

Alkaline, AEM & Seawater Electrolysis

CSIR-CECRI is continuously advancing technologies aimed at reducing precious metals usage and breaking pure water dependence for hydrogen generation.

Alkaline Electrolyzer

Robust industrial hydrogen production system featuring a cost-effective and durable electrolyzer platform using indigenous alkaline stack architecture.

- **Key Attributes:** Non-PGM electrodes, Durable industrial stack design, Low-maintenance operation.
- **H₂ Output:** 1.0 Nm³/h | **O₂ Output:** 0.5 Nm³/h
- **H₂ Purity:** 99.9%
- **Energy Consumption:** 4.9 - 5.2 kWh/Nm³

AEM Membrane & MEA Capabilities

- Scale-up of large area Anion Exchange Membranes (AEMs).
- PGM-free catalyst-coated electrodes.
- High-performance electrode-membrane interfaces.
- Cost-reduction-focused materials engineering.

Seawater Electrolysis Capabilities

- Direct seawater hydrogen production.
- Chloride-tolerant electrode systems.
- Corrosion-resistant catalyst coatings.
- Selective ion-transport membrane interfaces.

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