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# IMPROVED EVALUATION OF PID CELL TESTS

Consideration of variable HV stress levels

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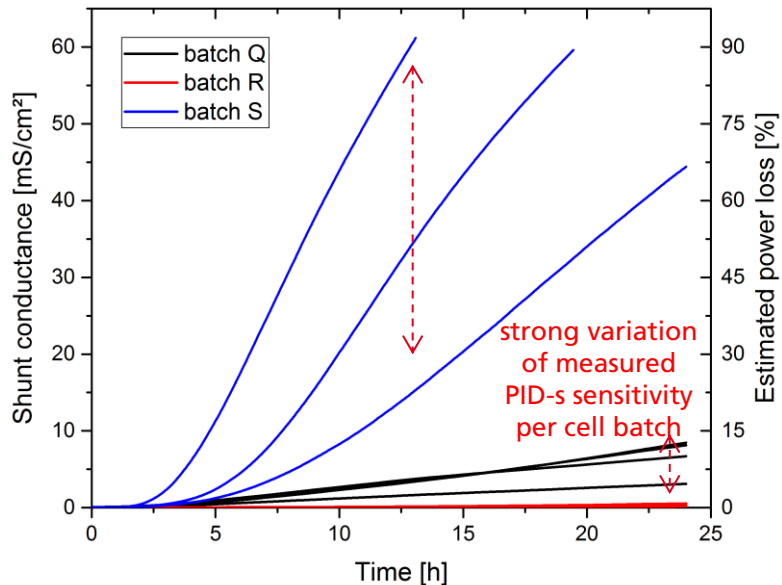
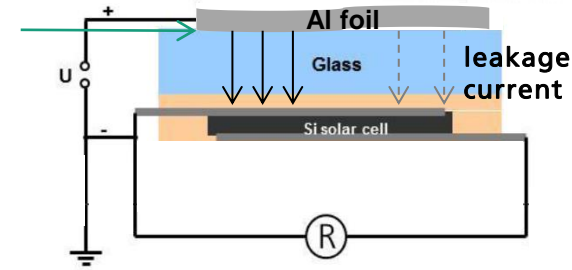


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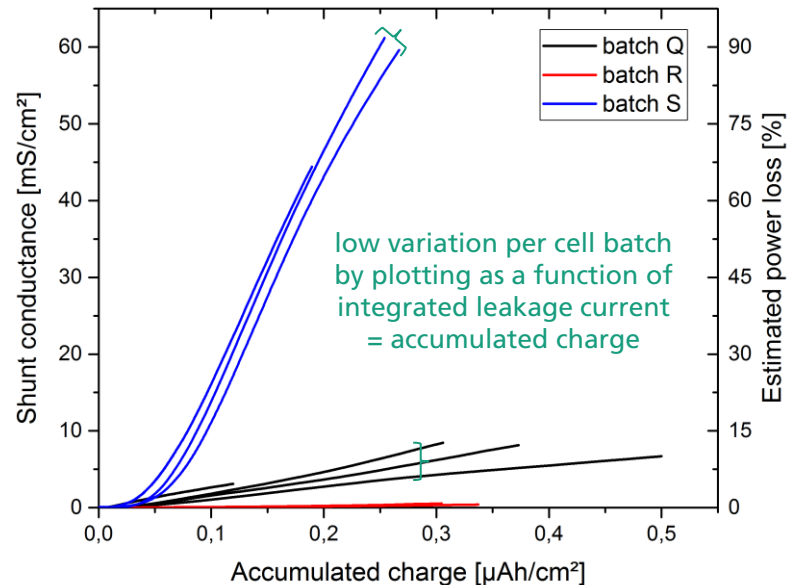
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# Improved evaluation for PID tests on cell and mini module level

- PID test on cell level is inexpensive method for monitoring/quality checks of sensitivity to PID-s\*
- Sometimes the top electrode (Al foil, metal plate) hasn't tight contact to the glass surface
- This leads to uncontrolled/reduced high voltage (HV) stress by reduced leakage currents
- ➔ Apparent variation of PID-s\* susceptibility within one cell batch at constant conditions (1)
- ➔ Can be eliminated by plot as a function of accumulated charge (2) instead of time



(1) common evaluation: plot of degradation indicator as a function of time



(2) new evaluation: plot of degradation indicator as a function of accumulated charge

**PID cell test conditions:**  
 PIDcon by Freiberg Instruments  
 Temperature: 85 °C  
 Voltage: 1000 V (neg. on cell, pos. on glass)  
 Stressed area: 10x10 cm<sup>2</sup>  
 EVA: Avaluxe EVA  
 Glass: float glass/white glass 3.2 mm