

تحت الرعاية السامية لصاحب الجلالة الملك محمد السادس نصره الله
ⵜⴰⵎⴰⵔⴰⵏⵜ ⵏ ⵓⵎⴰⵎⵓⵎ ⵙⵓⵔ ⵓⵎⴰⵎⵓⵎ ⵙⵓⵔ
Sous le Haut Patronage de Sa Majesté le Roi Mohammed VI



جامعة شعيب الدكالي

ⵜⴰⵎⴰⵔⴰⵏⵜ ⵏ ⵓⵎⴰⵎⵓⵎ ⵙⵓⵔ ⵓⵎⴰⵎⵓⵎ ⵙⵓⵔ



Université Chouaib Doukkali

—ORGANIZE—



4th GERMAN-AFRICAN GREEN HYDROGEN FORUM 2026

Bridging Continents for a Sustainable Hydrogen Future



24 - 25 SEPTEMBER 2026



Zephyr Mazagan, El Jadida, Morocco

PROGRAM GAGH2 FORUM 2026



Organized by



المدرسة الوطنية لتكنولوجيا المصنوعات



RECONNUE PAR L'ÉTAT



ECOLE MAROCAINE DES
SCIENCES DE L'INGÉNIEUR

HONORIS UNITED UNIVERSITIES



OPENING & OFFICIAL WELCOME



Green Hydrogen: El Jadida at the Heart of the Moroccan-German-African Alliance.



08:45 - 09:30
a.m.

Registration & Welcome Coffee



MEET
CONNECT
BUILD TOGETHER



09:30 - 10:00
a.m.

Opening ceremony &
official welcome



SHARED VISIONS
BOLDER ACTION
A GREENER TOMORROW



OFFICIEL OPENING SPEAKERS



**Prof. Abdelowahed
HAJJAJI**

Acting President of
Chouaib Doukkali
University, Director of
National School of
Applied Sciences, El
Jadida, Morocco



**Prof. Jörg
BAGDAHN**

President of Anhalt
University of Applied
Sciences, Germany



**Prof. Hafid
SABER**

Dean of the Faculty
of Sciences
El Jadida, Morocco



**Prof. Mohammed
BARBOUCHA**

Director of the School
of Advanced
Engineering Studies
(EHEI), Oujda,
Morocco



**Prof. Mohammed
EL RHABI**

Director General of
the Moroccan School
of Engineering
Sciences (EMSI),
Morocco





BRIDGING
KNOWLEDGE
PEOPLE
AND
OPPORTUNITIES

FORUM LEADERSHIP

IDEAS
PEOPLE
SOLUTIONS
A BRIGHTER
TOMORROW

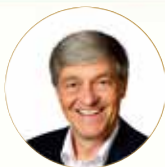
01 CHAIRMEN OF THE FORUM

— Guiding the Dialogue for a Sustainable Future —



**Prof. Charaf
HAJJAJ**

Faculty of Science,
Chouaib Doukkali
University,
El Jadida, Morocco



**Prof. Markus
HOLZ**

Vice-President for
Research, Transfer, and
Sustainability, Anhalt
University of Applied
Sciences, Germany



**Prof. Elhadi
BAGHAZ**

Faculty of Science,
Chouaib Doukkali
University,
El Jadida, Morocco



**Prof. Ahmed
ENNAOUI**

President of The
Scientific Council of
IRESEN, Morocco

02 CO-CHAIRS OF THE FORUM

— Connecting Talent for Greater Impact —



**Dr. Massaab
EL YDRISSI**

InnovX, Mohammed VI
Polytechnic University
(UM6P), Benguerir,
Morocco



**Dr. Alae
AZOUZOUTE**

Faculty of Sciences,
Mohammed First
University, Oujda,
Morocco



**Prof. Abdellatif
BOUAICHI**

Moroccan School of
Engineering Sciences,
Rabat, Morocco



**Prof. Samir
TOULI**

School of Advanced
Engineering Studies,
Oujda, Maroc





01

SESSION

IALOGUE
OLUTIONS
HARED
ROSPERITY

FROM
IDEAS TO
IMPACT

Session 1:

Moroccan-German-African Roadmaps & Hydrogen Diplomacy

STRONGER
PARTNERSHIPS
BRIGHTER
TOMORROWS



10:00 - 11:45
a.m

MODERATOR



Mr. Badre IKKEN

Executive President of Gi3
Managing Partner at Gi2
President of the Morocco-Germany Business Council - CGEM

Facilitating
Partnerships
for a Hydrogen
Future

SPEAKERS



Prof. Markus HOLZ

Vice-President for Research, Transfer, and Sustainability,
Anhalt University of Applied Sciences, Germany

*"Beyond the Molecule: Mastering the Logistics
of German-African Hydrogen Flows"*

LOGISTICS
INFRASTRUCTURE
MARKETS
CONNECTIONS



Dr. Samir RACHIDI

Director General of IRESEN
Secretary General of the GreenH2 Cluster

"Address on R&D and Innovation"

RESEARCH
INNOVATION
TALENT
VALUE
CREATION



Dr. Firdaous El Ghazi

Director of Contract Management for Green Hydrogen
MASEN - Moroccan Agency for Sustainable Energy, Rabat, Morocco

*"How can green hydrogen contribute to the
integration of renewable energy while accelerating
industrial decarbonisation and the development of
new green value"*

INTEGRATION
DECARBONISATION
GREEN VALUE CHAINS
SUSTAINABLE GROWTH



Dr. Ing. Sidi Bouhamady

Director of the Higher Institute of Energy (ISE) -
Polytechnic Group, Associate Professor (Senior Lecturer)
in Electrical Engineering and Renewable Energy

*"The Potential of the Green Hydrogen Sector
in Mauritania: Strengths, Challenges, and
Development Prospects."*

OPPORTUNITIES
CAPACITY BUILDING
REGIONAL DEVELOPMENT
AFRICA FORWARD



Panel Discussion - Round-table among speakers (30 min)



11:45 a.m. - 12:15 p.m. | Coffee Break + Poster (Part I)





02

SESSION

FROM
INNOVATION
TO IMPACT

CLEAN ENERGY
STRONGER AFRICA
BRIGHTER TOGETHER

Session 2:

Accelerating the Green Hydrogen Economy: Production, Financing, Regulation & Certification

PEOPLE
IDEAS
INNOVATION
PARTNERSHIPS
REAL IMPACT



12:15 p.m. - 02:15 p.m.

MODERATOR



Dr. Firdaous El Ghazi

Director of Contract Management for Green Hydrogen
MASEN - Moroccan Agency for Sustainable Energy, Rabat, Morocco

TURNIN
STRATEGY
INTO A GREENER
TOMORROW

SPEAKERS



Mr. Badre IKKEN

Executive President of Gi3 / Managing Partner at Gi2
President of the Morocco-Germany Business Council - CGEM

"Address on Morocco-Germany-Africa
Cooperation & Economic Diplomacy"

DIPLOMACY
COOPERATION
INVESTMENT



Prof. Abdessamad Faik

Director of LIMSET, UM6P

"From Laboratory to Industry: Ongoing Hydrogen
R&D and Innovation Enabling Green Hydrogen
Deployment in Morocco and Africa"

R&D
INNOVATION
DEPLOYMENT



Mr. Khalid Benhamou

Director, Sahara Wind

"The strategic roll-out of Morocco's green
hydrogen ecosystem"

ECOSYSTEM
STRATEGY
MOROCCO



Mr. Youssef Imghi

CEO, Portus Advisory International

"Green corridors, port infrastructure and export
bankability: Logistics, bunkering, safety, certification,
and financing."

LOGISTICS
PORTS
BANKABILITY



Prof. Said Laassiri

Assistant Professor, CBS, UM6P

"The Potential of the Green Hydrogen Sector
in Mauritania: Strengths, Challenges, and
Development Prospects."

GREEN AMMONIA
CATALYSIS
PRODUCTION



Panel Discussion - Round-table among speakers (30 min)



02:15 p.m. - 03:30 p.m.

Lunch Break & Networking

Meet. Exchange. Build. Partnerships.



PEOPLE
CONNECTIONS
OPPORTUNITIES





TUTORIAL SESSION

CAPACITY
KNOWLEDGE
APPLICATION

Tutorial held in parallel with Session 3:

Interface Materials for Photo- & Advanced Catalytic Technologies:

From Fundamental Electrochemistry
to Industrial Scale-Up

LEARN
EXPERIMENT
INNOVATE
SCALE-UP



03:30 p.m. - 07:00 p.m.



SPEAKERS



Prof. Ahmed ENNAOUI

Former head of research group at Helmholtz-Zentrum Berlin
President of the scientific council at IRESEN &
Founder of Virtual Learning University

Prof. Abdelilah Benyoussef

Hassan II Academy of Sciences and Technologies, Rabat, Morocco;
Faculty of Sciences, Mohammed V University, Rabat, Morocco





POSTER SESSION



11:45 a.m. - 12:15 p.m. **Poster Session 1 - Morning Coffee Break**

GAGH2-2026-ABS-0009 S. Merzouk et al.

Artificial Intelligence for Predictive Maintenance and Safety Optimization in Green Hydrogen Infrastructure.

GAGH2-2026-ABS-0014 M. Chanda et al.

Investigation of Cu-Doped Multi-Cation Perovskite Oxides for High-Temperature Water Splitting: A Combined Experimental and Theoretical Study.

GAGH2-2026-ABS-0015 M. El Hayani et al.

Theoretical approach to study hydrogen storage properties of MgH₂ nanoclusters: Crucial role of hydrogen kinetics.

GAGH2-2026-ABS-0020 Y. Ait Bella et al.

High-Entropy Perovskite Air Electrodes: Combined DFT-AIMD and Experimental Insights into Reversible OER/ORR Activity

GAGH2-2026-ABS-0023 R. Naji El Idriissi et al.

Cooperative Power Management of Residential Loads and Electric Vehicles Using Optimization and Reinforcement Learning

GAGH2-2026-ABS-0028 A. Lamine et al.

Transferring GeoH₂ from a Namibian to a German Case Study for Regional Hydrogen Infrastructure Planning

GAGH2-2026-ABS-0033 M. Boughalbi et al.

Green Hydrogen Transportation: A Comprehensive Review and Comparative Analysis of Pipeline and Truck-Based Logistics

GAGH2-2026-ABS-0038 F. Lyasi et al.

A Multiphysics Modeling Approach for PEM Water Electrolyzer Systems

GAGH2-2026-ABS-0049 M. Kattan et al.

Integration of a Packed Bed Latent Heat Storage for Solar-Assisted Feed-Water Preheating in PEM Electrolysis

GAGH2-2026-ABS-0051 S. Chatioui et al.

Numerical Investigation of the Thermal Performance and Thermo-Mechanical Behavior of a Liquid Sodium Solar Central Receiver Tube

GAGH2-2026-ABS-0055 I. Sadik et al.

Dynamic Performance Analysis of an Integrated Floating Photovoltaic SWRO PEM System for Green Hydrogen Production

GAGH2-2026-ABS-0058 F. Laiti et al.

Comparative Performance Evaluation of a Photovoltaic System Using a Proposed MPPT Control Strategy: A Simulation-Based Study

GAGH2-2026-ABS-0060 O. Echab et al.

Advanced Incremental Conductance MPPT for Standalone Photovoltaic Systems under Partial Shading Conditions: Embedded Validation Using Arduino Due

GAGH2-2026-ABS-0065 C. Benhamza et al.

From solar radiation to hydrogen storage: Dynamic operation of a PV-PEMFC-metal hydride energy system under Mildet climatic conditions

GAGH2-2026-ABS-0066 S. Malki et al.

Structural, Electronic, and Optical Properties of Hexagonal VS₂ within the Local Density Approximation: Implications for Energy Storage Applications

GAGH2-2026-ABS-0072 M. Sadik et al.

Assessment of Aerosol Optical Depth Products for Solar Resource and Photovoltaic Applications in Morocco

GAGH2-2026-ABS-0073 F. Ouerradi et al.

Enhancing photovoltaic performance using PCM-filled triangular cavities: A numerical investigation of thickness effects

GAGH2-2026-ABS-0080 W. Baali et al.

Tailored Nanostructures of Nickel Phosphate as Electrocatalyst for Efficient Water Electrolysis

GAGH2-2026-ABS-0083 M. Chouitar et al.

Techno-Economic Assessment of Green Hydrogen Production from Wind-Powered Electrolysis: A Case Study of the Marrakech-Safi Region, Morocco

GAGH2-2026-ABS-0086 B. Dawai et al.

Development of a COF@MOF Core-Shell Photocatalyst for Solar-Driven Hydrogen Production

GAGH2-2026-ABS-0094 Y. El Alami et al.

Impact of cooling uniformity on the thermal and electrical performance of photovoltaic-thermal systems: A three-dimensional numerical study

GAGH2-2026-ABS-0098 H. Mounir et al.

Dynamic Modeling and Energy Management of a PV Battery PEM Electrolyzer System for Green Hydrogen Production





POSTER SESSION



07:00 p.m.

Poster Session II - Afternoon Coffee Break

GAGH2-2026-ABS-0008 I. Aitouhanni et al.

Machine Learning-Based Framework for Predicting Green Hydrogen Production Efficiency under Variable Environmental Conditions.

GAGH2-2026-ABS-0012 I. Baqqal et al.

A Vehicle Routing Approach for Green Hydrogen Distribution Under Operational and Regulatory Constraints.

GAGH2-2026-ABS-0016 A. Dahani et al.

Advanced Waste Heat Recovery from the Haber-Bosch Process for efficient hydrogen production via Solid Oxid Electrolysis (SOE).

GAGH2-2026-ABS-0021 M. El Jabouri et al.

A Critical State-of-the-Art Review of Green Hydrogen Storage and Transportation Technologies: Towards Techno-Economic and Environmental Optimization for Morocco and Africa

GAGH2-2026-ABS-0027 H. Ouatab et al.

Assessing Business Creation Opportunities Around Green Hydrogen Projects in Morocco

GAGH2-2026-ABS-0029 R. Mamhoud et al.

Proposal for a surface geothermal-solar architecture for domestic hot water (DHW) production intended for building use, with system performance using PINN (Physics-Informed Neural Networks)

GAGH2-2026-ABS-0030 J. El Gharfaoui et al.

An Adaptive Variable-Step Hill Climbing MPPT Algorithm for Fast and Accurate Maximum Power Point Tracking

GAGH2-2026-ABS-0039 O. Kassaoui et al.

Evaluating Solar-Wind Complementarity for Green Hydrogen Production in Southern Morocco: A Multi-Level Techno-Economic Approach

GAGH2-2026-ABS-0040 M. Bibih et al.

Electrolyzer-Based Demand Response for Short-Term Power System Flexibility in Emerging Grids

GAGH2-2026-ABS-0050 A. Ben Touil et al.

Semi-Empirical Modeling and Techno-Economic Optimization of a PV-Powered PEM Electrolyzer System for Levelized Cost of Hydrogen Minimization

GAGH2-2026-ABS-0052 M. Hlal et al.

Multi-Scale Computational Design of Next-Generation Cathode Materials XMnYO₄ (X = Li, Na; Y = Si, Ge, Sn) for Sodium-Ion Batteries: A DFT, Machine Learning, and Molecular Dynamics Study

GAGH2-2026-ABS-0057 A. Benaly et al.

Unified High-Throughput Workflow to Classify and Rank MOF-74 Families for Hydrogen Storage

GAGH2-2026-ABS-0061 M. Oumella et al.

Optimal Sizing of a PEM Electrolyzer for Cost-Effective Wind-Based Green Hydrogen Production

GAGH2-2026-ABS-0063 Y. El Alami et al.

Experimental Assessment of a Novel Stainless-Steel Heat Exchanger for Simultaneous Electrical, Thermal and Exergy Enhancement of a Photovoltaic-Thermal System

GAGH2-2026-ABS-0068 H. Chetnoui et al.

Predicting the Performance of a Photovoltaic/Thermal System with a Phase-Change Material Using Artificial Neural Networks

GAGH2-2026-ABS-0071 Y. Anbi et al.

Comparative Assessment of Existing Photovoltaic Soiling Loss Models Using Ground Measurements and Reanalysis Data: The Case of Ben Guerir Site, Morocco

GAGH2-2026-ABS-0076 F. Zadane et al.

Multiphysics Parametric Study of a Multi-Channel Parallel Flow Field PEM Electrolyzer for Green Hydrogen Production

GAGH2-2026-ABS-0077 L. El-Mahaouchi et al.

Green Hydrogen and the Energy Transition to X in Morocco: An Analysis of Policy Frameworks and Infrastructure Potential

GAGH2-2026-ABS-0082 A. El Yaagoubi et al.

From Hydrogen Diplomacy to Project Delivery: A Project-Level Analysis of Morocco-Germany Green Hydrogen Cooperation

GAGH2-2026-ABS-0084 E. Mohammed et al.

Five-Year Multisite Assessment of Photovoltaic Degradation Using Ground and Satellite Data: Comparative Performance and Economic Analysis of Mono-Si, CdTe and CIGS Technologies in Morocco

GAGH2-2026-ABS-0087 Z. Hasnaoui et al.

Intelligent Energy Management of a Grid Connected Photovoltaic System Using TD3 and LSTM

GAGH2-2026-ABS-0089 S. Laghchimi et al.

Optimizing the Green Hydrogen Supply Chain at the Port of Tan-Tan: Integrated Production-Storage-Transport Modeling and Comparative Export Scenarios (Ammonia/Methanol, Pipeline/Maritime)

GAGH2-2026-ABS-0095 H. Chinchkar et al.

Prospects for underground hydrogen storage in Moroccan salt formation: From variable renewables to secure supply





DAY 2 — TECHNICAL VISITS & CULTURAL TOUR

Industry, Heritage and a Shared Future



09:00 a.m. – 12:00 p.m.



Visit to the Port of Jorf Lasfar

OCP Group | Hydrogen Pilot Project



Explore one of Morocco's key industrial port hubs and discover the OCP Group's hydrogen pilot project, a step toward a sustainable and decarbonized industrial future.



03:00 p.m. – 06:00 p.m.



Visit to the Portuguese City and Tourist Sites of El Jadida



Explore the historic Portuguese City of El Jadida, a UNESCO World Heritage Site, and discover its unique blend of history, architecture and Atlantic charm.





PREVIOUS EDITION HIGHLIGHTS

Snapshots from the previous German–African Green Hydrogen Forum



Technical session



Group photo



Innovation site visit



Academic exchange



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