BATTERY 2030+
At the heart of a green and connected society

Status Report

Director: Prof. Kristina Edström, Uppsala University, Sweden
Kristina.edstrom@kemi.uu.se
Deputy director: Dr. Simon Perraud, CEA, France
THE EU BATTERY LANDSCAPE TODAY

Scope

- Long-term research
- Short- to medium-term research
- Industrialisation

Actors

- The European Battery Community

Roadmap

- A long-term research roadmap

SET-Plan

- Industrial roadmaps

- S3 battery materials
- IPCEI
The BATTERY 2030+ roadmap presents three overarching research themes and six research areas needed to invent the sustainable batteries of the future. Short-, mid- and long-term goals for each area are also identified.

I. Accelerated discovery of battery interfaces and materials – Battery Interface Genome (BIG) Materials Acceleration Platform (MAP)

II. Integration of smart functionalities – sensing and self-healing

III. Cross-cutting areas – manufacturability and recyclability
ROADMAP – LONGER THAN 10 YEAR PERSPECTIVE

Short term:
- Develop theoretical and experimental platforms and tools

Medium term:
- Integration of the different parts
- Six BATTERY 2030+ research projects and a CSA project started September 1, 2020
- New R&I actions suggested now
- Also to M-ERA.NET

Long-term:
- Battery materials acceleration platform + smart battery functionalities established
- Our dream!
- We work for it with your help!

European batteries fit for purpose
Six research areas

RESEARCH AREAS

Materials acceleration platform (MAP)

Battery interface genome (BIG)

Discovery of new self-healing materials

Big data from sensors embedded in battery cells

Sensing

Self-healing

Feedback loop between sensing and self-healing via the BMS

INSTABAT

CROSS-CUTTING RESEARCH AREAS

Manufacturability

Recyclability

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.
WE HAVE STARTED THE REAL WORK NOW!

7 projects

Collaboration Agreement in place
BATTERY 2030+ projects:
102 organisations across Europe

Starting configuration of the BATTERY 2030+ initiative!
Core partners
The Coordination and Support Action

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.
EU BATTERY ECOSYSTEM

Now 500 companies along the full value chain

ETIP network with 550 participants

National
Regional S3
European University Networks
IPCEI
Skill Pacts – ALBATTs

European Batteries Partnership

Protocols for reporting, FAIR data, data sharing

Dissemination and communication

Curricula and skills

Future projects

Long-term research

The European large scale facilities:

High Performance Computing: EuroHPC
The synchrotron facilities and neutron facilities in Europe
Seven Kick-offs to start creating a BATTERY 2030+ identity

Over 1400 endorsements

International and European visibility

Silvia Bodoardo Polito: IWLiME South American workshop organised by Chile

Simon Perraud CEA: Dessault workshop

European Conference on Batteries 24-27 Nov.
Kristina Edström UU, Martin Winter WWU Munster, Philippe Jacques EMIRI, Oscar Miguel CIDETEC

Workshop on data sharing and data handling. To be held in February

Green Deal now an open call on energy storage: BATTERY 2030+ is an attractive partner

Link to different skill pacts and skills-networks in Europe: ALBATTS, MESC, DESTINY

This project has received funding from the European Union’s research and innovation programme Horizon 2020 under grant agreement No. 957213
THE NEXT PHASE: 2021 AND ONWARDS

European Batteries Partnership

C5-D2-BAT-05-2021: Interface and electron monitoring for the engineering of new and emerging battery technologies

C5-D2-BAT-06-2022: Furthering the development of a materials acceleration platform for sustainable batteries (combining AI, big data, autonomous synthesis robotics, high throughput testing, for accelerated discovery of high performing battery technologies)

C5-D2-BAT-13-2022: Embedding smart functionalities into battery cells (embedding sensing and self-healing functionalities to monitor and self-repair battery cells)

C5-D2-BAT-19-2022: Coordination of large-scale initiative on future battery technologies

C5-D2-BAT-10-2023: Development and implementation of advanced digital twins for optimisation of current battery cell production lines and to accelerate the set-up of effective manufacturing processes for the next generation battery cells

BIG MAP

M.ERA-NET Call now prepared! Will be announced early spring

Green Deal
SUMMARY BATTERY 2030+

We do research implementing the long-term BATTERY 2030+ research roadmap to invent the sustainable batteries of the future (http://battery2030.eu)

We support Europe to reach the UN sustainable development goals

We foster European research excellence for the benefit of the European battery industry throughout the battery value chain

We suggest new R&I actions
FOLLOW US AND READ MORE!

www.battery2030.eu

Twitter: @2030Battery, #battery2030
LinkedIn: BATTERY Initiative

Endorse us: https://battery2030.eu/engage/endorse-us-

More than 2300 followers
More than 1450 endorsers

Read more about the research themes and download the roadmap: https://battery2030.eu/research/roadmap/