



BATTERY RESEARCH TWIN

OPEN SOURCE

A reproducible, extensible lithium-ion digital-twin baseline — built with Vicena

0BSD • Commercial use allowed

Start research from a verified baseline — not from zero.

Configuration-driven PyBaMM models, provenance, tests and portable outputs give researchers a common foundation they can inspect, reproduce and extend.

MULTI-FIDELITY PHYSICS

SPM • SPM_e • DFN
Electrochemical + thermal states

REPRODUCIBLE BY DESIGN

Versioned YAML experiments
Tests • hashes • provenance

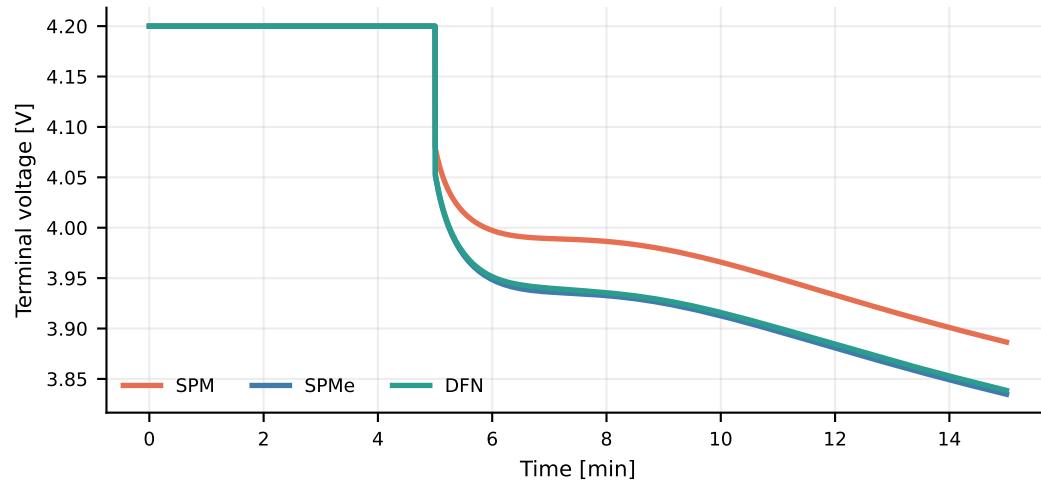
RESEARCH EXTENSIBLE

New cells • degradation • packs
BMS • estimation • uncertainty

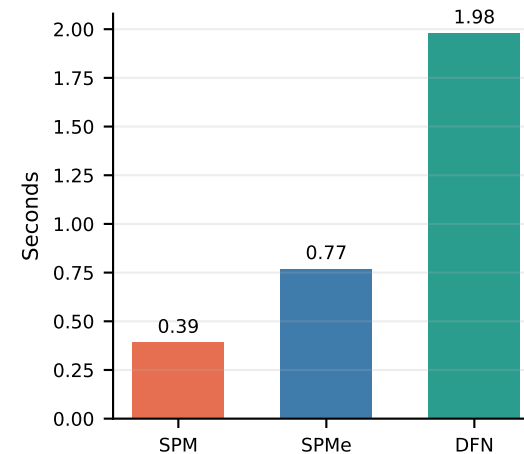
COMPUTE-AWARE

Local first; Vicena Compute or
Rowan when scientifically needed

Same cell and protocol — selectable model fidelity



Measured runtime



2.5 mV

SPM_e vs DFN mean voltage difference

5 tests

Automated baseline checks passed

3 models

One shared experiment interface

0 remote jobs

Required for baseline verification

ONE BASELINE, MANY RESEARCH DIRECTIONS

