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

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SAFELiMOVE – Deliverable Report

D8.2 Standardization protocols for solid-state cells

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Publishable summary

In this document, two standards (UN38.3 and IEC-62660-2) usually applied to GEN3 cells are analyzed to assess their consistency/applicability to all solid-state batteries as developed in SAFELiMOVE. A modification of some protocols is proposed for GEN4 cells, and the behavior of the SAFELiMOVE cell under abusive conditions is considered.

Executive summary

Deviation from planned timings: None
Deviation from planned objectives: None

Appendix A - Table of Abbreviations

Symbol / Shortname	
ARC	Accelerated rate Calorimeter
BEV	Battery electric vehicle
CID	Current interruption device
EUCAR	European Council for Automotive R&D
EV	Electric vehicle
GEN3	Third generation cells
GEN4	Fourth generation cells
HCPE	Hexagonal arranged porous composite polymer electrolyte
HEV	Hybrid electric vehicle
LiM	Lithium metal
LLZO	Lithium aluminium titanium phosphate
PTC	Positive thermal coefficient
SOC	State-of-charge
SSB	Solid-state batteries
TR	Thermal runaway

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