# IEA AFC TCP Task 30: Electrolysis

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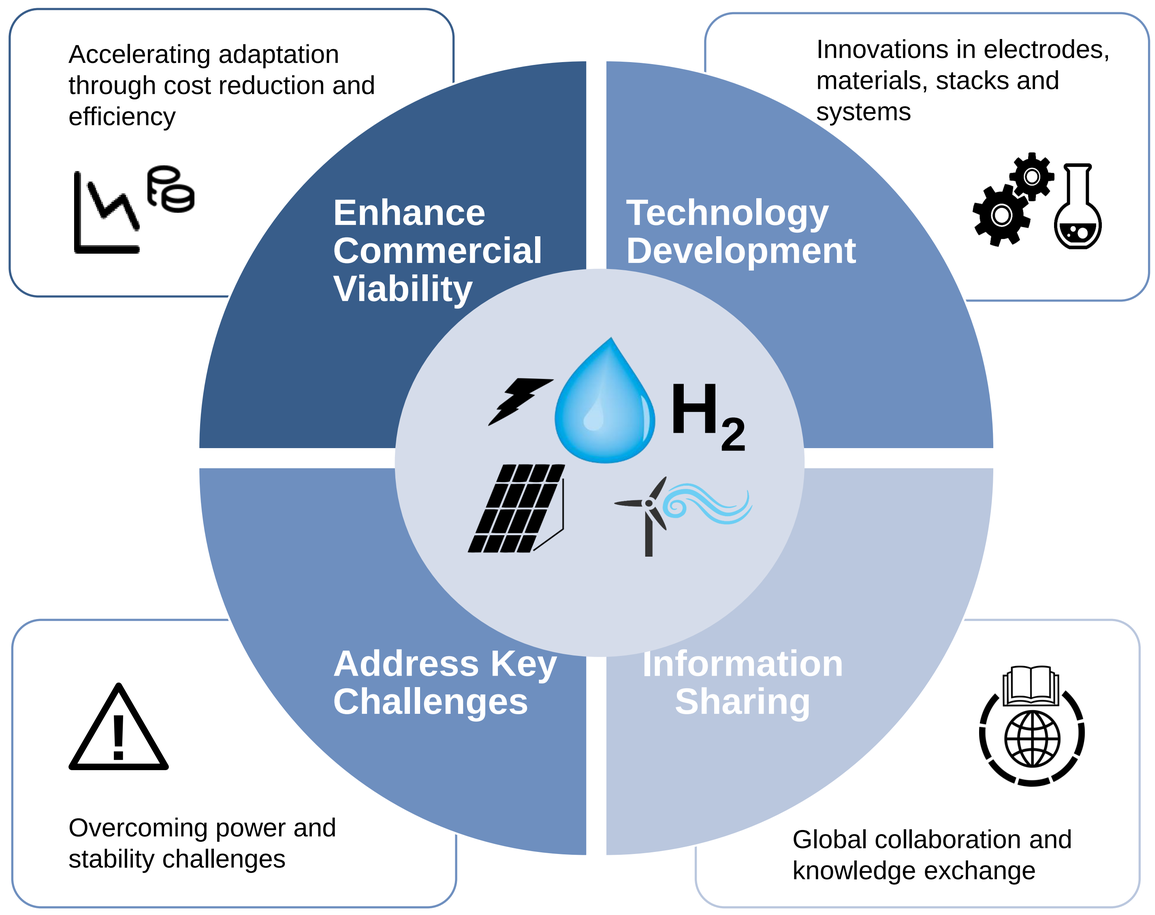
## IEA AFC TCP Task: 30

International Energy Agency, Advanced Fuel Cells Technology Collaboration Programme (IEA AFC TCP), Task 30 on Electrolysis focuses on the advancement of electrolysis technologies for sustainable hydrogen production. The initiative focuses on enhancing the commercial feasibility, technological development, addressing critical challenges to fully realize its potential for hydrogen production, and encouraging collaboration among experts worldwide.[1]

Within the electrochemical engineering workgroup, our core expertise lies in degradation and durability studies. In the context of IEA Task 30, this expertise supports discussions on electrolysis performance, stability, and lifetime.

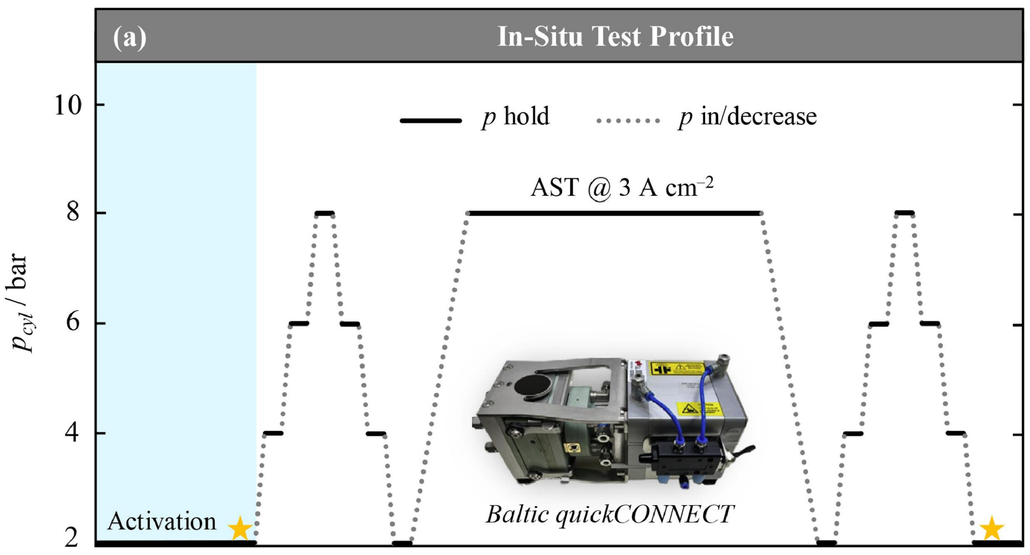



## Our Contributions

- Participation in IEA task force meetings, workshops, and international conferences supporting electrolysis technology development
- Presentation and discussion of scientific research findings with a focus on degradation and durability
- Engagement in international knowledge and perspectives exchange with academic and industrial experts to address performance, stability and cost challenge

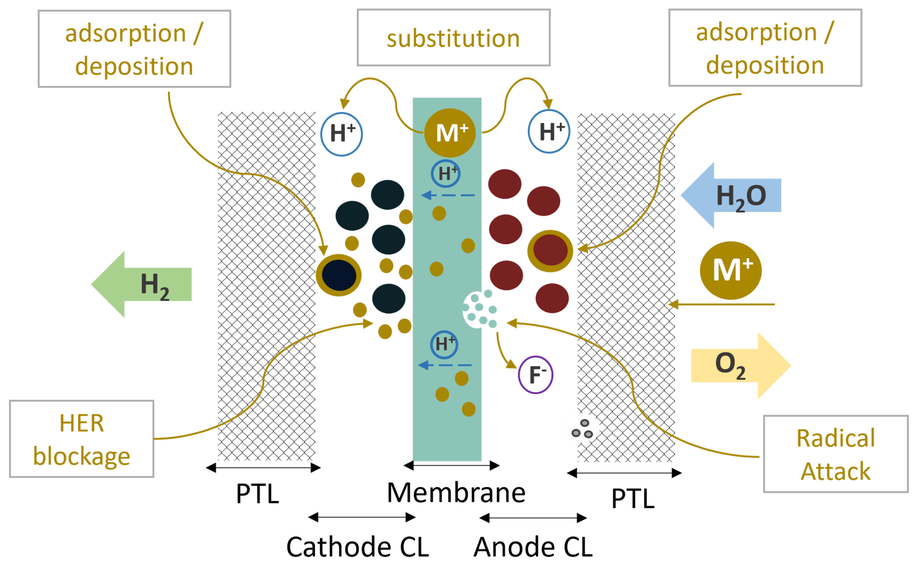
## Research Activities Shared within the IEA Task Force

Compression induced hysteresis studies, published in *Results in Engineering*.




- Representation of operational mechanical stressors
- Comparison of different porous materials
- Implications for degradation and lifetime

PEMWE contamination studies, presented at the 19th IEA Task 30 Workshop (Muldersdrift, South Africa).




- Contamination sources and transport pathways
- Component level interactions with representative system derived contaminants
- Relevance to degradation, lifetime and cost considerations

## Acknowledgement

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## Newsletter

## References

[1] “Tasks & focus areas,” IEA Advanced Fuel Cells, https://ieafuelcell.com/tasks (accessed Aug. 22, 2025).
[2] Kuhnert, E., Dächert, M., Lammer, M., Roessler-Escudero, L., Kiziltan, Ö., Machado-Charry, E., Hacker, V., & Bodner, M. (2025). Compression-induced hysteresis and degradation of titanium porous transport layers in PEM water electrolysers. *Results in Engineering*, *28*, 108109. https://doi.org/10.1016/j.rineng.2025.108109

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