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Sodium-Ion and sodium Metal BAtteries for efficient and sustainable
next-generation energy storage

GRANT AGREEMENT No. 963542



SIMBA – Deliverable Report

<< D6.1 – Deliver process for 80% of materials to be
reclaimed from the base-line cell >>

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Related WP	6	
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Publishable summary

This research addresses critical aspects of emerging battery technologies before their market entry.

The main focus of our work addressed in this deliverable is devoted to end-of-life management and sustainability, aligning with compliance under the New Battery Directive. Our recycling approach aims to minimize carbon footprint and produce end-front materials suitable for a closed loop within the battery segment.

The process involves two key blocks:

- 1- Mechanical processing at room temperature and in dry condition to mitigate negative impact.
- 2- Chemical process for achieving high recovery rates of various materials.

Additionally, we consider final material specifications for the battery loop and extend our considerations beyond the battery segment to address broader market applications.

The unique composition of the cathode in SIMBA cells, incorporating iron-cyanide complexes, necessitates a novel approach distinct from conventional lithium-ion batteries. This comprehensive study provides insights into the sustainable handling of new battery technologies, encompassing transportation regulations, end-of-life strategies, and recycling methodologies.

10 Appendix B- Acknowledgement

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Project partners:

#	Partner	Partner Full Name
1	TUDa	TECHNISCHE UNIVERSITAT DARMSTADT
2	UU	UPPSALA UNIVERSITET
3	UBham	THE UNIVERSITY OF BIRMINGHAM
4	WMG	THE UNIVERSITY OF WARWICK
5	KIT	KARLSRUHER INSTITUT FUER TECHNOLOGIE
6	CEA	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
7	IFE	INSTITUTT FOR ENERGITEKNIKK
8	SAS	USTAV ANORGANICKEJ CHEMIE SLOVENSKA AKADEMIA VIED (Institute of Inorganic Chemistry, Slovak Academy of Sciences)
9	FHG	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
10	Elkem	ELKEM AS
11	YUN	YUNASKO-UKRAINE LLC
12	SAFT	SAFT
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14	Recupyl	TES RECUPYL SAS
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