STORAGE RESEARCH INFRASTRUCTURE ECO-SYSTEM

RI Information sheet 2022

Teknologian tutkimuskeskus VTT, VTT Infrastructure for Batteries

Electrochemical storages

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Project Acronym	StoRIES
Call	H2020-LC-GD-2020
Grant Agreement No.	101036910
Project Start Date	01-11-2021
Project End Date	31-10-2025
Duration	48 months

1. Photo

PrintoCent pilot factory:

Battery laboratory:

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2. Geographical coordinates (˚, ", … N/S, E/W)

PrintoCent pilot factory: 65˚ 3' 24.879" N 25˚ 27' 19.451" E

Battery laboratory: 60˚ 11' 5.576" N 24˚ 49' 12.587" E

3. Description of the research infrastructure for the webpage

Teknologian tutkimuskeskus (VTT) Infrastructure for Batteries includes 1) PrintoCent Pilot Factory for flexible batteries and 2) battery laboratory combined with hydrogen and fuel cell laboratory.

State of the art: Printocent pilot factory provides a unique roll-to-roll (R2R) pilot manufacturing environment for fabrication of electrodes for flexible battery development. Battlab provides equipment for comprehensive experimental work on battery cells, modules and packs, as well as battery management systems and thermal management. The high-power battery emulator can be utilized to test electric vehicle prototypes on the dynamometer without a real battery installed in the vehicle. Furthermore, also fuel-cell research facilities are included in the same entity, enabling flexible integration, testing and management of hybrid systems containing a battery pack and a fuel-cell system.

Services currently offered by the infrastructure: Battlab provides performance characterization and validation of battery cells, modules, and packs, battery pack system integration, BMS algorithm development, SOH diagnostics, and battery pack performance validation at different temperatures and load profiles.

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Printocent provides for flexible battery development a unique roll-to-roll (R2R) pilot manufacturing environment for fabrication of electrodes.

4. Availability of the research infrastructure

Availability needs to be considered case by case.

5. Special considerations (confidentiality / NDA agreements, insurance requirement, special training, HSE training)

TBD

6. Energy storage technology that can be analysed/studied by using the research infrastructure

- Electrochemical ☒
- Chemical ☐
- Thermal ☐
- Mechanical ☐
- Superconducting Magnetic ☐
- Cross-cutting ☐ (Specifically: ...)

7. Key words for the webpage

Batteries, pilot factory, flexible batteries, roll-to-roll, performance, validation, BMS, battery pack, thermal management

8. TRL level (if applicable):

- 1-3 ☒
- 4-6 ☒
- Above ☒

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