

**HORIZON EUROPE PROGRAMME**  
**TOPIC HORIZON-JTI-CLEANH2-2023-1**  
**GA No. 101137802**

## **ELECTROLIFE**

**Enhance knowledge on comprehensive electrolyser technologies  
degradation through modeling, testing and lifetime prevision,  
toward industrial implementation**



### **Deliverable report**

#### **D1.10 – Annual progress report M12**

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<b>Author(s)</b>	Alessandro Hugo Videla Monteverde WP leaders	POLITO POLITO, EGP, AAU, CNR, UNR
<b>Checked by</b>	Arjo Roersch van der Hoogte	UNR
<b>Reviewed by (if applicable)</b>	Daniele Consoli	EGP
<b>Approved by</b>	Alessandro Hugo Videla Monteverde	POLITO
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## Publishable summary

The ELECTROLIFE project aims to be a booster to enable the use of green hydrogen technologies to support decarbonization of European global industry. Currently, electrolysis technologies suffer from limitations in terms of cost, efficiency, stability, scalability, and recyclability. This is mainly due to the lack of understanding and identification of electrolyzer degradation mechanisms and improvement of current cell performance. In the next 5 years, ELECTROLIFE aims to increase the efficiency performance of electrolyzers by reducing the use of critical materials and extending the useful life of these systems. These goals will be achieved through test campaigns to identify multiple degradation mechanisms on multiple scales, multiphysics simulations with superimposed degradation mechanisms, prototyping of cells and stack components, and construction of dedicated test benches.

Deliverable 1.10 provides an extensive report on the annual progress of the ELECTROLIFE project in the first year of the project (M1-M12). Per work package the activities which have been undertaken and finalized are addressed and how these have resulted in the progress towards the achievement of the project objectives. Furthermore, the report provides a conclusion and recommendation for the second year and it gives an overview of all the submitted deliverables and the conferences, events and meetings all the partners have participated in as part of the ELECTROLIFE project. More information can be found in D1.9 Annual progress report which is a public document and available, both on the project website ([Project - ELECTROLIFE](#)) and the EC website cordis ([ELECTROLIFE - Clean Hydrogen Partnership](#)).

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## Project partners:

#	Partner short name	Partner Full Name
1	POLITO	Politecnico di Torino
2	UNR	Uniresearch B.V.
3	EGP	Enel Green Power SpA
4	FAU	Friedrich-Alexander-Universitaet Erlangen-Nuernberg
5	TUG	Graz University of Technology
6	KER	Kerionics s.l.
7	AAU	Aalborg University
8	FZJ	Forschungszentrum Jülich gmbh
9	ULille	University of Lille
10	STARGATE	Stargate Hydrogen Solutions OU
11	PF	Pietro Fiorentini s.p.a.
11.1	HYT	Hyter s.r.l. (Affiliated)
12	CNR	Consiglio Nazionale delle Ricerche
13	1s1	1s1 Energy Portugal Unipessoal Lda
14	AEA	AEA s.r.l.
15	VDX	Volytica diagnostics GmbH
16	SE	SolydEra SpA

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