

## ABSTRACT

### **Battery 2030+ Vision for the Future**

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The European initiative **Battery 2030+** is building a long-term research roadmap for breakthrough battery technologies, aligning scientific excellence with industrial and societal needs. Looking beyond 2030, the initiative envisions batteries that are *sustainable, safe, circular, and digitally integrated*, enabling Europe to reach its climate neutrality targets while maintaining technological leadership. Key themes of Battery 2030+ include the accelerated discovery of materials through artificial intelligence and high-throughput methods, self-healing concepts for improved durability and safety, advanced sensing and interface control, sustainable-by-design approaches, and closed-loop recycling strategies.

In addition to these scientific and technological ambitions, Battery 2030+ emphasizes the role of **people and skills** in driving innovation. The initiative actively engages with young researchers across Europe, recognizing that their creativity and fresh perspectives are essential to shape the next generation of energy storage solutions. In this context, the **Battery 2030+ Young Scientist Manifesto** was developed to voice the aspirations of the new generation of researchers. The Manifesto highlights the need for open science, interdisciplinarity, diversity, and societal responsibility as cornerstones of future R&I ecosystems.

A dedicated **Young Scientists Event** has been established as a flagship activity, offering a platform where early-stage researchers can present their work, connect with peers and senior experts, and interact directly with industry and policy stakeholders. This initiative not only empowers young scientists to contribute to the European battery agenda but also strengthens the long-term sustainability of the research community by fostering skills, networking, and leadership opportunities.

By combining visionary science with inclusive community-building, Battery 2030+ aims to accelerate Europe's path towards a green, resilient, and competitive battery ecosystem—where the voices of young scientists are not only heard but actively shape the future of energy storage.