

VERDE HYDROGEN Achieves Breakthrough in Anion Exchange Membrane (AEM) Technology for Green Hydrogen

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-- VERDE HYDROGEN proudly announces a major technological breakthrough in the research and development of anion exchange membrane (AEM) technology. This breakthrough offers an alternative solution with an efficient, durable, and cost-effective pathway for green hydrogen generation.

The company's newly developed non-precious-metal electrodes have demonstrated exceptional electrochemical performance, achieving a hydrogen evolution overpotential of 180 mV and an oxygen evolution overpotential of 245 mV at $100 \text{ mA}\cdot\text{cm}^{-2}$, while maintaining over 70% energy conversion efficiency and 99.9% hydrogen purity. Building on these results, VERDE HYDROGEN will begin manufacturing a larger-scale AEM electrolyzer prototype to further validate performance stability and integration within a modular system architecture.



Meanwhile, VERDE HYDROGEN is initiating a feasibility study on hybrid AEM-alkaline (ALK) electrolyzer systems, aiming to explore the optimal integration of both technologies for future large-scale deployment.

The hybrid approach seeks to combine the efficiency and compactness of AEM technology with the proven durability and maturity of alkaline systems, offering potential pathways toward higher flexibility, dynamic response, and cost reduction in industrial hydrogen production.

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