

Natural Hydrogen - Understanding the Geoscience 1 - 2 July 2025

Hybrid Conference, Burlington House, and Zoom, BST

Final Programme

Day One	
08.30	Registration
08.50	Welcome remarks Owain Jackson, <i>H2Au</i>
	Session 1 – Natural Hydrogen Systems
09.10 Virtual	The migration of hydrogen from planetary to basin scale Bhavik Lodhia, <i>Curtin University</i>
09.35	The character and habitat of natural hydrogen resources Chris Ballentine, <i>University of Oxford</i>
10.00	Hydrogen systems analysis and play based exploration – A global perspective Michael Lawson, <i>Snowfox Disco very</i>
10.25	Modelling hydrogen-generation potential of water-rock reaction Andy Barnicoat, <i>NHSG</i>
10.50	Break (Poster Session)
11.50	Iron redox state of serpentized mantle rocks through a Wilson cycle: implications for serpentization-sourced hydrogen systems Francesca Dimasi, <i>Université de Strasbourg</i>
12.15	Full-physics numerical models for hydrogen migration: One step closer to model natural hydrogen plays in sedimentary basins Javier Garcia-Pintado, <i>MARUM, Center for Marine Environmental Sciences, University of Bremen</i>
12.40	Lunch
13.40 Virtual	A Systems Approach to Hydrogen Migration, Migration Efficiency, and Preservation Jay Huang, <i>Northlight Recourse Analytics</i> <i>Ketnote</i>
14.05	Keynote – Challenges and opportunities related to geologic hydrogen prospectivity mapping Geoff Ellis, <i>US Geological Survey</i>
14.30	Break
	Session 2 – Geological Hydrogen Stimulation
14.50	Keynote - Initiating a first pilot for stimulated geological hydrogen production in peridotite rocks Alexis Templeton, <i>University of Colorado</i>
15.15	Scientific challenges for Stimulated Geologic Hydrogen Florian Osselin, <i>Vema Hydrogen</i>
15.40	Turning Subsurface Gambles into a Factory of Hydrogen Certainty Alexei Tcherniak, <i>Geokiln Energy Innovation</i>
16.05	Hydrogen Stimulation in Ultramafic Systems: Reactive Reservoirs and Their Associated Challenges Owen Sutcliffe, <i>Halliburton</i>
16.30	Electrical Reservoir Stimulation: Lab-Scale Hydrogen Generation Experiments of Fractured Peridotite Cores and Upcoming Field Pilot in Oman Mark Hansford, <i>Eden GeoPower</i> , Alexis Templeton, <i>University of Colorado</i>
16.55	20 min Closing Remarks/Questions/Discussion (tbc)
17.15- 18.15	Drinks Reception

Day Two	
08.30	Registration
08.50	Keynote – Natural Hydrogen Development-Potential and Challenges <i>Arnout Everts, AEGeo Sdn Bhd</i>
	Session 3 - Settings, Plays & Case Studies
09.15	Keynote - Following the Yellow Brick Road to Natural Hydrogen: Early Exploration Insights from Kansas <i>Ben Mee, Hyterra</i>
09.40	Could rift-inversion orogens host large-scale natural H₂ accumulations? <i>Frank Zwaan, University of Lausanne, Switzerland - GFZ Helmholtz Centre for Geosciences, Potsdam, Germany - University of Fribourg, Switzerland</i>
10.05 Virtual	Natural hydrogen occurrences in Mpumalanga, South Africa, and their relationship with underlying geology <i>Prof Adam Bumby, University of Pretoria, South Africa</i>
10.30	A Top Down Approach to Natural Hydrogen Exploration in the Semail Ophiolite, Ras Al Khaimah, United Arab Emirates <i>Daniel Holloway, RAK Gas</i>
10.55	Break
11.10	Prospect of Natural Hydrogen in Himalayan region, India <i>Annapurna Boruah, UPES Dehradun</i>
11.35	Overview of the natural hydrogen potential of Senegal and Republic of the Congo (Congo-Brazzaville) <i>Richard Cooke, HydroGenesis</i>
12.00	Lunch
13.00	A potential H₂-He-N₂ gas province in southern Denmark: insights from legacy well data <i>Kasper H. Blinkenberg</i>
13.25	The role of fractures in the genesis and migration of natural hydrogen in ophiolites <i>Keith Rawnsley, SubsurfaceLabs</i>
13.50	Mafic sheet intrusions in sedimentary basins: insights from field and subsurface data implications for hydrogen exploration <i>Simon Holford, University of Adelaide</i>
14.15	Break
	Session 4 – Technology & Data in Hydrogen Exploration
14.30	Keynote - Rock physics for quantitative geophysical interpretation of natural hydrogen resources <i>Yashee Mathur, Stanford University</i>
14.55	Using Potential Fields Data to Model Potential Natural Hydrogen Production from Ultramafic Bodies: Assorted Case Studies from Around the World <i>David Tierney, Getech Group plc</i>
15.20	Mössbauer spectroscopy to characterize Fe in H₂-generating rocks <i>Ugo Geymond, Vema Hydrogen</i>
15.45	Regional 4He Basement Flux Assessment in South Australia: implications for H₂ Transport <i>Zak Milner, Durham University</i>
16.10	Numerical Simulation of Stimulated Hydrogen Generation at Varying Serpentinization Rates: Impacts and Benefits of Code Comparisons <i>Mark White, Kansas Geological Survey</i>
16.35	Closing Remarks
17.00	End of Conference

Posters
Understanding hydrogen production in continental lithosphere: effect of spinel on olivine serpentinization Emanuele Fanesi, <i>University of Bristol</i>
Assessment of natural hydrogen potential in Iberia from serpentinization of shallow lithospheric mantle rocks Jesús García Senz, <i>CN IGME-CSIC; Geological and Mining Institute of Spain</i>
Pathfinder Modelling of H₂ solubility and migration in sedimentary basins Alexander Hartwig, <i>Geos4 GmbH</i>
Assessing Finland's Natural Hydrogen Potential and Key Influencing Factors Timo Jaakko Olavi Hietava, <i>Geological Survey of Finland</i>
Investigation of the geological-hydrogen potential of the MCR in Northeastern Minnesota Valentine Combaudon, <i>University of Colorado Boulder</i>
Enhancing Low-Temperature Serpentinisation for Hydrogen Production: Catalytic Role of Awaruite and Chromite Jeffrey Akuoko, <i>University of Manchester</i>
Hidden Energy Streams: Evaluating Serpentinization-driven Hydrogen Generation in the Ronda Peridotite (S. Spain) Inés Membrado-Royo, <i>University of Granada</i>
Natural Hydrogen Exploration Workflow - a pragmatic evaluation matrix from Regional to Play to Prospect scales Dominique Pourtoy, <i>Pole Avenia – earth2</i>
The Global Search for Commercial Natural Hydrogen – An Update Alan Driscoll, <i>NVentures</i>
The role of organic matter in the H₂ system of the western Pyrenees, A missing player? Nicolas Lefeuvre, <i>Université de Pau et des Pays de l'Adour</i>
Unlocking the evaluation and scalability of Natural Hydrogen Exploration: the HOREX Techno Pilot. Part 1: Play-based strategy Emmanuel Masini, <i>Mantle8</i>
Natural hydrogen prospect assessment and the difference with traditional oil and gas workflows Martin Neumaier, <i>ArianeLogiX</i>
Natural Hydrogen Occurrences in the Western Portion of Northern Apennines, Italy Vivian Azor de Freitas, <i>University of Parma</i>
Time-resolved 2D and 3D Imaging of Two-Phase Hydrogen and Brine Injection into Porous Clashach Sandstone Eike Thaysen, <i>Institute for Environmental Assessment and Water Research</i>

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