

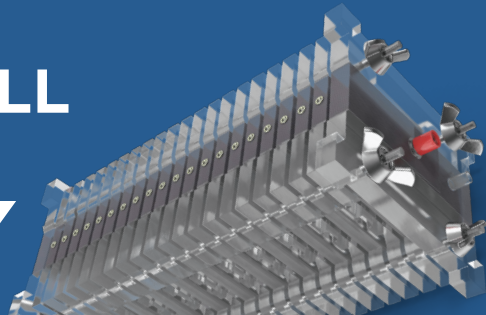


2ND SOUTHERN AFRICAN HYDROGEN AND FUEL CELL CONFERENCE 2025

Pathway to industrialisation



7-8 APRIL 2025 CONFERENCE
**VENUE SOUTHERN SUN ROSEBANK,
JOHANNESBURG**



**ECSA VALIDATED CPD ACTIVITY,
CREDITS = 0.1 POINTS PER HOUR ATTENDED**

Abstracts Received

Development progress of high-performance, durable and low-cost fuel cell MEA solutions at HySA catalysis (UCT)

F. van Schalkwyk, D. Susac, *University of Cape Town, South Africa*

Pathways to reduce costs and improve efficiency for scaling Hydrogen and Fuel Cell Technologies

L. Khotseng, *University of Western Cape, South Africa*

The effect of carbon supported and unsupported iron on reversal tolerance and anode durability

U. Nyambi, H. Moydien, D. Susac, *University of Cape Town, South Africa*

Optimisation of hydrocarbon-based membrane electrode assembly for proton exchange membrane fuel cells

B.K. Tawa, F. van Schalkwyk, D. Susac, *University of Cape Town, South Africa*

Advanced electrocatalysis for green hydrogen production

Z.S.H. Rajan, G. Moss, J. Itota, D. Susac, R. Mohamed, *University of Cape Town, South Africa*

Optimization of metal hydride tanks for hydrogen storage through heat and mass transfer modeling

B.L. Hem, *South Africa*

Synthesis and characterisation of Pd@PANI/MIL(Cr) composite for photocatalytic hydrogen production by recycling palladium ions in wastewater

K. Ramollo, T. Maponya, N. Hintsho-Mbita, K. Modibane, *University of Limpopo, South Africa*

Investigation of Pt ternary alloy catalysts as PEMFC ORR catalysts

T. Ngwenya, Z. Mseleku, K. Tshehla, C. Gray, *Mintek, South Africa*

An investigation on the use of H₂ gas as a potential reductant of FeCr₂O₄ spinel into FeCr alloy

S. Dandi, *Chemical Engineer at Biocarbon Manicaland, South Africa*

A computational approach to designing High entropy alloys for hydrogen storage

B.S. Ramatsoma¹, E.M. Makhatha¹, D.E.P. Klenam², M.O. Bodunrin², ¹*University of Johannesburg,* ²*University of the Witwatersrand, South Africa*

Roll-to-roll coating methods for the manufacture of PEMFC MEAs

C. Felix, O. Barron, *Mintek, South Africa*

Locally developed test station for water electrolysis characterization with advanced capabilities

A.S. Pushkarev, I.V. Pushkareva, C. Martinson, S. Mamathuntsha, H. Brink, S. Modise, A. Malakhov, D. Bessarabov, *North-West University, South Africa*

Investigations of oxygen evolution reaction catalysts for proton exchange membrane water electrolyzer

M. Kozlova^{1,2}, I. Pushkareva³, D. Bessarabov³, A. Pushkarev³, ¹*National Research Center Kurchatov Institute, Russia* ²*National Research University Moscow Power Engineering Institute, Russia* ³*North-West University, South Africa*

Synthesis and characterisation of IrxZDyO₂ catalyst for Proton Exchange Membrane Water Electrolyzers (PEMWE)

D. Zide^{1,2}, S. Chidziva², A. Nqumba¹, S. Karels², S. Pasupathi², B.J. Bladergroen², ¹*Cape Peninsula University of Technology,* ²*University of the Western Cape, South Africa*

Design and development of metal hydride hydrogen compressors at HYSA systems based at the University of the Western Cape

M.W. Davids, M. Lototsky, V. Linkov, S. Pasupathi, *University of the Western Cape, South Africa*