SIGTP-03_observation period of no TP

China

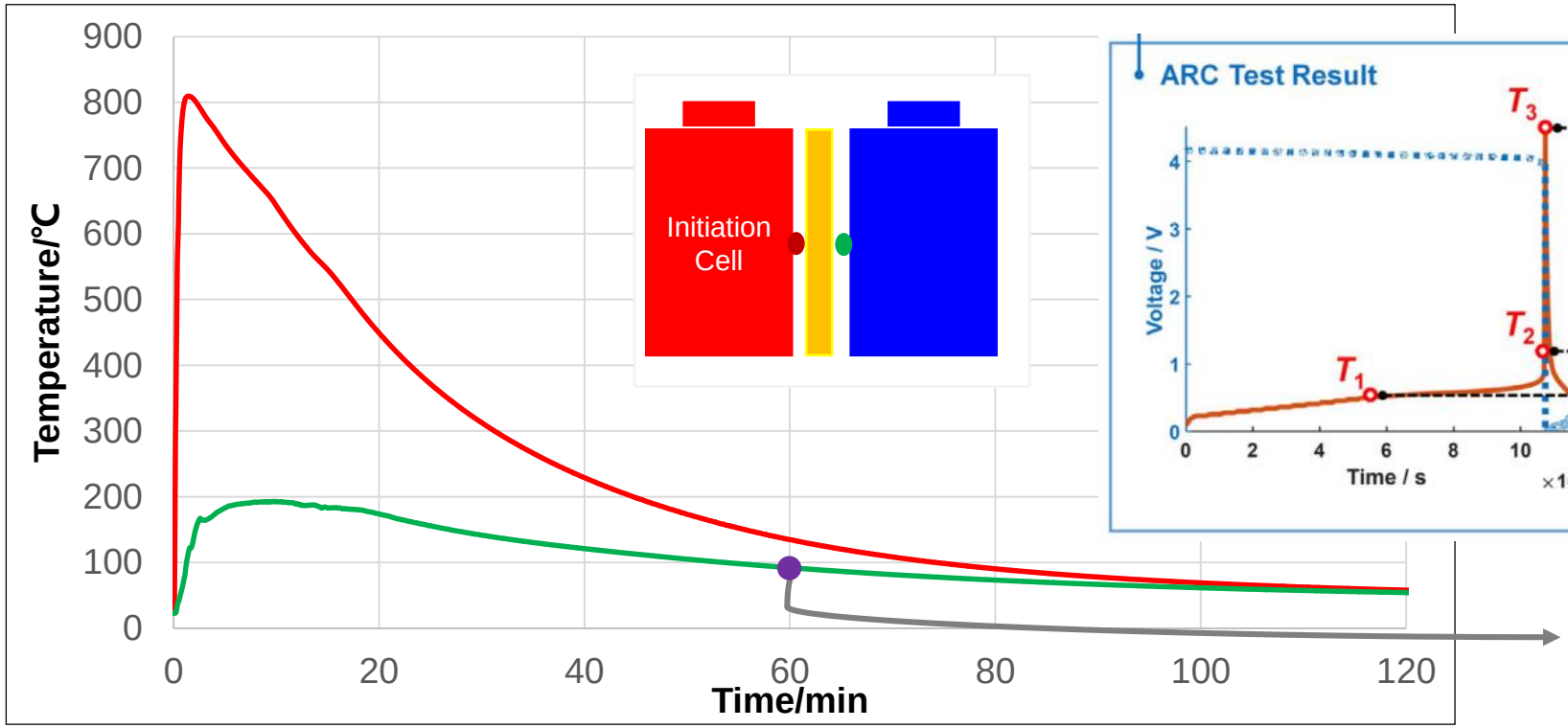
2024/3/12

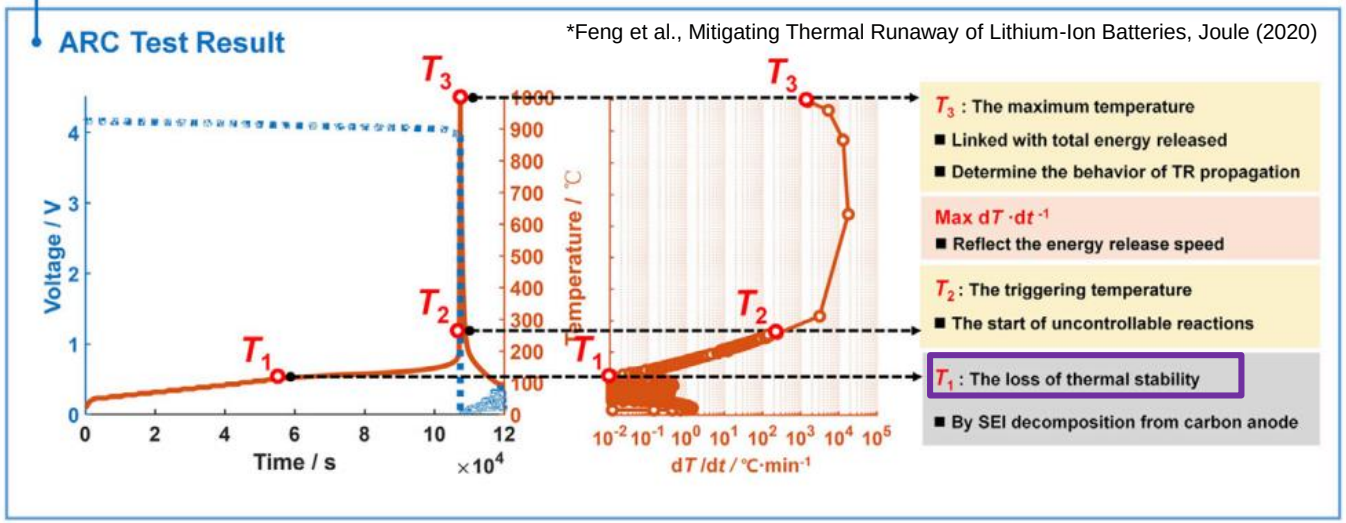
Observation Time of No Thermal Propagation

In case that no thermal propagation is observed [during [1 h]] after thermal runaway was triggered in the initiation cell, the requirements are deemed to be satisfied. In the case no thermal propagation occurs, [the

No TP defined

in *SIGTP-02-31_(Sec)working_document3*





After 1hr, the cell temperature is still close to 100℃ and would have a risk of losing thermal stability

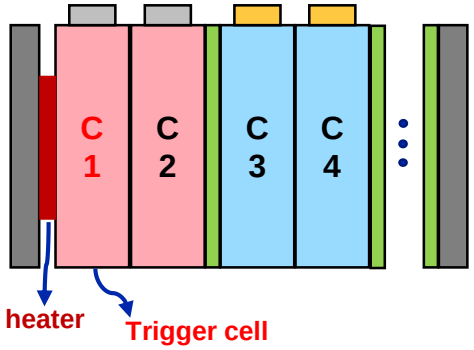
➢ **An observation time of 1 hour for the determination of no TP is not sufficient**

Definition of Thermal Propagation

2.47. "*Thermal propagation*" means the sequential occurrence of thermal runaway within a REESS triggered by thermal runaway of a cell in that REESS.

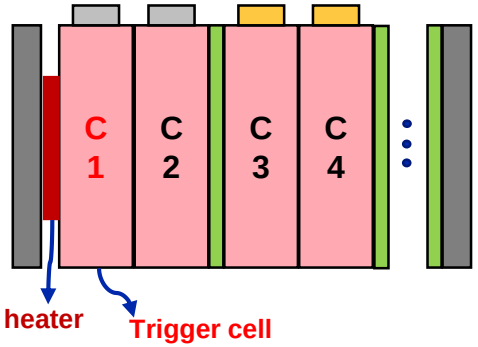
TP defined in *SIGTP-02-31_(Sec)working_document3*

Scenario 1:



Cell #2 TR **(only one cell)** triggered by TR of Cell #1

Scenario 2:



Cell #2, #3, #4… TR **(more than one cell)** triggered by TR of Cell #1

sequential adjective

se·quen·tial si-ˈkwen(t)-shəl

Synonyms of *sequential* ›

1 : of, relating to, or arranged in a sequence : SERIAL
sequential file systems

2 : following in sequence

3 : relating to or based on a method of testing a statistical hypothesis that involves examination of a sequence of samples for each of which the decision is made to accept or reject the hypothesis or to continue sampling

Merriam-Webster Est. 1828

Does *the sequential occurrence of thermal runaway* imply that in addition to the initiation cell, at least two cells should enter TR?

Observation time in no TP judgement

Number	Chemical System	Cell Capacity	Type	Initiation method	Time between TR to TP
1	LFP	130-250Ah	Prismatic	Nail penetration in GB 38031	56min
2					61min
3					63min
4					75min
5					86min
6					47min
7					77min

- Total samples: 120
- 1h observation time in no TP judgement may not be enough
- Tentative idea for observation time in no TP judgement: larger than 1 hour and the temperature of adjacent cells are less than XX ℃ (need more supporting information)