2026

EUROPEAN HYDROGEN ENERGY CONFERENCE

Seville · 11th - 13th March 2026

PROGRAMME

EHEC 2026
EUROPEAN HYDROGEN ENERGY CONFERENCE

AeH2
SPANISH HYDROGEN ASSOCIATION

www.ehec.info

moeve

Renewable hydrogen: to go beyond net zero.

At Moeve, we're accelerating decarbonization for our clients and for industry more broadly, while reinforcing Europe's energy independence and boosting its industrial competitiveness. To make this happen:

We'll connect southern and northern Europe with the **first renewable hydrogen corridor** between our production facilities in Spain and entry points in northwestern Europe

We're promoting the development of e-SAF

We're advancing the **Andalusian Green Hydrogen Valley** (PCI Project). To achieve this, we have secured the highest funding **(€300 M+) under the H2 Valleys Program**

H2V

Co-financed by the Connecting Europe Facility of the European Union

Discover more here

Funded by the European Union
NextGenerationEU

IDAE

Plan de Recuperación, Transformación y Resiliencia

H_2 Hidrógeno renovable Valles

WELCOME TO THE EUROPEAN HYDROGEN ENERGY CONFERENCE

EHEC 2026
EUROPEAN HYDROGEN ENERGY CONFERENCE

Organized by

AeH2
SPANISH HYDROGEN ASSOCIATION

Hinicio by Vulcain

IPLANENERGY by Vulcain

From Business Case to Engineering Execution

Hydrogen projects do not fail because of lack of ambition, they fail in the gap between concept, bankability, and engineering execution. At HINICIO and IPLAN ENERGY we bridge that gap.

We combine deep hydrogen and Power-to-X expertise in market design, regulation, techno-economic optimisation and project structuring with strong engineering capabilities from conceptual design to FEED and detailed engineering.

For developers, industrial off-takers, utilities and investors, we provide one integrated approach that:

- Validates project viability with defendable assumptions and realistic cost structures
- Anticipates regulatory, permitting and compliance constraints early
- Optimises plant configuration, utilities and infrastructure to improve efficiency and integration with existing assets
- Minimises water consumption and treatment demand, cooling requirements, and overall energy management
- Develops engineering packages and detailed design, and supports projects through tendering and construction

Developing a hydrogen or e-fuels project?

Bring your location, target product and timeline.

We'll help identify the key technical, regulatory and commercial risks and define the solution.

Do you have any technical questions? Ask our team

Connect with our expert team from HINICIO and IPLAN ENERGY

Visit us at booth 11

VULCAIN ENGINEERING GROUP

HINICIO and IPLAN ENERGY are both part of the Vulcain Group

About HINICIO

HINICIO is a leading firm specialised in hydrogen and decarbonisation of hard-to-abate sectors. With more than 20 years of experience in hydrogen and its derivatives, and a portfolio of over 1,000 projects across 45 countries, we advise governments, multilaterals, investors, banks, industrial players and project developers.

www.hinicio.com
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About IPLAN ENERGY

IPLAN ENERGY is an engineering and consulting company specialising in conceptual, basic and FEED engineering, detailed engineering, owner's engineering, and EPC project management for national and international hydrogen projects. We work with project developers, EPC companies, and operators on hydrogen and decarbonisation projects.

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You can download the APP of the congress “EHEC 2026” on your device through through Play Store or App Store. You can also download the application by scanning the following QR code:

IOS

ANDROID


HYDROGEN
LET'S GO BEYOND

WELCOME LETTER

MR. JAVIER BREY

President, European Hydrogen Energy Conference 2026

President, Spanish Hydrogen Association (AeH2)

Dear colleagues, dear friends,

It is my great honour, as President of the European Hydrogen Energy Conference (EHEC) 2026 and President of the Spanish Hydrogen Association (AeH2), to welcome you to Seville for this new edition of EHEC.

Since its inception in 2005, the European Hydrogen Energy Conference has grown into one of the most respected and influential gatherings of the global hydrogen community. Over two decades, EHEC has accompanied the sector through research breakthroughs, early demonstrations, industrial scaling, and now, crucially, market deployment.

EHEC 2026 takes place at a decisive moment.

Hydrogen is no longer a promise confined to pilot projects or strategic roadmaps. It is entering the phase where execution, competitiveness, regulation, and industrial resilience determine success. Across Europe and worldwide, we are witnessing the transition from ambition to implementation. The questions before us are no longer whether hydrogen will play a role in decarbonization, but how fast, how efficiently, and how sustainably we can integrate it into our energy, industrial, and mobility systems.

Seville becomes, for three days, a meeting point for this global conversation.

This edition gathers leading policymakers, industrial pioneers, researchers, financial institutions, and technology developers from across the hydrogen value chain. Through plenary sessions, technical tracks, strategic panels, and our international exhibition area, EHEC 2026 provides a platform not only to exchange knowledge, but to forge partnerships capable of accelerating real projects on the ground.

Spain, and Southern Europe more broadly, stand at the forefront of this transformation. With exceptional renewable resources, an expanding project pipeline, growing industrial commitment, and strong European integration, our region has a unique opportunity to contribute meaningfully to Europe's hydrogen future. EHEC 2026 reflects this momentum while maintaining its firmly international outlook.

The Spanish Hydrogen Association (AeH2), together with our partners and organizing committee, has worked with dedication and care to ensure that this conference reflects both the technical excellence and the strategic depth that the current stage of our sector requires. Our ambition is simple but demanding: to deliver an event that is rigorous, relevant, and genuinely useful for the decisions you must make in the months and years ahead.

Hydrogen is not a trend. It is an industrial transformation. And transformations demand cooperation, realism, innovation, and courage.

Thank you for being part of this journey.

Welcome to EHEC 2026.

Welcome to Seville.

HONOUR COMMITTEE

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Vice Presidency of the Committee

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THE AeH2

The Spanish Hydrogen Association (AeH2) is the national reference organization for the hydrogen sector in Spain, acting as a key platform for collaboration among industry, public institutions, research centers, and technology developers across the entire hydrogen value chain. Founded in 2002 as a non-profit entity, AeH2 brings together a rapidly growing membership that reflects the strong momentum of hydrogen deployment in Spain and its strategic role in Europe's energy transition.

For over two decades, AeH2 has worked to promote the development and integration of hydrogen technologies as a cornerstone of a competitive, secure, and decarbonized energy system. The Association actively supports innovation, industrial development, and job creation by fostering cooperation between stakeholders, facilitating knowledge exchange, and contributing to the creation of a stable regulatory and investment framework.

AeH2 maintains close dialogue with national, regional, and local administrations, as well as European and international partners, ensuring that hydrogen remains a priority within energy, climate, and industrial strategies. Through its technical working groups, policy contributions, and institutional engagement, the Association provides expertise to help shape effective regulation and accelerate market deployment.

A central instrument in this effort is the Census of Hydrogen Projects in Spain, periodically updated with the support of AeH2 members. This initiative provides a comprehensive overview of projects across production, infrastructure, mobility, and industrial applications, offering valuable insight into the scale, maturity, and geographic distribution of hydrogen development in the country. The Census has become a key tool for understanding Spain's rapid progress from pilot initiatives to large-scale industrial implementation.

AeH2 also plays an essential role in connecting the Spanish ecosystem with the global hydrogen community. By fostering international cooperation, facilitating partnerships, and promoting knowledge exchange, the Association contributes to positioning Spain as one of Europe's most dynamic hubs for renewable hydrogen deployment.

The Association has been closely linked to the European Hydrogen Energy Conference (EHEC) since its early years, organizing the first edition hosted by AeH2 in 2005. Since then, AeH2 has worked continuously to grow and consolidate this biennial event, which now marks more than two decades as a leading international forum for dialogue, innovation, and collaboration across the hydrogen sector.

Today, EHEC stands as a flagship initiative led by AeH2, bringing together policymakers, industry leaders, researchers, and investors to advance cooperation and accelerate the transition from strategy to implementation, helping shape a resilient hydrogen economy at both European and global levels.

AeH2 remains committed to enabling hydrogen as a driver of decarbonization, industrial competitiveness, and technological leadership—supporting the transformation toward a sustainable energy future.

Find out more at www.aeh2.org

AeH2 SPANISH HYDROGEN ASSOCIATION

TIMETABLE

WEDNESDAY 11TH

08.00 · 09.00	Registration
09.00 · 09.50	Opening
09.50 · 10.00	**Special Plenary Address**
10.00 · 10.30	Coffee Break Poster Session
10.30 · 13.00	**Plenary Session 1**
13.00 · 14.30	Lunch Break
14.30 · 17.10	**Parallel Session 1**
17.10 · 17.40	Coffee Break Poster Session
17.40 · 20.00	**Parallel Session 2**

TIMETABLE

THURSDAY 12TH

08.00 · 09.00	Registration
09.00 · 09.15	**Special Plenary Address**
09.15 · 11.00	**Plenary Session 2**
11.00 · 11.30	Coffee Break Poster Session
11.30 · 13.30	**Plenary Session 3**
13.30 · 15.00	Lunch Break
15.00 · 17.00	**Parallel Session 3**
17.00 · 17.30	Coffee Break Poster Session
17.30 • 19.10	**Parallel Session 4**
20.45 • 23.00	Gala dinner & Networking party

TIMETABLE

FRIDAY 13TH

08.00 · 09.00	Registration
09.00 · 11.00	**Plenary Session 4**
11.00 · 11.30	Coffee Break Poster session
11.30 • 13.30	**Parallel Session 5**
13.30 · 14.00	Closing Ceremony

THE VENUE FIBES II

FIBES II is the modern extension of the Seville Conference and Exhibition Centre (FIBES), inaugurated in September 2012.

Designed by architect Guillermo Vázquez Consuegra, it significantly expands the venue's capacity for large scale congresses, exhibitions, and cultural events.

Address: *Avenida Alcalde Luis Uruñuela, 1, 41020 Sevilla, España*

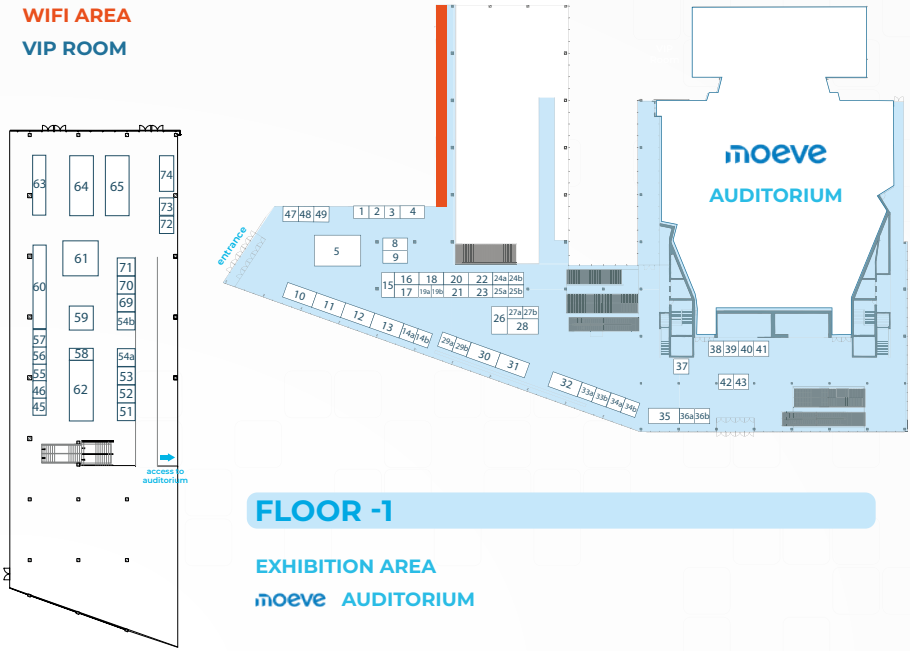
THE VENUE FIBES II

FLOOR 1

B2B AREA
PRESS & SPEAKERS' ROOM
PARALLEL ROOMS
SIDE EVENT ROOMS
POSTER AREA

MAIN FLOOR

EXHIBITION AREA
WIFI AREA
VIP ROOM



FLOOR -1

EXHIBITION AREA
moeve AUDITORIUM

CONFERENCE INFORMATION

REGISTRATION

The registration desk will be **available from 8:00 on Wednesday 11th**, in a designated room located on the access ramp to Fibes II. Each type of ticket will have its queue. The Registration & Information Desk and Speakers' Room will remain open throughout the three-day Congress.

EHEC 2026 ENJOYABLE FEATURES & ACTIVITIES:

- Conference Plenary & Parallel Sessions
- Trade Fair: Main floor & -1 Floor
- Test & Drive
- Cocktail Gala Dinner
- Delegate bag: Programme & Proceedings Book
- Side Events & Networking Area

TEST & DRIVE

You can register for Test & Drive on the pavement near the main entrance.

CONFERENCE INFORMATION

NAME BADGE
Your name badge serves as your ticket to all sessions, the exhibition, catering, and the Gala Dinner. Please, wear it at all times.

COFFEES, DRINKS & LUNCH
Coffee corners will be at the Trade Fair and in the Poster area. Lunch will take place at the main & -1 floor.

WIRELESS INTERNET
Available on-site at no charge. Please note that the connection speed could vary due to the number of attendees connected.

User: **EHEC2026**

WEBSITE: www.ehec.info

CONFERENCE INFORMATION

TRADE FAIR SCHEDULE

Wednesday, March 11th from 9:00 a.m. to 8:00 p.m.
Thursday, March 12th from 09:00 a.m. to 8:00 p.m.
Friday, March 13th from 9:00 a.m. to 2:30 p.m.

CERTIFICATES

Certificates of attendance can be downloaded from the "CERTIFICATES" section of the "MY CONGRESS" personal area of the web page.

SOCIAL NETWORKS

Find out the latest news about the congress using the hashtag:
#EHEC2026

TWITTER (X): @EHEC_2026
LINKEDIN: European Hydrogen Energy Conference (EHEC) 2026

SPEAKERS' INFORMATION

PREPARATION

- Store all your files in a unique folder, especially videos (make sure videos play automatically when the slide is displayed). 16/9 slides format is recommended.
- Mac users: please don't forget to bring your adaptor.
- Bring your file (ppt and pdf format) on a USB drive/USB stick to the **Speakers' Room** located on the 1st Floor of the Building where Parallel Sessions will be held.

SPEAKERS' ROOM

- Please, bring your presentation the day before or at least 2 hours before your lecture.
- Our technicians will transfer your presentation to a server. We encourage you to confirm on the technician's computer that the ppt is correctly displayed.

LECTURE ROOM

- Your presentation will be transferred and available on your lecture room, on a presentation computer operated by a technician. There will be no possibility to connect your laptop.

SPEAKERS' INFORMATION

LECTURE ROOM

- It wont be possible to make any changes in the presentation once you are in the lecture's room.
- Oral presentations will last 15 minutes. There will be an additional 5 minutes for discussion and Q&A. It is important to adjust to the time limits.

INFORMATION FOR CHAIRPERSONS

- Please stick to the time scheduled to allow people to follow the Programme and move between sessions.
- Let the speaker know when there are 5 minutes and 1 minute left of their time.
- Facilitate and encourage the discussion after the speaker's presentation.

MEMBERS OF THE ORGANIZATION AND LOCAL STAFF WILL BE ALWAYS PRESENT AT THE VENUE. IF YOU NEED ANY HELP, PLEASE CONTACT THEM

GALA DINNER

March 12th · 20:45 h

RESTAURANTE 'EL 29'

Av. Isabel la Católica, 2.
Parque de María Luisa, 41013 Sevilla

The event, sponsored by **moeve**, offers all attendees an exquisite soiree at one of the most special places in Seville. A unique occasion to meet and establish meaningful relationships.

El 29 Restaurante y Eventos is a gastronomic and leisure space located in a privileged setting in Seville, within the María Luisa Park and next to the iconic Plaza de España. It occupies a historic building that in 1929 served as the Information Pavilion of the Ibero-American Exposition, now transformed into a venue dedicated to dining and the celebration of events.

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Seville AT A GLANCE

Seville is a captivating city where history, innovation, and warm hospitality come together to create an exceptional setting for any international congress. Bathed in year round sunshine and renowned for its vibrant cultural heritage, Seville offers an inspiring atmosphere that enhances every professional gathering.

Home to iconic landmarks such as the Plaza de España and the lush María Luisa Park, the city blends architectural grandeur with peaceful green spaces, offering delegates the perfect backdrop to connect, reflect, and be inspired. Its historic charm harmoniously coexists with modern infrastructure, making Seville a dynamic hub for business, knowledge exchange, and global collaboration.

The city's rich gastronomy—famous for its Mediterranean flavors and lively tapas culture—invites attendees to enjoy memorable culinary experiences after a day of sessions. Its warm and welcoming character ensures visitors feel at home from the moment they arrive.

With excellent connectivity, a vibrant social scene, and venues designed to accommodate world class events, Seville stands out as a destination where ideas flourish and meaningful connections are forged. Hosting your congress here means offering participants not just a meeting place, but a truly unforgettable experience.

NOT TO MISS

1. Royal Alcázar of Seville

A unique palace with centuries of history, Nasrid style courtyards, royal chambers, and spectacular gardens. It is considered one of the most impressive palace complexes in Europe.

2. Seville Cathedral and the Giralda

The largest Gothic cathedral in the world and an essential visit. Don't miss the climb to the Giralda tower for a panoramic view of the city.

3. Plaza de España

One of the most beautiful squares in the country, built for the 1929 Ibero American Exposition. Its tiles, canals, and architecture make it an absolute icon.

4. Santa Cruz Quarter

The former Jewish quarter is a charming maze of narrow streets, flower filled patios, and romantic corners. Perfect for wandering without a plan.

5. A Flamenco Show

Flamenco is an essential part of Andalusian identity. Watching a show in a traditional tablao is an emotional and culturally unique experience.

6. Tapas and Sevillian Gastronomy

Seville is made to be savored: traditional tapas, local wines, and its famous outdoor culinary culture. Historic bars coexist with creative contemporary proposals

7. María Luisa Park

Seville's green oasis, perfect for strolling among fountains, plazas, ponds, and regionalist architecture. It is also home to the Plaza de España.

8. Walk Along the Guadalquivir River

Walking or taking a small cruise along the river offers a relaxing way to see Seville from a different perspective.

9. Street & Plaza Life

Pedestrian streets, lively terraces, and a vibrant atmosphere make simply wandering through the historic center an essential part of the experience.

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Arcamo presents its **turnkey service** proposal for critical industrial infrastructures at the European Hydrogen Energy Conference, with a special focus on the **hydrogen market**, ultra-high purity (UHP) gas systems, gas cabinets, and associated solutions for the semiconductor sector.

With a **fully integrated approach**, Arcamo covers all project phases, from engineering and design to system integration and commissioning, acting as a single point of contact throughout the project lifecycle. This model ensures maximum safety, process reliability, and operational continuity in highly demanding production environments.

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TOYOTA
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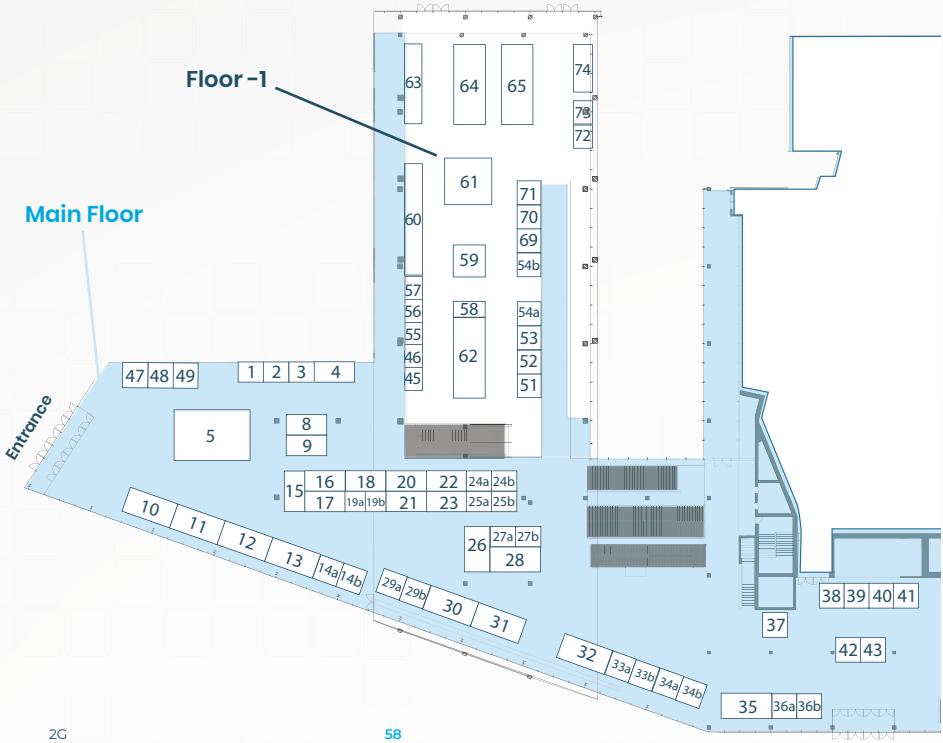
TRADE FAIR MAP



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	BMW	35
	BOLLFILTER	25
	BOSCH	33b

TEST & DRIVE

TOYOTA

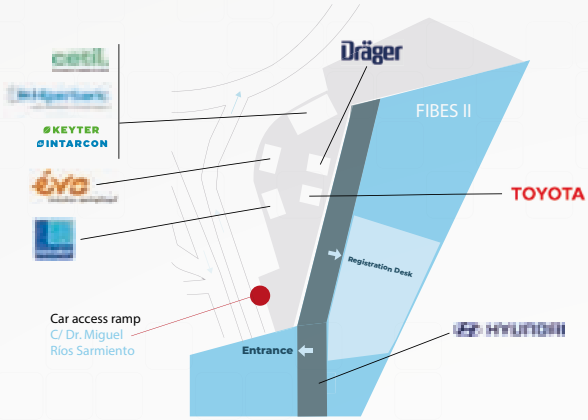
Toyota Mirai is a hydrogen fuel cell electric vehicle with a 182 HP engine, a consumption of 0.81 kg/100 km, a range of 650 km and a refueling time of 3-5 minutes, with zero emissions.

Toyota Mirai is an example of leadership in the commitment to a hydrogen-based society, where the model is not only zero emissions, but purifies the air when circulating. The vehicle has an electric hydrogen fuel cell system that offers smooth, powerful, and very quiet operation. Thanks to a widely redesigned fuel cell system, a very intelligent configuration and greater aerodynamic efficiency, its range can reach up 650 km, with a refueling time of between 3 and 5 minutes and without more emissions than water vapor.

SCHEDULE

Wednesday, March 11th	**Thursday, March 12th**	**Friday, March 13th**
from 9 am to 7.30 pm	from 9 am to 7.30 pm	from 9 am to 2 pm

OUTDOOR EXHIBITION



OUTDOOR EXHIBITION

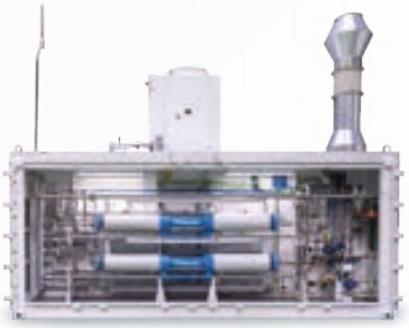
EVO's H2 Terminal Tractor is a new-generation terminal tractor designed and manufactured as a complete OEM platform for ports, logistics hubs, airports and other demanding industrial environments. The vehicle combines a high-efficiency fuel cell system, certified hydrogen storage, and a fully electric drivetrain to deliver zero-emission operation without compromising performance, reliability or operational availability.

Engineered for intensive duty cycles, the H2 Tractor features optimised thermal management, fast refuelling capability and robust system integration to ensure safe and continuous operation in real-world port and industrial applications. Developed with a strong focus on industrialisation and operational validation, it enables the decarbonisation of heavy-duty logistics operations while maintaining the productivity levels required in mission-critical environments.

OUTDOOR EXHIBITION

Hiperbaric
HIGH PRESSURE TECHNOLOGIES

Hiperbaric, the global leader in high pressure technologies, will be showcasing its complete and containerized hydrogen compression solution of up to 1,000 bar. A plug & play concept that includes all the necessary components to compress hydrogen at high pressures in a safe, efficient, and reliable way. This equipment is adaptable to any production level, with a two-stage piston compressor as its main component, allowing suction and discharge pressures from 20 bar to 500 or 950 bar.



OUTDOOR EXHIBITION

INTARCON

The Plug & Play solution integrating both CETIL hydrogen dispenser E30H2 and INTARCON ECO_2HYDROGEN CO2 cooling system streamlines equipment commissioning, significantly reducing on-site installation work and project timelines.

The CETIL E30H2 dispenser, exhibited here, is a reliable product with more than 40 units sold. It safely fills H_2 in trains, trucks, cars, buses, and ships. Easy adaptation to customer needs. Heat exchanger integrated to cool down up to T40. Metrologically certified solution. Filling according to proven protocols and automatic data logging for improved maintenance.

The INTARCON Hydrogen Cooling System T40, exhibited here, is specifically engineered for hydrogen refuelling stations, delivering precise temperature control down to −40 °C. Based on natural refrigerant technology (transcritical CO_2), it ensures high energy efficiency, stable operation and reduced mechanical stress during fast-fill cycles.

Key benefits of this joint solution:

- Optimised performance during H_2 refuelling enabled by precise thermal management.
- Full compatibility between both technologies guaranteed.
- All system connections are fully factory-tested.
- Maximum reliability in communications and operation.
- Reduced commissioning time and minimal on-site intervention and lower project risk.
- Reduced installation and commissioning cost.

OUTDOOR EXHIBITION

Hydrogen Refrigerated Semi-Trailer for Zero-Emission Cold-Chain Logistics

HYTRAIL pioneers Europe's first hydrogen-powered refrigerated semi-trailer, delivering a breakthrough solution to decarbonise cold-chain logistics—one of the sectors with the highest greenhouse-gas emissions and urban noise impact.

The project develops and commercialises a fully integrated hydrogen-powered refrigeration and propulsion system that combines cryogenic liquid hydrogen (LH_2) storage, modular fuel-cell refrigeration, and an energy-recovering electric axle into a single scalable platform.

OUTDOOR EXHIBITION

HYUNDAI

The new Hyundai NEXO introduces significant advancements in exterior design, hydrogen fuel-cell technology, performance, efficiency, and equipment, strengthening its position as a benchmark hydrogen fuel-cell SUV in Europe.

Major upgrades have been applied to the hydrogen fuel-cell system:

- Fuel-cell output: 110 kW
- High-voltage battery output doubled to 80 kW
- Combined system output: 190 kW
- Traction motor power: 204 HP, representing an increase of 41 HP compared to the previous model
- Battery capacity increased to 2.64 kWh
- Hydrogen tank capacity increased by 0.39 kg, reaching 6.69 kg

The Hyundai NEXO represents a substantial step forward in clean hydrogen mobility, delivering zero-emissions driving, leading autonomy within its segment, fast refueling capability, and advanced technology for customers who seek sustainability without compromising practicality.

OUTDOOR EXHIBITION

Dräger

Come visit us at the outdoor exhibition, where you can discover our “Gas Detection Car (GDS Car)”. We have the latest technology in gas detection: live demonstrations, expert advice, and answers to all your safety questions, all in one place:

- Customized solutions for hydrogen safety
- Our own engineering department dedicated to gas detection
- Practical tests with gases relevant to your operations
- Instant questions and answers with Dräger specialists
- No travel, no costs: together, by your side

Plenary SESSIONS

Special PLENARY ADDRESS

moeve Auditorium
March 12th · 09.00 - 09.15

CARLOS BARRASA

moeve

EVP Commercial & Clean Energies at Moeve

Carlos Barrasa has 30 years of experience in the energy sector, with 20 years abroad in the UK and China. He specializes in transformation, sustainability and strategic growth. As Executive VP at Moeve, he leads bioenergy, green hydrogen and customer decarbonization partnerships. He previously held senior roles at Mobil Oil and BP, received the Shanghai Magnolia Award, and holds a degree in Industrial Chemistry and an MBA from IE.

ANTONIO MARTÍNEZ RODRÍGUEZ

enagas renovable

CEO - Enagás Renovable

Antón Martínez is the CEO of Enagás Renovable, a pioneering company and leader in the development of renewable gases in Spain, playing a key role in the energy transition and decarbonization. With more than 20 years of solid experience in the energy sector, Antón has held different positions of maximum responsibility at Enagás, including Director of LNG Terminals, Director of Business Development and M&A, Director of Transformation, member of the Board of Directors of the Trans Adriatic Pipeline, and Chief Transformation & Green H_2 Officer (2017–June 2022), where he led the creation and launch of Enagás Renovable.

Throughout his career, he has also promoted the creation of Axent, a telecommunications operator, and Enagás Services Solutions, a company specializing in consulting, engineering, and operation and maintenance (O&M) services. He is currently a member of several boards of directors, and he served as Chairman of the Board of Axent and Chairman of the Technical Board Committee of TAP, combining strategic vision, industrial leadership, and innovation.

ÁLVARO PÉREZ DE LEMA

CEO - Saeta Yield

General Manager of Saeta Yield since July 2018, and previously Chief Financial Officer (CFO) from October 2014. Álvaro holds a Master's Degree in Industrial Engineering from Universidad Pontificia Comillas (ICAI, 1997) and an MBA from MIT Sloan School of Management (2003). He has extensive professional experience in the energy and infrastructure sectors, having developed his career in Spain, the United Kingdom, and the United States, with a focus on corporate finance, business development, strategic planning, and operational management. Before joining Saeta Yield, he held various leadership roles at Endesa, participating in investment projects, international expansion, and business transformation. He also worked in business consulting during the early years of his professional career

PLENARY SESSION 1

moeve Auditorium
March 11th · 10.30 - 13.00

SCALING COMPETITIVE HYDROGEN PRODUCTION & TRANSPORT

Sponsored by moeve

Moderator

INÉS GÓMEZ DE ITURRIAGA FICA

General Manager of the Spanish Hydrogen Association (AeH2)

"Spain and Andalusia at the heart of the future of Green Hydrogen"

JOAQUÍN RODRÍGUEZ

moeve

Director of Hydrogen & Clean Energies at Moeve

Joaquín Rodriguez joined Moeve (formerly Cepsa) in 2022 as Director of Hydrogen & Clean Energies after seven years at Fisterra Energy, where he developed 2 GW of green hydrogen projects in MENA and renewable assets in Mexico. He previously held senior leadership roles at Endesa and Enel Green Power in strategy, M&A and trading. He has also advised major infrastructure and private equity funds on the Mexican energy market.

"What It Takes to FID: Subsidies, Offtakers, and Disciplined Delivery"

MARIBEL RODRÍGUEZ OLMO

repsol

Hydrogen Director at Repsol

Maribel Rodríguez Olmos, forestry industrial engineer with an MBA from EAE Business School, is Hydrogen Director at Repsol. Since 2007, she has developed renewable hydrogen technologies, starting at Ariema and contributing to over 35 projects. She has evaluated European innovation projects, managed energy initiatives for CDTI, led the Hydrogen Technology Platform linked to the IEA, and promoted industrial renewable hydrogen projects at FRV.

"Industrializing Green Hydrogen: Lessons from Wind"

ESBEN BALTZER NIELSEN

Stiesdal Hydrogen

Director, Sales and Business Development at Stiesdal

Esben Baltzer Nielsen leads sales and business development at Stiesdal Hydrogen. He has extensive experience in renewable energy, sales management, business development, and public affairs. Esben has held senior roles at Vattenfall, spearheading electrification solutions for industry and transport, and has served on key industry boards, including Wind Denmark.

PLENARY SESSION 1

moeve Auditorium
March 11th · 10.30 - 13.00

SCALING COMPETITIVE HYDROGEN PRODUCTION & TRANSPORT

Sponsored by moeve

"Iberdrola, leader in Industrial Electrification"

JORGE PALOMAR HERRERO

Iberdrola

Head of Green Hydrogen at Iberdrola

Iberdrola is accelerating industrial electrification through renewable hydrogen, leveraging over 45 GW of renewable capacity and a diversified global portfolio. With three green hydrogen plants operating in Spain and a fourth under construction, the company is expanding through strategic partnerships to deliver competitive RFNBO energy and integrated decarbonization solutions, advancing a fully sustainable industrial ecosystem.

"LCOH won't drop until we solve the real problem: connecting electrolyzers directly to renewables"

ROTEM ARAD

H2PRO

CBO at H2Pro

Lowering LCOH remains a major challenge. Despite progress in CAPEX reduction and system optimization, costs are not decreasing fast enough, slowing green hydrogen adoption. Electricity is the main cost driver, so reducing LCOH requires supplying electrolyzers with the cheapest power available. This means direct connection to renewables off-grid and operating during profitable windows when grid-connected—an approach enabled by H2Pro's DWE.

"BP's hydrogen strategy: putting it into service where it really matters, close to industrial clusters"

CAROLINA MESA

bp

VP Hydrogen, Europe & MENA at BP

Carolina joined bp in 2012 and has had a variety of roles covering Business Development, Commercial and Planning across Group, Upstream and Solar. As Vice-President of Hydrogen for Europe and the Middle East and North Africa, she currently manages the Hydrogen business in these regions. Prior to joining bp, she spent her career in M&A and Private Equity, covering a number of different industries, including Energy.

"Developments in the hydrogen infrastructures in Spain and Europe"

JESÚS MANUEL GIL JIMÉNEZ

Hydrogen Infrastructures Director at Enagás

Mechanical and Industrial Organization Engineer from UPM and UEM, with a Master's in Energy Business and Project Management and a PdD from IESE. Fellow of MIT Sloan, PMP and Certified Energy Manager. He joined Enagás in 1998 and has over 30 years' experience in energy. He currently leads Hydrogen within the Energy Transition Division and represents the company in key hydrogen and renewable gas associations in Spain and Europe.

PLENARY SESSION 2

moeve Auditorium
March 12th · 09.15 - 11.00

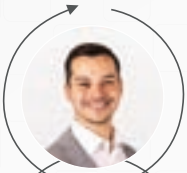
MOBILITY, END USES & HYDROGEN DEMAND

Sponsored by moeve

Moderator

ÁFRICA CASTRO ROSENDE
Vice-President Spanish Hydrogen Technological Platform (PTeH2)

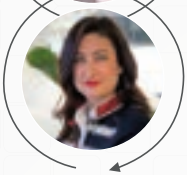
"Maximizing value, Minimising Cost: Designing Hydrogen Projects for Stronger business Cases Before FID"



JUAN PABLO ZÚÑIGA

Engineering Director at Hinicio

Juan Pablo Zúñiga is Global Director of Engineering and Digital Solutions at Hinicio. Since 2018, he has developed international hydrogen projects, working across regulation, engineering and market dynamics, focusing on project structuring and viable business models. He co-founded Hinicio's Chile office and later led operations in Colombia and the USA. He is also co-founder of the Chilean Hydrogen Association and served as its Executive Director.



MONTSERRAT VARAS

Co-founder and General Director at IplanEnergy

Chemical Engineer, Montserrat Varas Roncero has over 23 years of experience managing projects and multidisciplinary teams in energy and refining. She has worked at SENER, Iberdrola Ingeniería and Duro Felguera, and is now CEO and Co-Founder of Iplan Energy in Madrid. She has led international EPC projects and large teams across Oil & Gas, renewables and power generation, and holds executive training from ESADE and EOI.

"President of the State Agency for New Mobility Solutions and Automotive"

FRANZ LOOGEN

President of e-Mobil BW

Franz Loogen has been President of the State Agency for New Mobility Solutions and Automotive, e-mobil BW since 2010. Before then he had been working in the automotive industry for twenty years. His professional career took him along the entire automotive added-value chain. Franz Loogen campaigns for the further development of climate-friendly mobility solutions. His focus here is on modern drives, regenerative energy technology, digital solutions and social developments.

"Hydrogen Mobility - Hype or Reality (Toyota's hydrogen vision"

STEPHAN HERBST

Technical Head Fuel Cell Business and Value Chain at Toyota

Final investment decisions for hydrogen projects are increasing globally, including hydrogen mobility. In mobility we are facing the challenge to align hydrogen vehicles, infrastructure and a TCO that is attractive for customers at the same time and at the same place. We are seeing different implementation speed globally depending on the political framework. This presentation will share some of the success stories and will also outline the contribution that Toyota is making to progress in the development of a Hydrogen Society.

PLENARY SESSION 2

moeve Auditorium
March 12th · 09.15 - 11.00

MOBILITY, END USES & HYDROGEN DEMAND

Sponsored by moeve

"A strategic multipurpose energy Carrier"

JESÚS MONTERO - ESCUDER

ARPA

Director of New Developments at ARPA

Industrial Engineer graduated from the Universities of Zaragoza and Munich, with a PDD from IESE and Master's degrees in Renewable Energies and Energy Efficiency. He has extensive international experience, including ten years in Germany, leading multicultural teams in production, engineering and continuous improvement. Patent holder in Germany, he is proactive, quality-oriented and committed to team success and organizational goals.

"The Key Ally for Maritime, Chemical and Aviation Decarbonisation through E-Metanol"

YANN DUMONT

reolum

Vice-President and CEO at Reolum

La Robla Green is a pioneering project integrating next-generation technologies to produce RFNBO green e-methanol from hydrogen, contributing to European decarbonization under tightening regulations. Yann Dumont, born in Brittany (France), holds a degree in Industrial Engineering from ICAM Lille and has completed executive programs at Georgetown University. He has dedicated his career to renewable energy and in 2019 founded Reolum to develop sustainable wind, solar and biomass projects combining profitability and energy transition.

"Pioneering Hydrogen – A New Powertrain Option for the BMW X5"

DR. KLAAS KUNZE

BMW GROUP

Head of Hydrogen Storage Concepts and Development at BMW

Dr. Klaas Kunze graduated in mechanical engineering from the Technical University of Munich and Ecole Centrale Paris in 1997. He worked at Siemens Power Generation on combined cycle projects before completing a PhD in thermodynamics at TUM on gas turbine combustion. He joined BMW Group in 2004 as a development engineer and since 2014 has led hydrogen storage system development.

"Use of Hydrogen in Mobile Vehicles, Rail Transport and Mobile Power Generators"

KIRILL LYATS

CEO at COOLERGY S.L.

As CEO of COOLERGY, he drives innovation in the liquid hydrogen sector. With extensive experience in team management and oil and gas equipment production, he leads the development of PET and GTL plants to expand capabilities. He is also advancing a 600-ton hookload dirigible project, promoting technological innovation in transport and shaping sustainable energy solutions with his team.

PLENARY SESSION 3

moeve Auditorium
March 12th · 11.30 - 13.30

ENERGY SECURITY PROFILES FOR THE GLOBAL TRANSITION

Moderator

ANTONIO GONZÁLEZ GARCÍA-CONDE

Vice-President of the Spanish Hydrogen Association (AeH2) and President of the Spanish Hydrogen Technological Platform (PTeH2)

AMPARO LÓPEZ SENOVILLA

Secretary of State for Trade, Ministry for Economy, Trade, and Enterprise of Spain

Amparo López Senovilla is Spain's Secretary of State for Trade and President of ICEX since May 2024. She held several senior positions within the Ministry between 2018 and 2024. A State Attorney since 2005, she represented Spain at UNCITRAL Working Group V on insolvency and contributed to EU restructuring frameworks. She has also served on the boards of SEPI, FROB and the Consortium of the City of Toledo.

VALERIE BOUILLON-DELPORTE

Executive Director at Clean Hydrogen Partnership

Valerie Bouillon-Delporte is Executive Director of the Clean Hydrogen Partnership since June 2024. A results-driven marketing and communication professional, she has extensive experience in business development, marketing and strategy within international companies. She is known for building strong value propositions, working across cultures and businesses, and is multilingual in French, English and German.

RIAD MEDDEB

Director of the Sustainable Energy Hub at United Nations Development Programme (UNDP)

Riad Meddeb is the Director of the UNDP Sustainable Energy Hub, where he leads global efforts to advance sustainable energy access and a just energy transition across more than 170 countries. He has previously served as Senior Principal Advisor on Small Island Developing States (SIDS) and as Interim Director of the UNDP Global Centre for Technology, Innovation and Sustainable Development in Singapore. Before joining UNDP, he worked as an economist at UNCTAD and the ILO, and lectured at the University of Paris V. He holds degrees in Economics and Finance from the Université Paris I PanthéonSorbonne

PLENARY SESSION 3

moeve Auditorium
March 12th · 11.30 - 13.30

ENERGY SECURITY PROFILES FOR THE GLOBAL TRANSITION

ÖZLEM DUYAN

Head of Research of the Hydrogen Council

Özlem Duyan is Head of Research at the Hydrogen Council, a global CEO-led coalition of 140 companies and investors across more than 20 countries. She has extensive expertise in analysing technologies and policies to achieve climate and energy transition goals. She has worked as a consultant and project manager with industry, governments and non-profit organizations worldwide.

DANIEL FRAILE

Chief Policy & Market Officer at Hydrogene Europe

Daniel Fraile is Chief Policy and Market Officer at Hydrogen Europe, leading policy and market intelligence. He has 20 years of experience in energy policy, renewables, hydrogen and international cooperation. An engineer with master's degrees in telecommunications and renewable energy, he previously led market intelligence at WindEurope and worked in power-to-gas consulting, Solar Power Europe, CAN-Europe and Iberdrola.

AYFER VEZIROĞLU

President and CFO of International Association for Hydrogen Energy (IAHE)

Ayfer Veziroğlu is an expert in hydrogen transportation systems and serves as President and CFO of the International Association for Hydrogen Energy (IAHE). She earned a Ph.D. from Instituto Superior Técnico in Lisbon in 2013 and a BSc from Marmara University in 1999. She publishes widely on hydrogen energy and leads several IAHE initiatives, including the International Journal of Hydrogen Energy and the Veziroglu World Hydrogen Energy Trust.

PLENARY SESSION 4

moeve Auditorium
March 13th · 09.00 - 11.00

TAILORING ENERGY SYSTEMS FOR A SECURE TRANSITION

JOAN GROIZARD PAYERAS

Secretary of State for Energy. Ministry for the Ecological Transition and the Demographic Challenge. Government of Spain

Renewable energy engineer passionate about the technical, economic, social and environmental challenges related to the transition towards a sustainable, low carbon economy. Currently Director-General at IDAE, in the Ministry for the Ecological Transition.

DR. ELKIN PÉREZ ZAMBRANO

Secretary General of the Ministry of Mines and Energy of Colombia

Law graduate from the Autonomous University of Colombia, specialized in Public Management and Infrastructure Law, currently pursuing a Master's in Senior Management of Public Resources. He has over 14 years' experience in the public sector, holding senior roles at Bogotá City Council, IDPAC, the Senate and SAE. His expertise includes legal and administrative management, public procurement, human talent, asset management and public finance.

SVEN SCHUPPENER

Associate Expert at the United Nations Industrial Development Organization

Sven Schuppener is a Hydrogen Expert at UNIDO, contributing to the Global Programme for Hydrogen in Industry and supporting developing countries in advancing sustainable hydrogen solutions. His work focuses on green hydrogen clusters, policy development and international partnerships, including standards, skills and innovation for a just transition. He represents UNIDO at global events on hydrogen and sustainable industry.

JENS GEIER

Member of the European Parliament (MEP)

Jens Geier is a Member of the European Parliament since 2009 with the S&D Group. He focuses on industrial policy, energy and budgetary affairs, supporting the green transition and Europe's competitiveness. He has served as Chair of the Committee on Budgetary Control and Vice-Chair of ITRE. Before the European Parliament, he worked in public administration and German political institutions on European policy and strategy.

Parallel SESSIONS

PARALLEL SESSIONS SCHEDULE

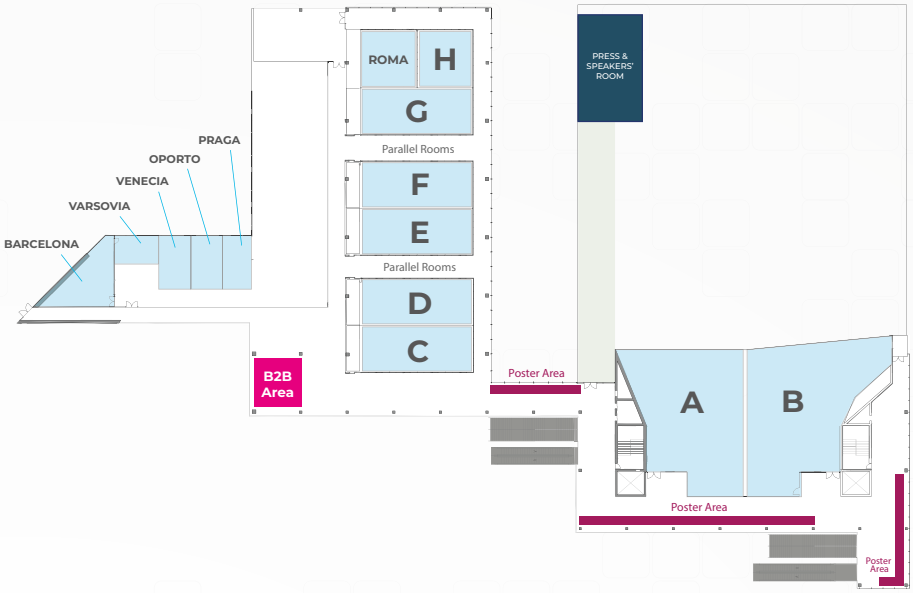
DATE	SESSION	TIME	ROOM A	ROOM B	ROOM C
WED 11TH	1	14:30 - 16:10	Hydrogen production: solar, thermochemical and bio-processes	AEM electrolyzers: materials, components and stacks	SOEC electrolyzers: materials, components and stacks
	2	17:40 - 20:00	Hydrogen production: solar, thermochemical and bio-processes	AEM electrolyzers: materials, components and stacks	SOEC electrolyzers: materials, components and stacks
THU 12TH	3	15:00 - 17:00	Hydrogen production: solar, thermochemical and bio-processes	Alkalyne electrolyzers: materials components and stacks	Electrocatalysts and electrodes for electrolyzers and fuel cells
	4	17:30 - 19:30	Catalysts for hydrogen production and conversion	PEM electrolyzers: materials components and stacks	Electrocatalysts and electrodes for electrolyzers and fuel cells
FRI 13TH	5	11:30 - 13:30	Catalysts for hydrogen production and conversion	PEM electrolyzers: materials components and stacks	Electrocatalysts and electrodes for electrolyzers and fuel cells

PARALLEL SESSIONS SCHEDULE

ROOM D	ROOM E	ROOM F	ROOM G	ROOM H
PEM fuel cells: materials, components and stacks	Hydrogen storage: carriers	Hydrogen systems modelling	Production of hydrogen derivatives	LCSA environmental and social impacts
PEM fuel cells: materials, components and stacks	Hydrogen storage: carriers & gas/liquid	Hydrogen systems modelling	Regulations, codes & standards	Other hydrogen applications
Roadmaps, strategies, valleys and networks	Hydrogen storage: underground	Hydrogen systems modelling / Hydrogen transport and distribution	Land transportation applications	Techno-Economic Analysis / Other hydrogen applications
Hydrogen combustion	Balance of plant and integrated systems	Hydrogen infraestructure for transport, distribution and dispensing	Aviation, ships and trains applications	Safety
Hydrogen combustion	Balance of plant, integrated systems and modelling	Hydrogen infraestructure for transport, distribution and dispensing	Market and Techno-Economic Analysis	Safety / LCSA storage carriers

PARALLEL SESSIONS LOCATION

FLOOR 1



Oral COMMUNICATIONS

WEDNESDAY, 11TH MARCH

ROOM A
HYDROGEN PRODUCTION: SOLAR, THERMOCHEMICAL & BIO-PROCESSES

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID236 Impact of type of coupling between an electrolysis plant and renewable generation plant at the cost of renewable hydrogen**
C. Ríos, P. Molina, C. Martínez de León and J.J. Brey
Loyola University Andalucía, Dos Hermanas, Spain

14:50 **ID348 Techno-economic comparison of off-grid and on-grid solar hydrogen SOE systems across the Mediterranean**
M.B. Falasconi, G. Barreto, J. Gonzalez Aguilar, M. Romero, A. Giaconia and P.G. Santori
IMDEA Energía, Móstoles, Spain; ENEA Casaccia Research Center, Rome, Italy; SNAM S.p.A., Milan, Italy

15:10 **ID185 Experiments on photocatalytic water splitting**
C. Pollerberg, M. Bollmann, G. Marginean, N. Kazamer, U. Pietschmann, I. Tausendfreund and S. Grothe
Westphalian University of Applied Sciences, Gelsenkirchen, Germany

15:30 **ID290 Design and Demonstration of a Hybrid Artificial/Natural Light Photoreactor for Pilot-Scale Photocatalytic Water-Splitting**
A. Abbas, A. Hakki and K.E. Kakosimos
Texas A&M University at Qatar, Doha, Qatar; Hamad Bin Khalifa University, Doha, Qatar; Aristotle University of Thessaloniki, Greece

15:50 **ID262 Reticulated Porous Ceramic (RPC) structure of $Sr_2CoNb_{0.3}Ti_{0.7}O_{6-\delta}$ perovskite for green H_2 production by thermochemical water splitting**
A. Pérez, M. Orfila, M. Linares, R. Sanz, J. Marugán, R. Molina and J.A. Botas
URJ, Móstoles, Spain

16:10 **ID28 Study of renewable energy and hydrogen production, storage, and distribution from biomass as a vector for sustainable transition**
E. Cordobés, J.M. Sánchez-Hervás, J. Pérez, J. García, D. Cazorla-Amorós, D. Costa, E. Tapia, J.M. Serra, J.C. Serrano-Ruiz and T. Guerrero
Euroinnovación Enterprise, Elche, Spain; CIEMAT, Madrid, Spain; ACTECO, Ibi, Spain; Greene Enterprise, Elche, Spain; Universidad de Alicante, Alicante, Spain; Greene W2H2, Elche, Spain; Hydrogen Onsite, Lujua, Spain; ITQ, Valencia, Spain; Universidad de Loyola, Sevilla, Spain; Protio Power, Amorebieta-Echano, Spain

16:30 **ID241 Sustainable Hydrogen Generation through Biomass-derived Toluene Steam Reforming**
R. Peláez, S. Falzarano, P. Marín and S. Ordóñez
University of Oviedo, Oviedo, Spain; University of Naples "Federico II", Naples, Italy

16:50 **ID264 Enhancing Continuous Biohydrogen Production through Co-Digestion of Agro-Industrial and Food Wastes**
J.J. Montoya Rosales, R. Muñoz Torre and O. García Depraect
University of Valladolid, Valladolid, Spain

ROOM B
AEM ELECTROLYZES: MATERIALS, COMPONENTS & STACKS

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID189 A Segmented Bipolar Plate as a Versatile In Situ Diagnostic Tool for Local Current Density Analysis in Anion Exchange Membrane Water Electrolysis and Proton Exchange Membrane Water Electrolysis**

D. Garcia-Sanchez, J. Torrero, B. Kimmel, A.S. Gago and K.A. Friedrich

DLR/German Aerospace Center, Stuttgart, Germany; University of Stuttgart, Stuttgart, Germany

14:50 **ID71 Scalable NiFe-Layered Double Hydroxide Catalysts for High-Performance AEMWE: From Lab to Industry**

G. Abellán, A. Seijas-Da Silva, A. Hartert, V.B. Vert, V. Lloret and J. Romero

Universitat de València, Paterna, Spain; Matteco Team S.L., Paterna, Spain

15:10 **ID116 Hierarchical Ni-Ni-NiFe electrode structures for oxygen evolution reaction produced by powder metallurgy and electrochemical deposition**

C.E. Höß, M. Kunrath, M. Wiedemann, D. Woelk, M. Cieluch, S. Ergüven, P. Haddadi, M. Peichert, N. Kazamer, C. Schaak, A. Bund, C. Pollerberg and M. Brodmann

Technische Universität Ilmenau, Ilmenau, Germany; BleiStahl Services GmbH & Co. KG, Wetter-Ruhr, Germany; RKV Oberflächentechnik, Schwäbisch Gmünd, Germany; University of Applied Sciences, Gelsenkirchen, Germany; Ruhr University Bochum, Bochum, Germany; ProPuls GmbH, Gelsenkirchen, Germany

15:30 **ID131 Electrodes of relevant size for industrial applications prepared by magnetron sputtering at oblique angle deposition geometries**

J.M. Luque-Centeno, A. Carmo, M. Martínez-Olaizola, A.R. González-Elipe, F. Yubero, M. Olías, S. Corrales, J.J. Brey and J. Gil-Rostra

ICM-CSIC -US, Sevilla, Spain; H2B2 Electrolysis Technologies, Dos Hermanas, Spain; Universidad Loyola Andalucía, Dos Hermanas, Spain

15:50 **ID230 Innovative PGM-free electrocatalysts for HER under AEMWE conditions based on NiMo and produced by magnetron sputtering**

A. Alba, A. Villamayor, L. Mendizabal and E.G.-Berasategui

Tekniker, BRTA, Éibar, Spain

16:10 **ID306 Layered Perovskite Nanofibers with Tailored Entropy for Alkaline Water Electrolysis**

L. Mathur, T.O. Aworindeull, W. Yang, L. Vega, M.T. Ahmed Khaleel and S. Sengodan

Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates; Research & Innovation Center for Graphene and 2D Materials (RIC-2D), Abu Dhabi, United Arab Emirates

16:30 **ID365 Upscaling Solution-Processed NiFe-Based Nanocomposite Electrocatalysts for Anion Exchange Membrane Electrolysis**

L. Forzanini, A. Saura-Avilés, F. Garcés Pineda, L.K. Acosta, R. Abargues, J.R. Galán Mascarós and S. Giménez

INAM, Universitat Jaume I, Castellón, Spain; ICMUV, Paterna, Spain; ICIQ-CERCA, BIST, Tarragona, Spain; ICREA, Barcelona, Spain

16:50 **ID346 Corrosion Behaviour of Metallic Components in Direct Seawater Electrolysis**

S. Bhowmick, J.F. Quintero Salinas, F. Vucko, A. Valencia Ramirez, F. Alcaide, N. Kazamer, U.W. Rost and M. Prestat

French Corrosion Institute, Brest, France; Cidetec, BRTA, Donostia, Spain; ProPuls GmbH, Gelsenkirchen, Germany; Westphalian University of Applied Sciences, Gelsenkirchen, Germany; University of Applied Sciences, Rüsselsheim, Germany

WEDNESDAY, 11TH MARCH

ROOM C
SOEC ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID36 Hydrocarbons steam reforming enhanced by an electrochemically-driven oxygen-membrane reactor**
P. Sintes, F. Toldra-Reig, L. Almar, L. Coloma de la Fuente, S. Escolástico, A. Albelda, D. Catalán, L. Iniesta and J.M. Serra
ITQ, Valencia, Spain

14:50 **ID158 Transition metal doped Ni/GDC synthetized by different methods as fuel electrode materials for co-electrolysis in SOEC**
E. Ruiz, V. Cascos, E. Millán, A. Rivera and M.J. Escudero
CIEMAT, Madrid, Spain; UAM, Madrid, Spain

15:10 **ID201 Operating Strategies to Mitigate Thermal Gradients during Methane Recirculation in Pressurized Solid Oxide Co-Electrolysis**
M. Gross, M. Riegraf, M.P. Heddrich and S.A. Ansar
DLR/German Aerospace Centre, Stuttgart, Germany

15:30 **ID353 Demonstrating Offshore Pressurised High-Temperature Co-Electrolysis for Power-to-X within the H_2Mare PtX Wind Project**
M. Metten, F. Stährfeldt, C. Schnegelberger, J. Hollmann, M. P. Heddrich and S.A. Ansar
DLR/German Aerospace Centre, Stuttgart, Germany

15:50 **ID376 Carbon dioxide vs hydrogen: the challenge of high-temperature co-electrolysis of H_2O and CO_2 in molten carbonates**
M. Cassir, V. Lair, A. Ringuedé, C. Bouallou, R. Vuillemier and C. Bessada
CNRS, PSL, Paris, France; CES-MINES ParisTech, Paris, France; ENS-PASTEUR, PSL, CNRS, Paris, France; CEMHTI-CNRS, Orléans, France

16:10 **ID349 Proton-Conductor Solid Oxide Electrolysis Cells prepared by Physical Vapor Deposition: Physico-Chemical Characterization and Preliminary Electrochemical Performance**
E. De Bona, F. Torazzi, S. Zorzi, M. Bordin, V.M. Sglavo and M. Testi
Fondazione Bruno Kessler, Trento, Italy; University of Trento, Trento, Italy

16:30 **ID78 Correlative 3D Microstructural Analysis and Performance Degradation Mechanisms in Segmented Ni-YSZ Solid Oxide Electrolysis Cells**
H. Chen, A. Iranzo and X. Xu
Harbin Institute of Technology, Shenzhen, China; ETSI-US, Seville, Spain

16:50 **ID367 1D, Multiphysics and transient model development for SOEC single cell and short stack simulation**
M. Castrillo and P. Ocón
CIDAUT, Boecillo, Spain; UAM, Madrid, Spain

ROOM D
PEM FUEL CELLS: MATERIALS, COMPONENTS & STACKS

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID74 CFD-driven Study of Wettability-patterned Gas Diffusion Layers for Enhanced Performance and Water Management in PEM Fuel Cells**

D.F. Rozo-Oviedo and A. Iranzo

ETSI-US, Seville, Spain

14:50 **ID95 Polysulfone-Based Membranes Modified with Ionic Liquids and Silica for Potential Fuel Cell Applications**

E. Fernández-Llamazares, T.H. Van Nguyen, P. Verdugo, A. Gual, Diogo M.E. Garcia, C. Delgado Simão, C. García Bellido, M. Díaz de los Bernardos and A. Nogalska

Eurecat, Tarragona, Spain; Eurecat, Mataró, Spain; Universitat Rovira i Virgili, Tarragona, Spain

15:10 **ID125 Replacing per- and polyfluoroalkyl substances in high temperature proton exchange membrane fuel cell electrodes**

A. Schechterle, D. Schonvogel, H. Niehoff and M. Wark

DLR/German Aerospace Center, Oldenburg, Germany; University of Oldenburg, Oldenburg, Germany

15:30 **ID355 Impact of the Membrane-Electrode Interface on PEMFC Performance and Durability**

J. Parisot, A. El Kaddouri, J. Dillet and O. Lottin

Université de Lorraine, CNRS, LEMTA, Nancy, France

15:50 **ID276 Electrochemical hydrogenation pathways in graphene: implications for hydrogen storage and fuel cell interfaces**

D. Bahamon, Y. Soong, Y. Li, N. Singh, M. Khaleel, M. Lozada-Hidalgo and L.F. Vega

Khalifa University of Science and Technology. Abu Dhabi, United Arab Emirates; The University of Manchester, Manchester, United Kingdom

16:10 **ID45 The impact of propane impurities from repurposed gas pipelines on PEM FC performance and durability**

A. Jolly, E. Cossar and K. McCay

Sintef AS, Trondheim, Norway

16:30 **ID49 Real-world hydrogen consumption, durability, operation cost and environmental impact of heavy-duty fuel cell vehicles**

F. Tinaut, R. Novella, M. Lopez-Juarez and A. Ferri-Sirvent

UPV, Valencia, Spain

16:50 **ID148 Impact of heavy-duty transport conditions on a PEMFC: a sensitivity and durability study on metal and carbon stacks**

S. Escribano, M. Trégaro, E. Fensterle, F. Wilhelm, R. Al Khamissi and P. Gazdzicki

University Grenoble Alpes – CEA, LITEN, Grenoble, France; Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW), Ulm, Germany; German Aerospace Center/DLR, Stuttgart, Germany

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ROOM E
HYDROGEN STORAGE: CARRIERS

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID194 Long-Distance Transport Model for Hydrogen in Liquid Carriers**
R. Bachler, W. Siegl, K. Rainwald, P. Oberschachner, M. Köberl, F. Radner, B. Loder, A.Rezqita, G.Wagner, F. Winkler and A. Trattner
HyCentA Research GmbH, Graz, Austria; Verbund Green Hydrogen GmbH, Vienna, Austria; OMV Downstream GmbH, Vienna, Austria; Graz University of Technology, Graz, Austria

14:50 **ID129 Experimental results for LOHC Dehydrogenation and Kinetic modelling**
C. Panzone, A. Chappaz, K. Alconada and V.L. Barrio
University Grenoble Alpes, CEA, Grenoble, France; UPV/EHU, Bilbao, Spain

15:10 **ID240 Industrial and Waste-derived Aromatic Oils as Hydrogen Carriers: Hydrogenation Studies**
S. Ordóñez, E. Diaz, L. Faba, I. Prieto and S. Cañete
University of Oviedo, Oviedo, Spain

15:30 **ID312 Exolum Immingham LOHC Demonstration**
C. Esteban
Exolum Solutions Energies, Spain

15:50 **ID44 Catalyst development and process design for direct and indirect methanol syntheses from CO_2 for hydrogen storage**
S. Wohlrab, H. Junge, H. Mena, U. Armbruster, S. Peters, S. Sokolov and A. Carbajal
Leibniz Institute for Catalysis, Rostock, Germany

16:10 **ID47 Methanol reformer with innovative gas purification for H_2 supply to an LT PEMFC – from lab scale to pilot plant**
H. Junge, H. Kempf, S. Peters, I.A. Carbajal Ramos, M.A. Ur Rehman, M. Haumann and S. Wohlrab
Leibniz Institute for Catalysis, Rostock, Germany; Friedrich-Alexander-University, Erlangen, Germany

16:30 **ID86 Green methanol towards novel multifuel synthesis conversion processes**
D.A Rodríguez-Pastor, S. Fogel, S. Unger, V.M. Soltero and R. Chacartegui
ETSI, Seville, Spain; Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany; EPS-US, Seville, Spain

16:50 **ID301 The Role of transition metals addition in Hydrogen Purification, Storage, and Compression Properties of Ti/V-Based Alloys**
J.A. Villajos, M.J. Jezeh, M. Baricco, E.M. Dematteis, Á.L. Ortiz Seco, D. Ursueguia and I. Arias
CIIAE, Cáceres, Spain; University of Turin, Torino, Italy; Extremadura University, Badajoz, Spain; ArcelorMittal Global R&D, Spain

ROOM F
HYDROGEN SYSTEMS MODELLING

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID32 Experimental Validation of Gas Dispersion Models in a Relevant Environment using Helium as a Hydrogen Surrogate**
E. Vadillo, F. Morente, M. Minguez, A. Errarte, A. Mialdun and M.M. Bou-Ali
Tecnalia Research & Innovation, Derio, Spain; Mondragon Unibertsitatea, Mondragon, Spain

14:50 **ID134 Driving cost-efficient hydrogen: techno-economic and safety insights into refuelling stations optimization**
A. Beloki, P. Pérez, I. Madinabeitia, E. Andrés, E. Fernández, I. Ortega-Fernández, U. Fernández-Gámiz, J. González and C. Fúnez
Tecnalia, BRTA, San Sebastián, Spain; UPV-EHU, Vitoria, Spain; Iberdrola Clientes, S.A.U., Bilbao, Spain

15:10 **ID173 Virtual Reality Models for Training in Hydrogen Facilities: An Innovative Approach to Safe and Efficient Education**
D. Jiménez Ruiz, A. Herranz and G. Greco
FHA, Huesca, Spain

15:30 **ID272 Process Modeling and Equipment Sizing for Green Hydrogen Production under Renewable Energy Variability**
B. Manías and I. Bonilla-Campos
AIN, Cordovilla, Spain; UPN, Pamplona, Spain

15:50 **ID303 A techno-economical study of hydrogen production from trapped hydropower**
K. Strandos and V.M. Oltedal
Western Norway University of Applied Sciences, Bergen, Norway; Norconsult Norge AS, Bergen, Norway

16:10 **ID407 Comprehensive Multiphysics Simulation Framework for the Hydrogen Economy**
T. Stelmach
Ansys, Sheffield, United Kingdom

16:30 **ID254 Multiphysical design of multilayered components for hydrogen storage and distribution outdoors**
Á. Valverde-González, E. Roque, D. González-Rodríguez and F. Montero-Chacón
Loyola University Andalucía, Dos Hermanas, Spain; IMDEA Materials Institute, Getafe, Spain

16:50 **ID128 Predicting Hydrogen Gas Production from Methane Pyrolysis Powered by Magnetic Induction Heating: An Application of a Hybrid Bayesian Neural Network**
E. Uchechukwu Iwuchukwu, F.N. Wiggers and C.A. Oller do Nascimento
University of São Paulo, São Paulo, Brazil

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ROOM G
PRODUCTION OF HYDROGEN DERIVATIVES

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID248 Can a Flexible PEM Electrolyser Revolutionize Hydrogen Derivative Production?**
S. Rehman, R. Serna Guerrero and A. Santasalo-Aarnio
Aalto University, Aalto, Finland

14:50 **ID23 Modular Electrochemical Reactor for CO_2 Capture and Conversion**
M.D. Fernández-Martínez, R. Miró and A. Gual
Universitat Rovira i Virgili, ETS d'Enginyeria, Tarragona, Spain; Eurecat, Tarragona, Spain

15:10 **ID30 Efficient CO_2 Methanation via Ni and Ni–CeO_x Catalysts for Power-to-Gas Applications**
M. Pedrola, R. Miró, I. Vicente and A. Gual
Eurecat, Tarragona, Spain

15:30 **ID328 Biomethane as an Energy Carrier for Green Hydrogen Storage: A Pathway Towards CCUS**
V. D. Mercader, C. Gimeno-Izquierdo, P. Durán, P. Aragüés-Aldea, E. Francés, J. Herguido and J.A. Peña
I3A, Zaragoza, Spain

15:50 **ID360 Usage of renewable H_2 for biogas upgrading with a Packed Bed Membrane Reactor (PBMR). Parametric optimization**
P. Aragüés-Aldea, P. Durán, V.D. Mercader, E. Francés, J. Herguido and J.A. Peña
I3A, Zaragoza, Spain

16:10 **ID315 Turning Flexibility into Opportunities in e-Methanol Production: A Techno-Economic Optimization Approach for Power-to-X Projects**
J. Grosclaude
Rely Solutions, Nanterre, France

16:30 **ID200 Design and Assessment of a Renewable Microgrid for Ammonia Industrial Processes with Hydrogen Utilization**
S.J. Navas, G.M. Cabello González, F.J. Pino and J.J. Guerra
ETSI-US, Sevilla, Spain

16:50 **ID428 Entrained-Flow Gasification of Biomass as a Clean Source for Fuels**
K.R. Radtke
Thyssenkrupp Uhde GmbH, Dortmund, Germany

ROOM H
LCSA ENVIRONMENTAL & SOCIAL IMPACTS

14:30 - 17:10 **PARALLEL SESSION 1**

14:30 **ID321 Life Cycle Assessment of a Microfluidic Membrane less Electrolytic Cell for Hydrogen Production**

J.F. Gutierrez-Espinoza, W. Zhao, J. Calvy, C.M. Fernández-Marchante and J. Lobato

University of Castilla-La Mancha, Ciudad Real, Spain; Eden Tech, Paris, France

14:50 **ID180 Impacts of the Energy Portuguese Grid Mix on Hydrogen Production through a 5th Generation Alkaline Electrolyzer: a Life Cycle Approach**

R.K. Martins and E. Surra

HyLab - Green Hydrogen Ccollaborative Laboratory, Sines, Portugal

15:10 **ID43 Simulation-based life cycle assessment and exergy assessment of SOEC primary production**

T. Veiga Barreiros, P. Völs, Y.T. Özcan, A.D. Laplana, M.V. Pereira da Luz, S. Alacacayir, L. Sandig-Predzymirska, M.A. Reuter and A. Charitos

Technische Universität Bergakademie Freiberg, Freiberg, Germany; Minviro, London, United Kingdom; SMS-Group, Monchengladbach, Germany

15:30 **ID298 Environmental Life Cycle Assessment of Water Based Tape Casting for Solid Oxide Electrolyser half-cell production**

R. Stropnik, I. Vakulko, A. Denissenko and X. Sun

University of Ljubljana, Ljubljana, Slovenia; Elcogen AS, Harju Makonde, Estonia; Technical University of Denmark, Lyngby, Denmark

15:50 **ID319 Integrating Sustainability and Safety into the Hydrogen Value Chain: Methodological Advancements in the Last Decade**

K. El Jardali, K.B. Hnich, D. Iribarren and J. Dufour

IMDEA Energy, Móstoles, Spain; URJ, Móstoles, Spain

16:10 **ID175 Evaluating the Absolute Environmental Sustainability of Renewable Hydrogen: Is Focusing on GHG Emissions Enough?**

Y. Nosrat Tajoddin, E. Cordioli, Z. Ali and M. Testi

HyRES Unit, Fondazione Bruno Kessler, Trento, Italy

16:30 **ID229 What Is the Most Environmentally Sustainable Strategy to Supply Green Hydrogen to Europe?**

S. Serghini, E. Mignard, S. Muller and G. Sonnemann

University Bordeaux, CNRS, Bordeaux, France; BRGM, Orléans, France

16:50 **ID244 Pre-Normative Research on Hydrogen Release Assessment (NHyRA) project: state of the art about H_2 emissions**

A. Guzzini, V. Bescos Roy, J. Clavreul, A. Kostereva, P. Piras, I. Pagazaurtundua, M. Pellegrini, M. Robino, C. Saccani, A. Saccardi, V. Troisi, T. Vogt and H. Wigger

University of Bologna, Bologna, Italy; Enagas Transporte SAU, Zaragoza, Spain; Engie Lab Crigen, Stains, France; Gerg, Brussels, Belgium; Bruno Kessler Foundation, Trento, Italy; SNAM SpA, Donato Milanese, Italy; DLR/German Aerospace Center, Oldenburg, Germany

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ROOM A
HYDROGEN PRODUCTION: THERMOCHEMICAL & BIO-PROCESSES

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID281 Turning food waste into hydrogen: long-term performance of lactate-driven dark fermentation**
O. García-Depraect, C. Martínez-Fraile and R. Muñoz
University of Valladolid, Valladolid, Spain

18:00 **ID310 Production of renewable hydrogen from biomass waste using an optimized treatment train at pilot scale**
E. Tuxans, F. Medina, M. Constantí, D. Montané, R. Rafecas and T. De La Torre
ACSA Sorigué, Barcelona, Spain; Universitat Rovira i Virgili, Tarragona, Spain

18:20 **ID386 Industrial Cotton Residues as a Feedstock for Hydrogen-Rich Syngas: The LOOPER® Approach**
A. Bubalo, A. Sedić and D. Maljković
Indeloop Ltd., Zagreb, Croatia

18:40 **ID283 SHINEFLEET PROJECT: Multi-Fuel Compact Renewable Hydrogen generator for Mobility Applications**
A. Nieto, J. Carrero, J.M. Sánchez, C. Jiménez-Borja, I. Moraleda, D. Úbeda, E. Simón, G. Monjas, A. Escobar, J.L. Carreras, A. del Río, C. Fernández-Caballero, E. Alcolea and M.A. Vega
Técnicas Reunidas, Madrid, Spain

19:00 **ID103 Ammonia cracking decarbonization by an electrified catalytic membrane reactor**
A. Arratibel, D. Zapater, J. Ollo and J. Zuñiga
Tecnalia, BRTA, Donostia, Spain

19:20 **ID165 Can cellulose nanofibril membranes find their application in green hydrogen production with SO_2 depolarized electrolyser?**
P. Narayana Prasad, M. Gasik and A. Santasalo-Aarnio
Aalto University, Aalto, Finland

19:40 **ID368 Asymmetric and symmetrically washcoated dense ceramic membranes activated with Pt for water thermal splitting and high temperature H_2 purification**
V. Saraceni, A. Bartoletti, A. Fasolini, A. Gondolini, E. Mercadelli, A. Sanson and F. Basile
University of Bologna, Bologna, Italy; CNR - ISSMC, Faenza, Italy

ROOM B
AEM ELECTROLYZES: MATERIALS, COMPONENTS & STACKS

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID09 Facile Removal of Impurities from Urine via Calcium Hydroxide Precipitation for Enhanced AEM Electrolysis Performance**

M. Ahn, B. Kang and M. Soo Kim

Seoul National University, Seoul, South Korea; Korea Institute of Machinery & Materials, Daejeon, South Korea

18:00 **ID85 A market status update on AEM Electrolysis**

A. Zorniger and J.M. Lopez Gallego

Power to Hydrogen, Columbus, United States

18:20 **ID111 Modular AEM electrolysis: low-CRM routes towards multi-MW hydrogen plants**

N. Bausá Martínez

Técnicas Reunidas, S.A., San Fernando de Henares, Spain

18:40 **ID203 Development and manufacturing of innovative AEM electrolysis components to produce green hydrogen using wind energy**

D. Minudri, A. Gallastegui, V. Oestreicher, E. Fernández, M. Sanchez-Molina, E. Amores, G. Sevilla and J. Liu

Tecnalia, BRTA, Donostia, Spain; Nordex Eloectrolyzers S.L., Puertollano, Spain

19:00 **ID212 Study on shunt current distribution in an anion exchange membrane alkaline water electrolyzer**

T.T. Do and Y.S. Chen

National Chung Cheng University, Chiayi, Taiwan

19:20 **ID214 Operation of a commercial multi-module Anion Exchange Membrane electrolysis plant in dynamic conditions: an insight into experimental results**

B. Bulzacca, A. Guzzini, M. Pellegrini, C. Saccani, M. Ferretti, Y. Shi, G. Nigliaccio and C. Renzi

University of Bologna, Bologna, Italy; Elektrovej, Lyngby, Denmark; ENEA, TERIN-DEC-H2V, Bologna, Italy

19:40 **ID323 Scaling Up AEM Water Electrolysis: Development and Performance Evaluation of a 100 cm² Electrolyzer Stack**

A. Martins, M. Garcia-Montolio, G. Martí, S. Vilaró, G. Pérez-Pi, S. Martinez, P. Bosch-Jimenez, J. Crespo, C. Salazar, L. Salvá Pitarch, T. Dominguez Sánchez and E. Borràs

Leitat, Terrassa, Spain; Los Arcos, Spain; Castelló de la Plana, Spain; Huelva, Spain

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ROOM C
SOEC ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID295 Environmental and Economic Life Cycle Assessment of PVD Coatings for Solid Oxide Electrolysers Interconnects**
R. Stropnik, M. Mori, P. Nazarovs, J. Puranen and J. Zidelunis
University of Ljubljana, Ljubljana, Slovenia; Sia Naco Technologies, Riga, Latvia; Elcogen OY, Vantaa, Finland

18:00 **ID383 Symmetrical solid oxide cells: enhancing high-temperature electrolysis and fuel cell applications**
A. Moratalla, A. Pardo, M.R. Serrano de la Cruz, I. Ayuso, N. Díaz, A. Iranzo, F.J. García-García, C. Montes and R. Campana
CNH2, Puertollano, Spain; Sevilla University, Sevilla, Spain

18:20 **ID120 Potential of SOE technology from an off-taker perspective. EfiSOEC project latest results**
A. Martínez González, B. Moreno Burriel, A. Hernández Rodríguez, B. Herrero Badorrey and E. Verdú Sánchez
Repsol Technology Lab., Móstoles, Spain

18:40 **ID123 24/7 ZEN Reversible SOEC/SOEFC System for a Zero Emissions Network Energy System (HORIZON-JTI-CLEANH2-2022-1 Project)**
M. Martín, M. Martín and G. Reyes
INERCO, Sevilla, Spain

19:00 **ID159 Process simulation and techno-economic analysis of hydrogen production with concentrated solar heat and SOEC for Japan**
Y. Tanaka, T. Roeder and N. Monnerie
AIST, Tsukuba, Japan; DLR/German Aerospace Center, Cologne, Germany; Aachen University, Aachen, Germany

19:20 **ID174 Testack/Tecnopropia project Design challenges in SOEC test benches**
E. Sams, D. Muñoz, J. Brey, C. García, A. Chumilla, M. Sánchez, S. Corrales and A. Castro
H2B2 Electrolysis Technologies, Dos Hermanas, Spain

19:40 **ID275 Electricity and Steam Production Through Thermal Energy Storage for Green Hydrogen Generation**
P. Santamaría, D. Muñoz, E. Sams, M. Ramos, A. Martínez, C. Martín-Montalvo and J.J. Brey
RPow Consulting S.L., Sevilla, Spain; H2B2 Electrolysis Technologies S.L., Dos Hermanas, Spain

ROOM D
PEM FUEL CELLS: MATERIALS, COMPONENTS & STACKS

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID151 Design and development of a prototype PEM fuel cell stack**

G. Moreno-Fernandez, C. Delgado, A. Abiola, J.M. Andújar, J.M. Barquin, T. Guerrero and F. Segura

Protio Power SL, Amorebieta-Etxano, Spain; CITES, University of Huelva Campus El Camen, Huelva, Spain

18:00 **ID144 Optimization of the cathodic columnar plate for a portable PEMFC to be operated under passive conditions**

L. Duque, P. Garcia-Salaberri, J. Ureña, M. Alvarez-Leal and A.M. Chaparro

CIEMAT, Madrid, Spain; ESCET, URJ, Móstoles, Spain; CETEMET, Linares, Spain

18:20 **ID246 Impact of Operating Parameters on PEM Fuel Cell Performance with an Obstructed Flow Field Desig**

G.M. Cabello González, B. Toharias, A. Pilenga, A. Saturnio, T. Malkow and A. Iranzo

University of Seville, Seville, Spain; AICIA, Seville, Spain; EU Commission, JRC, LE Petten, The Netherlands

18:40 **ID106 Quantification of PEMFC degradation during start-up/shutdown phases in real stack configuration**

G. Laphitz, F. Micoud, É. Pinton, N. Mariage, R. Riasse and Y. Bultel

University Grenoble Alpes, CEA, Grenoble, France; University Grenoble Alpes, CNRS, Grenoble, France

19:00 **ID322 An investigation into the performance limitations of PEMFC in the temperature range of 90-100°C**

G. Etienne, A. Ouhammi, A. El Kaddouri, J. Mainka, J. Dillet and O. Lottin

Université de Lorraine, CNRS, LEMTA, Nancy, France

19:20 **ID107 Understanding of the limiting phenomena during break-in phase to reach nominal performance of Proton Exchange Membrane Fuel Cell (PEMFC)**

C. Rèmy, F. Micoud, S. Rosini and A. Morin

University Grenoble Alpes, CEA, Grenoble, France

19:40 **ID70 Modeling, Simulation and Emulation of a PEM Fuel Cell**

R. Moualek and N. Benamrouche

University Mouloud Mammerl of Tlzi Ouzou, Tizi Ouzou, Algeria

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ROOM E
HYDROGEN STORAGE: CARRIERS & GAS/LIQUID

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID177 The key role of magnesium at the A-site of nickel-based perovskites for efficient hydrogen production from ammonia**
C. Martín, A.R. de la Osa, A. de Lucas-Consuegra, M. Pinzón and P. Sánchez
University of Castilla-La Mancha, Ciudad Real, Spain

18:00 **ID238 Stack-level dynamic modelling and state estimation of ceramic electrochemical reactors for ammonia-to-hydrogen conversion**
T. Puleston, A. Cecilia, R. Costa-Castelló and M. Serra
UPC, Barcelona, Spain

18:20 **ID97 High-pressure hydrogen production from formic acid catalyzed by iridium complexes**
Y. Himeda
AIST Tsukuba, Tsukuba-Ibaraki, Japan

18:40 **ID294 Support Morphology–Metal Loading Interplay in Ni/CeO_2 Catalysts for CO_2 Methanation**
R. Nuez, M.P. Yeste, M.A. Cauqui, V.M. González-De la Cruz and J.J. Calvino
Cádiz University, Puerto Real, Spain; IMEYMAT, Puerto Real, Spain

19:00 **ID384 Physically-Based Models to Improve the Design Against Mechanical Failure in Materials for Liquid Hydrogen Storage**
D. Gonzalez, F. Montero-Chacon and A. Valverde-Gonzalez
Loyola University Andalucia, Sevilla, Spain

19:20 **ID96 Modelling the non-isobaric evaporation of stored liquid hydrogen**
F. Huerta and V. Vesovic
Pontificia Universidad Católica de Chile, Santiago, Chile; Imperial College London, London, United Kingdom

19:40 **ID405 Liquid Hydrogen: Enabling a Global Hydrogen Trade**
S. Mahdy
Chartin Industries, Renfrew, United Kingdom

ROOM F
HYDROGEN SYSTEMS MODELLING

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID112 System Simulation for Optimized Operation of Alkaline Electrolyzers Coupled with Renewable Energy and Hybrid Storage Solutions**

B. Honel, P. Montaland and D. Jimenez

Siemens DISW, Lyon, France

18:00 **ID213 Thermal management and operational considerations in electrolyzer systems**

L. Sangolt, J. de Elio Medina, O.A. Lorentsen, A. Olivares and V. Myrseth Oltedal

Western Norway University of Applied Sciences, Haugesund, Norway; HydrogenPro ASA, Porsgrunn, Norway; Endra, Haugesund, Norway; Western Norway University of Applied Sciences, Bergen, Norway

18:20 **ID258 Data-driven degradation analysis of PEM electrolyzer under fluctuating operation**

H. Sayed-Ahmed, R. Keller, Á.I. Toldy, M. Müller, D. Froning and A. Santasalo-Aarnio

Aalto University, Espoo, Finland; Forschungszentrum Jülich GmbH, Jülich, Germany

18:40 **ID394 Next-Generation Green Hydrogen Electrolysis Plants: Integrating Health Awareness into Hybrid Electrolysis Plant Design**

A. Elizetxea-Navarro, J. Aizpuru, M. Centeno-Telleria, Y. Peña-Sanchez, A. Goikoetxea and M. Penalba

Mondragon University, Arrasate, Spain; Ikerbasque, Basque Foundation for Science, Bilbao, Spain

19:00 **ID403 Physically Informed Modular Alkaline Electrolyzer Model for Hybrid Renewable Integration Across Geographies**

A. Rahbari and A. Bos

Xintic B.V., Delft, The Netherlands

19:20 **ID109 Enabling High-Fidelity Hydrogen Management in PEMFC Vehicles: Two-Phase Flow Modeling and HiL Validation of an Ejector-Based Recirculation System**

D. Di Blasio and T. Fletcher

University of Bath, Bath, United Kingdom

19:40 **ID331 Development of a Digital Twin Model for Automotive PEM Fuel Cell System Using Physics-Informed Neural Networks**

F. Laencina, A. Husar, J. Llorca and X. Llamas

Applus+ IDIADA Group, Santa Oliva, Spain; UPC Hydrogen Lab, UPC, Barcelona, Spain; UPC, Barcelona, Spain

WEDNESDAY, 11TH MARCH

ROOM G
REGULATIONS, CODES & STANDARDS

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID77 Power-to-X Governance in Germany: A Perceived Policy Coherence Analysis**
A.E. Torkayesh, R. Sota and S. Venghaus
RWTH Aachen University, Aachen, Germany; Institute of Climate and Energy Systems - Jülich Systems Analysis, Forschungszentrum Jülich, Germany

18:00 **ID219 Implementing RFNBO Certification in Renewable Hydrogen Production: Technical, Industrial and Organizational Implications**
B. Martín Martínez, C. Moreno Carrero, T. Arzuaga Canals, M.J. Gimeno Cortés, A. Bricio, A. Caspari and J. Nevares
Alba Emission Free Energy, Abanto-Zierbena, Spain; Repsol, Madrid, Spain; Petronor, Muskiz, Spain; MEO Carbon Solutions, Köln, Germany

18:20 **ID259 Analytical Characterization of Hydrogen Purity: ISO 14687 Compliance in Electrolysis Technologies**
R. Canales, R. Pozo and A. De Ridder
Bureau Veritas Sustainable Fuels Management, Abanto-Zierbena, Spain; Bureau Veritas Solutions, Alcobendas, Spain; Bureau Veritas commodities Antwerp, The Netherlands

18:40 **ID293 Development of an electrolyzer quality label and its testing protocols in the CLEANHYPRO project**
P. Cortiguera, R. Pozo, A. Hurtado and C. Lucero
Bureau Veritas Solutions, Alcobendas, Spain

19:00 **ID299 From barriers to guidelines: HYPOP project and the implementation of hydrogen technologies**
M.J. Sánchez Alañón, M. Panadero Camacho and G.M. Rodado Nieto
CNH2, Puertollano, Spain

19:20 **ID76 Identifying Regulatory Gaps for a Safe Liquid Hydrogen Refuelling: Lessons from the DelHyVEHR Project**
V. Iglesias, S. Contelles, D. Makarov and D. Cirrone
Dekra Services S.A.U., Alcobendas, Spain; University of Ulster, Belfast, Northern Ireland; University of Ulster, Newtownabbey, North Ireland

19:40 **ID393 Experiences in testing a hydrogen refuelling station using a mobile testing device**
E. Trillo, A. Márquez, A. Moñino and G. Pérez
Lean Hydrogen, Sevilla, Spain

ROOM H
OTHER HYDROGEN APPLICATIONS

17:40 - 20:00 **PARALLEL SESSION 2**

17:40 **ID235 Reduction of GHG emissions and water consumption in Spain with renewable hydrogen substituting fossil fuels and natural gas**
C. Ríos, P. Molina, C. Martínez de León and J.J. Brey
Loyola University Andalucía, Dos Hermanas, Spain

18:00 **ID127 Renewable Energy Communities with Hydrogen technologies: an opportunity toward Environmental Sustainability and Energy Autonomy**
A.A. Casado, B.B. Sarmiento, I. Martínez Rodríguez, C.F. Pérez and D.N. López
Cox Energy, Seville, Spain; Aytana, Seville, Spain; Cox Energy comercializadora, Madrid, Spain

18:20 **ID132 Integrating Hydrogen into a Modular Passivhaus Building: Lessons Learned from the LIFE ZEROENERGYMOD Project**
A.A. García Sáez-Benito, P. Casero and B.P. Barbero Gallo
FHA, Huesca, Spain

18:40 **ID357 Automation of Data Processing Acquired by SCADA from a Test Bench for Fuel Cell Modules**
S.N. Calderón Valdez and C. De la Cruz Rodríguez
CNH2, Puertollano, Spain

19:00 **ID332 Energy recovery from a hydrogen-rich gas stream obtained as a by-product of an innovative denitrification process**
A. Rubio-Rico, C. Salvador-Collado, L. Boira-Toledo, M. Pedro-Monzonís, J. Sanchis-Carbonell and M. García-Pellicer
ITE, Paterna, Spain; Aguas de Valencia S.A, Valencia, Spain

19:20 **ID137 Air or Liquid Cooling? Impact of Fuel Cell Cooling Techniques for Energy Systems in Military Applications: NOMAD Project**
J. Rey, T. Dankers, E. López, J. Ramallo, E. García-Quismondo, R. Rengel and B. Correia
INTA, Mazagón, Spain; TNO, Helmond, The Netherlands; IMDEA Energy, Móstoles, Spain; ARPA Equipos Móviles de Campaña, La Muela, Spain

19:40 **ID277 Twist-engineered graphene for next-generation proton exchange membranes in hydrogen technologies**
D. Bahamon, J. Tong, M. Lozada-Hidalgo and L.F. Vega
Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates; The University of Manchester, Manchester, United Kingdom

THURSDAY, 12TH MARCH

ROOM A
HYDROGEN PRODUCTION: SOLAR, THERMOCHEMICAL & BIO-PROCESSES

15:00 - 17:00 **PARALLEL SESSION 3**

15:00 **ID218 Methanol production as hydrogen derivative using concentrated solar energy**
N. Monnerie, J. Martin, E. Prats-Salvado and C. Sattler
DLR/German Aerospace Center, Cologne, Germany; RWTH Aachen University, Aachen, Germany

15:20 **ID72 Decentralized Hydrogen and Power Generation through Methanol Reforming: A Validated, Scalable Off-Grid Solution**
T. Vincendon and S. Netto
Methanol Reformer S.L., Barcelona, Spain

15:40 **ID17 Advanced MOF-derived Ni catalysts for H_2 production via dry reforming of methane**
A. Choya, M. Córdoba, B. de Rivas, J.I. Gutiérrez-Ortiz and R. López-Fonseca
UPV/EHU, Leioa, Spain

16:00 **ID204 Enhanced hydrogen production by thermocatalytic decomposition of methane over P-doped activated carbons**
V. Balloi, M.A. Diaz-Perez and J.C. Serrano-Ruiz
Loyola University, Dos Hermanas, Spain

16:20 **ID304 Influence of calcination temperature on the preparation of hydrotalcite-type catalysts for low temperature steam reforming of ethanol**
A. Miralles-Martinez, C. Jimenez-Borja and A. Chica
UPV-CSIC, Valencia, Spain; Técnicas Reunidas, S.A., Madrid, España

16:40 **ID406 Long-term and continuous operation of a catalytic fluidized-bed reactor for simultaneous production of hydrogen and carbon**
H. Lee, D.A. Pham, D. Kim, B. Hwang, H.J. Ryu, K.S. Go, K. Lee and W. Kim
Chungnam National University, Daejeon, South Korea; Korea Institute of Energy Research, Daejeon, South Korea; University of Science and Technology, Daejeon, South Korea

THURSDAY, 12TH MARCH

ROOM B
ALKALINE ELECTROLYSERS: MATERIALS, COMPONENTS & STACKS

15:00 - 17:00 PARALLEL SESSION 3

15:00 **ID18 ALPIQ'S Strategic integration of Green-Hydrogen: Technical Overview, Operational Synergies, and Long-Term Flexibility Strategy**
M. Gonzalez Rosas, P. De La Fuente and A. Teir
Alpiq AG, Lausanne, Switzerland; Alpiq Energía España, Madrid, Spain; P2X Solutions Oy, Espoo, Finland

15:20 **ID287 Experimental validation of a 10 kW alkaline stack by ENDURE harmonised testing protocols**
L. Martínez-Izquierdo, N. Van Dijk, J.G. Galindo, A. Sánchez, V. Gil, R. Küngas, C. Bernäcker and T. Ludwig
FHa, Huesca, Spain; ARAID Foundation, Zaragoza, Spain; Stargate Hydrogen Solutions, Tallinn, Estonia; Fraunhofer IFAM, Dresden, Germany; Center for Solar Energy and Hydrogen Research, Stuttgart, Germany

15:40 **ID300 Innovative alkaline electrolysis technology producing H_2 working at supercritical water conditions**
P. Bosch-Jimenez, M. Garcia, S. Martínez-Crespiera, G. Massobrio, A. Ramunni, A. Testolin, F. Cartasegna, P. Costa, M. Miola and A. Nemati
Leitat technological center, Terrassa, Spain; Snam SPA, Milano, Italy; Industrie De Nora SPA, Milano, Italy; Particular Materials SRL, Cadoneghe, Italy; Danmarks Tekniske Universitet, Kongens Lyngby, Denmark

16:00 **ID345 Reinventing Alkaline Electrolysis: An Industrialized Design Philosophy for Scalable Hydrogen Production**
S. Kumar
Stiesdal HydroGen, Give, Denmark

16:20 **ID169 From design to operation: challenges and preliminary results from a 60-kW AEL and AEM electrolysis test bench**
I. Ortega-Fernández, I. Velasco, I. Eguizabal and E. Fernández
Tecnalia, BRTA, San Sebastián, Spain

16:40 **ID336 Effects of Cell Scaling in AWE Technology**
D. Solera, MF. Paucar and F. Carmona
Ariema Enerxia S.L., Madrid, Spain

THURSDAY, 12TH MARCH

ROOM C
ELECTROCATALYSTS & ELECTRODES FOR ELECTROLYZERS & FUEL CELLS

15:00 - 17:00 **PARALLEL SESSION 3**

15:00 **ID06 Optimizing Fabrication Routes for Uniform, High-Performance catalyst coated membranes for proton exchange membrane fuel cell applications**
J.Baehr, S. Hegde, R. Wörner and S.E. Temmel
University of applied sciences Esslingen, Göppingen, Germany

15:20 **ID48 Advanced Coating Strategies for PEM Fuel Cells via Magnetron Sputtering**
A. Villamayor, A. Alba, F.J. Asensio, G. Moreno-Fernandez and T. Guerrero
Tekniker, BRTA, Eibar, Spain; UPV/EHU, Eibar, Spain; Protio Power SL, Amorebieta-Etxano, Spain

15:40 **ID222 Density Functional Theory Study of Ripple-Electric Field Interactions in 2D Catalysts for Hydrogen Dissociation**
N. Sahir, D. Bahamon, M. Lozada-Hidalgo, N. Singh and L.F. Vega
Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates; University of Manchester, Manchester, United Kingdom

16:00 **ID335 Electrodeposited core-shell nanoparticles with ultra-low Pt loading for efficient oxygen reduction reaction in acidic media for PEMFC**
F. Alcaide, A. Nicolenco, U. Huizi, R. de Paz Castany, E. Pellicer and E. García-Lecina
CIDETEC, BRTA, Donostia, Spain; UAB, Cerdanyola del Vallès, Spain

16:20 **ID396 Platinum Recycling Towards Economical PEM Technologies**
I. Peñas, J. Isidro, J.C. Carmona, R. Campana and J. Rodríguez
CNH2, Puertollano, Spain

16:40 **ID389 Towards the development of high-performance solid oxide technologies for fuel cells and electrolyzers**
A. Moratalla, A. Pardo, M. Rosario Serrano de la Cruz, I. Ayuso, N. Díaz, L. Sánchez-Beato, J. Broceño, C. Montes and R. Campana
CNH2, Puertollano, Spain

THURSDAY, 12TH MARCH

ROOM D
ROADMAPS, STRATEGIES, VALLEYS & NETWORKS

15:00 - 17:00 PARALLEL SESSION 3

15:00 **ID142 IEA Hydrogen Technology Collaboration Programme (Hydrogen TCP): current open activities and results**
M.P. Argumosa and F. Isorna
INTA, Torrejon De Ardoz, Spain; INTA CEDEA, Huelva, Spain

15:20 **ID29 Green Energy Corridor from Morocco to Germany: Evaluating Hydrogen, Ammonia, and Power Grid Solutions**
A. Soleimani Mehr, G. Scheffknecht, R. Zohourian and J. Maier
IFK, University of Stuttgart, Stuttgart, Germany; EnBW Energie Baden-Württemberg AG, Karlsruhe, Germany

15:40 **ID63 SH2AMROCK and HYDEA – Building Momentum for Ireland's First Hydrogen Valley**
R. Monaghan and H. Jayasankar
University of Galway, Ireland; Ryan Institute, University of Galway, Ireland; MaREI, the Research Ireland Centre for Energy, Climate and Marine, Ireland

16:00 **ID280 Assessing renewable hydrogen production in the Community of Madrid: Resource availability and technological mix**
L. Merlo-Camuñas, N. Martínez-Ramón, D. Iribarren and J. Dufour
IMDEA Energy, Móstoles, Spain; URJ, Móstoles, Spain

16:20 **ID237 Solid Oxide Electrolyser Cell (SOEC) Coupled with Advanced Nuclear: A Strategic Pathway for Stable and Affordable Hydrogen Supply in Europe**
M. Buzzi
Topsoe A/S, Kongens Lyngby, Denmark

16:40 **ID139 FID Unlocked: Total Installed Cost as a Driver of Green Hydrogen Deployment**
A. Pequenin, M. Martín, S. MacKinven, C. Mata-Torres and P. Redondo
Worley Consulting, Madrid, Spain; Worley Consulting, Aberdeen, United Kingdom

THURSDAY, 12TH MARCH

ROOM E
HYDROGEN STORAGE: UNDERGROUND

15:00 - 17:00 **PARALLEL SESSION 3**

15:00 **ID216 From Molecules to Reservoirs: Understanding Underground Hydrogen Storage**
A.M. Adam, D. Bahamon, M. Al Kobaisi and L.F. Vega
Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates

15:20 **ID113 Underground Hydrogen Storage: Impact of Pressure and Temperature on Surface Equipment Sizing, and Cost**
M. Montazeri, A. Salmachi, G. Nathan, M. Haghighi and T. Hosseini
The University of Adelaide, Adelaide, Australia; CSIRO Energy, Victoria, Australia

15:40 **ID16 DESSERT: Mechanical and tribological testing of stainless steels of a new advanced production string for UHS**
E. Tabares, B. Fernández, Y. Portilla and V. Astigarraga
Tekniker, BRTA, Eibar, Spain; Tubacex Innovación S.L., Derio, Spain

16:00 **ID31 Hydrogen storage in salt caverns: FrHyGe Project**
J.A. Lana, A.M. Garcia, L. Lapeña, O. Delprat and O. Lhôte
Enagás Transporte SAU, Zaragoza, Spain; Enagás Transporte SAU, Madrid, Spain; Storeny, Bois-Colombes, France

16:20 **ID118 Enabling large-scale energy storage in Spain: A spatial analysis of potential salt cavern sites for hydrogen storage**
C. Back, A. Pedrera, J. García-Senz, P. Haro and A. Iranzo
AICIA, Sevilla, Spain; IGME/CSIC, Madrid, Spain; US, Sevilla, Spain; Engreen, US, Sevilla, Spain

16:40 **ID253 Soil gas monitoring at future Underground Hydrogen Storage (UHS) facility in Aljarafe (Seville, Spain)**
M. Sánchez-Pérez, L.F. Mazadiego, S. Ledesma and J. Elío
Aytterra Estudios y Proyectos SL, Sevilla, Spain; UPM, Madrid, Spain; Trinity Energy Storage, Madrid, Spain; Western Norway University of Applied Sciences, Haugesund, Norway

ROOM F
HYDROGEN SYSTEMS MODELLING / HYDROGEN TRANSPORT & DISTRIBUTION

15:00 - 17:00 **PARALLEL SESSION 3**

15:00 **ID83 How hydrogen infrastructure impacts storage requirements: A dynamic modelling approach**
L. Höpken, C. Käding, W. Germer, H. Langnickel and A. Dyck
DLR/German Aerospace Center, Oldenburg, Germany

15:20 **ID117 H2Sizer – Optimization of the sizing of renewable hydrogen projects for industrial users**
F. Guedán Carbonell, J.A. Peral Partida, D. Aller Giraldez and C. Ibáñez Llano
Repsol Technology Lab., Móstoles, Spain

15:40 **ID122 HyTEA: A Decision Support Tool for Optimising the Green Hydrogen Value Chain**
H. Jayasankar, A. Bopaiah, F. Dadashidooki and R. Monaghan
University of Galway, Ireland; Ryan Institute, University of Galway, Ireland; MaREI, Ireland

16:00 **ID251 Real-Gas Modelling for Hydrogen Blending in Gas Networks: A ROM-Enhanced CFD approach**
I. Echeverribar, C. Alfaro-Isac, M. García-Camprubí, R. Campana, L.C. Gutiérrez and J.A. Lana
ITA, Zaragoza, Spain; CNH2, Puertollano, Spain; Enagás Transporte SAU, Zaragoza, Spain

16:20 **ID73 SHIMMER Database for Hydrogen Integration in European Gas Grids**
N. Ekici and O. Sobol
Bundesanstalt für Materialforschung und -Prüfung, Berlin, Germany

16:40 **ID126 Flow Assurance of Hydrogen Blending in the Natural Gas Grid: A Case Study of the Spanish Transmission and Distribution Pipelines**
R. Octaviano, D. Palochis, H. Blokland, A. Muñoz Subirón, P. Martínez Fondón, J.A. Lana Calvo, L. C. Gutierrez Perez and M.D. Storch de Gracia
TNO, The Netherlands; Redexis, Spain; Enagás Trasnsporte SAU, Spain

THURSDAY, 12TH MARCH

ROOM G
LAND TRANSPORTATION APPLICATIONS

15:00 - 17:00 **PARALLEL SESSION 3**

15:00 **ID79 Methodology for designing and validating a modular Hydrogen range extender for electric mobility**
J. Ruiz de Pascual, J.I. García, A. Aguilar and C. De la Cruz
CNH2, Puertollano, Spain; Tecnove S.L., Herencia, Spain

15:20 **ID184 Remaining useful life estimation of fuel cells using machine learning – a methodology**
M. Roatta, R. Morvillier and V. Heiries
CEA-Leti, Université Grenoble Alpes, Grenoble, France

15:40 **ID208 The Challenge of Developing an Automotive Hydrogen Storage Container according to R134-02**
K. Kunze, Ö. Ahmet-Tsaous and K. Szoucsek
BMW AG, Munich, Germany

16:00 **ID81 Experimental strategies to operate a commercial compression ignition engine with Hydrogen as the main fuel: Maximum stable operating range with the minimum pilot diesel injection**
J. Serrano-Reyes, F.J. Jiménez-Espadafor, M.A. Tagua-Navarrete and J.A. Vélez-Godiño
ETSI-US, Seville, Spain

16:20 **ID309 Enhanced Digital Twin Energy Management for Lowering TCO in Fuel Cell Heavy-Duty Vehicles**
P. Blanco-Carmona, E. Hidalgo-Fort, M. Fernandez-Giraldez, R. Gonzalez-Carvajal, A. Perez-Serrano and J. Galeano-Bilbao
US, Seville, Spain; Évolution Synergétique Automotive S.L., Seville, Spain

16:40 **ID359 AI-Augmented Modular Balance-of-Plant Modelling for Scalable Fuel Cell Systems in Heavy-Duty Mobility Applications**
S. Roy and O. Curnick
Coventry University, Coventry, United Kingdom

THURSDAY, 12TH MARCH

ROOM H
TECHNO-ECONOMIC ANALYSIS / OTHER HYDROGEN APPLICATIONS

15:00 - 17:00 PARALLEL SESSION 3

15:00 **ID50 Techno-Economic Analysis of FC-mCHP Combined with Heat Pump and Storage for Off-Grid Residential Applications**
P. Gabana, B. Giménez, A. Horrillo and F.V. Tinaut
University of Valladolid, Valladolid, Spain; CIDAUT, Boecillo, Spain; UPV, Valencia, Spain

15:20 **ID270 From Curtailment to Conversion: How Redispatch Schemes Shape Electrolyser Operation**
N. Weber, D. Koller, F. Radner, F. Winkler and A. Trattner
HyCentA Research GmbH, Graz, Austria; Graz University of Technology, Graz, Austria

15:40 **ID271 Integration of Renewable Energy in Carbon-Negative Hydrogen Production from Biogas: CARMA-H2 Demo**
I. Bonilla-Campos and B. Manías
AIN, Cordovilla, Spain; UPN, Pamplona, Spain

16:00 **ID392 Beyond electrolysis and fuel cells: the potential of polymer membranes in hydrogen compression, expansion and purification**
E. Trillo, A. Márquez, G. Pérez and D. Sánchez
Lean Hydrogen, Sevilla, Spain; US, Seville, Spain

16:20 **ID296 Multiscale numerical methodology for upscaling of hydrogen-assisted iron production**
C. Alfaro-Isac, C. Sáenz Ezquerro, A.T. Latorre, A.M. Rodríguez and M. García-Camprubí
ITA, Zaragoza, Spain

16:40 **ID372 Hydrogen as the key enabler for circular steel production: The ZHYRON project approach to by-product valorization**
M. Figueira Magalhães, F.J. Real Salar, L. Correas Uson and I. Martins Jimenez
CIRCE, Zaragoza, Spain

THURSDAY, 12TH MARCH

ROOM A
CATALYSTS FOR HYDROGEN PRODUCTION & CONVERSION

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID274 Matrimid/$LaNi_5$ Hollow Fiber Membranes for Hydrogen Recovery from Industrial Waste Streams**

G. Moral, A. Ortiz, D. Gorri and I. Ortiz

Cantabria University, Santander, Spain

17:50 **ID249 Novel Pd membranes with catalytic Ru/Al_2O_3 intermediate layers for enhanced hydrogen separation during ammonia decomposition**

S. Coelho, C. Rocha, M.A. Soria, L.M. Madeira, J.A. Calles, R. Sanz and D. Alique

LEPABE, ALiCE, University of Porto, Porto, Portugal; URJ, Móstoles, Spain; Research Institute for Sustainable Technologies, Móstoles, Spain

18:10 **ID67 Development of Ru-PNPC Pincer Complexes for Catalytic (De)hydrogenation Reactions**

H.A. Kempf, G. Lopez Robledo, K. Junge, H. Jiao, H. Junge and M. Beller

Leibniz-Institut für Katalyse e.V., Rostock, Germany

18:30 **ID289 Engineering Tunable Single-Site Catalysts for Next-Generation Green Hydrogen Production**

S. Alareeqi, D. Bahamon, M. Ashraf Sabri, P. Clancy and L.F. Vega

Khalifa University of Science and Technology, Abu Dhabi, Unite Arab Emirates, Johns Hopkins University, Baltimore, USA

18:50 **ID160 Hydrogen production based on formate decomposition with colloidal platinum nanoparticles dispersed by hybrid polymer with high catalytic activity**

Y. Amao

Osaka Metropolitan University, Osaka, Japan

THURSDAY, 12TH MARCH

ROOM B
PEM ELECTROLYZERS: MATERIALS COMPONENTS & STACKS

17:30 - 19:10 PARALLEL SESSION 4

17:30 **ID84 Thin TiO_x coatings for corrosion protection of stainless steel and titanium in PEM water electrolysis**

M. Prestat, K. Egorov, E. Blachier, S. Bhowmick, G. Ringot, F. Vucko, A. Gupta, F. Xu, C. Battaglia, G. Maranzana and M.V.F. Heinz

French Corrosion Institute, Brest, France; EMPA, Dubendorf, Switzerland; Université de Lorraine, CNRS, LEMTA, Nancy, France; ETH Zurich, Zurich, Switzerland; EPFL, School of Engineering, Lausanne, Switzerland

17:50 **ID387 TiO_xN_y -based coatings with low interfacial contact resistance for protecting 316L bipolar plates in PEM water electrolyzers**

K. Chergui, B. Lescop, M. Prestat, G. Ringot, F. Vucko, V. Demange, L. Rault, F. Gouttefangeas, L. Joanny, S. Ollivier, M. Walls, G. Maranzana, D.S. Ramirez-Rico, L. Assaud and S. Rioual

Univ Brest, CNRS, Brest, France; French Corrosion Institute, Brest, France; Univ Rennes, CNRS, Rennes, France; University of Paris-Saclay, Saclay, France; University de Lorraine, CNRS, Vandoeuvre-les-Nancy, France; University Paris-Saclay, UMR CNRS, Orsay, France; University Paris Sciences & Letters, Paris, France

18:10 **ID370 Bipolar HiPIMS: a new route to deposit advanced coatings on 3D complex geometries and enhance performance in electrolyzer plates**

A. Wennberg, I. Fernández-Martínez, J.A. Santiago-Varela, P. Diaz-Rodriguez, M. Monclús, J. Molina, L. Mendizábal, C. Zubizarreta, J.L. Endrino and J. Brey

Nano4Energy, Madrid, Spain; IMDEA, Madrid, Spain; Tekniker, Eibar, Spain; Loyola University, Sevilla, Spain

18:30 **ID91 Laser-Induced Graphene: A Scalable 3D Material Advancing Proton Exchange Membrane Water Electrolysis for High-Efficiency Green Hydrogen Generation**

B. Branco, M. Pervolaraki, T. Gounela, S. Luján López, A. Rubí Masjuan, N. Rovira, E. Stratakis, C. Casellas Coll and D.M.E. Garcia

Eurecat, Mataró, Spain; FORTH, IESL, Heraklion, Greece

18:50 **ID325 Nanostructured MoS_2 composites as durable PGM-free cathodes for PEM H_2 production**

M.A. Mancuso, F. Giacobello, V. Cicciò, A. Muscolino, S. Siracusano and A.S. Aricò

CNR – ITAE, Messina, Italy

THURSDAY, 12TH MARCH

ROOM C
ELECTROCATALYSTS & ELECTRODES FOR ELECTROLYZERS & FUEL CELLS

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID399 Single atom catalysts on carbon nanofibers for enhanced oxygen evolution activity in AEM electrolysis**

C. Serrano-Alcalde, S. Pérez-Rodríguez, D. Sebastián and M.J. Lázaro

IC-CSIC, Zaragoza, Spain

17:50 **ID130 Nanostructured catalysts prepared by magnetron sputtering for anion exchange membrane water electrolysis**

C. Gómez-Sacedón, A.R. González-Elipe, V. Rodríguez-Pintor, J.M. Luque-Centeno, F. Yubero, J. Gil-Rostra and A. de Lucas-Consuegra

University of Castilla-La Mancha, Ciudad Real, Spain; ICM-CSIC -US, Sevilla, Spain

18:10 **ID136 Ni-Based Catalysts prepared by Magnetron Sputtering for AEM Electrolysers**

A. Carmo-Delcán, J.M. Luque-Centeno, C. Gómez-Sacedón, V. Rodríguez-Pintor, M. Martínez-Olaizola, A.R. González-Elipe, A. de Lucas-Consuegra, J. Gil-Rostra and F. Yubero

ICM-CSIC -US, Sevilla, Spain; University of Castilla-La Mancha, Ciudad Real, Spain

18:30 **ID397 Electrochemical Behaviour of Catalytic NiOOH in Ni200 electrodes in Alkaline Water Electrolysis: Influence of Renewable Energy Supply**

N. López, G. Sánchez, L. Veleva, R. Simion, J. Isidro, R. Campana and J. Rodríguez

CNH2, Puertollano, Spain; CINVESTAV, Mérida, México

18:50 **ID400 Mn enriched MOF- doped rGO hybrid electrocatalyst with high activity for the oxygen reduction reaction**

E. Pastor, S. Fajardo, P. Ocón, J.L. Rodríguez and C. Sánchez-Sánchez

La Laguna University, La Laguna, Spain; UAM, Madrid, Spain; Sorbonne Université, CNRS, Paris, France

THURSDAY, 12TH MARCH

ROOM D
HYDROGEN COMBUSTION

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID402 Design of an Experimental Rig to Investigate the Effect of Gravity and Inlet Flow Patterns on Cryogenic Chilldown of Transfer Lines using Liquid Nitrogen and Liquid Hydrogen**

V. Sharma, J. Coull and P. Ireland

University of Oxford, Oxford, United Kingdom

17:50 **ID207 TiO_2 as support for the catalytic combustion of hydrogen: from (meso)porous powders to magnetron sputtered thin films**

G.M. Arzac, D. Hufschmidt, M.C. Jiménez de Haro, A. Fernández, J.J. García, M.V. Lombardo and P.C. Angelomé

CSIC-US, Sevilla, Spain; CAC, CNEA, Buenos Aires, Argentina; Instituto de Nanociencia y Nanotecnología, nodo CAC, Buenos Aires, Argentina

18:10 **ID278 Safety and risk perspectives of H_2 use in domestic settings - review of modeling approaches**

M. Dlima, R. Bernardino, M. Silva, M. Martins, G. Gaspar, E. Fernandes and N. Canha

HyLab - Green Hydrogen Collaborative Laboratory, Sines, Portugal; IN+- Centre for Innovation, Technology and Policy Research, IST, Universidade de Lisboa, Lisbon, Portugal

18:30 **ID21 Impact of thermo-diffusive instabilities in lean hydrogen combustion for spark-ignition engines**

R. Novella, J. Gomez-Soriano, D. González-Domínguez and G. Alcarria-Laserna

UPV, Valencia, Spain

18:50 **ID228 Experimental Assessment of a Spark-Ignited Heavy-Duty Hydrogen Engine Under Varying Combustion and Hardware Parameters**

A.J. Peñín, M. Rivas, C. Valls and N. Campanella

AVL Ibérica SA., Valladolid, Spain

THURSDAY, 12TH MARCH

ROOM E
BALANCE OF PLANT & INTEGRATED SYSTEMS

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID60 System-Level Optimisation of Electrolyser Integration under Real Operating Conditions**
A.P. Casero Cabezón, A. García and B.A. Martínez Tovar
FHA, Huesca, Spain

17:50 **ID170 Simulation and experimental validation of operating strategies for renewable hydrogen production in PEM and AEM multi-stack electrolyzers**
E. López, A. Monterroso, M.A. Ridao, D. Tejada, J. Renau, F. Isorna, C. Bordons and V. García
INTA, Mazagón, Spain; ETSI-US, Sevilla, Spain; ESET, CEU University, Alfara del Patriarca, Spain; Engreen, Sevilla, Spain

18:10 **ID215 Integration of H_2 plant components: an experimental analysis on the Green Hydrogen Lab**
B. Bulzacca, A. Guzzini, M. Pellegrini, M. Rossi and C. Saccani
University of Bologna, Bologna, Italy; Fores Engineering srl, Forlì, Italy

18:30 **ID33 Minimizing Water Use in Green Hydrogen Production Plants**
A. Torralba
Alfa Laval, Spain

18:50 **ID35 Fresh Water Generation from Electrolyzer Waste Heat**
A. de Francisco and L. Mendes
Alfa Laval, Spain

THURSDAY, 12TH MARCH

ROOM F
HYDROGEN INFRASTRUCTURE FOR TRANSPORT, DISTRIBUTION & DISPENSING

17:30 - 19:10 PARALLEL SESSION 4

17:30 **ID337 PilgrHYm: Pre-Normative Research on Integrity Assessment Protocols of Gas Pipes Repurposed to Hydrogen and Mitigation Guidelines**
L. Cuenca Fuentes, I. Montero Puñal and C. Martinez Aguilera
Enagás Transporte SAU, Spain

17:50 **ID27 Development of Low-Permeability Polymeric Materials for Safe and Efficient Hydrogen Transport**
S. Navarro García and J. Lozano Barrachina
Aimplas, Paterna, Spain

18:10 **ID82 On the Effect of Surface Alloying on H Permeation through Steel: A combined DFT and kMC Simulation Approach**
L. Meier and S. Cottenier
Ghent University, Belgium

18:30 **ID94 Capacity-building for fatigue testing of large-scale hydrogen pipeline sections**
A. Pitois, R. Kleine and B. Acosta Iborra
EU Commission, Joint Research Centre, LE Petten, The Netherlands

18:50 **ID179 Compatibility assessment of hydrogen on metallic materials of the natural gas grid: Results of CANDHy Round Robin Test**
L. Martínez-Izquierdo, V. Gil, V. Madina, M. Bertin, V. Farrugia, E. Henriques, E. Soileux, R. Delia and L.F. Di Vito
FHA, Huesca, Spain; ARAID, Zaragoza, Spain; Tecnalia, BRTA, Donostia, Spain; Natran, Bois Colombes, France; RINA-CSM, Roma, Italy

THURSDAY, 12TH MARCH

ROOM G
AVIATION, SHIPS & TRAINS APPLICATIONS

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID371 PILA: Project for Research and Development in Enabling Technologies for the Use of Hydrogen Cells as a Power Plant in Aviation**
N. Martinez, M.A. Jimenez-Roldán, A. Casado and J. Boby
Aytana Aeroespacio y Defensa, Madrid Spain; CATEC, Seville, Spain

17:50 **ID401 Design, Construction and Evaluation of a Hydrogen Fuel Cell-Powered RPAS for Use in Intensive Olive Cultivation (OLIVARIA PROJECT)**
A.F. Isorna, B.D. Tejada, C.M. Díez Pérez, D.R. Cuesta, E.E. López, M.F.Á. Ridao and G.C. Bordons
INTA, Mazagón, Spain; University of Seville, Seville, Spain

18:10 **ID430 Modeling of Hydrogen Refueling Systems for Trains**
Ø. Ulleberg, G. Helgesen, M.C. Ocaña, B. Yang, C. Foncin and S. Wieser
IFE, Kjeller, Norway; Talgo, Majadahonda, Spain; DB Energie GmbH, Frankfurt/M, Germany; SNCF, La Plaine St. Denis, France; German Aerospace Center/DLR, Stuttgart, Germany

18:30 **ID80 Toward cleaner marine propulsion: Combustion strategies for Heavy fuel oil–Hydrogen and Heavy fuel oil–Ammonia Mixtures in slow-speed two-stroke diesel engines**
M.A. Tagua-Navarrete, J. Serrano and F.J. Jiménez-Espadafor
ETSI-US, Seville, Spain

18:50 **ID269 Ammonia cracking technologies for decarbonisation of the shipping industry**
E. Briales, M. Charsoulas, A. Arrizabalaga, G. García-Miguel, T. Crespo and J. Medrano
H2SITE, Loiu, Spain

ROOM H
SAFETY

17:30 - 19:10 **PARALLEL SESSION 4**

17:30 **ID02 Integrating CFD, Deep Learning, and Evolutionary Algorithms for Smarter Hydrogen Leak Detection**
M. Rupani, F. Morente Belmez, M. Minguez Fica, E. Vadillo Arenas and A. Villanueva Merino
Tecnalia, BRTA, Derio, Spain

17:50 **ID156 Benchmark of commercially available hydrogen sensors for target end-uses**
M.A. Silva, L. Bueno, G. Gaspar, E.C. Fernandes and N. Canha
HyLab–Green Hydrogen Collaborative Laboratory, Sines, Portugal; IST, Universidade de Lisboa, Lisbon, Portugal

18:10 **ID364 Impact of Hydrogen Blending Ratio on Quantitative Risk Assessment of Natural Gas pipelines**
D. Vasconcelos, R. Bernardino, R. Galhano dos Santos and N. Canha
HyLab–Green Hydrogen Collaborative Laboratory, Sines, Portugal; Cerena, IST, Universidade de Lisboa, Lisboa, Portugal

18:30 **ID140 The Venting vs Flaring Dilemma: A Comparative Lens for Hydrogen Plants**
M. Tejada and R. Sobrino
Worley Consulting, Madrid, Spain

18:50 **ID282 Large-scale tests addressing hazards associated with storage and releases of LH_2**
A. Casal, V. Espejo and K. van Wingerden
Vysus Group, Sant Cugat del Vallès, Spain; Bergen, Norway

FRIDAY, 13TH MARCH

ROOM A
CATALYSTS FOR HYDROGEN PRODUCTION & CONVERSION

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID19 Enhanced Dehydrogenation Performance of Pt and PtMo Catalysts Supported on TiO_2 for Benzyltoluene-Based LOHC System**
J. Renobales, F. Mariño and V.L. Barrio
UPV-EHU, Bilbao, Spain

11:50 **ID226 Effect of Co and Fe Modification on Ni/Mg-Al_2O_3 Catalysts for combined Partial Oxidation and Dry Reforming of Biogas**
I. Martínez-Salazar, E. Millán Ordóñez, N. Mota and R. Navarro Yerga
ICP-CSIC, Madrid, Spain

12:10 **ID408 Ni–Ce Catalysts on Nanofibrous Alumina with Enhanced Coke Resistance for Biogas Dry Reforming**
S. Peña Fernández-Pacheco, P. Jurado, E. López, L. Andrés and A. Chica
UPV-CSIC, Valencia, España

12:30 **ID409 On-site hydrogen generation by CuZnAl LDH water gas shift catalyst for climate-independent, and emission-free "on-board" energy**
D. Nikolova, M. Gabrovska, I. Ivanov, T. Prvanova-Mancheva and T. Tabakova
Institute of Catalysis-Bulgarian Academy of Sciences, Sofia, Bulgaria

12:50 **ID227 Effect of Al–Ga Doped ZnO Supports on intermetallic ZnPd Catalysts for CO_2 Hydrogenation to Methanol**
C. Quilis, N. Mota, B. García and R.M. Navarro
ICP-CSIC, Madrid, Spain; UAM, Madrid, Spain

13:10 **ID15 Intensified production of H_2 from greenhouse gases: development of nickel catalysts over ceramic foams for dry reforming of biogas**
M. Córdoba, A. Choya, B. de Rivas, J.I. Gutiérrez-Ortiz and R. López-Fonseca
UPV-EHU, Leioa, Spain

FRIDAY, 13TH MARCH

ROOM B
PEM ELECTROLYZES: MATERIALS, COMPONENTS & STACKS

11:30 - 13:30 PARALLEL SESSION 5

11:30 **ID186 Optimization of cathodic GDL for its use in a PEMWE: Effects of fiber length and hydrophobicity**
J.L. Canales Izquierdo, A.J. Navarro, A. Molina-García and J.J. López Cascales
UP, Cartagena, Spain

11:50 **ID324 Enhanced Aquivion® Membranes for High-Performance PEM Water Electrolysis**
V. Cicciò, S. Siracusano, F. Giacobello, M.A. Mancuso, L. Mazzapioda and A.S. Aricò
CNR-ITAE, Messina, Italy; SYENSQO, Bollate, Italy

12:10 **ID55 Development of composite PEM through printing methodologies for fuel cell and electrolyser applications**
S. Luján López, A. Rubi Masjuan, N. Rovira, G. Paixão da Costa, B. Branco, C. Casellas Coll and D.M.E. Garcia
Eurecat, Mataró, Spain

12:30 **ID197 PINN for parameter identification of equivalent circuit models of PEM electrolyzer**
M. Sabamehr, C. Batlle Arnau and M. Serra Pra
CSIC-UPC, Barcelona, Spain; EPSEVG, UPC, Vilanova i la Geltru, Spain

12:50 **ID26 Begin-of-life analysis of a 60-cell polymer electrolyte water electrolysis stack**
E. Hoppe, H. Janßen, S. Holtwerth, M. Hehemann, W. Zwaygardt and M. Müller
Forschungszentrum Jülich GmbH, Institute of Energy Technologies, Jülich, Germany

13:10 **ID395 From Fragmentation to Framework: Standardized Experimental Protocols for Electrolyser Degradation Characterisation**
J. Aizpuru, A. Elizetxea-Navarro, M. Martinez-Agirre, J. Berasategi, M. Penalba and A. de Andrés
Mondragon University, Arrasate, Spain; Ikerbasque, Basque Foundation for Science, Bilbao, Spain; ICM-CSIC, Madrid, Spain

FRIDAY, 13TH MARCH

ROOM C
ELECTROCATALYSTS & ELECTRODES FOR ELECTROLYZERS & FUEL CELLS

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID273 Enhancing the Performance of Double Perovskite Cathode for Protonic Ceramic Fuel Cells with Mo-doping Strategy**
W. Yang, T. Aworinde, L. Mathur, L. Vega and S. Sengodan
Khalifa University, Abu Dhabi, United Arab Emirates

11:50 **ID149 Strategies for Electrochemical Stability in Direct Seawater Electrolysis Using Affordable Anion Exchange Membranes**
S.C. Zignani, M. Fazio, M. Pascale, A. Aricò, A. Nicolenco and F. Alcaide
ITAE of the Italian National Research Council (CNR); Cidetec, BRTA, Donostia, Spain

12:10 **ID247 Membrane-less Supercritical Water Electrolyzer: Development and Characterization of Catalysts**
M. Garcia-Montolio, S. Martínez-Crespiera, A. Tanase, I. Sánchez, M. Aliaguilla, A. Ramunni, A. Testolin, P. Costa, M. Miola and P. Bosch-Jimenez
Leitat Technological Center, Terrassa, Spain; Industrie De Nora SPA, Milano, Italy; Particular Materials SRL, Cadoneghe, Italy

12:30 **ID11 Nanoparticulate high entropy catalysts for the acidic water electrolysis: towards low loading PGM catalysts**
J. Ruiz Esquius, M. Alonso Menendez, S. Reguera Riera, R. Santamaría, C. Blanco and V.G. Rocha
Carbon Science and Technology Institute, Oviedo, Spain

12:50 **ID14 Synthesis and Performance of Advanced Nanocatalysts for Green Hydrogen Production in PEM Electrolyzers**
R. Miró, J. Li, A. Shavel, S. León Duval, A. Gual, V. Lesnyak and M. Diaz de los Bernardos
Eurecat, Tarragona, Spain; Physical Chemistry, TU Dresden, Dresden, Germany

13:10 **ID56 High-throughput computational strategy to discover new catalysts for the Hydrogen Economy including elastic strain engineering**
C. Martínez-Alonso, V. Vassilev-Galindo, J.M. Guevara-Vela and J. Llorca
IMDEA Materials Institute, Getafe, Spain; UCM, Madrid, Spain; UPM, Madrid, Spain

FRIDAY, 13TH MARCH

ROOM D
HYDROGEN COMBUSTION

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID223 Control strategies for abnormal combustion prevention in hydrogen-fueled engines. Design and experimental validation**
B. Erviti, M. Ugalde, P.M. Diéguez, J.C. Urroz, P. Villanueva and L.M. Gandía
UPN, Pamplona, Spain; Tafalla Iron Foundry S.Coop., Tafalla, Spain

11:50 **ID22 Recent developments in experimental research on hydrogen-fueled spark-ignition engines for light-duty applications**
F. Tinaut, R. Novella, J. Gomez-Soriano, O. Olaciregui and R. Tabet
UPV, Valencia, Spain; Horiba Europe GmbH, Darmstadt, Germany

12:10 **ID121 On the ultra-lean hydrogen-air combustion in an excess-enthalpy burner**
D. Fernández-Galisteo, C. Jiménez, A.L. Sánchez, V.N. Kurdyumov and F.A. William
CIEMAT, Madrid, Spain; University of California, San Diego, United States

12:30 **ID423 The Dual Challenge of Hydrogen: Oxidation Mechanisms in Stainless Steels and Refractory Compatibility**
O. Burgos-Montes, I. Collado, S. Martinez-Chaparro, S. Serena, A.H. de Aza, M. Álvarez and J.F. Almagro
Alfran S.A., Alcalá de Guadaíra, Spain; Acerinox Europa SAU, Spain; ICV–CSIC, Madrid, Spain

12:50 **ID267 Effects of multicomponent transport and detailed chemistry in adiabatic Hele-Shaw cell lean hydrogen-air flame calculations**
B. Naud, A. Dejoan and D. Fernández-Galisteo
CIEMAT, Madrid, Spain

13:10 **ID61 Development and Experience of Retrofit Hydrogen Combustion Systems - Decarbonization of Peaking Gas Turbines (H2GT) used to Complement Intermittent Renewables**
J.A. Benoit
Clean Energy Solutions. PSM – a Hanwha company, Florida, United States

FRIDAY, 13TH MARCH

ROOM E
BALANCE OF PLANT, INTEGRATED SYSTEMS & MODELLING

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID191 Development and implementation of a rapid deployment control system concept for an automotive PEM Fuel Cell System**

A. Molavi, X. Llamas, S. Batista, M. Pita, A. De Mello and L. Tarnovschi

Applus+ IDIADA group, Tarragona, Spain

11:50 **ID04 Innovative Advancement in Power-to-Liquid Technology: The Creation of a Highly Efficient Co-SOEC-Based SAF Production Demo Plant**

M. Tandl, J. Macherhammer, B. Reiter and B. Stoeckl

AVL List GmbH, Graz, Austria

12:10 **ID378 Gasifier and SOEC integration for enhanced fuel production facilitated using foam-based catalyst for syngas upgrading**

E. Orfei, F. Suzzi, N. Baraldi, N. Dimitratos, A. Fasolini, A. Gondolini, J.De Maron, E. Mercadelli, A. Sanson and F. Basile

University of Bologna, Bologna, Italy; CNR-ISSMC, Faenza, Italy; Iridenergy S.R.L., Parma, Italy

12:30 **ID183 Portable Test Bench for Analysis and Diagnostics of Stacks and Electrolyzers**

S. Corrales, D. Muñoz, J. Brey, C. García, E. Sams, A. Chumilla, M. Sánchez and A. Castro

H2B2 Electrolysis Technologies, Dos Hermanas, Spain

12:50 **ID217 Design Optimization of Power Electronics Systems for alkaline electrolyzer based on real 2,5 MW stack operation experience**

T. Arzuaga Canals, F. Diez-Heppe Echevarri, I. Uriarte, I. Valero and Y. Bodson

Alba Emission Free Energy, Abanto-Zierbena, Spain; Ingeteam Power Technology S.A., Zamudio, Spain; John Cockerill Hydrogen, Seraign, Belgium

13:10 **ID172 Operational Strategy and Control of a Renewable-Energy-Powered Hydrogen Production Plant with Flexible Electrolyzer Management**

J. Otero and M. López

EAG Empresarios Agrupados-GHESA, Spain

ROOM F
HYDROGEN INFRASTRUCTURE FOR TRANSPORT, DISTRIBUTION & DISPENSING

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID263 Evaluation of the Hydrogen Embrittlement Resistance of Three Stainless Steels during Slow Strain Rate Testing on Pre-charged Specimens**
V. Astigarraga, R. Rodríguez, B. Calleja and A. López
Tubacex Innovación, Derio, Spain

11:50 **ID75 DelHyVEHR: Demonstrating Large-Scale Liquid Hydrogen Refuelling for Heavy-Duty Transport**
V. Iglesias and S. Contelles
Dekra Services S.A.U., Alcobendas, Spain

12:10 **ID178 Mobile Hydrogen Refuelling Station for H_2PORTS ROJECT**
B. Nieto, C. Ballester and D. Rodriguez
CNH2, Puertollano, Spain

12:30 **ID330 Virtual Sensorization for fast Refueling of Compressed Hydrogen Tanks**
I. Echeverribar and M. García-Camprubí
ITA, Zaragoza, Spain

12:50 **ID34 Hydrogen precooling in refueling stations**
A. Barrientos and E. Alankaya
Alfa Laval, Spain

13:10 **ID01 Evaluation of Safety Distance Criteria for Hydrogen Installations: A Cross-Standard Study of NFPA2 and PGS 35/EIGA**
A. Villanueva, F. Morente and M. Rupani
Tecnalia Research and Innovation, Derio, Spain

FRIDAY, 13TH MARCH

ROOM G
MARKET & TECHNO-ECONOMIC ANALYSIS

11:30 - 13:30 **PARALLEL SESSION 5**

11:30 **ID138 Beyond LCOH: Project and Technology Drivers of Green Hydrogen Economics**
C. Mata-Torres, J.C. García-Escribano, M. Martín, S. MacKinven and P. Redondo
Worley Consulting, Madrid, Spain; Worley Consulting, Aberdeen, United Kingdom

11:50 **ID313 Digitally-Driven Flexibility in Green Hydrogen Production: Turning Intermittency into Opportunity**
C. Nugroho and Y. Monbeig
Rely Solutions, Nanterre, France

12:10 **ID187 Methodology for the identification and configuration of H_2 valleys**
I. Muñoz, D. García-Gusano, P. Hernández, L. Mabe and A. López
Tecnalia Research & Innovation, BRTA, Derio, Spain

12:30 **ID340 Hydrogen Territories Platform Simulation Tool (HTP Tool) development for Hydrogen Valleys**
A. Herranz, G. Greco and T. Villuendas
FHA, Huesca, Spain

12:50 **ID334 Green hydrogen supply chains and distribution: Cost and market conditions for Portugal**
M. Espinha, J.C.C. Portillo, S.G. Simoes and J. Barbosa
LNEG – Laboratório Nacional de Energia e Geologia, Amadora, Portugal

13:10 **ID343 Long-term perspectives of hydrogen imports from North Africa and Brazil to Europe and the impacts on the Iberian Peninsula**
J.C.C. Portillo, S.G. Simões and J. Barbosa
LNEG – Laboratório Nacional de Energia e Geologia, Amadora, Portugal

FRIDAY, 13TH MARCH

ROOM H
SAFETY / LCSA STORAGE CARRIERS

11:30 – 13:30 PARALLEL SESSION 5

11:30 **ID320 Hydrogen Safety: Quantifying Venting Risks for Safety Protocols**
I. Echeverribar, A. Gutiérrez-Robledo, J. Mené and M. García-Camprubí
ITA, Zaragoza, Spain

11:50 **ID93 Spatial analysis of hydrogen transport incidents in Europe and in the US**
A. Pitois, J. Bolard, L. Kurz, I. Hidalgo Gonzalez and P. Moretto
EU Commission, Joint Research Centre, LE Petten, The Netherlands

12:10 **ID155 A new protection coating to improve the safety of on-board type IV 70 MPa composite pressure vessel during a fire**
S. Villalonga, G. Baudry, M. Ramage, C. Haméon and B. Fournel
CEA, DAM, Monts, France

12:30 **ID195 Structural Integrity of WAAM AA5183 Aluminium Alloy for Hydrogen Storage Applications**
A. Bakir and S. Manzoor
Material Performance Group, Cambridge, United Kingdom

12:50 **ID115 Life Cycle Sustainability Assessment of reference metal hydride storage product for ecodesign purposes**
J. Gramc, S. Barberis, D. Violi and M. Mori
University of Ljubljana, Ljubljana, Slovenia; Bluenergy Revolution Soc. Coop., Genova, Italy

13:10 **ID239 Comparative Life Cycle Assessment of Liquid Organic Hydrogen Carriers for Green Hydrogen Transport**
C. Colombres, L.M. Machín-Ferrero and S. Ordóñez
University of Oviedo, Oviedo, Spain; U. Nacional de Tucumán, Tucumán, Argentina; CONICET, San Miguel de Tucumán, Argentina

EHEC 2026
EUROPEAN HYDROGEN ENERGY CONFERENCE

Poster
COMMUNICATIONS

POSTER COMMUNICATIONS

HYDROGEN PRODUCTION: SOLAR, THERMOCHEMICAL & BIO-PROCESSES

P1 **ID25 Integrated thermochemical–electrochemical routes for renewable hydrogen production and storage from biomass waste: towards industrial application in the ceramic sector**

L. Cano, G. Molina, P. Campos, S. Ferrer, A. Gómez, I. Rodríguez, D. Costa Milan, J. Garcia and E. Cordobés

Greene Enterprise, Elche, Spain; CIEMAT, Madrid, Spain; Kerionics, Torrent, Spain; ITC, Castellón de la Plana, Spain; CIUDEN, Cubillos del Sil, Spain; Nanogap, La Coruña, Spain; Euroinnovacion Enterprise, Elche, Spain

P2 **ID39 Design and optimization of an improved CH_4 reforming system using Chemical Looping processes (SE-CLR)**

J. González-Torrijo, M. de las Obras Loscertales, T. Mendiara and A. Abad

ICB-CSIC, Zaragoza, Spain

P3 **ID205 Hydrogen Production by Plasma Decomposition of Ammonia-Containing Water Vapor**

M. Isoyama, S. Kambara, R. Yoshiie and T. Nakamura

Gifu University, Gifu, Japan

P4 **ID209 Production of Green Hydrogen by Pyrolysis**

S.C. Anibal de Almeida, M. Dias da Rocha and A.O. Pereira Junior

UFRJ, Rio de Janeiro, Brazil; DNV, Rio de Janeiro, Brazil; COPPE/UFRJ, Rio de Janeiro, Brazil

P5 **ID284 Green hydrogen production via biogas electrified reforming in a circular economy: Zeppelin project**

C. Jiménez-Borja, J. Sánchez-Luján, I. Moraleda, A. Nieto, M.J. Bellón, D. Úbeda, J.L. Carreras, G. Monjas and E. Alcolea

Técnicas Reunidas, Madrid, Spain

P6 **ID292 Hydrogen Production via Steam Reforming of Acetone over $LaNiO_3$ Perovskite-Based Catalyst**

M.P. Pliaka, G.I. Siakavelas, N.D. Charisiou and M.A. Goula

LAFEC, University of Western Macedonia, Kozani, Greece

P7 **ID302 H2SHIFT Project: Clean Hydrogen for Mobility Applications through Innovative PSA Solutions**

I. Moraleda, J. Carrero, C. Sanchez, C. Jimenez-Borja, A. Nieto, A. Escobar, C. Gutierrez, E. Alcolea and M.A. Vega-Pacho

Técnicas Reunidas, Madrid, Spain

P8 **ID318 Simulation study of sorption-enhanced steam reforming of biomass-derived syngas: Effect of feed composition on H_2 production and energy efficiency**

A. Vega, F. Rubiera, C. Pevida and M.V. Gil

INCAR, CSIC, Oviedo, Spain

HYDROGEN PRODUCTION: SOLAR, THERMOCHEMICAL & BIO-PROCESSES

P9 **ID352 Renewable hydrogen production by sorption-enhanced steam gasification of wood manufacturing industry waste**

F. Cuarán-Grajales, J. Gancedo, F. Rubiera, M.V. Gil and C. Pevida

INCAR, CSIC, Oviedo, Spain

P10 **ID354 Techno-Economic and Environmental Assessment of Hydrogen Production from H_2S and Industrial Waste Streams**

L.F. Vega, I.I.I. Alkhatib and S. Ali

Khalifa University. Abu Dhabi, United Arab Emirates

P11 **ID380 Sustainable H_2 production from biogas/biomethane using decentralised steam reformer technology and potentials**

C. Hofmann, N. Sipöcz and A. Caball

Metacon, Uppsala, Sweden; Metacon, Barcelona, Spain

HYDROGEN PRODUCTION: SOLAR PROCESSES

P12 **ID233 Integration of Solar Energy and Thermal Energy Storage with High Temperature Electrolyser**

P. Santamaría, M. Ramos, P. Fernández, A. Martínez and C. Martín-Montalvo

RPow Consulting S.L., Sevilla, Spain

P13 **ID234 Water usage in the production of renewable hydrogen: analysis of the sources available in Spain and impact in the costs**

C. Ríos, P. Molina, C. Martínez de León and J.J. Brey

Loyola University, Dos Hermanas, Spain

P14 **ID243 Mathematical modelling and operational optimization of a PEM hydrogen production plant integrated with renewable energy**

C. Salvador-Collado, L. Boira-Toledo, S. Kouaou-Carretón, F. Llinares-Díaz, A. Rubio-Rico and M. García-Pellicer

ITE, Paterna, Spain

P15 **ID261 Renewable hydrogen production by solar thermochemical water splitting with modified cerium oxides type $Ce_{1-x}Me_xO_{2-\delta}$ (x = 0.05 and 0.1; Me = Co, Ni, Mn and Ca)**

A. Pérez, M. Orfila, M. Linares, R. Sanz, J. Marugán, R. Molina and J.A. Botas

URJ, Móstoles, Spain

P16 **ID388 Lead-free Halide Perovskite Nanocrystals for the Sustainable Production of Added-value Chemicals and H_2 Fuel through Photoelectrocatalysis**

S.M. Jain, A. Gutiérrez-Blanco, L.S. Arumugam, E. Ng, M. Vallés-Pelarda, I. Mora-Seró and S. Giménez

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HYDROGEN PRODUCTION: SOLAR PROCESSES

P17 **ID415 Development of a Hybrid Sonophotocatalytic Reactor for Enhanced Hydrogen Generation**

H. Brahim, G. Marino, D. Maccaroni, M. Thomas, C. Italiano and A. Vita

CNR-ITAE, Messina, Italy

P18 **ID416 High-Efficiency Photoelectrolysis via Electrospun α-Fe_2O_3 and CuO Electrodes**

I. Mastronardo, L. Frusteri, B. Brancato and C. D'Urso

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P19 **ID429 Solar-Powered Hydrogen Pilot Plant implementation to Decarbonize Industrial Processes**

F. Musy, I. Ortiz and A. Ortiz

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BALANCE OF PLANT & INTEGRATED SYSTEMS

P20 **ID163 Integration of biomass gasification and water electrolysis plants for renewable fuels production**

E. López, D. Tejada, A. Castro, B. Rijo, C. Mateos-Pedrero, P. Brito, M.A. Ridao, F.J. Pino and J.I. Domínguez

INTA, Mazagón, Spain; VALORIZA, Polytechnic Institute of Portalegre, Portugal; US-ETSI, Sevilla, Spain; CIDAUT, Boecillo, Spain

P21 **ID391 Optimizing Rectifiers for Sustainable Hydrogen Production**

N. Han, I. Corrales and J.A. Almansa

ABB, Spain

P22 **ID412 How SiC MOSFETs Represent the Next Level of Performance for Large-Scale Power Conversion Systems**

S. Aust and M. Ahlert

SMA Altenso GmbH, Niestetal, Germany

ALKALINE ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

P23 **ID190 Advancing cost-effective Green Hydrogen Production through Innovative Electrolyzer Technology**

S. Luján, M. Cuartero-Gonzalez, J. Lado, E. Garcia-Quismondo, J. Palma, V. Dato and F. Fueyo-González

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ALKALINE ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

P24 **ID220 MW-scale alkaline electrolyzers: design, scaled and operation**

E. Amores, G. Sevilla, M. Sánchez-Molina, A. San Martín, N. Rojas, H. González, N. Gutiérrez, A. Ollacarizqueta, L.D. García and J. Fernández de Manzanos

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P25 **ID350 Development and scale-up of advanced electrodes for alkaline electrolysis**

M. Sánchez-Molina, E. Amores, N. Gutiérrez, H. González, G. Sevilla, N. Rojas, J. Liu, B. Sánchez, J. Fernández de Manzanos, L. Mendizábal, M. Parco, B. Navarcorena, P. Cumia, H. Lores, G. Vara, O. Larrañaga and L. Carreras

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P26 **ID379 Renewable hydrogen through the implementation of alkaline water electrolysis: STELAH project**

E. Plaza-Mayoral, D. Úbeda, I. Moraleda, C. Gutierrez, E. Alcolea and R. Beneito-Ruiz

Técnicas Reunidas Internacional S.A., Madrid, Spain

P27 **ID413 Investigation of Alkaline Water Electrolyzer Response Under Various Operational Conditions**

A. Barge, D. Grilli, D. Ullmer, H. Wiggenhauser, K. Ghotia, F. Razmjooei and S.A. Ansar

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PEM ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

P28 **ID59 Screen printing membrane electrode assemblies towards scalable green hydrogen production**

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P29 **ID90 Graphene and graphene-related materials as sustainable and cost-effective approaches for green hydrogen production**

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P30 **ID110 High-Pressure Test Cell Based on Hydraulic Compression for PEM Electrolysis under Differential Pressure**

L. Engelhardt, J. Neumann, U. Rost, N. Kazamer, C. Pollerberg, J. Roth, L. Böhm, M. Cieluch, F. Wirkert and M. Brodmann

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AEM ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

P31 **ID164 From Performance to Durability: MEA Development for PEM Water Electrolysis**

M. Porcel-Valenzuela, A. Ortega-Murcia, G. Melle, V. Fuster-Roig and M. García-Pellicer

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P32 **ID256 Conductivity-based detection of Nafion® membrane degradation in PEM electrolyzers**

A. Sandoval-Amador, A. Sánchez de la Nieta, J.L. Endrino and M. Zurita-Gotor

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P33 **ID291 Electrochemical dispersion deposition of platinum-reduced catalyst nanoparticles on gas diffusion layers for use in polymer membrane fuel cells (PEMFC)**

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P34 **ID07 Ink Matters Meets Membrane Pre-Treatment: Optimizing Ni-CCMs for Performance testing in AEM Electrolysis**

S. Michler, D. Ölschläger, R. Baltoglou, R. Wörner and S.E. Temmel

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P35 **ID37 Efficient PGM-free electrodes for Anion-Exchange Membrane Water Electrolysis (AEM)**

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P36 **ID166 Thermal spraying as scalable porous transport layer manufacturing process for alkaline oxygen evolution anodes**

D. Woelk, M. Cieluch, L. Böhm, N. Kazamer, G. Marginean, J. Eßler, C. Pollerberg, U. Rost, F. Wirkert and M. Brodmann

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P37 **ID167 Development of Competitive AEM Electrolysis Cell**

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P38 **ID221 Visualization of oxygen evolution in an anion exchange membrane water electrolyzer**

C.H. Liu, H.T. Yau and Y.S. Chen

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P39 **ID374 A comparison of electrocatalysts with and without the presence of ionomer in an AEM water electrolysis single-cell**

L.A. Diaz, J.A. Coca-Clemente, B. Espadiña-Osorio and F. Rodriguez Laguna

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SOEC ELECTROLYZERS: MATERIALS, COMPONENTS & STACKS

P40 **ID124 ATMOSPHERE (New technologies for storage, generation and safety of green hydrogen plants)**

M. Escudero, J. Guillén and G. Reyes

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P41 **ID150 Magnetron sputtering deposition of YSZ electrolytes and GDC interlayers to enhance long-term performance of SOEC**

M.P. Cumia, J.A. Santiago, I. Fernández, P. Díaz-Rodríguez, C. Calero Almeyda, A. Alconchel-Allue, J. Zueco, C. De La Torre-Gamarra, A. Orera, A. Wennberg and M.A. Laguna-Bercero

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P42 **ID152 H_2-24/7 project - Electricity and steam production system using thermal storage for green H_2 generation through SOEC electrolysis**

D. Muñoz, J. Brey, C. García, E. Sams, A. Chumilla, M. Sánchez, C. Martín-Montalvo, S. Corrales and A. Castro

H2B2 Electrolysis Technologies, Dos Hermanas, Spain; RPoow Consulting, S.L., Sevilla, Spain

P43 **ID153 Investigation on high entropy oxide with A_2BO_4-type structure as a promising air electrode for reversible solid oxide cell**

J. Medina, V. Cascos, C. Maffiotte, E. Millán, P. Adeva, E. Ruíz and M.J. Escudero

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P44 **ID225 Optimizing SOEC Electrolytes through Multiphysics Modelling and Experimental Validation**

A.F. Casimiro, D. Ferrero, S. Anelli, A.C. Marques, M. Santarelli and G. Gaspar

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CATALYST FOR HYDROGEN PRODUCTION & CONVERSION

P45 **ID211 Development of an Auto-Thermal Reactor for Hydrogen Production from Ammonia**

H. Isogai, S. Kambara, R. Yoshiie, T. Nakamura, K. Sakamoto and M. Shindo

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P46 **ID410 Advancing CuZnAl catalyst design for efficient one-step water–gas shift hydrogen generation**

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CATALYST FOR HYDROGEN PRODUCTION & CONVERSION

P47 **ID426 Preferential CO oxidation on Co-Ce/SiO_2 catalysts -influence of the preparation method**

S. Todorova, Z. Geshkova, B. Grahovski, I. Yordanova and V. Idakiev

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P48 **ID427 Unraveling the Effect of Au on the Activity and Stability of a Successfully Scaled Cu–ZnO–Al_2O_3 Catalyst for hydrogen CO shift**

M. Gabrovska, T. Tabakova, D. Nikolova, I. Ivanov, T. Parvanova-Mancheva, P. Tzvetkov, K. Tenchev and G. Zarkova

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ELECTROCATALYST & ELECTRODES FOR ELECTROLYZERS & FUEL CELLS

P49 **ID260 Towards Cost-Effective PEMWE: Electrochemical Recovery of PGM and Recycling of Anode Materials**

R. Muntean, G. Dima, M. Dan, R. Bojîncă, S. Ambruș, A. Kellenberger, C. Crăciunescu and N. Vaszilcsin

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P50 **ID381 Earth-Abundant Metal Sulfides with Operando Surface Reconstruction for Scalable Hydrogen Generation**

L. Forzanini, A. Gutiérrez-Blanco, R. Fernández Climent, V. Jayaraman and S. Giménez

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HYDROGEN STORAGE: CARRIERS

P51 **ID69 AI-based prediction of high-performance catalysts derived from waste for hydrogen methanation in space applications**

A. Meyer, N. AlMakdessi, K. Parkhomenko and C. Courson

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P52 **ID105 The simulation of a solid-state hydrogen storage system based on a real scale prototype**

M.S. Chung, W.H. Kim, S.J. Lee and H.J. Lee

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P53 **ID147 Room-temperature synthesis of ammonia with sub-nanometric Ru on CeO_2 and CeO_2-La_2O_3 solid solutions: evidence of hybrid dissociative-associative kinetic mechanisms**

J. Arroyo-Caire, M.A. Diaz-Perez, M.A. Lara-Angulo and J.C. Serrano-Ruiz

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HYDROGEN STORAGE: CARRIERS

P54 **ID206 Advanced Electron microscopy study of Ni particles generated from $CaTi_{1-x}Ni_xO_3$ perovskites as catalysts for CO_2 methanation**

G.M. Arzac, A.M. Beltran Custodio, A. Fernandez, J.C. Pedrozo Alfonso, F.G. Duran, L.E. Cadús and F.N. Agüero

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P55 **ID308 Optimizing e-methanol synthesis over low loading copper/indium-based catalysts: synergy of the T, WHSV and feed ratio in a fixed bed reactor**

R. González-Pizarro, V. Mercader, J. Lasobras, S. Renda, J. Soler, M. Menéndez and J. Herguido

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P56 **ID311 Tuning e-fuel selectivity in sorption enhanced CO2 hydrogenation over In_2O_3/ZrO_2: the effect of LTA and FAU zeolites**

R. González-Pizarro, V. Mercader, J. Lasobras, S. Renda, J. Soler, M. Menéndez and J. Herguido

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P57 **ID377 Nickel as a key metal for efficient catalysis in hydrogen storage and release using liquid organic hydrogen carriers**

C. Tardio, J. Rodríguez, N. García-Mancha, C. Esteban and R. Campana

CNH2, Puertollano, Spain; Exolum Solutions, Madrid, Spain

P58 **ID419 Continuous hydrogen production from formic acid with integrated CO_2 capture by ionic liquids: proof-of-concept**

A. Quintanilla, A. Parra, C.B. Molina, J. Du, J. Lemus and J. Palomar

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HYDROGEN STORAGE: GAS / LIQUID

P59 **ID101 Minimising boil-off rates for the non-isobaric evaporation of liquid hydrogen stored in vertically orientated cylindrical tanks**

F. Huerta and V. Vesovic

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P60 **ID181 Experimental insights on hydrogen storage operation limitations**

S. Pekkinen and A. Santasalo-Aarnio

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HYDROGEN INFRASTRUCTURE FOR TRANSPORT, DISTRIBUTION & DISPENSING

P61 **ID99 Monitoring of hydrogen gas networks: pressure and mass balance**

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HYDROGEN INFRASTRUCTURE FOR TRANSPORT, DISTRIBUTION & DISPENSING

P62 **ID199 Existing Regulations, Codes and Standards on Hydrogen Transportation via Pipelines: Gaps and Future Needs**

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P63 **ID202 Renewable Hydrogen Infrastructure for Decarbonizing Hard-to-Abate Industries Under Water Scarcity**

E. Norman, B.S. Pérez, A. Ortiz and I. Ortiz

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P64 **ID344 Tribological performance of polymers in hydrogen compared with other environments**

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P65 **ID430 Modeling of Hydrogen Refueling Systems for Trains**

Ø. Ulleberg, G. Helgesen, M.C. Ocaña, B. Yang, C. Foncin and S. Wieser

IFE, Kjeller, Norway; Talgo, Majadahonda, Spain; DB Energie GmbH, Frankfurt/M, Germany; SNCF, La Plaine St. Denis, France; DLR/German Aerospace Center, Stuttgart, Germany

PEM FUEL CELLS: MATERIALS, COMPONENTS & STACKS

P66 **ID12 Impact of Carbon Monoxide on the Performance of a Commercial 12 W PEM Fuel Cell Stack**

V. Cascos, R. Roldán, J.L. Serrano, F. Perosanz and M.J. Escudero

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P67 **ID104 Investigating the Impact of Ammonia Impurities on Next-Generation PEM Fuel Cell Membranes**

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P68 **ID193 Temperature and Relative Humidity Performance Disruption for Proton Exchange Membrane Under Automotive Range Conditions**

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P69 **ID245 Performance optimization of single low temperature polymer electrolyte membrane fuel cell (LT-PEMFC) for robust system**

F. Hussain, A. Husar and V. Roda

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PEM FUEL CELLS: MATERIALS, COMPONENTS & STACKS

P70 **ID333 Enhancing Cold Start Performance of PEM Fuel Cells through Alternating Coolant Flow Thermal Management**

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P71 **ID339 Optimisation of Water and Air Management for Hydrogen Fuel Cell Systems**

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P72 **ID420 Enhancing the Efficiency of Open-Cathode PEM Fuel Cells: An Experimental Study**

J. Aranguren, M. Mediavilla, L. Oca, A. Goikoetxea and J.M. Canales

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P73 **ID421 Nafion® nanocomposite membranes containing green nanocellulose**

G. Di Profio, S. Palermo, D. Talarico, T. Sibillano, R. Ciriminna, F. Galiano, A. Figoli, G. Li Petri, G. Angellotti, F. Meneguzzo, C. Giannini, M. Pagliaro and E. Fontananova

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P74 **ID422 Anion conductive membranes based on polymerized ionic liquids**

E. Fontananova, F. Galiano, R. Mancuso, D. Talarico, S. Palermo, G. Di Profio, L. Guazzelli, C. S. Pomelli, M. Ferraro, R. Filosa, V. Formoso, R. G. Agostino, B. Gabriele and A. Figoli

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OTHER FUEL CELLS: MATERIALS, COMPONENTS & STACKS

P75 **ID162 From Textile Waste to Power: Coupling Pyrolysis with Solid Oxide Fuel Cell (SOFC)**

A. Ortega-Murcia, L.C. Boira-Toledo, S. Kouaou-Carretón, M. Porcel-Valenzuela and M. García-Pellicer

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P76 **ID171 New Promising Materials for Anodes of Ammonia-Fueled Solid Oxide Fuel Cells**

R. Roldán, M.J. Escudero, V. Cascos, J.L. Serrano and F.J. Perosanz

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P77 **ID286 Enhancing Solid Oxide Fuel Cell Anodes Through Exsolution of Nanoparticles: A Study on Ru effect**

T. Aworinde, W. Yang, L. Mathur, M. Ibrahim Ali, D. Anjum, S. Mishra and S. Sengodan

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OTHER FUEL CELLS: MATERIALS, COMPONENTS & STACKS

P78 **ID356 The effect of alloy exsolution on symmetrical SOFCs comprising $PrBaMn_{2-x}TM_xO_{5+d}$ layered perovskite obtained by mechanochemistry**

F.J. Gotor, J. Zamudio-García, D. Marrero-López and F.J. García-García

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P79 **ID361 The use of magnetron sputtering for the fabrication of robust poison-resistant ultrathin anodes for application in SOFCs**

F.J. Garcia-Garcia and R. Lambert

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P80 **ID398 Reducing CO_2 emissions from a coal fired power plant by using a Molten Carbonate Fuel Cell**

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PRODUCTION OF HYDROGEN DERIVATIVES

P81 **ID119 CO_2 conversion to synthetic fuels using flow cell reactor over Cu based cathodes**

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P82 **ID363 Hydrogen-Enhanced Upgrading of MSW Biogas to Renewable Natural Gas: A Technoeconomic Study of Selected Scenarios**

V.D. Mercader, P. Sanz-Monreal, P. Aragüés-Aldea, P. Durán, E. Francés, J. Herguido and J.Á. Peña

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P83 **ID425 Affordable green ammonia by KBR and using SolydEra reversible solid oxide electrolysis**

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HYDROGEN COMBUSTION

P84 **ID42 IR-Thermography Coupled with Mass Spectrometry to Uncover Operating Limits in Catalytic H_2 Combustion Systems**

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HYDROGEN COMBUSTION

P85 **ID224 Simulation of the hydrogen intake process for the retrofitting of a heavy-duty gasoline port-fuel injection spark ignition engine**

P.M. Diéguez, B. Erviti, M. Ugalde, P. Villanueva, J.C. Urroz and L.M. Gandía

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P86 **ID338 Hydrogen-powered microturbines for decentralized energy transition: a retrofit protocol**

L. Bueno, A. Gonçalves, S. Das, M. Rosário, N. Canha, A. Fonseca, E.C. Fernandes and G. Gaspar

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P88 **ID424 Integrated CFD Simulation and Thermodynamic Modeling of Hydrogen Combustion in Stainless Steel Annealing Furnaces**

I. Collado, O. Burgos-Montes, J. Palacios, S. Martinez-Chaparro, S. Serena, A.H. de Aza, M. Álvarez and J.F. Almagro

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MARITIME & AVIATION APPLICATIONS

P89 **ID52 Hydrogen-Based Maritime Decarbonisation: Integrating Green Fuels in Coastal and Commercial Shipping**

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P90 **ID143 R&D activities on Hydrogen Sustainable aviation at INTA**

J. Maellas and M.P. Argumosa

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P91 **ID369 Influence of ZnO nanomorphology on ZnPd/ZnO catalysts for methanol production from CO_2 hydrogenation**

N. Mota, B. Pawelec, A. Palomino, C. Quilis and R.M. Navarro Yerga

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P92 **ID417 Stack PEMFC for Naval Applications: Virtual Design and Assembly**

I. Belviso, O. Barbera, G. Giacoppo, N. Briguglio, M. Bottari, V. Antonucci and L. Andaloro

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MARITIME & AVIATION APPLICATIONS

P93 **ID418 From Short-Stack to Full-Stack: Development for Marine Applications**

I. Belviso, O. Barbera, G. Giacoppo, N. Briguglio, N. Randazzo, V. Antonucci and L. Andaloro

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LAND TRANSPORTATION APPLICATIONS

P94 **ID03 Potential and Challenges of Next Generation Fuel Cell Powered Heavy-Duty Long Haul Trucks**

R. Doebereiner, C. Schoerghuber, A. Schenk, T. Schubert, J. Macherhammer and B. Stoeckl

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P95 **ID108 A comparative assessment of OMEx and fuel-cell buses for urban bus fleet decarbonization**

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P96 **ID210 The Future of Fuel Cell Electric Vehicles: Overcoming Barriers to Widespread Adoption**

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OTHER HYDROGEN APPLICATIONS

P97 **ID133 Development of Fuel Cell Gensets for critical applications: design, integration and functional validation**

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P98 **ID297 Selective Hydrocracking of Hexadecane over Ni catalysts Supported on Promoted ZrO_2 for Production of bio-gasoline**

G.I. Siakavelas, N.D. Charisiou, M. Pliaka, D.S. Kourkoumpas, P. Grammelis and M.A. Goula

LAFEC, University of Western Macedonia, Kozani, Greece; CERTH/CPERI, Charilaou – Thermi, Greece

P99 **ID305 Next-Generation Hydrogen Backup and Peak-Shaving Prototype: Multi-Energy Modular Architecture with AI and Digital Twin Supervision**

J.M. Pagán, D. Campos, E. Cuenca, J. Llamas, F.D. Gallego and V. Fabregat

Regenera Energy, Regenera Levante S.L., Murcia, Spain

REGULATIONS, CODES & STANDARDS

sP100 **ID92 Advanced Chromatographic Approaches for Hydrogen Purity Determination: A Comparative Study of Analytical Methods**
E. Tovar, M. Miras, J.M. Toro, C. Dominguez, V. Fernandez, E. Parrondo, S. Rodriguez and J. Llorca
Moeve S.A., Alcalá de Henares, Spain

P101 **ID182 Key Challenges in CO_2 Utilization for E-Fuel Production**
I. Bolea
Hy.Five Hydrogen S.L, Bilbao, Spain

SAFETY

P102 **ID135 Validation of a Hydrogen Leak Test Bench: A Combined Analytical, Numerical and Experimental Approach**
A. Errarte, A. Mialdun, M. Minguez, E. Vadillo, F. Morente and M.M. Bou-Ali
Mondragon Unibertsitatea, Mondragon, Spain; Tecnalia Research & Innovation, Derio, Spain

P103 **ID316 Designing for Performance, Safety, and Sustainability in Green Hydrogen Plants**
C. Nugroho, S. Monton and O. Levaux
Rely solutions, Nanterre, France; Brussels, Belgium

LCSA ENVIRONMENTAL & SOCIAL IMPACTS

P104 **ID250 Towards a Positive Territorial Impact: Social License in Renewable Gas Projects**
V. Del Coso, R. López Verdura and A. Pérez
EHS Techniques SL, Spain

HYDROGEN SYSTEMS MODELLING

P105 **ID46 Modeling of a Pd-Based Reactor for Enhanced H_2 Production via Water Gas Shift and Selective Permeation**
C.M. Torres, V. Puchal Bosch and M. Martínez del Álamo
EURECAT, Tarragona, Spain

P106 **ID146 Performance Prediction of an Anion Exchange Membrane Electrolyzer Using Multivariate LSTM Models and Correlation-Based Feature Selection**
I. Otic and F.J. Perosanz
Eggenstein-Leopoldshafen, Germany; CIEMAT, Madrid, Spain

POSTER COMMUNICATIONS

HYDROGEN SYSTEMS MODELLING

P107 **ID279 Modelling and validation of a process simulation for a hydrogen refuelling infrastructure**

A. Megia, C. de la Cruz, C. Ballester and B. Nieto

CNH2, Puertollano, Spain

P108 **ID288 Understanding the key drivers of the Levelized Cost of Hydrogen (LCOH)**

J.N. Hinojosa, D. Toscano and I. Torres

COX Energy, Sevilla, Spain

P109 **ID351 Decentralised hydrogen refuelling station dynamic modelling in Modelica**

J.C.C. Portillo

LNEG – Laboratório Nacional de Energia e Geologia, Amadora, Portugal

ROADMAPS, STRATEGIES, VALLEYS & NETWORKS

P110 **ID57 CyLH2Valley: Unlocking the Renewable Hydrogen Potential of Castilla y León**

C. Martínez-Alonso, A. Niño-Pariente and J. Robador

H2CYL Hydrogen Association, Burgos, Spain

MARKET & TECHNO-ECONOMIC ANALYSIS

P111 **ID38 Innovative AI-Powered Platform for Geological Exploration and Pipeline Monitoring: Revolutionizing Resource Discovery and Infrastructure Safety**

E. Korneev

Soto de Rey, Asturias, Spain

P112 **ID98 Techno-economic analysis of green hydrogen distribution for heavy transport applications: A Western Australian case study**

H. Hettigoda, B. Graham and E. Fridjonsson

University of Western Australia, Australia

P113 **ID268 Evolution of funding hydrogen technology projects in Spain**

C. García, A.F. Carazo and A. Rosales-Tristancho

Loyola University Andalucía, Dos Hermanas, Spain; Pablo de Olavide University, Sevilla, Spain; US, Sevilla, Spain

P114 **ID414 Financing Renewable Hydrogen in Spain: FI Group's 360° Approach to Maximising Public Funding Opportunities**

J.L. Lupiáñez and S. Miguel

FI Group, Madrid, Spain

Side EVENTS

SIDE EVENTS

WEDNESDAY MARCH 11TH
ROOM OPORTO
10:00 - 14:00

PTeH2 & Mission Innovation Side Event: International Collaboration to Scale Up Hydrogen and SAF.

This side event, jointly promoted by PTeH2 and Mission Innovation, will explore how international collaboration in hydrogen R&D&I is accelerating the deployment of Sustainable Aviation Fuels (SAF). The session will combine institutional perspectives, technological insights and industry viewpoints, highlighting coordinated efforts from research to market uptake and fostering dialogue among stakeholders.

WEDNESDAY MARCH 11TH
ROOM PRAGA
15:30 - 19:30

From the Andalusian Hydrogen Ecosystem to European Good Practices.

Organised within the framework of the Green Hydra project, this interregional learning event brings together partners and stakeholders to explore the Andalusian hydrogen ecosystem and share European good practices. Through regional insights, interregional exchange and stakeholder engagement, the event aims to contribute to the development of a sustainable and competitive green hydrogen market in Europe.

SIDE EVENTS

THURSDAY MARCH 12TH
ROOM VARSOVIA
10:00 - 14:00

H2 Business Alliance

Scaling Green Hydrogen Sustainably: Building Markets, Mobilising Investment, Enabling Offtake.

The Green Hydrogen Business Alliance (H2BA) presents its latest activities to accelerate the global ramp-up of green hydrogen markets. The session will explore how H2BA fosters a shared understanding of next steps in market development, engages partner countries and emerging economies to build sustainable value chains, and creates a transparent, investment-friendly market environment. Participants will gain insights into the design of innovative support mechanisms — including Contracts for Difference (CfDs) and Procurement Alliances — designed to unlock offtake and catalyse large-scale deployment.

THURSDAY MARCH 12TH
ROOM ROMA
10:00 - 14:00

JETRO
Japan External Trade Organization

Bilateral Business Networking with Japanese Companies

A bilateral networking event organized by JETRO, featuring Japanese and international company pitches, followed by business matchmaking sessions.

Participants will discover Japan's cutting-edge hydrogen technologies and explore potential business collaborations.

We welcome inquiries from organizations interested in Japanese hydrogen technologies.Please do not hesitate to contact us at: **info-jetromadrid@jetro.go.jp**

SIDE EVENTS

THURSDAY MARCH 12TH
ROOM BARCELONA
11:30 - 14:00

H2SALT Project Results Presentation Workshop: Hydrogen Storage in Salt Caverns.

The companies TEAM, TTI, TUBOS REUNIDOS, TAMOIN, and IBERDROLA, together with the associations BASQUENERGY CLUSTER and SIDEREX, have carried out the H2SALT project within the framework of the PERTE Hydrogen Value Chain call. During this event, the main technical results will be presented, along with the most relevant conclusions drawn from the project's implementation. The event will also feature the participation of ENAGAS, which will provide an overview of the role of large-scale hydrogen storage within the future energy system, with particular emphasis on salt caverns as one of the technological solutions with the greatest potential to ensure flexibility, security of supply, and the integration of Renewable hydrogen.

Registration: **https://ace.bmvit.es/event/h2salt-project-results-presentation-workshop-hydrogen-storage-in-salt-caverns-434/register**

11:30 Opening session: Overview of salt cavern storage technologies and projects. Outlook for the 2030-2050 horizon (ENAGAS)

12:00 Presentation of project results:

- Geological structure and characteristics of salt formations; evolution of gas stored underground; parameters such as flow rate, pressure, and H_2 purity **(TEAM)**
- Mechanical and design requirements for control systems and auxiliary cavern elements **(TAMOIN)**
- Development of hydrogen injection and withdrawal systems and auxiliary components **(TUBACEX, TUBOS REUNIDOS)**
- New technological solutions and business model for underground hydrogen storage in salt caverns **(IBERDROLA)**

13:00 Panel discussion

13:15 Networking aperitif & wine

THURSDAY MARCH 12TH
ROOM ROMA
15:30 - 19:30

Connecting the Dots: Shaping the Spain-Germany Hydrogen Value Chains.

On 12th March 2026, partners from Baden-Württemberg, North Rhine-Westphalia and Andalusia discuss infrastructure and innovations for a future-proof hydrogen supply chain from Spain to Germany. You can also get to know our exhibitors from the regions. They will be giving short pitches on exciting technologies and innovations from the two federal states.

Please register online: **https://www.event.plattform-h2bw.de/**

SIDE EVENTS

THURSDAY MARCH 12TH
ROOM PRAGA
15:30 - 19:30

beWarrant | tinexta innovation hub · hydra · NHyRA · GERG

Building a sustainable Hydrogen Economy: insights from HYDRA and NHyRA projects.

The joint HYDRA–NHyRA workshop will bring together leading researchers and industry representatives to explore the possible scenarios of a future hydrogen economy.

The event will open with a welcome session and an introduction to the HYDRA (GA 101137758) and NHyRA (GA 101137770) projects, followed by three focused technical sessions. These will cover the hydrogen value chain and its leakage hotspots, scenarios for future hydrogen adoption and potential impacts, and the latest advances in leakage detection technologies.

The workshop will conclude with an interactive roundtable featuring project partners, who will share their perspective on strenghtening safety and long-term sustainability of the hydrogen value chain.

15:30-15:45 Registration of Participants

15:45-16:00 Welcome
- Greetings.
  Isella Vicini, HYDRA Project Coordinator (beWarrant | Tinexta Innovation Hub)
- Presentation of the HYDRA project and consortium (5 min).
  Rossella Urgnani, HYDRA Project Scientific Coordinator (Tinexta Innovation Hub)
- Presentation of the NHyRA project and consortium (5 min).
  Vittoria Troisi, NHyRA Project Manager (SNAM)

16:00-16:45 **Session 1** – Hydrogen Value Chain and Leakages
- Overview of the hydrogen value chain and leakage points (20 min)
  Alessandro Guzzini, Università di Bologna, NHyRA
- Estimation of hydrogen losses across the value chain (20 min)
  Davide Trapani, Politecnico di Torino, HYDRA
- Q&A

16:45-17:30 **Session 2** – Scenarios for a Future Hydrogen Economy
- Definition of future hydrogen economy scenarios (10 min)
  Yasaman Nosrat Tajoddin, Fondazione Bruno Kessler, NHyRA
- Energy, socio-economic and atmospheric emission scenarios-including hydrogen (20 min)
  Iñigo Capellán Pérez, Universidad de Valladolid, HYDRA
- Environmental impacts: land use, water consumption and climate (10 min)
  Noelia Ferreras Alonso, CARTIF Technology Centre, HYDRA
- Q&A

17:30 – 17:45 Break

17:45 – 18:25 **Session 3** – Hydrogen Leakage Detection Technologies
- Detection techniques, methodologies and experimental results (10 min)
  Haydn Barros, National Physical Laboratory, NHyRA
- New HYDRA technology and testing activities (10 min)
  AUTOMA, HYDRA
- Feedback on leakage monitoring from electrolyzer producers (15 min)
  Alessandro Saccardi, Fondazione Bruno Kessler, NHyRA
- Q&A

18:25 – 19:00 **Round Table** – Towards a Safe and Sustainable Hydrogen Value Chain
Moderators: **Rossella Urgnani,** Tinexta Innovation Hub & **Vittoria Troisi,** SNAM

19:00 **Closing**
Isella Vicini, HYDRA Project Coordinator (beWarrant | Tinexta Innovation Hub)

Ultrasonic Gas Leak Detection

Point Gas Detection

Flame Detection

Hydrogen Safety

H_2 SAFETY

Dräger Hydrogen Detection Solutions

Dräger

Technology for Life

SIDE EVENTS

THURSDAY MARCH 12TH
ROOM BARCELONA
15:30 - 19:30

AeH2 SPANISH HYDROGEN ASSOCIATION

Shaping the Hydrogen Future: Insights from Global Partners.

This side event will bring together representatives from hydrogen associations and key institutions from different regions worldwide, offering a high- level exchange of perspectives on the evolving global Hydrogen landscape. Through short interventions and shared reflections, speakers will present the current status of hydrogen development in their respective countries, addressing policy frameworks, market trends, infrastructure deployment and international cooperation. The session will provide attendees with a comparative and global overview of the sector, while fostering dialogue on common challenges, emerging opportunities and potential areas for collaboration to accelerate the sustainable growth of the hydrogen economy.

SPEAKERS:

IOAN IORDACHE
Executive Director of Romanian Association for Hydrogen Energy

JANNE HIETANIEMI
Key Account Director, Cleantech&Industry at BusinessOulu

JUAN ANTONIO GUTIÉRREZ
Chemical Engineer at H2 Perú

NISHAANTH BALASHANMUGAM
CEO and Director at GH2 India

JOSÉ YSMAEL VERDE GÓMEZ
President of the Mexican Hydrogen Society

JAN-NIKLAS BECK
Project Manager Green Hydrogen Business Alliance at Germany GIZ.DE

JAVIER BONILLA HERRERA
President of the Costa Rican Hydrogen Association

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2026

EUROPEAN HYDROGEN ENERGY CONFERENCE

Seville · 11th - 13th March 2026

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European Hydrogen Energy Conference (EHEC) 2026

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