SoLayTec launches new product and proves cell efficiency gain of 0,2% compared to PECVD AlO_x

During the last two exhibitions, new products of Tempress and SoLayTec were revealed. Especially for the next PERC2.0 expansions those products are highly requested by the market. The 2nd Generation InPassion ALD combined with the newest direct PECVD can annually produce up to 130MW including the integrated anneal process.
Furthermore, two weeks ago the 25th Intersolar exhibition and EUPVSEC conference were held in Munich. In several presentations the InPassion ALD was an important topic. Research institute Imec presented its latest results regarding n-type IBC cells on 156x156mm^2 using Al_2O_3 from SoLayTec. Furthermore Hanwha Q Cells presented its evaluation results of InPassion ALD versus MW-PECVD and SoLayTec gave an overview of its successful PERC integration project of one of their key customers.

PERC2.0
"For PERC integration the Al_2O_3 ALD machine only, is not the complete solution. A customer also needs a PECVD capping machine for covering the Al_2O_3 layer. So far a customer needed at least 6 direct PECVD tubes to meet the ALD output of 3600wph. Since 10th SNEC exhibition in Shanghai Tempress introduced the SPECTRUM PECVD which has at least the same nett capacity as the InPassion ALD. So now capex wise we have a highly cost effective solution available for our customers", said Roger Görtzen, co-founder of SoLayTec and director marketing and sales. "Especially if we take into account that the uptime, throughput, TMA usage and efficiency gain are even better than our main competitor. On top of that, the newly introduced 2nd generation InPassion ALD has been improved a lot. The main point that has been improved is the uptime and nett throughput of the machine", according to Roger Görtzen.

Munich Intersolar / EUPVSEC
During the 32nd PVSEC in Munich, Hanwha Q CELLS published the results of the evaluation of the InPassion ALD and compared the results with their mainstream MW-PECVD system. The main conclusion is that the InPassion ALD gives an 0.15% up to 0.25% better efficiency for multi-cSi PERC compared to MW-PECVD AlO_x. This gives a benefit in extra margin for the customer of about 300.000Euro/year. "At SoLayTec we are very proud of this result, confirming our efficiency benefits at an important tier one cell manufacturer", said Roger Görtzen.
Since 2011 Tempress and SoLayTec are both part of the Industrial Affiliation program within imec. This week the imec research team and its partners presented the latest results of their large area n-type IBC cells of 22.8%. In the past imec already proved that ALD Al_2O_3 was a good passivation material for p+ emitters, but in this work the ALD from SoLayTec plays a significant role to passivate also the n+ emitter. In the past standard passivation method was always by using Wet thermal SiO_x, but now also for IBC concepts the gain is +0,3% by using the ALD Al_2O_3 layer. "For our customer this gives a wider opportunity to use our ALD system, besides PERC applications also for other high efficiency cell concepts like: n-PERT, IBC, PERL and the latest Topcon approach", states Roger Görtzen.

Furthermore the process team of SoLayTec recently performed a PERC integration at one of our customers in Asia. This successful ramp-up of a standard multi cell line into mono PERC reached a daily capacity of 50.000 PERC solar cells, with a stable cell efficiency of 20.6%.

SoLayTec
SoLayTec is a spin-off company of the Dutch research organisation TNO and established in 2010. SoLayTec is part of the Amtech Group (Nasdaq ASYS). The company develops, delivers and services machines for atomic layer deposition (ALD) on solar cells worldwide. The SoLayTec ALD machines are designed for mass production in the solar market. In the field of solar cell ALD equipment, SoLayTec has a leading position.
For more information, please visit www.solaytec.com.

Press contact:
SoLayTec
Roger Görtzen
Phone: +31 40 2380220
Mobile number: +31 6 30615719
Roger.Gortzen@solaytec.com