

EUROPEAN COMMISSION

HORIZON 2020 PROGRAMME - TOPIC H2020-LC-BAT-2019
Strongly improved, highly performant and safe all solid-state batteries for
electric vehicles.

GRANT AGREEMENT No. 875189



SAFELiMOVE – Deliverable Report

<< D3.2 – Physical and electrochemical characterization
of Li anodes >>

Publishable summary

Hydro-Québec (HQ) is responsible on lithium anode material development in SAFELiMOVE project. HQ will produce the required thickness of the lithium based on the cell design calculation. HQ has developed methods to manipulate lithium metal and has overcome technical challenges to design very thin films with highly homogeneous surface.

As part of this project, lithium films are manufactured according to the design of the cell to achieve an energy density of above 400 Wh/kg and 1200 Wh/L. Thin lithium films ranging from 250 to 40 μm can be produced. Further evaluation tests must be carried out to confirm experimentally the necessary thickness. As it is well known that lithium is very reactive, it reacts from the first contact with the atmosphere or with several materials. Then, manipulation of lithium metal is strongly dependent on the atmosphere condition. Details on lithium processing and characterization are described.

Appendix B- Acknowledgement

The author(s) would like to thank the partners in the project for their valuable comments on previous drafts and for performing the review.

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