INNOVATION

- First commercial luminescence analysis setup focused on solar energy materials and light emitting diodes research
- Full-blown optical setup inside of a small & portable device allowing flexible usage in constrained spaces e.g. inert gloveboxes
- Substantially accelerates opto-electronic device development saving time, material and costs.
- Measures absolute photon fluxes and provides a software that calculates device relevant metrics (quantum yield & implied voltage) at early stage of fabrication
- Allows detailed efficiency potential analysis from neat absorber layers to full devices
- Prototype system used for developing the 29.1% efficient Si/perovskite tandem world record (Al-Ashouri et al., Science 2020)

The business and market potential

1. Currently available luminescence analysis systems are usually designed for a general material analysis. The LuQY Pro is tailored to the development of opto-electronic devices (solar cells, LEDs) and differentiates itself strongly on the market by three distinct USPs:
   - Compact & inexpensive, yet extremely powerful and versatile luminescence analysis system
   - Possibility to precisely simulate various operating points of an opto-electronic device (LED or solar cell)
   - System directly analysis the data and predicts device relevant metric (implied Voltage)
2. Several hundred research groups and also solar cell manufactures are currently working only on perovskite solar cells/LEDs (with over 4000 scientific publications only in 2020)
3. After product launch in July 2021, two devices have been sold in the first two months – one to an industry and one to an academic customer. The target for this year is to sell four devices in total yielding a turnover in the six-digit range within only six months. For 2022, we plan to organically grow these numbers to 10 sold devices and expand our product portfolio.