

**Abstract STK Meeting 2018**

**Christian Lautz, F. Hoffmann-La Roche Ltd, Basel, Switzerland**

### **The Integrated Calorimeter – Combining Calorimetry and PAT Measurements**

The presentation will focus on the PAT strategy implemented since 2017, focusing on support for laboratory process development by the newly established Process Analytical Technologies group in Roche Small Molecule Technical Development. The integrated calorimeter is a key component of this strategy for drug substance development, giving additional insight by spectroscopy into the reaction steps investigated by calorimetry.

Several case studies will be presented, with a focus on process safety, reaction monitoring and finally reliable scale-up to larger scale productions with an example describing the technical setup of an IR probe and spectrometer in 4000 L scale and its successful application for monitoring a Reformatsky coupling reaction.