat Dogan and Bekir Zuhtu Uysal</b>

<b>16:15-16:30</b>	Development of a High Performance PEM Fuel Cell Stack with Open-Cathode Titanium Bipolar Plate for Unmanned Aerial Vehicles <b>Ugur Aydin, Omer Erdemir, Mehmed Selim Cogenli, Selahattin Celik, Serkan Toros and Bora Timurkutluk</b>	Popped Rice Char and Animal Manure Char with Sirnak Asphaltite Char-Characterization of Adsorption Kinetics for H <sub>2</sub> in Microfluidic Sorbent Particle Packed Bed Using Biochar by Microwave Radiation <b>Yildirim Tosun</b>
<b>16:30-16:45</b>	Electrical Properties of the Carbon Nanotube (CNT) Reinforced Composite Plates for the PEM Fuel Cell Bipolar Plate Application <b>Alparslan Topcu, Fatih Daricik, Kadir Aydin and Selahattin Celik</b>	Ca and Co doped perovskite structures for hydrogen production <b>Seyfettin Berk Sanli, Ihsan Emre Yigiter, Berke Piskin, Fatih Piskin and Gülhan Cakmak</b>
<b>16:45-17:00</b>	Performance Evaluation of the Novel Flow Field for PEM Fuel Cells <b>Nazım Kurtulmus and Alparslan Topcu</b>	Fine Tuning the Intrinsic Activity of Layered Iron Nickel Sulphide Nanosheets by Varying Boron Doping to Produce Low Cost and Green Hydrogen <b>Esaam Jamil, Begum Yarar Kaplan, Selmiye Alkan Gursel and Alp Yurum</b>
<b>17:00-17:15</b>	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	<b>HALL B</b>
<b>17:15-18:30</b>	<b>SESSION 7A: Hydrogen Production-2</b> Chair: <b>Murat Ozturk</b>	<b>SESSION 7B: Hydrogen Energy Applications-1</b> Chair: <b>Kadir Aydin</b>
<b>17:15-17:30</b>	Effect of Organic Fraction of Municipal Solid Waste Addition to High Rate Activated Sludge System for Hydrogen Production from Carbon Rich Waste Sludge <b>Dogukan Tunay, Oznur Yildirim, Bestami Ozkaya and Ahmet Demir</b>	Hydrogen and Ammonia as Fuel for the Decarbonization of Shipping <b>Omer Berkehan Inal, Burak Zincir and Cengiz Deniz</b>
<b>17:30-17:45</b>	Investigation and Thermodynamic Analysis of a New Geothermal Energy System for Hydrogen and Other Valuable Outputs <b>Burak Tekkanat, Yunus Emre Yuksel and Murat Ozturk</b>	Thermodynamic Optimization of the Scimitar Engine with Fixed Nozzle Geometry <b>Tayfun Tanbay and Ahmet Durmayaz</b>
<b>17:45-18:00</b>	A New Multigeneration Plant for Useful Outputs Including Hydrogen <b>Yunus Emre Yuksel, Murat Ozturk and Ibrahim Dincer</b>	Energy and exergy analyses of a new geothermal energy-based tri-generation plant <b>Murat Koc, Yunus Emre Yuksel and Murat Ozturk</b>
<b>18:00-18:15</b>	Thermodynamic Analysis of a Power and Liquid Hydrogen Production Plant Using Waste Heat <b>Murat Koc, Yunus Emre Yuksel and Murat Ozturk</b>	Effect of External Heater Operating Duration on Cold Start Performance of PEM Fuel Cell <b>Alparslan Topcu, Kadir Aydin and Selahattin Celik</b>
<b>18:15-18:30</b>	Optimization of Pretreatment of Olive Tree Biomass using Response Surface Methodology for Biological Hydrogen Production <b>Oznur Yildirim, Dogukan Tunay, Bestami Ozkaya and Ahmet Demir</b>	Optimum Heating Method for the Assisted Cold Start Technique of PEM Fuel Cell <b>Alparslan Topcu, Ahmet Ozkan Kocmanoğlu, Kadir Aydin and Selahattin Celik</b>

# Friday, May 28, 2021

PARALLEL SESSIONS		
	HALL A	HALL B
<b>09:00-11:30</b>	<b>SESSION 8A: Materials for Hydrogen Energy Technologies-2</b> Chair: <b>Nezihe Ayas</b>	<b>SESSION 8B: Materials for Hydrogen Energy Technologies and Hydrogen Energy Applications-3</b> Chair: <b>Nader Javani</b>
<b>09:00-09:15</b>	Synthesis and Characterization of NiFe <sub>2</sub> O <sub>4</sub> -TiO <sub>2</sub> Photocatalysts and Their Use for Photocatalytic Hydrogen Production <b>Irem Firtina-Ertis and Ozge Kerkez-Kuyumcu</b>	Investigation of Effective Promoters and Iron Precursors in FT Synthesis over TiO <sub>2</sub> Supported Iron Catalysts <b>Utku Burgun, Hadi Rahmaei Zonouz, Hasan Can Okutan, Husnu Atakul, Selim Senkan, Alper Sarioglan and Gamze Gumuslu Gur</b>
<b>09:15-09:30</b>	Kinetic Study of Ni-Co/Al <sub>2</sub> O <sub>3</sub> Catalyst Used in Hydrogen Rich Gas Production from Olive Pomace with Thermogravimetric Analysis <b>Fahriye Dönmez, Vildan Aker and Nezihe Ayas</b>	The Novel Synthesis Route of BiVO <sub>4</sub> and Photocatalytic Activity on Water Splitting <b>Fatih Tezcan, Meltem Kahya Dudukcu and Gülfeza Kahya Dudukcu</b>
<b>09:30-09:45</b>	The Influence of Ni/Dolomite Catalyst for Production of Hydrogen from NaBH <sub>4</sub> Hydrolysis <b>Burcu Kiren and Nezihe Ayas</b>	Synthesis and Characterization of Phase-Pure Perovskite Type Oxides - The Case of BaZr <sub>0.80</sub> Y <sub>0.20</sub> O <sub>3-δ</sub> and SrCe <sub>0.95</sub> Yb <sub>0.05</sub> O <sub>3-δ</sub> <b>Omer Ozcan and Fatih Piskin</b>
<b>10:00-10:15</b>	Determination of the Synthesis and Activity of the Sepiolite Supported Catalyst Used in the Production of H <sub>2</sub> from Methane <b>Tugce Basara and Nezihe Ayas</b>	Analysis and Assessment of a Novel Biomass Gasification Based Integrated System with Hydrogen Generation Process <b>Mehmet Altinkaynak and Murat Ozturk</b>
<b>10:15-10:30</b>	Hydrogen from Poppy Seed Gasification over Co-La/Sepiolite Catalyst <b>Alattin Cakan, Burcu Kiren and Nezihe Ayas</b>	Thermodynamic Modeling of a Combined Plant for Clean Hydrogen Generation Using High Pressure Air Storage Plant <b>Mehmet Altinkaynak and Murat Ozturk</b>
<b>10:30-10:45</b>	H <sub>2</sub> Release from NaBH <sub>4</sub> with Novel Catalyst <b>Aybuke Ayse Erturk, Tugba Akkas Boynuegri and Metin Guru</b>	Energy and Exergy Analyses of a Concentrated Solar Power Generation System Integrated with a Biomass-based Hydrogen Production Process <b>Mehmet Emre Burulday, Nader Javani and Mehmet Selcuk Mert</b>
<b>10:45-11:00</b>	<b>Break</b>	<b>Break</b>



	HALL A	HALL B
11:00-13:00	<b>SESSION 9A: Solid Oxide Fuel Cells-1</b> Chair: <b>Serkan Toros</b>	<b>SESSION 9B: Hydrogen Energy Technologies-3</b> Chair: <b>Filiz Karaosmanoglu</b>
11:00-11:15	The stability and corrosion behavior of binary NiPd electrocatalysts in alkaline electrolysis system <b>Ramazan Solmaz</b> Pd-modified polyrhodanine thin films as cathode electrocatalysts for water splitting <b>Ramazan Solmaz and Dursun Öztürk</b>	Autonomous Hydrogen Production System Design <b>Feride Cansu İskenderoglu, Mustafa Kaan Baltacıoglu, Caglar Conker and Hasan Huseyin Bilgic</b>
11:15-11:30	Development of LPG Powered Micro-Tubular Solid Oxide Fuel Cell System for Unmanned Aerial Vehicles <b>Ugur Aydin, Ibrahim Pamuk, Kerem Talu, Omer Erdemir, Cigdem Timurkutluk, Selahattin Celik and Bora Timurkutluk</b>	Performance Assessment of Vanadium Chlorine Thermochemical Cycle <b>Mustafa Balta and Mehmet Keles</b>
11:30-11:45	Investigation of Contact Problem in Planar Solid Oxide Fuel Cells <b>Sezer Onbilgin, Cigdem Timurkutluk, Bora Timurkutluk and Selahattin Celik</b>	Automatic PEM Water Electrolyzer Control System (PEMECS) Design for Cell Testing <b>Emre Ozdogan, Ebubekir Tuncay, Ilayda Nur Uzgoren, Murat Kisti, Süleyman Uysal, Bulut Huner, Nesrin Demir and Mehmet Fatih Kaya</b>
11:45-12:00	Fuzzy- Analytical Hierarchy Process (F-AHP) Based Material Selection for Solid Oxide Fuel Cell Electrolyte <b>Siamak Alipour, Emrah Sagir and Arash Sadeghi</b>	A Unique Hydrogen Energy System Developed for Data Centers in Arctic Regions with Heat Recovery <b>Mert Temiz and Ibrahim Dincer</b>
12:00-12:15	Development of Ceramic-Fiber Reinforced Sealants for Solid Oxide Fuel Cells <b>Cigdem Timurkutluk, Gamze Atalmis, Sezer Önbilgin, Furkan Toruntay and Bora Timurkutluk</b>	A Renewable Energy Based Waste-To-Energy System with Hydrogen Options <b>Bogachan Gungor and Ibrahim Dincer</b>
12:15-12:30	Cold Sintering of 8YSZ Electrolytes for Solid Oxide Fuel Cells <b>Tugce Uzun, Murat Murutoglu, Aligul Buyukaksoy, Yahya Kemal Tur and Huseyin Yilmaz</b>	Hydrogen Powered Cities: A Perspective on Urban Planning <b>Munevver Balta and Mustafa Balta</b>
12:30-12:45	Development of Multi Phase Cathodes for SOFCs via Thermal Plasma Synthesis <b>Havva Eda Aysal, Gulhan Cakmak and Tayfur Ozturk</b>	Development of Sustainable Multigeneration System With Recompression SCO <sub>2</sub> Brayton Cycle For Hydrogen Production <b>Serpil Celik Toker, Gamze Soy Turk and Onder Kizilkan</b>
12:45-13:15	<b>Break</b>	<b>Break</b>

	HALL A	HALL B
13:15-15:00	<b>SESSION 10A: Hydrogen Energy Applications-2</b> Chair: <b>Ramazan Solmaz</b>	<b>SESSION 10B: Hydrogen Energy Technologies-4</b> Chair: <b>Onder Kizilkan</b>
13:15-13:30	Coolant Selection for the Enhanced Cold Start Capability of PEM Fuel Cell <b>Alparслан Topcu, Kadir Aydin, Selahattin Celik and Mikail Yagiz</b>	Machine learning analysis of gas phase photocatalytic CO2 reduction for hydrogen production <b>Dilara Saadetnejad, Burcu Oral and Ramazan Yildirim</b>
13:30-13:45	Hydrogen Energy Systems for Underwater Applications <b>Berna Sezgin, Yilser Devrim, Tayfur Öztürk and Inci Eroglu</b>	A New Off-Grid Autonomous Energy System Structure and Improved Controller <b>Süleyman Yildiz, Burak Yildirim and Mahmut Temel Ozdemir</b>
13:45-14:00	New and Future Approach Technologies on Hydrogen Fuel Cell Applications with Marine Vehicles <b>Meryem Gizem Surer and Huseyin Turan Arat</b>	A Novel Chaos Embedded Particle Swarm Optimization Based on Stability Boundary Locus for Delayed Fuel Cell Microgrid with PI Controller <b>Mahmut Temel Ozdemir and Vedat Celik</b>
14:00-14:15	Energy, Exergy and Economic Analyses and Multiobjective Optimization of a Novel Solar Multigeneration System for Production of Green Hydrogen and Other Utilities <b>Mert Colakoglu and Ahmet Durmayaz</b>	A New Signal Processing-Based Islanding Detection Method for Reliable Grid Integration of Solid Oxide Fuel Cell-Based Distributed Generators <b>Alper Yilmaz and Gokay Bayrak</b>
14:15-14:30	Biohydrogen and Bioethanol Production Routes from Pyrolysis Gas <b>Simge Sertkaya, Gozde Duman, Haris Nalakath Abubackar, Nuri Azbar, Jale Yanik and Tugba Keskin</b>	Mathematical Modeling of a Solid Oxide Fuel Cell (SOFC) Based Micro-CHP System for Residential Applications <b>Merve Atilmis and Can Ozgur Colpan</b>
14:30-14:45	An Experimental Study to Validate Optimum Distance Between Metal Hydride Tanks with Staggered Arrangement for Effective Thermal Management <b>Ismail Hilali, Ahmet Akbas, Vehbi Balak and Dursun Akaslan</b>	Automated Classification of Power Quality Disturbances in a SOFC&PV-based Microgrid Using a Hybrid Machine Learning Method with High Noise Immunity <b>Alper Yilmaz, Ahmet Kucuker and Gokay Bayrak</b>
14:45-15:00	A Road Map to Ammonia Deployment as a Green Fuel in the Land Transportation Sector of Qatar <b>Mohammed Al-Breiki and Yusuf Bicer</b>	Local Green Hydrogen Production Potentials for Turkey with Solar Energy <b>Gorkem Kubilay Karayel, Nader Javani and Ibrahim Dincer</b>
15:00-15:15	<b>Break</b>	<b>Break</b>
	HALL A	HALL B
15:15-16:45	<b>SESSION 11A: Solid Oxide Fuel Cells-2</b> Chair: <b>Bora Timurkutluk</b>	
15:30-15:45	Effect of Anode Functional Layer Material on the Performance of Anode Supported Micro-tubular SOFCs	

	<b>Cigdem Timurkutluk, Keremhan Bilgil, Ali Celen, Sezer Onbilgin, Tolga Altan and Ugur Aydin</b>	
<b>15:45-16:00</b>	Fabrication of Micro-Tubular Solid Oxide Fuel Cells by Tape Casting Method <b>Tolga Altan, Cigdem Timurkutluk, Bora Timurkutluk and Selahattin Celik</b>	
<b>16:00-16:15</b>	Effects of Adding Graphene Oxide to Glass Ceramic for Solid Oxide Fuel Cells <b>Tolga Altan, Mikail Yagiz, Selahattin Celik and Recep Zan</b>	
<b>16:15-16:30</b>	Effects of Increasing the Electrolyte Surface Area on the Electrochemical Performance <b>Cigdem Timurkutluk, Tolga Altan, Fuat Yildirim, Sezer Onbilgin, Mikail Yagiz, Bora Timurkutluk and Selahattin Celik</b>	
<b>16:30-16:45</b>	Modeling of Sheet Hydroforming of Metallic Interconnectors for Solid Oxide Fuel Cells <b>Habip Gokay Korkmaz, Emre Ucar, Serkan Toros and Bora Timurkutluk</b>	
<b>16:45-17:00</b>	Cold sintering of GDC electrolyte for SOFCs applications <b>Murat Murutoglu, Tugce Uzun, Aligul Buyukaksoy, Yahya Kemal Tur and Huseyin Yilmaz</b>	
<b>16:45-17:00</b>	<b>Break</b>	<b>Break</b>
	<b>HALL A</b>	
<b>17:00-17:30</b>	<b>Closing Ceremony</b>	