IMPROVED SMALL-SCALE CELL FOR ALKALINE WATER ELECTROLYSIS

PEACE

An improved small-scale benchmark cell providing a reliable and reproducible platform for comparing alkaline electrolysis components and accelerating the development of improved, cost-effective technologies

Description

- Improved small-scale alkaline water electrolysis cell for testing electrodes, membranes and other cell components
- Reliable and reproducible testing platform for performance evaluation and material comparison
- Benchmark cell for alkaline electrolysis, addressing the lack of suitable small-scale reference platforms
- More consistent component testing, supporting reliable comparison of new materials and designs
- Support for faster development of improved and cost-effective electrolysis technologies

Maturity of the Result

TRL 5 – Technology validated in a relevant environment

Result Availability

Available from November 2026

Owner

Eindhoven University of Technology

Impact

01 Potential benchmark platform for alkaline electrolysis research

02 More consistent comparison of electrodes, membranes and other components

03 Improved reproducibility in testing and validation of new materials

04 Stronger collaboration and knowledge exchange across research organisations

05 Faster development of more cost-effective alkaline electrolysis technologies.

Improved Small-Scale Cell for Alkaline Water Electrolysis

Target Users

- Researchers in alkaline water electrolysis: Reliable platform for testing and comparing cell components
- Universities and research organisations: Reproducible tool for materials research and experimental validation
- Electrolyser technology developers: Support for component benchmarking and cell design optimisation
- Manufacturers of electrodes, membranes and cell components: Consistent platform for evaluating and demonstrating component performance

Collaboration opportunities

- Research collaboration and external testing of the cell and its components
- Evaluation of new electrodes, membranes and cell components
- Joint cell development and optimisation for improved performance
- Training and educational activities using the cell as a research platform
- Potential future provision of cell prototypes to interested users

More information

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- PEACE PROJECT: https://www.h2peace.eu/

Clean Hydrogen Partnership

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