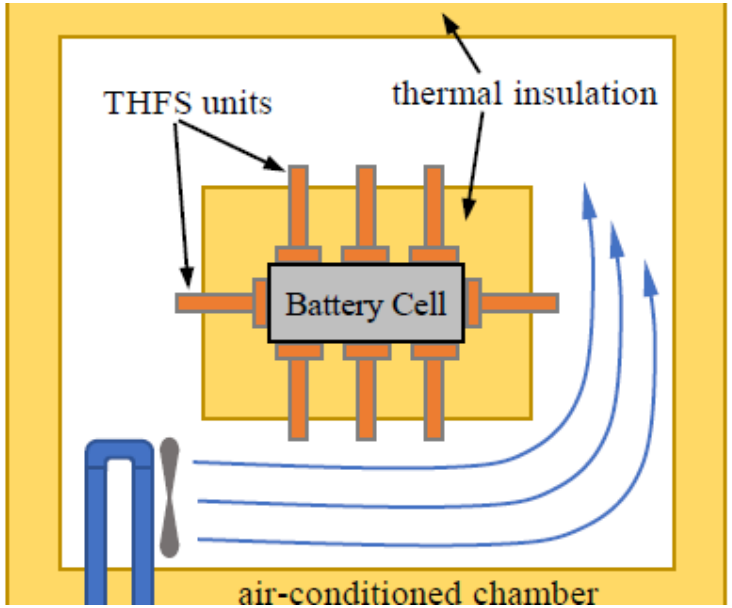
Bachelor Thesis/Master Thesis/Research module

Developement of a combined measuring and heating unit for Li-Ion cells

The thermal boundary conditions of a cell inside a module vary depending on the cooling strategy or the positioning inside the module. These inhomogenities can lead to increased aging rates, losses in capacity and power, and risks for the battery safety.

In order to investigate the influence of different cooling strategies and interconnections in a module on cells, a measuring stamp is to be developed with which the direction-dependent heat flow into the cell can be precisely defined.



R Christen, B Martin, G Rizzo. "New Experimental Approach for the Determination of the Heat Generation in a Li-Ion Battery Cell". Energies. 2021; 14(21):6972. doi: 10.3390/en14216972

Qualifications:

- Basic knowledge about heat transfer
- Independent and responsible working
- Optional: Experience with CAD-software (e.g. Creo)
- Optional: Experience with the application of sensors and Peltier elements

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