

Get to know our consortium

LIST, Luxembourg
<https://www.list.lu/>
OPINCHARGE's Project Coordinator

CNRS, France
<https://www.cnrs.fr/fr>

CIC ENERGIGUNE, Spain
<https://lnkd.in/gcQFkqR>

DLR, Germany
<https://www.dlr.de/en>

DFKI, Germany
<https://www.dfki.de/en/web>

THERMO, Netherlands
thermofisher.com

CIDETEC, Spain
www.cidetec.es

FZ Jülich, Germany
www.fz-juelich.de/de

PEDAL Consulting, Slovakia
www.pedal-consulting.eu

PSI, Switzerland
<https://www.psi.ch/en>



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LinkedIn: @OPINCHARGE
X: @opincharge_eu

VISIT:

www.opincharge.eu

CONTACT US:

info@opincharge.eu

Project ID:

Grant Agreement: 101104032

Call: HORIZON-CL5-2022-D2-01

Topic: HORIZON-CL5-2022-D2-01-02

Type of action: HORIZON Research and Innovation Actions

Granting authority: European Climate, Infrastructure and Environment Executive Agency

Grant managed through EU Funding & Tenders

Portal: Yes (eGrants)

Project starting date: fixed date - 1. June 2023

Project end date: 31. May 2026

Project duration: 36 months



Reinventing the way we invent batteries

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Our goal

The main objective of OPINCHARGE is to investigate the fundamental processes and degradation mechanisms that occur at the interfaces within LIBs.

These interfaces, where active materials, electrolytes, and other components meet, play a crucial role in the performance and lifespan of the batteries.

By gaining a deeper understanding of the interfacial phenomena, the project aims to improve the design and functionality of LIBs, leading to safer, more efficient, and longer-lasting battery systems.

Ultimately, the OPINCHARGE project strives to contribute to the advancement of battery technology, supporting the transition towards a greener and more energy-efficient future.



About OPINCHARGE

OPerando analyses and modelling of INTERface dynamics and CHARGE transport in lithium-ion batteries – OPINCHARGE project is an ambitious research initiative focused on advancing the understanding and optimization of lithium-ion batteries (LIBs).

They are widely used in various applications such as electric vehicles and portable electronics.

The project brings together a consortium of leading organisations, such as:

- research institutions
- experts in the field of battery technology
- consulting companies

OPINCHARGE – Innovation in producing safe and long-lasting batteries



Multidisciplinary approach

To achieve our goal, OPINCHARGE uses:

- experimental techniques,
- advanced characterization methods, computational modeling.

Key areas of research:

- Interface Dynamics And Evolution
- Charge Transport Characterization
- Isotopes-Based Interfacial Characterization

By combining these research efforts, the OPINCHARGE project aims to provide a holistic understanding of LIB interfaces, from atomic and nanoscale interactions to mesoscale transport phenomena. The insights gained from this research will enable the development of innovative battery designs and materials, leading to safer, higher-performing, and more sustainable lithium-ion batteries for a wide range of applications.