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Strongly improved, highly performant and safe all solid-state batteries for electric vehicles.

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SAFELiMOVE – Deliverable Report

<< D5.2 – Characterization & stability of solid-solid interfaces in full cell configuration, prior and post-cycling. Level 1-3 materials >>

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Publishable summary

This report summarizes analyses and interpretations of the results of D5.2 related to Work Package 5 (WP5) “Interface analyses” of the SAFELiMOVE project. D5.2 includes characterization and stability of solid-solid interfaces in full cell configuration, prior- and post-cycling of Level 1-3 materials. Report includes the physico-chemical and electrochemical characterization of the solid-solid interfaces in proof-of-concept full cell devices of the different materials generations (Level 1-3 materials). Pre- and post-cycling full coin and pouch cells are reported by different techniques (CEA, CID, ABEE), both in coin cell (Task 5.4) and single-layer pouch (Task 5.5) cell formats.

In this scope CID, ABEE, and CEA addressed:

- Electrochemical characterization of solid-solid interfaces in coin cell configuration,
- In-situ and operando characterization of solid-solid interfaces in coin cell configuration,
- Electrochemical characterization of solid-solid interfaces in pouch cell configuration,
- Developing a methodology to integrate a reference electrode in solid state pouch cells.

Analytical results and design rules are important information for the development of the materials in WP3 (Advanced Material Set) and the design and processing of components and cells in WP4 (Materials processing and small cell design) and WP6 (Cell design development and prototyping).

Appendix B- Acknowledgement

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Project partners:

#	Partner	Partner Full Name
1	CICe	CENTRO DE INVESTIGACION COOPERATIVA DE ENERGIAS ALTERNATIVAS FUNDACION, CIC ENERGIGUNE FUNDAZIOA
2	SCHOTT	SCHOTT AG
3	UMICORE	UMICORE
4	HYDRO-QUEBEC	HYDRO-QUEBEC
5	SAFT	SAFT
6	RENAULT SAS	RENAULT SAS
7	TME	TOYOTA MOTOR EUROPE NV
8	IKERLAN	IKERLAN S. COOP
9	CEA	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
10	CIDETEC	FUNDACION CIDETEC
11	TUB	TECHNISCHE UNIVERSITAT BERLIN
12	RWTH AACHEN	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN
13	ABEE	AVESTA BATTERY & ENERGY ENGINEERING
14	LCE Srl	LIFE CYCLE ENGINEERING SRL
15	UNIRESEARCH BV	UNIRESEARCH BV