



LayTec welcomes a new marketing manager!

LayTec is happy to welcome a new manager for marketing services who joined the company on January 1st. **Mirja Schwarz** will take care of LayTec's marketing activities in the field of photovoltaics and be in charge of communication, public relations, advertisement, participation in conferences and trade fairs. Mirja can contribute to our work from the very first day because she has already gained a profound experience in marketing when she worked at LayTec as a student in 2008. Additionally, she is a certified administrative assistant and obtained Magister degree in economics, geography and Spanish at Humboldt University of Berlin in 2009. We are glad to welcome Mirja back on board at LayTec!

AbsoluT – LayTec's new development for precise on-site temperature calibration

LayTec has developed the ultimate temperature calibration tool for its EpiTT, EpiTwinTT and EpiCurve®TT tools: the **AbsoluT**. The new instrument is designed for on-site use in AIXTRON Planetary® and CRIUS reactors. It performs temperature calibration inside the MOCVD chamber through the original viewport without any sophisticated alignment and with unrivaled accuracy.

All reactor-to-reactor and ring-to-ring temperature variations caused by manufacturing tolerances of the equipment (viewport and window variations) can now be easily corrected. The new method will replace the less accurate and more time consuming method of eutectic calibration used currently.



Fig. 1: AbsoluT's head with reference light emitter

A calibration with **AbsoluT** takes only 30 minutes and shortens maintenance cycles profoundly. The user just has to put the **AbsoluT** head into the chamber and press it with its

heat resistant surface against the reactor lid under the optical view-port. The calibration data is automatically tracked and processed for further temperature measurements.

Recently, the new method was successfully approved at industrial customer sites. A customer who tested **AbsoluT** wrote: "Your new calibration method is very successful. After calibration the temperature measurement in MQW showed identical results in each system. I think your team did a very good job here!"

In Fig. 2 we show a typical calibration result. **AbsoluT** was used in 5 identical CRIUS reactors running the same LED recipe. The initial values (black) were gained with reference to the black body pre-calibration before shipment. They are obviously higher than the real temperature, and head-to-head or reactor-to-reactor variations are in the range of ± 7.5 K.

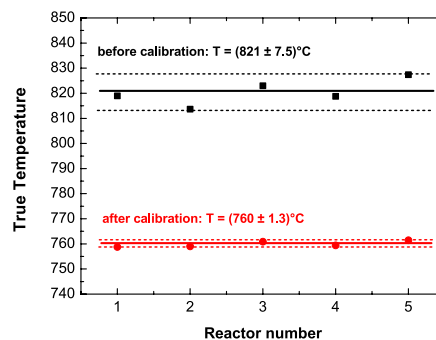


Fig. 2: Temperature measurements in 5 identical reactors before calibration (black) and after calibration (red).

As the original viewport of the MOCVD system is not available at LayTec for pre-calibration, on-site variations of the viewport diameter (typically in the range of 10 %) cannot be corrected. The viewport aperture, however, affects temperature sensing in CRIUS type of reactors because the intensity of the IR radiation detected by the pyrometer changes if the view-port diameter differs. The new **AbsoluT** calibration completely eliminates these effects: after temperature calibration (red), the correct temperature of 760°C was measured and the temperature variation of ± 1.3 K was validated by identical photoluminescence (PL) emission wavelength of the wafers from all 5 reactors.

AbsoluT will be available to LayTec customers in April 2010. For further information please contact info@laytec.de.

You can meet us at the following workshops and conferences:

16–21 May 2010
8th International Symposium on Semiconductor Light Emitting Devices (ISSLED)
in Beijing, China
www.issled2010.com.cn

23–28 May 2010
15th International Conference on Metal Organic Vapor Phase Epitaxy (IC MOVPE) and LayTec in-situ seminar in Lake Tahoe, Nevada, USA
www.tms.org

4–8 July 2010
3rd International Symposium on Growth of III-Nitrides - ISGN
in Montpellier, France
http://isgn3.org