

Revolutionising Lithium-ion Battery Technology for Enhanced Safety: Launch of New EU Project "INERRANT"

Patras, Greece, 15 May 2024 – With an eye towards revolutionising the safety and sustainability of Lithium-ion batteries (LIBs), the EU-funded project "*Integrating novel materials with scalable processes for safer and recyclable Li-ion batteries*" (INERRANT) officially kicks off today. Coordinated by Prof. Spyros Yannopoulos from the Foundation for Research and Technology Hellas (FORTH), INERRANT is set to address the urgent need for enhanced safety in Gen 3 LIB technologies, particularly for mobility applications. This initiative is a direct response to the European Commission's call for "*New Approaches to Develop Enhanced Safety Materials for Gen 3 Li-Ion Batteries for Mobility Applications.*"

"Enhancing the safety of LIBs batteries is not just a technical challenge; it is a vital step towards sustainable and secure mobility," said Prof. Yannopoulos. "With INERRANT, we are pioneering advancements in materials and processes that promise to redefine what is possible in battery technology, emphasising safety without compromising performance or sustainability."

Over the next three years, INERRANT will receive a total funding of more than 4.4 million EUR from the European Union's "Horizon Europe" Framework Programme for Research and Innovation.

Pioneering a Safer, Sustainable Future

The INERRANT project is committed to pushing the boundaries of current LIB technologies by focusing on the development of innovative material combinations, advanced electrolyte formulations, and eco-friendly recycling methods that prioritise safety and recyclability. This holistic approach targets the entire battery lifecycle, from design and manufacturing to end-of-life recycling.

In their quest for innovation, safety is the research team's compass: The project leverages cutting-edge science and technology to build the foundation for safer energy storage solutions, paving the way for a future where mobility is both eco-friendly and secure.

A Strong Consortium for a Bold Vision

Supported by a consortium of leading research institutions and industrial partners, INERRANT aims to set new standards for the industry. The project's collaborative framework ensures a multidisciplinary approach to overcoming the challenges associated with developing safer, more efficient, and sustainable LIBs.



"This consortium represents leading experts from academia and industry coming together with a common purpose. Our collaboration is the foundation upon which we will build a new era for Lithium-ion batteries," said Prof. Yannopoulos.

Commitment to Impact and Innovation

INERRANT's strategy is tailored to meet the ambitious benchmarks set by the 2030 European SET plan for Gen 3 LIB technologies. By reducing dependency on Critical Raw Materials (CRMs) and employing cutting-edge methodologies, including operando spectroscopies and machine learning, the project is poised to make a significant impact on the future of mobility.

"Our vision is clear—to enable the widespread adoption of electric vehicles through safer, more sustainable battery solutions. INERRANT is a step towards achieving that vision, supporting the transition to a more sustainable, electrified future," concluded Prof. Yannopoulos.

Project Key Facts

Title: Integrating novel materials with scalable processes for safer and recyclable Li-ion batteries

(INERRANT)

Start: 1 May 2024

Duration: 36 months

Budget: 4.4 Mil €

Coordinator: Foundation for Research and Technology Hellas (FORTH)

Website: inerrant-batteries.eu

Social Media: [X](#) & [LinkedIn](#)

Project Partners

Austria

- Keysight

Czech Republic

- IBG Česko s.r.o.



Funded by the European Commission

- NanoSpace Technology s.r.o.
- University of Jan Evangelista Purkyně

France

- Verkor

Germany

- European Research and Project Office GmbH (EURICE)
- Fraunhofer Institute for Silicate Research-ISC
- University of Würzburg

Greece

- Foundation for Research and Technology Hellas (FORTH)(Coordinator)
- PLEIONE Energy SA

Ireland

- University College Dublin

Contact

Project Coordination

Foundation for Research and Technology Hellas (FORTH)
Prof. Spyros Yannopoulos
Email: sny@iceht.forth.gr

Project Management

European Research and Project Office GmbH (EURICE)
Sabine Dier
Email: s.dier@eurice.eu

