

14TH INTERNATIONAL CONFERENCE ON HYDROGEN PRODUCTION (ICH2P-2023)

December 19-21, 2023

Hamad Bin Khalifa University
Doha, Qatar

CONFERENCE PROGRAM

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Program Layout

Day 1 | Tuesday, December 19, 2023

08:00 am-9:00 am	Conference Registration	Exhibition Hall
09:00 am-10:00 am	Opening Ceremony (Welcoming Talks)	Auditorium
10:00 am-10:45 am	Keynote Talks	Auditorium
10:45 am-11:15 am	Coffee Break	Exhibition Hall
11:15 am-12:45 pm	Keynote Talks	Auditorium
12:45 pm-02:00 pm	Lunch	Exhibition Hall
02:00 pm-03:30 pm	Industry Panel Session	Auditorium
03:30 pm-04:00 pm	Coffee Break (with Poster Presentations)	Exhibition Hall
04:00 pm-05:30 pm	Parallel Scientific Sessions	Conference Rooms

Day 2 | Wednesday, December 20, 2023

09:00 am-10:30 am	Plenary Sessions	Auditorium
10:30 am-10:45 am	Coffee Break (with Poster Presentations)	Exhibition Hall
10:45 am-12:30 pm	Parallel Scientific Sessions	Conference Rooms
12:30 pm-02:00 pm	Lunch	Exhibition Hall
02:00 pm-03:30 pm	Parallel Scientific Sessions	Conference Rooms
03:30 pm-04:00 pm	Coffee Break (with Poster Presentations)	Exhibition Hall
04:00 pm-05:30 pm	Parallel Scientific Sessions	Conference Rooms
06:30 pm-08:30 pm	Gala Dinner and Awards Ceremony	

Day 3 | Thursday, December 21, 2023

09:00 am-06:15 pm	Hydrogen Energy Course	Auditorium
09:00 am-10:30 am	Parallel Scientific Sessions	Conference Rooms
10:30 am-11:00 am	Coffee Break (with Poster Presentations)	Exhibition Hall
11:00 am-12:30 pm	Parallel Scientific Sessions	Conference Rooms
12:30 pm-02:00 pm	Lunch	Exhibition Hall
02:00 pm-03:30 pm	Parallel Scientific Sessions	Conference Rooms
03:30 pm-04:00 pm	Coffee Break (with Poster Presentations)	Exhibition Hall
04:00 pm-05:30 pm	Parallel Scientific Sessions	Conference Rooms
06:15 pm-06:30 pm	Closing Ceremony	Auditorium
06:30 pm-09:30 pm	Optional Social Tour	

Day 1 | Tuesday, December 19, 2023

Time	Program	Location
08:00 am-09:00 am	Conference Registration	Exhibition Hall
09:00 am-10:00 am	<p style="text-align: center;">OPENING CEREMONY</p> <p style="text-align: center;">Dr. Ala Al-Fuqaha Associate Provost Hamad Bin Khalifa University</p> <p style="text-align: center;">Dr. Yusuf Bicer Co-Chair of the Conference Hamad Bin Khalifa University</p> <p style="text-align: center;">Dr. Tareq Al-Ansari Co-Chair of the Conference Hamad Bin Khalifa University</p> <p style="text-align: center;">Dr. Mounir Hamdi Dean, College of Science and Engineering Hamad Bin Khalifa University</p> <p style="text-align: center;">H.E. Dr. Mohammed Bin Saleh Al-Sada Former Minister of Energy and Industry in Qatar Chairman of the Joint Advisory Board of Texas A&M University at Qatar Chairman of the Board of Trustees of the Doha University of Science and Technology</p>	Auditorium
Keynote Talks		
10:00 am-10:45 am	<p style="text-align: center;">ICH2P14-KN1</p> <p style="text-align: center;">New Horizons in Hydrogen Production Technologies</p> <p style="text-align: center;">Keynote Speaker - Dr. Ibrahim Dincer</p> <p style="text-align: center;">Professor, Ontario Tech University, Canada</p>	Auditorium
10:45 am-11:15 am	Coffee Break	Exhibition Hall

Day 1 | Tuesday, December 19, 2023

11:15 am-12:00 pm	<p style="text-align: center;">ICH2P14-KN2</p> <p style="text-align: center;">Development of Manufacturing Techniques for Highly Performing Polymer Electrolyte Membrane Fuel Cells</p> <p style="text-align: center;">Keynote Speaker – Dr. Xianguo Li</p> <p style="text-align: center;">Professor, University of Waterloo, Canada</p>	Auditorium
12:00 pm-12:45 pm	<p style="text-align: center;">ICH2P14-KN3</p> <p style="text-align: center;">Hydrogen and Fuel Cell Development and the Benefit of Digital Twin and Artificial Intelligence in this field</p> <p style="text-align: center;">Keynote Speaker - Dr. Abdul Ghani Olabi</p> <p style="text-align: center;">Professor, University of Sharjah, UAE</p>	Auditorium
12:45 pm-02:00 pm	Lunch	Exhibition Hall
02:00 pm-03:30 pm	<p style="text-align: center;">Industry Panel Session</p> <p style="text-align: center;"><u>Moderator:</u> Sean van der Post Global Offshore Business Director, Lloyd's Register</p>	Auditorium

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Poster Number	Poster Presentations 3:30 PM - 4:00 PM Chair: Dr. Burak Yuzer	Exhibition Hall
ICH2P14 – PP175	Turquoise Hydrogen Production: Carbon Management and Conversion to Sustainable Energy Carriers <u>Aliya Banu, Yusuf Bicer</u>	
ICH2P14 – PP166	Evaluation of Hydrogen Production from Ammonia Reforming on Ni/ZnO Nanowire Catalysts <u>Hiroya Tamai, Hironori Nakajima</u>	
ICH2P14 – PP114	Photocatalytic Hydrogen Generation from Seawater Using High Performance Polymeric Materials <u>Noora Al-Subaiej, Ghalya Abdulla, Mohammed Al-Hashimi, Konstantinos E Kakosimos</u>	
ICH2P14 – PP008	Long-Term Assessment of Hydrogen Technology Deployment for Large Scale Decarbonisation of Power Production <u>Kamran Khammadoov, Damian Flynn, Eoin Syron</u>	
ICH2P14 – PP 013	Use of Refinery Off Gas (ROG) as CO ₂ Emission Reduction and Natural Gas (Ng) Savings in Hydrogen (H ₂) Production <u>Marcelo Tagliabue</u>	
ICH2P14 – PP139	Performances of Commercial Zeolites with Different Acidities for Catalytic CO ₂ Hydrogenation to Dimethyl Ether Using Copper/Zinc/Alumina Catalyst <u>Abdelbaki Benamor, Assem Mohamed, Abdul Hakeem Anwer, Siham AlQaradawi, Mohammed Saad</u>	
ICH2P14 – PP075	Modeling of Hydrogen Liquifaction Process Parameters Using Advanced Artificial Intelligence Technique <u>A. Abdallah El Hadj, Ait yahia, Hamza. K, M. Laidi, S. Hanini</u>	
ICH2P14 – PP066	Hydrogen Protection of the Mechanical Properties and Electrochemical Effects by Bio-Corrosion Inhibitors on Carbon Steel in the Presence of Aggressive Media <u>Mouna Amara, Azedine Belalia, Mohammed HadjMeliani, Hadjer Didouh, Rami K.Suleiman, Guy Pluvinage</u>	
ICH2P14 - PP192	Hydrogen from Catalytic Steam Reforming of Biomass <u>Sergio Rapaqñà, Alessandro Antonio Papa, Andrea Di Carlo</u>	
ICH2P14 - PP161	Textile Wastewater Treatment and Hydrogen Generation with Ion-Exchange Resins on Solar-Assisted Bipolar Membrane Electrolysis Process <u>Burak Yuzer, Ragad F. Alshebli, Nadira Salsabila, Yusuf Bicer</u>	
ICH2P14 - PP170	In-Situ Current Distribution Measurements of a Planar Solid Oxide Fuel Cell for a Three-Dimensional Finite Element Model Train a Machine-Learning Surrogate Model <u>Yutaro Ito, Yingtian Chi, Hironori Nakajima</u>	



Day 1 | Tuesday, December 19, 2023

Parallel Sessions 1

Time	Auditorium	Conference Room – A048	Conference Room – A046
04:00 pm-05:30 pm	<p>Session 1A: Clean Hydrogen Production Chair: Dr. Fadwa ElJack Co-Chair: Dr. Fares A. Almomani</p>	<p>Session 1B: Waste to Hydrogen Energy Chair: Dr. Tareq Al-Ansari Co-Chair: Dr. Mohammad Alherbawi</p>	<p>Session 1C: Hydrogen Production Catalysts Chair: Dr. Abdulkarem Amhamed Co-Chair: Dr. Ahmed Abdala</p>
04:00 pm-04:15 pm	<p>Invited Talk</p> <p>ICH2P14-IT1</p> <p>Green Hydrogen Production: Solar Chimney Power Plant Integrated with Water Desalination Plant</p> <p>Dr. Fares A. Almomani</p> <p>Department of Chemical Engineering, Qatar University</p>	<p>ICH2P14 - OP010</p> <p>A Novel Cost-Effective Approach for Production of Hydrogenase Enzymes and Molecular Hydrogen from Whey-Based By-Products</p> <p><u>Anna Poladyan, Meri Iskandaryan, Ofelya Karapetyan, Ela Minasyan, Anait Vassilian, Karen Trchounian, Garabed Anatronikian</u></p>	<p>ICH2P14 - OP037</p> <p>Synergizing Hydrogen and Chlorine Gas Production for Enhanced Resource Utilization Using Earth-Abundant Electrocatalysts</p> <p><u>Ahmed Badreldin, Ahmed Abdel-Wahab</u></p>
04:15 pm-04:30 pm		<p>ICH2P14 - OP044</p> <p>Biotechnological Potential of Spent Coffee Grounds for Large-Scale Hydrogen Production</p> <p><u>Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian</u></p>	<p>ICH2P14 - OP171</p> <p>Ni-Cu Bimetallic Catalysts for Effective Syngas Production via Low-Temperature Methane Steam Reforming</p> <p><u>Martin Khzouz, Babak Fakhim, Saleh Babaa, Mohammad Ghaleeh, Faraooq Sher, Evangelos I. Gkanas</u></p>
04:30 pm-04:45 pm	<p>ICH2P14 – OP095</p> <p>A Solar Pond Integrated with Bifacial Solar Panels for Power and Hydrogen Generation</p> <p><u>Dogan Erdemir, Ibrahim Dincer</u></p>	<p>ICH2P14 – OP069</p> <p>Biohydrogen Production from Various Industrial Wastewater of Chalawa, Kano, Nigeria</p> <p><u>Garba Uba, Abdulhadi Yakub, Salisu Ahmed, Ibrahim Abdulganiyyu</u></p>	<p>ICH2P14 - OP017</p> <p>Kinetic Modelling and Process Optimization for Blue Hydrogen Production Via Ammonia Cracking</p> <p><u>Raqad Aldilajjan, Sai Katikaneni, Osamah Siddiqui, Mohammad Rakib, Bandar Solami</u></p>
04:45 pm-05:00 pm	<p>ICH2P14 – OP205</p> <p>PV-AWG-H₂: A Potential Method for Sustainable Hydrogen Production in Qatar</p> <p><u>Aiyad Gannan, Nagi Abdussamie</u></p>	<p>ICH2P14 – OP102</p> <p>Syngas Production Using Catalyst Based on Local Minerals Extruded as Honeycomb Monolith</p> <p><u>Tarik Chafik</u></p>	<p>ICH2P14 – OP122</p> <p>Synthesis, Characterization, and Application of Bio-Templated Ni-Ce/Al₂O₃ Catalyst for Clean H₂ Production in the Steam Reforming of Methane Process</p> <p><u>Mohammad Reza Rahimpour, Maryam Koohi-Saadi</u></p>
05:00 pm-05:15 pm	<p>ICH2P14 - OP083</p> <p>Design and Performance Analysis of Green Hydrogen Production from Hybrid Solar PV/Wind Turbine Energy System</p> <p><u>Chaouki Ghenai</u></p>	<p>ICH2P14 – OP125</p> <p>Green Energy from Waste: A Systems Engineering Approach to Bio-Hydrogen Production</p> <p><u>Salman Raza Naqvi, Bilal Kazmi, Syed Ali Ammar Taqvi, Imtiaz Ali, Muhammad Shahbaz</u></p>	<p>ICH2P14 – OP211</p> <p>Integrated SMR System for Efficient Hydrogen and Power Production</p> <p><u>Abdullah A. AlZahrani, Mansur Aliyu</u></p>
05:15 pm-05:30 pm	<p>ICH2P14 – OP123</p> <p>Green Hydrogen Based Ammonia Production Process: Insight into Energy and CO₂ Emissions Minimization</p> <p><u>Swaprabha P. Patel, Ashish M. Gujarathi, Piyush Vanzara</u></p>	<p>ICH2P14 – OP113</p> <p>Development of a Hydrogen Production Model for The Gasification of Municipal Solid Waste and Its Constituents Using Aspen Plus Using Cao for CO₂ Capture</p> <p><u>Muhammad Shahbaz, Prakash Parthasarathy, Mohammad Alherbawi, Gordon McKay, Tareq Al-Ansari</u></p>	<p>ICH2P14 - OP144</p> <p>Hydrogen Production Via Steam Reforming of Methanol (SRM) Using Cu/ZnO/Al₂O₃ Catalyst</p> <p><u>Masresha Adasho Achomo, P. Muthukumar, Nageswara Rao Peela</u></p>
End of the Day			

Day 2 | Wednesday, December 20, 2023




Time	Plenary Session	Location
09:00 am - 09:45 am	<p>ICH2P14-KN4</p> <p>Sustainable Feedstocks and Integrated Bioprocess for Biohydrogen Production in Arid and Desert Regions</p> <p>Keynote Speaker - Dr. Moktar Hamdi</p> <p>Professor, National Institute of Applied Sciences and Technology, University Carthage, Tunisia</p>	Auditorium
09:45 am - 10:30 am	<p>ICH2P14-KN5</p> <p>A Framework to Evaluate Economics and CO2 Fixation potential of New Carbon Capture and Utilization (CCU) Reaction Pathways – Towards Golden Hydrogen Production</p> <p>Keynote Speaker - Dr. Nimir Elbashir</p> <p>Professor, Chemical Engineering, Director TEES Gas and Fuels Research Center, Texas A&M University at Qatar</p>	Auditorium
10:30 am - 10:45 am	Coffee Break with Poster Presentations	Exhibition Hall

Poster Number	Poster Presentations 10:30 am-10:45 am Chair: Dr. Burak Yuzer	Exhibition Hall
ICH2P14 – PP117	Redox Regulation of Hydrogen Production in Escherichia Coli During Growth on Byproducts of the Wine Industry <i>Lusine Baghdasaryan, Ofelya Karapetyan, Karen Trchounian, Garabed Antranikian, Anna Poladyan</i>	
ICH2P14 – PP118	Comparative Economic Analysis of Small Modular Reactor Hydrogen Cogeneration and Conventional Gas-Fired Plant for Load Following: A Case Study <i>Derrick Whelan, Lixuan Lu</i>	
ICH2P14 – PP124	Ship Design Adaptations for LNG Propulsion, Carbon Capture Utilization, and Hybrid Technologies <i>Aisha Al-Asmakh, Yusuf Bicer, Tareq Alansari</i>	
ICH2P14 – PP128	Green Hydrogen Production: A Cost Comparison of Different Electrolysis Technologies <i>Hafiz Muhammad Uzair Ayub, Sabla Y. Alnouri</i>	
ICH2P14 – PP012	Comparative Study Between GBO and BES Optimization Algorithms for Optimal PEMFC Parameters Identification <i>Ahmed Zouhir Kouache, Ahmed Djafour, Khaled Mohammed Said Benzaoui, Souheil Touili</i>	
ICH2P14 – PP172	Integrated Hydrogen Production and Purple Phototrophic Bacteria Biomass Recovery via Electrocoagulation <i>Ojima Wada, Burak Yuzer, Yusuf Bicer, Gordon McKay, Hamish Mackey</i>	
ICH2P14 – PP188	Hydrogen Naval Propulsion: Problems and Solutions <i>Remili Sadia, Mohamed Chaimaa</i>	
ICH2P14 – PP186	Study of the Energy and Financial Performance of Hydrogen Production with Solar Energy and Photoelectrolyzer/PEM in the Algerian Desert Region (OUARGLA) <i>Madjeda Ramdani, Ahmed Djafour, El Mouatez Billah Messini, Ahmed Zouhir Kouache, Zineb Bensaci</i>	
ICH2P14 – PP014	Investigating the Effect of Using Hydrogen as a Fuel on Performances of Gas Turbine Operating at Lean Condition in Site of Hassi R'MEL <i>Fethia AMROUCHE, Bouziane Mahmah, Lidya Boudjema, Oum Keltoum Bari</i>	

Day 2 | Wednesday, December 20, 2023

Parallel Sessions 2			
Time	Auditorium	Conference Room – A048	Conference Room – A046
10:45 am-12:30 pm	<p style="text-align: center;">Session 2A: Hydrogen Storage Chair: Dr. Fadwa El Mellouhi Co-Chair: Dr. Dhabia M. Al-Mohannadi</p>	<p style="text-align: center;">Session 2B: Bio-Hydrogen Chair: Dr. Ibrahim M. Abu-Reesh Co-Chair: Dr. Burak Yuzer</p>	<p style="text-align: center;">Session 2C: Low-Carbon Hydrogen with Reforming Chair: Dr. Anand Kumar Co-Chair: Dr. Mohammad Alherbawi</p>
10:45 am-11:00 am	<p style="text-align: center;">Invited Talk ICH2P14-IT2 Iron Based Hydrogen Storage and Transport</p>	<p style="text-align: center;">ICH2P14 – OP024 Biogas Dry Reforming to Syngas Using Catalyst Based on Local Minerals Extruded as Honeycomb Monolith <u>Tarik Chafik</u></p>	<p style="text-align: center;">Invited Talk ICH2P14-IT3 Analyzing Grey and Blue Hydrogen Production Costs in Steam-Methane, Auto-Thermal, and Non-Catalytic Partial Oxidation Reforming Plants</p>
11:00 am-11:15 am	<p style="text-align: center;">Dr. Viktor Hacker Professor, Graz University of Technology, Institute of Chemical Engineering and Environmental Technology, Austria</p>	<p style="text-align: center;">ICH2P14 – OP197 A Net-Zero Emission System with Biogas-Fed Solid Oxide Fuel Cell for Hydrogen Production to Advance Sustainability in the Textile Industry <u>Baraka Abbas, Hooreen Ansari, Kabsha Zain, Wasifa Umer, Abeeha Fatima, Khurram Kamal, Tahir A.H. Ratlamwala</u></p>	<p style="text-align: center;">Mary Katebah, Ma'moun Al-Rawashdeh, Patrick Linke Texas A&M University at Qatar</p>
11:15 am-11:30 am	<p style="text-align: center;">ICH2P14 – OP133 Graded Gyroid-Enhanced Metal Hydride Container for Efficient Hydrogen Storage Application <u>Luthfan Adhy Lesmana, Muhammad Aziz</u></p>	<p style="text-align: center;">ICH2P14 - OP048 Biogas Production from Date Palm Fruit Waste in Jigawa State Nigeria <u>Abdulhadi Yakubu, Garba Uba, Zainab Abbas Abdulhadi, Ahmed Muhammad Gumel</u></p>	<p style="text-align: center;">ICH2P14 - OP091 Piston Reactor Capabilities to Make Hydrogen from Methane Via Steam and Autothermal Reforming – Modeling Study <u>Aya Abousrafa, Patrick Linke, Ma'moun Al-Rawashdeh</u></p>
11:30 am-11:45 am	<p style="text-align: center;">ICH2P14 - OP027 Transportation and Storage of Hydrogen by LOHC: Design and Simulation of the Dehydrogenation Reactor <u>Pietro Delogu, Elena Barbera, Andrea Mio, Alberto Bertucco, Maurizio Fermeqlia</u></p>	<p style="text-align: center;">ICH2P14 – OP049 Production of Bioethanol from Groundnut Shell as a Substrate <u>Abdulhadi Yakubu, Garba Uba, Zainab Abbas Abdulhadi</u></p>	<p style="text-align: center;">ICH2P14 – OP023 Membrane Reformer Technology for Sustainable Hydrogen Production from Hydrocarbon Feedstocks <u>Alaa Albasry, Ahmed Naimi, Abdulbari Alqarni, Minseok Bae, Bandar Solami, Stephen Paglieri, Aadesh Harale</u></p>
11:45 am-12:00 pm	<p style="text-align: center;">ICH2P14 – OP126 Methods of Hydrogen Production, Storage and Transportation <u>Sayel M. Fayyad, A.m. Maqableh</u></p>	<p style="text-align: center;">ICH2P14 - OP165 Hydrogen Gas and Biochar Production from Kitchen Waste Via Dark Fermentation <u>Sniqdhendubala Pradhan, Burak Yuzer, Yusuf Bicer, Gordon Mckay</u></p>	<p style="text-align: center;">ICH2P14 – OP057 Catalytic Conversion of CO₂ to CO Via Methane Dry Reforming and Reverse Water Gas Shift Reaction <u>Parisa Ebrahimi, Mohammed Al-Marri, Majeda Khraisheh, Anand Kumar</u></p>
12:00 pm-12:15 pm	<p style="text-align: center;">ICH2P14 – OP109 Multi-Response Optimization of Absorption and Desorption Parameters in a Metal Hydride Based Hydrogen Storage System <u>Alok Kumar, Purushothaman Nandagopalan, P. Muthukumar, Ranjith Thangavel</u></p>	<p style="text-align: center;">ICH2P14 – OP067 An Optimum Approach for Biohydrogen Production Using Poplar <u>A. Yaqmur Goren, Muratcan Kenez, Ibrahim Dincer, Ali Khalvati</u></p>	<p style="text-align: center;">ICH2P14 - OP155 Enhancing Ni-Supported Catalysts for Efficient Dry Reforming of Methane: Effects of Halloysite Nanotubular Clay Surface Activation <u>Ahmed Abotaleb, Dema Al-Masri, Alaa Alkhateb, Kamal Mroue, Atef Zekri, Yasmin Mashhour, Alessandro Sinopoli</u></p>
12:15 pm-12:30 pm	<p style="text-align: center;">ICH2P14 - OP031 Experimental Investigation on Novel Multi-Tube Metal Hydride Reactor for Large Capacity Hydrogen Storage Applications <u>Shubham Parashar, P. Muthukumar, Atul Kumar Soti</u></p>	<p style="text-align: center;">ICH2P14 – OP087 Biomethanol and Hydrogen Production from Pinecone Biomass Using Steam Gasification <u>Hilal Sayhan Akci Turqut, Ibrahim Dincer</u></p>	<p style="text-align: center;">ICH2P14 - OP047 The Hydrogen Production Using Steam Methane Reforming Based on Central Receiver <u>Ali Alaidaros, Abdullah A. AlZahrani</u></p>
<p style="text-align: center;">12:30 pm-02:00 pm Lunch Exhibition Hall</p>			

Day 2 | Wednesday, December 20, 2023

Parallel Sessions 3			
Time	Conference Room – A047	Auditorium	Conference Room – A046
02:00 pm-03:30 pm	Session 3A: Electrochemical Hydrogen Chair: Dr. Ahmed Abdala Co-Chair: Dr. Dogan Erdemir	Session 3B: Decarbonization through Hydrogen Chair: Dr. Marcello Contestabile Co-Chair: Dr. Luluwah Al-Fagih	Session 3C: Hydrogen in Transportation Applications Chair: Dr. Sertac Bayhan Co-Chair: Dr. Abdulla Al Wahedi
02:00 pm-02:15 pm	ICH2P14 - OP064 Effect of Volume Concentration and Sonication Time on the Performance of Hybrid Solar Collector Based Hydrogen Production System with Hybrid Nanofluid: An Experimental Investigation M.Baskaran, S.Senthilraja R. Gangadevi, Mohamed M. Awad	Invited Talk ICH2P14-IT4 In the Green Zone: Navigating Carbon Management in the Hydrogen Shift Dr. Muftah El-Naas	ICH2P14 - OP007 Carbon Emission Reductions in the University of Sao Paulo's Transportation Sector Using Hydrogen-Powered Vehicles Beethoven Narváez-Romo, Danilo Perecin, Thiago Lopes, Daniel Lopes, Karen Mascarenhas, Suani Coelho, Julio R. Meneghini
02:15 pm-02:30 pm	ICH2P14 - OP073 Solar Energy Driven Silicon Photovoltaic Monolithic Electrochemical Cells for Efficient Hydrogen Production from Water Mourad Frites, Shahed Khan	Professor, Chemical Engineering, Qatar University	ICH2P14 – OP020 Experimental Investigation of Diesel Engine in Dual Fuel Mode by Using Hydrogen and Low Carbon Ether Blended Diesel Vasanthakumar Ravisankar, Loganathan Marimuthu, Vikneswaran Malaiperumal
02:30 pm-02:45 pm	ICH2P14 - OP163 Seawater Desalination and Hydrogen Production Using Monovalent Selective Membranes Assisted with Ion-Exchange Resins for Hydroponic Solution Production Ragad F. Alshebli, Nadira Salsabila, Burak Yuzer, Yusuf Bicer	ICH2P14 - OP159 Developing A Sustainable Production Framework for Green Hydrogen to Decarbonize Existing Industrial Clusters Afreenuzzaman Badruzzaman, Fadwa Eljack, Seckin Karagoz	ICH2P14 - OP150 Driving Toward Hydrogen Mobility: A Life Cycle Cost Analysis of Traditional, Electric, And Hydrogen Fuel Cell Vehicles in Qatar Carlos Méndez, Marcello Contestabile, Yusuf Biçer
02:45 pm-03:00 pm	ICH2P14 - OP085 Design Considerations of Artificial UV Light-Driven Photocatalytic Water Splitting for Production of Hydrogen in a Combined Solar/Artificial Light Reactor Ahmed Abbas, Shohda Makki, Konstantinos E. Kakosimos	ICH2P14 - OP164 Decarbonizing ASEAN By 2050: From the Lens of a Hydrogen Economy Archana Kumaraswamy, Sushant S Garud, Iftekhar A Karimi, Shamsuzzaman Farooq	ICH2P14 – OP099 An Adaptation of The Conventional LNG Floating Storage and Regasification Unit to Hydrogen and Ammonia Dindha Andriani, Muhammad Usman Sajid, Yusuf Bicer
03:00 pm-03:15 pm	ICH2P14 - OP174 Electrochemical Conversion of Carbon Dioxide into Formic Acid as Hydrogen Carrier: Role of Anolyte Muhammad Arsalan, Muftah H. El-Naas	ICH2P14 - OP177 Shades Of Sustainability: An In-Depth Analysis of The Direct and Indirect Carbon Footprint in Blue Ammonia Manufacturing Husein Al-Yafei, Ahmed AlNouss, Saleh Aseel	ICH2P14 – OP130 Exergetic Analysis of the Process for Hydrogen Rich Syngas Production Through Biomass Gasification and Its Onsite Use in HCCI Engine for Land Transportation Tawfiq Al-Mughanam, Abdul Khaliq
03:15 pm-03:30 pm	ICH2P14 - OP074  Evaluation of a Novel Hybrid Photoelectrochemical-Conventional Hydrogen Generator Mehmet Gursoy, Ibrahim Dincer	ICH2P14 – OP190  Feasibility Study of Backing Up Energy Supply For Electric Charging Stations With Hydrogen Integration Huseyin Biyikci, Yusuf Bicer	ICH2P14 – OP110  Development of a Hybrid Powering System with Ammonia Fuel Cells and Internal Combustion Engine for Submarines Ibrahim Akqun, Ibrahim Dincer
Coffee Break with Poster Presentations Exhibition Hall			

Day 2 | Wednesday, December 20, 2023

Poster Number	Poster Presentations 03:30 pm-04:00 pm Chair: Dr. Burak Yuzer	Exhibition Hall
ICH2P14 – PP041	Fast Modeling Method of Gas Diffusion Layers of Polymer Electrolyte Membrane Fuel Cells <i>Hamid Reza Taheri, <u>Mohsen Shakeri</u></i>	
ICH2P14 – PP101	$La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}$ (LSCF) Cathode Supported on Gadolinium-Doped Ceria Electrolyte Prepared by Screen-Printing Method and Performances Evaluation as Solid Oxide Fuel Cell at Intermediate Temperature <i>Oumaima Ettalibi, Hicham Ben Brahim Sbitri, Abdessamad Samid, Ouafae Achak, Raphael Ihringer, <u>Tarik Chafik</u></i>	
ICH2P14 – PP015	Sorption Properties of Ball-Milled Porous Silicon for Hydrogen Storage Up to 80 Bar <i>Rama Chandra Mudulij, Paresh Kale</i>	
ICH2P14 – PP016	Evaluation of Synergistic Integration of Nickel, Porous Silicon, and Thermally Reduced Graphene Oxide for Hydrogen Storage <i>Rama Chandra Mudulij, Neeraj Kumar Nishad, Paresh Kale</i>	
ICH2P14 – PP108	Hydrogen Adsorption Characteristics of Activated Carbon Derived from Prickly Pear Seed Cake <i>Rimene Dhahri, Imen Tlili</i>	
ICH2P14 – PP154	Facilitating Production of Acetate and Hydrogen Through Enhanced Electron Transfer and Substrate Mass Transfer Using a Multifunctional Photocathode with NiO/G-C ₃ N ₄ /Polythiophene <i>Abdul Hakeem Anwer, Assem Mohamed, Nafees Ahmed, Abdelbaki Benamor</i>	
ICH2P14 – PP167	Recovery Of Spent Acidic and Alkaline Liquors Generated in Metal Industry and Hydrogen Production by An Integrated System <i>Huseyin Selcuk, Yusuf Gunes, Ayse Elif Ates, Burak Yuzer, Yusuf Bicer</i>	
ICH2P14 – PP105	Neural network for the prediction of Biohydrogen Production during Dark Waste Organic Biomass Fermentation <i>Fares Almomani</i>	
ICH2P14 – PP201	Recent Technological Development and Advancements in Hydrogen Storage Technologies <i>Abhishek Sharma, Mohit Nayal, Siddharth Jain, Varun Pratap Singh</i>	

Day 2 | Wednesday, December 20, 2023

Parallel Sessions 4			
Time	Conference Room – A047	Auditorium	Conference Room – A046
04:00 pm-05:30 pm	<p style="text-align: center;">Session 4A: Green Hydrogen Production Chair: Dr. Hicham Hamoudi Co-Chair: Dr. Ahmed AlNouss</p>	<p style="text-align: center;">Session 4B: Hydrogen Techno-Economics Chair: Dr. Ahmed Khalifa Co-Chair: Dr. Ikhlas Ghiat</p>	<p style="text-align: center;">Session 4C: Integrated Hydrogen Production Systems Chair: Dr. Ahmad K. Sleiti Co-Chair: Dr. Abdullah A. AlZahrani</p>
04:00 pm-04:15 pm	<p style="text-align: center;">ICH2P14 – OP082 Green Hydrogen Production and Solar to Hydrogen Ratio Using Bifacial Solar Photovoltaics and High Roof Surface Albedo Fahad Ahmad Faraz, Oussama Rejeb, Chaouki Ghenai</p>	<p style="text-align: center;">Invited Talk ICH2P14-IT5 Future and Potential of Hydrogen for Qatar Under Its Energy and Economic Transformation Quest</p>	<p style="text-align: center;">ICH2P14 - OP094 Innovative Integrated Multigeneration System for Sustainable Power, Hydrogen, and Ammonia Production Ahmad K. Sleiti, Wahib A. Al-Ammari, Mohammad Azizur Rahman</p>
04:15 pm-04:30 pm	<p style="text-align: center;">ICH2P14 – OP029 Green Hydrogen Production by Hydrolysis of Aluminum and Waste Recycling Pedro Ayala, Edgar Borja, P.J. Sebastian</p>	<p style="text-align: center;">Dr. Muammer Koc Professor, Division of Sustainable Development, College of Science and Engineering, Hamad Bin Khalifa University</p>	<p style="text-align: center;">ICH2P14 - OP009 Transient Simulation and Comparative Assessment of Two Concentrated-Solar Based Hydrogen Production Systems Integrated with Vanadium-Chlorine Thermochemical Cycle Erfan Zand, Mohammadreza Khosravi, Pouria Ahmadi, Mehdi Ashjaee</p>
04:30 pm-04:45 pm	<p style="text-align: center;">ICH2P14 – OP018 Solar Hydrogen Production with Direct and Indirect Design System Ilyès Nouicer, Sabah Menia, Fares Meziane, Nourine Kabouche, Chaouki Ghenai</p>	<p style="text-align: center;">ICH2P14 - OP036 A Techno-Economic Evaluation of the Integration of Direct Air Capture with Hydrogen and Solar Fuel Production Enric Prats-Salvado, Nathalie Monnerie, Christian Sattler</p>	<p style="text-align: center;">ICH2P14 – OP104 Green Hydrogen Production via Integrated Triple Technologies: Downdraft Tower, Photovoltaic and Electrolysis Emad Abdelsalam, Fares Almomani</p>
04:45 pm-05:00 pm	<p style="text-align: center;">ICH2P14 - OP025 Thermoelectric Condensation of Ambient Humidified Air for Green Hydrogen Production Hilal Ahmad, Taqi Ahmad Cheema, Hadeed Ahmed Sher</p>	<p style="text-align: center;">ICH2P14 - OP176 Flowsheet Safety and Techno-Economic Analysis of Optimum Ammonia and Urea Production Route Amzan AlSabri, Ahmed AlNouss, Fadwa ElJack</p>	<p style="text-align: center;">ICH2P14 – OP089 Electricity Hydrogen and Heat (EHH) Production in Stand-Alone Renewable Energy System El Manaa Barhoumi, Ikram Ben Belgacem, Manaf Zghaibeh, Mohamed Ouda</p>
05:00 pm-05:15 pm	<p style="text-align: center;">ICH2P14 – OP187 Optimum Green Hydrogen Production Through Biomass Feedstock Blending Ahmed AlNouss, Gordon Mckay, Tareq Al-Ansari</p>	<p style="text-align: center;">ICH2P14 - OP096 Techno-Economic Evaluation of Various Hydrogen Carriers Ahmad K. Sleiti, Laveet Kumar, Wahib A. Al-Ammari</p>	<p style="text-align: center;">ICH2P14 – OP080 A Clean Option for Potential Hydrogen Production Via Nuclear in Canada Gorkem Kubilay Karayel, Ibrahim Dincer</p>
05:15 pm-05:30 pm	<p style="text-align: center;">ICH2P14 – OP111 An Integrated Solar-Driven Chlor-Alkali System for Hydrogen and Chlorine Production Sümeyya Ayça, Ibrahim Dincer</p>	<p style="text-align: center;">ICH2P14 – OP193 Strategy Of Turkiye on Hydrogen Energy Serpil Edebalı, Mustafa Ersoz</p>	<p style="text-align: center;">ICH2P14 – OP088 A Study on Nuclear-Based Hydrogen Production System Via Three- and Four-Step Magnesium Chlorine Cycles Sulenur Asa, Adem Acir, Ibrahim Dincer</p>
<p style="text-align: center;">06:30 pm-08:30 pm Gala Dinner and Awards Ceremony Hotel</p>			





Day 3 | Thursday, December 21, 2023

Parallel Sessions 5			
Time	Conference Room – A047	Conference Room – A048	Conference Room – A046
09:00 am-10:30 am	<p style="text-align: center;">Session 5A: Life Cycle Assessment of Hydrogen Chair: Dr. Mohamed Haouari Co-Chair: Dr. Tareq A. Al-Ansari</p>	<p style="text-align: center;">Session 5B: Hydrogen in Grids and Communities Chair: Dr. Patrick Linke Co-Chair: Dr. Veronica Bermudez</p>	<p style="text-align: center;">Session 5C: Hydrogen Effects on Materials Chair: Dr. Ibrahim Galal Hassan Co-Chair: Dr. Afrooz Barnoush</p>
09:00 am-09:15 am	<p style="text-align: center;">ICH2P14 – OP084 Life Cycle Assessment of Green Hydrogen Supply Network <u>Dana Alghool</u>, <u>Mohamed Haouari</u>, <u>Paolo Trucco</u></p>	<p style="text-align: center;">ICH2P14 - OP056 Multi-Scenario Analysis of Levelized Cost of Hydrogen for Water Electrolysis-Photovoltaic Energy Technology in the Near Future (2025–2050) of Algeria <u>Hammou Tebibel</u>, <u>Abdelhamid M'raou</u></p>	<p style="text-align: center;">ICH2P14 – OP134 The Correlation of Porous Material's Properties Between Particle Geometry for Hydrogen Fuel And Electrolysis Cells <u>Jaeyeon Kim</u>, <u>Luthfan Adhy Lesmana</u>, <u>Muhammad Aziz</u></p>
09:15 am-09:30 am	<p style="text-align: center;">ICH2P14 – OP180 Life Cycle Assessment of a Direct Air Capture and CO₂ Utilization System <u>Aliya Banu</u>, <u>Namra Mir</u>, <u>Muftah H. El-Naas</u>, <u>Ahmed Ali Khalifa</u>, <u>Abdulkarem I. Amhamed</u>, <u>Yusuf Bicer</u></p>	<p style="text-align: center;">ICH2P14 - OP142 Optimizing Green Hydrogen and Power Generation from Urban Sewage Sludge in the Steel Industry: A Kerman Case Study <u>Saeed Edalati</u>, <u>Mohammadreza Khosravirad</u></p>	<p style="text-align: center;">ICH2P14 – OP112 Influence Of Hydrogen Uptake on Additively Manufactured and Conventional Austenitic Stainless Steels 316L <u>Qingyang Liu</u>, <u>Sumia Manzoor</u>, <u>Mohammad Tariq</u>, <u>Hanan Farhat</u>, <u>Afrooz Barnoush</u></p>
09:30 am-09:45 am	<p style="text-align: center;">ICH2P14 - OP178 Tank To Tank Life Cycle Assessment of Greenhouse Gas Emission from Methanol Plant <u>Hussein Al-Yafei</u>, <u>Ahmed AlNouss</u>, <u>Saleh Aseel</u>, <u>Mohannad AlJarrah</u>, <u>Tareq Al-Ansari</u></p>	<p style="text-align: center;">ICH2P14 - OP097 Maximizing Power Grid Resilience: Rolling Horizon Control for Output Power Smoothing in Islanded Wind-Solar Microgrids with Multiple Hydrogen Storage Tanks <u>Muhammad Bakr Abdelqahany</u>, <u>Ahmed Al-Durra</u></p>	<p style="text-align: center;">ICH2P14 – OP046 In-House Green Anti-Corrosion Inhibitor to Protect from Hydrogen Embrittlement Effect on the Structural Integrity of Api 5l Steel Pipeline <u>Mohammed HadjMeliani</u>, <u>Hadjer Didouh</u>, <u>Mouna Amara</u>, <u>Azedine Belalia</u>, <u>Rami K.Suleiman</u>, <u>Guy Pluvinage</u></p>
09:45 am-10:00 am	<p style="text-align: center;">ICH2P14 – OP106 An Integrated Life Cycle Assessment and Supply Chain Analysis of a Multi-Generation System for Renewable Clean Power and Green Hydrogen Production <u>Tahir Abdul Hussain Ratlamwala</u>, <u>Sheikh Muhammad Ali Haider</u>, <u>Khurram Kamal</u></p>	<p style="text-align: center;">ICH2P14 - OP173 Circular Economy of integrating Green Hydrogen Production within an Eco-Industry Park <u>Hajer Mkacher</u>, <u>Fadwa ElJack</u></p>	<p style="text-align: center;">ICH2P14 - OP072 Protection From Hydrogen Embrittlement Using Green Inhibitor on the Welding Joint of Api X65 Pipeline Steel in Dynamic Loading <u>Azedine Belalia</u>, <u>Mohammed Hadj Meliani</u>, <u>Hadjer Didouh</u>, <u>Mouna Amara</u>, <u>Rami K.Suleiman</u>, <u>Guy Pluvinage</u></p>
10:00 am-10:15 am	<p style="text-align: center;">ICH2P14 - OP151 Regeneration Energy Optimisation of Post-Combustion CO₂ Capture (PCC) Process Based on Amine Composition Using Artificial Neural Network (ANN) <u>Najamus Sahar Riyaz</u>, <u>Nancy Khalaf AbuZaid</u>, <u>AlAnkaa Al-Harbi</u>, <u>Abdelbaki Benamor</u></p>	<p style="text-align: center;">ICH2P14 - OP004 Monte Carlo Simulation Applications for Stakeholder Management on Hydrogen Production Projects: Toward Sustainable Development <u>Ayman Mashali</u></p>	<p style="text-align: center;">ICH2P14 - OP043 Advancing Hydrogen Production: High-Resolution Kinetic Analysis of Photocatalytic Water Splitting Using Covalent Organic Framework Catalyst and Ascorbic Acid <u>Suhde Makkj</u>, <u>Konstantinos E. Kakosimos</u></p>
10:15 am-10:30 am	<p style="text-align: center;">ICH2P14 – OP120 A Life Cycle Assessment of Hydrogen Production with Catalyst <u>Assem Abdurakhmanova</u>, <u>Ibrahim Dincer</u></p>	<p style="text-align: center;">ICH2P14 - OP052 Assessment of Hydrogen Trading Within Blockchain and Artificial Intelligence: A Review <u>Sofya Morozova</u>, <u>Arif Karabuga</u>, <u>Zafer Utlu</u></p>	<p style="text-align: center;">ICH2P14 – OP140 A Critical Review of Hydrogen (H₂) Flow Assurance in the Presence of Impurities <u>Mohammad Azizur Rahman</u>, <u>Ibrahim Hassan</u>, <u>Rashid Hasan</u>, <u>Faisal Khan</u>, <u>Eduardo Gildin</u>, <u>Ahmad Sleiti</u></p>




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Poster Number	Poster Presentations 10:30 am-11:00 am Session Chair: Dr. Burak Yuzer	Exhibition Hall
ICH2P14 – PP005	Efficiency Hydrogen Production Via Water Photoreduction Over Fenps Elaborated Via Green Way <i>Meriem Guouasmi, <u>Amel Boudjema</u>, Chahrazed Benhamidech, Khaldoun Bachari</i>	
ICH2P14 – PP011	Field Investigation of Green Hydrogen Production Through the Pem Electrolyzer in Ouargla City <i><u>Ahmed Zouhir Kouache</u>, Ahmed Djafour, Khaled Mohammed Said Benzaoui, Madjida Ramdani</i>	
ICH2P14 – PP028	Recent advances in Green Synthesis of Cu ₂ O as a Photocatalyst for Conversion of Solar Energy into H ₂ <i>S. Torres-Arellano, <u>P.J. Sebastian</u></i>	
ICH2P14 – PP030	Effect of Scale-Up in Membraneless Microbial Electrolysis Cells on Hydrogen Production <i>M. Mejía-López, O. Lastres, J.L. Alemán-Ramirez, L. Vereá, <u>P.J. Sebastian</u></i>	
ICH2P14 – PP153	Synthesis and Evaluation of Cu-Based Catalytic Materials for CO ₂ Hydrogenation to Value-Added Products <i>Rim Ismail, Assem Mohamed, Mohamed Ali H. Saad, Abdelbaki Benamor</i>	
ICH2P14 – PP168	Current and Temperature Distributions in a Planar Solid Oxide Electrolysis Cell In-situ Assessed with Segmented Electrodes <i>Kentaro Yokoo, Hironori Nakajima, Kohei Ito</i>	
ICH2P14 – PP181	Underground Gas Storage Systems: Natural Gas, Hydrogen, And Carbon Sequestration <i><u>Manal Al-Shafi</u>, Yusuf Bicer, Ahmad Abushaikha</i>	
ICH2P14 – PP055	Forced Convection in Porous Medium Using Triply Periodical Minimum Surfaces: Experimental and Numerical Approach <i><u>M. Ziad Saghir</u></i>	

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Parallel Sessions 6			
Time	Conference Room – A047	Conference Room – A048	Conference Room – A046
11:00 am-12:30 pm	Session 6A: Bio-Hydrogen-2 Chair: Dr. Mohammad Alherbawi Co-Chair: Dr. Farhat Mahmood	Session 6B: Hydrogen Storage and Carriers Chair: Dr. Majeda Khraisheh Co-Chair: Dr. Alessandro Sinopoli	Session 6C: Electrolyzers Chair: Dr. Muhammed Iberia Aydin Co-Chair: Dr. Nurettin Sezer
11:00 am-11:15 am	ICH2P14 - OP157 Potential Evaluation and Optimization of Exoelectrogenic Activity of Rhodobacter Capsulatus: A Sustainable Strategy for Bioelectricity Production Saima Mirza, Junaid Mahmood, Arjumand Shah Bano, Mohammad Morowvat, Mudassar Ali, Obaid ur-Rehman	 ICH2P14 - OP145 Heat Transfer Optimization of a Metal Hydride Tank Targeted to Improve Hydrogen Storage Performance Nadhir Lebaal, Djafar Chabane, Alaeddine Zereg, Nouredine Fenineche	ICH2P14 - OP156 An Electrolyser Design for Membraneless Electrolysis by Using 3D Printing Muhammed Iberia Aydin, Ibrahim Dincer
11:15 am-11:30 am	ICH2P14 – OP135 Predictive Modeling of Biogas and Methane Production from Cow and Chicken Manure Using a Modified Gompertz Model Optimized by Particle Swarm Optimization Nadjiba Sophy, Nour Elislam Mougari, Nabil Himrane, Luis Le Moyne	ICH2P14 – OP137 Sodium Bicarbonates Production Through Carbon Mineralization for Hydrogen Storage: A Techno-Economic Assessment Dina Ewis, Zeyad Moustafa Ghazi, Sabla Y. Alnouri, Abdelbaki Benamor, Muftah H. El-Naas	ICH2P14 – OP179 Modeling For Multi-Mechanisms Permeability of Hydrogen Using a Membrane Process Hamid Zentou, Mahmoud M. Abdelnaby, Abdullah A. AlZahrani
11:30 am-11:45 am	ICH2P14 - OP079 Optimizing Hydrogen Production and Anaerobic Biodegradability in Pharmaceutical Industry Wastewaters Through Photocatalytic Oxidation Ayşe Elif Ateş, Burak Yüzer, Adem Yurtsever, Sinan Ates	ICH2P14 - OP146 Assessing the Potential and Viability of Renewable Methane and Hydrogen as Sustainable Energy Carriers Mohammed Al-Breiki, Yusuf Bicer	ICH2P14 - OP033 Degradation Modelling of Water Electrolyzers Using Hidden State Estimation and Deep Learning Frank Hilden, Pourya Azadi, Stéphane Haag, Giuseppe Cusati, Vanessa Gepert
11:45 am-12:00 pm	ICH2P14 – OP189 Biocatalytic Conversion of Lignocellulosic Biomass into Biohydrogen Via Photofermentation Route Saima Mirza, Javed Iqbal Qazi, Shulin Chen	ICH2P14 – OP184 Flexible Natural Gas Allocation to Blue-Hydrogen Monetised Products: An Agent-Based Modelling Approach Noor Yusuf, Ahmed AlNouss, Tareq Al-Ansari	ICH2P14 - OP141 Experimental And Numerical Analyses of A Cathode-Supported Monolithic Solid Oxide Electrolysis Cell Hironori Nakajima, Yoshihiro Iwanaga, Kohei Ito
12:00 pm- 12:15 pm	ICH2P14 – OP196  Mathematical Modeling of A Sustainable Energy System For Restaurant Communities: Waste-To-H2 Conversion, CO2 Mitigation, Clean Fuel Production, And Power Generation Syed Muhammad Aun Rizvi, Khurram Kamal, Tahir A.H. Ratlamwala	ICH2P14 – OP035 Power-To-Gas Process in the Upgrading of The CO ₂ Extracted from the Unprocessed Algerian Natural Gas Rafika Boudries, Nourine Kabouche, Rafik Medjebour, Brahim Laoun, A. Khellaf	ICH2P14 – OP065 Solar Hydrogen and Methanol Production with CSP/PV Driven Electrolyser Nathalie Monnerie, Andreas Rosenstiel, Christian Sattler
12:15 pm-12:30 pm	ICH2P14 - OP092  An Approach in Treating Biomass and Plastic Waste for Production of Hydrogen and Ethanol Muhammad Ishag, Ibrahim Dincer	ICH2P14 – OP183 Comparative Thermodynamic Analysis of Two Green Fuel Production and Power Generation Pathways Amira Chebbi, Yusuf Bicer	ICH2P14 - OP090  An Investigation of Metal Coated 3D-Printed Electrodes for Hydrogen Production Muarij Khalil, Ibrahim Dincer
12:30 pm-02:00 pm Lunch Exhibition Hall			

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Parallel Sessions 7			
Time	Conference Room – A047	Conference Room – A048	Conference Room – A046
02:00 pm-03:30 pm	Session 7A: Thermodynamic Analysis of Hydrogen Systems Chair: Dr. Hadi Genceli Co-Chair: Dr. Shoukat Alim Khan	Session 7B: Fuel Cells and Combustion Chair: Dr. Mohd Zamri Che Wanik Co-Chair: Dr. Tahir A.H. Ratlamwala	Session 7C: Photo-Electro-Catalytic Hydrogen Production Chair: Dr. Rima Isaifan Co-Chair: Dr. Khaled Abedrabboh
02:00 pm-02:15 pm	ICH2P14 - OP152  Design, development and investigation of solar-integrated co-electrolysis for methanol production Muhammad Sajid Khan, Muhammad Abid, Chen Chen, Juliana Hj Zaini, Tahir Ratlamwala	ICH2P14 - OP042 Feasibility Study of a Molten Carbonate Fuel Cell as a CO ₂ Separator for Various Industrial Exhaust Emissions Arkadiusz Szczęśniak, Aliaksandr Martsinchyk, Olaf Dybinski, Katsiaryna Martsinchyk, Kamil Futyma, Łukasz Szablowski, Jarosław Milewski, Małgorzata Dembowska	ICH2P14 - OP034 Synthesis and Application of Pd/Sr-NPs@TiO ₂ for Photocatalytic H ₂ Generation from Water Splitting Reactions Ejaz Hussain, Khezina Rafiq
02:15 pm-02:30 pm	ICH2P14 – OP160 Energy And Exergy Analysis of A Four-Step Copper Chlorine Cycle For Enhanced Efficiency And Performance Satyasekhar Bhogilla, Aman Pandoh, Uday Raj Singh	ICH2P14 - OP149 Sustainable Proton-Exchange-Membrane Fuel Cell (PEMFC) System Exergoeconomic Analysis Rodrigo Raimundo, Carlos Matiolo, Rhayssa Ribas, Lauber Martins, André Mariano, Stephan Och, Vanessa Kava, José Vargas	ICH2P14 – OP127 Dye-Sensitized Photocatalytic Hydrogen Production by Sepiolite Clay Yigit Osman Akyildiz, Emre Aslan, Mahmut Kus, Imren Hatay Patir, Mustafa Ersoz
02:30 pm-02:45 pm	ICH2P14 – OP054 Performance Evaluation of Different Working Fluids In S-ORC Based Hydrogen Production System Arif Karabuga, Zafer Utlu, Melik Ziya Yakut	ICH2P14 – OP136  3e Analysis and Multi-Objective Optimization of Solar-Thermal-Assisted Energy System: Supercritical CO ₂ Brayton Cycle and Solid Oxide Electrolysis/Fuel Cells Zhicong Fang, Zhichao Liu, Shuhao Zhang, Zekun Yang	ICH2P14 - OP032 Synthesis of Au–BaO@TiO ₂ /Cds Catalysts: H ₂ Generation from Water Splitting Reactions Khezina Rafiq, Ejaz Hussain
02:45 pm-03:00 pm	ICH2P14 - OP162 Thermodynamic Evaluation of a Renewable Energy Storage Concept Incorporating a Solid Oxide Electrolyzer and Metal Hydride Compressor Uday Raj Singh, Satyasekhar Bhogilla	ICH2P14 – OP203 A Review of The Feasibility of Utilising Hydrogen as a Marine Fuel in Australia Hongjun Fan, Naqi Abdussamie, Andrew Harris, Peggy Shu-Ling Chen, Irene Penesis	ICH2P14 – OP115 Photocatalytic Hydrogen Generation from Seawater Using High-Performance Polymeric Materials Noora Al-Subaiei, Ghalya Abdulla, Mohammed Al-Hashimi, Konstantinos E Kakosimos
03:00 pm-03:15 pm	ICH2P14 - OP053 Thermodynamic Analysis of PTC-Based Hydrogen Production System Arif Karabuga, Zafer Utlu, Hasan Ayarturk	ICH2P14 - OP143 Study Of Laminar Burning Speed Correlation' For Ammonia-Hydrogen Fueled Mixture Anas Rao, Muhammad Ihsan Shahid, Muhammad Farhan, Yongzheng Liu, Fanhua Ma	ICH2P14 - OP021 Efficient and Stable Seawater Electrolysis Over a Binder-Free Nio-Nanosheet Array Bifunctional Catalyst Khadijeh Hemmati
03:15 pm-03:30 pm	ICH2P14 – OP093  A Unique System for Hydrogen, Methanol, Fresh Water and Electricity Production with Carbon Capturing and Storage Mitra Ghannadi, Ibrahim Dincer	ICH2P14 – OP194 Proton Exchange Membrane based Fuel Cell Generation System Modeling for Power System Studies Mohd Zamri, Che Wanik	ICH2P14 – OP121 Piezocatalytic Hydrogen Evolution Activity of Seleno-Chevreil Phases Talha Kuru, Emre Aslan, Faruk Ozel, Imren Hatay Patir, Mustafa Ersoz
03:30 pm-04:00 pm Coffee Break with Poster Presentations Exhibition Hall			

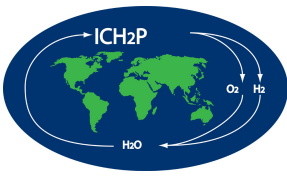
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Poster Number	Poster Presentations 03:30 pm-04:00 pm Chair: Dr. Burak Yuzer	Exhibition Hall
ICH2P14 – PP132	Modeling Of Supercritical Hydrogen Storage System Parameters Using Artificial Intelligence Technique <u>A. Abdallah El Hadj, Ait Yahia, Smain Sabour, Mohammed R Zahi, Maamar Laidi, S.Hanini</u>	
ICH2P14 – PP147	Photo-Electro-Electrolysis System Utilizing TiO ₂ -Coated Stainless Steel and FTO as Photoelectrodes for Enhanced Dye Removal in Wastewater and Hydrogen Production <u>Nadira Salsabila, Ragad F. Alshebli, Burak Yuzer, Yusuf Bicer</u>	
ICH2P14 – PP169	Dynamic Modelling Approach for Understanding the Influence of Carbon Policies on Electrofuels Utilisation Within the Aviation Sector <u>Ridab Khalifa, Yusuf Bicer, Tareq Al-Ansari</u>	
ICH2P14 – PP185	Multi-Purpose Charging Station for Electric and Hydrogen Vehicles Enabling Sustainable Transportation <u>Marawan Hussein, Sara Mohamed, Amira Chebbi, Luluwah Al-Fagih, Tareq Al-Ansari, Yusuf Bicer</u>	
ICH2P14 – PP068	Hydrogen Sulfide H ₂ S – for the Service of Humanity! <u>Anatolii Startsev</u>	

Time	Conference Room – A048	Conference Room – A046
04:00 pm-05:00 pm	Session 8A: Other Hydrogen Applications Chair: Dr. Dogan Erdemir Co-Chair: Dr. Hanadi G. Al-Thani	Session 8B: Hydrogen Utilization and Production Chair: Dr. Huseyin Selcuk Co-Chair: Dr. Muhammed Iberia Aydin
04:00 pm-04:15 pm	ICH2P14 - OP051 Enhancing Hydrogen Gas Production in Escherichia Coli Through a Crispr-Based Approach <u>Salisu Ahmed, Musa Abdullahi, Abubakar Ahmad</u>	ICH2P14 – OP182 A Techno-Economic Analysis of Hybrid Solar-Wind Energy Systems with Hydrogen Storage for Residential Communities <u>Sara Mohamed, Yusuf Bicer, Luluwah Al-Fagih</u>
04:15 pm-04:30 pm	ICH2P14 - OP148 State-Flow Based Energy Management System in Micro-Grid Including Fuel Cell <u>Hamid Bentarzi, Abderrahmane Ouadi, Abdelkader Zitouni, Abdelkader Abdelmoumene</u>	ICH2P14 – OP138 Design And Performance Analysis of Ammonia-Based Power Generation <u>Kazuki Ohira, Rahmat Waluyo, Muhammad Aziz</u>
04:30 pm-04:45 pm	ICH2P14 – OP191 Wind Power's Evolution: Unveiling Advances and Challenges in the Quest for Sustainable Energy <u>Abdelkader Abdelmoumene, Hamid Bentarzi</u>	ICH2P14 – OP071 Investigation of a New Energy System with Recycled Aluminum-Water Hydrogen Production <u>Andre Bolt, Ibrahim Dincer, Martin Agelin-Chaab</u>
04:45 pm-05:00 pm	ICH2P14 – OP213 An Investigation on the Magnetic Cooling Systems in Electric Vehicle <u>Nader Javani, Hadi Genceli</u>	ICH2P14 – OP195 Optimizing Green Hydrogen Production in the GCC: A Pilot Study of Capacity Factor Enhancement via Trans-Continental Energy Imports <u>Moiz Ali, Yusuf Bicer, Tareq Al-Ansari</u>
05:00 pm-05:15 pm	ICH2P14 – OP070  Bio-Inspired Optimization of Hydrogen Production Plants: Harnessing the Pollutants for Enhanced Efficiency of Fuel Cell <u>Khaled Abu Alfoul, Anaam Abu Foul</u>	ICH2P14 - OP098  Electro-Biomembrane Reactor for Concurrent Hydrogen Production and Desalination <u>Ahmet Faruk Kilicaslan, A. Yagmur Goren, Ibrahim Dincer, Ali Khalvati</u>
05:15 pm-05:30 pm	ICH2P14 – OP119  Low Price Photo and Thermal Production of Hydrogen Fuel from Hydrogen Sulfide Extracted from Petroleum Natural Gas <u>Salah Naman</u>	ICH2P14 - OP078  A Community Energy System Designed to Cover the Needs Including Hydrogen <u>Moslem Sharifishourabi, Ibrahim Dincer, Atef Mohany</u>
06:30 pm-09:30 pm Optional Social Tour		

Hydrogen Energy Course

Time	Hydrogen Energy Course (with registration)	Auditorium
09:00 am-09:15 am	Opening Talks	
09:15 am-11:15 am	Introduction to Hydrogen: H2-101 Professor Dr. Ibrahim Dincer, Ontario Tech University, Canada	
11:15 am-11:30 am	Break	
11:30 am-01:30 pm	Hydrogen Production: Electrolyzes, Methods and Processes Professor Dr. Fares Almomani, Qatar University, Qatar	
1:30 pm-02:00 pm	Lunch Break	
2:00 pm-04:00 pm	Hydrogen Storage and Transportation Dr. Yusuf Bicer, Hamad Bin Khalifa University, Qatar	
04:00 pm-04:15 pm	Break	
04:15 pm-06:15 pm	Hydrogen Utilization and Fuel Cells Professor Dr. Xianguo Li, University of Waterloo, Canada	
06:15 pm-06:30 pm	Certification Ceremony	



14TH INTERNATIONAL CONFERENCE ON HYDROGEN PRODUCTION (ICH2P-2023)

December 19-21, 2023

**Hamad Bin Khalifa University
Doha, Qatar**

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