PILATUS

NEWSLETTER AUTUMN 2024

Dear reader,

Our project reached its second birthday already… and we were able to celebrate this with an amazing result: 25.1% cell efficiency has been reaching by the PILATUS team at Meyer Burger Research (MBR). A great present for us and the sector! Further in this issue you can read about the team effort that brought innovative solutions allowing combined inline metrology and a short summary of the ongoing activities for the M10 wafer pilot line and module pilot line. Also clustering activities have been 'cultivated' and stimulated during the past months, resulting in PILATUS participation in a joint panel discussion at the EU PVSEC conference las September in Vienna.

Anna Molinari - Coordinator PILATUS

PILATUS cell efficiency established above 25%

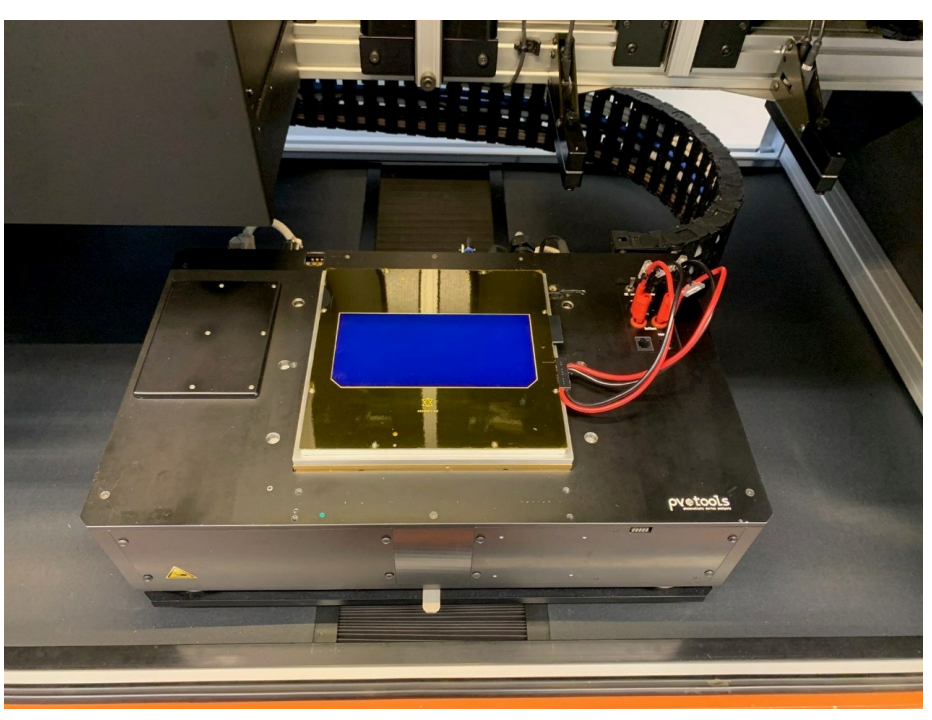
The recent progress in cell efficiency at Meyer Burger Research (MBR), hitting now 25.1% on HM6 wafer size, was linked to the installation of a new wet bench from PILATUS-partner Exateq and new PECVD processes implementation at MBR. The high quality of texturing and cleaning from this tool enabled to produce high quality and reproducible wafer preparation, triggering immediately a boost in passivation quality.

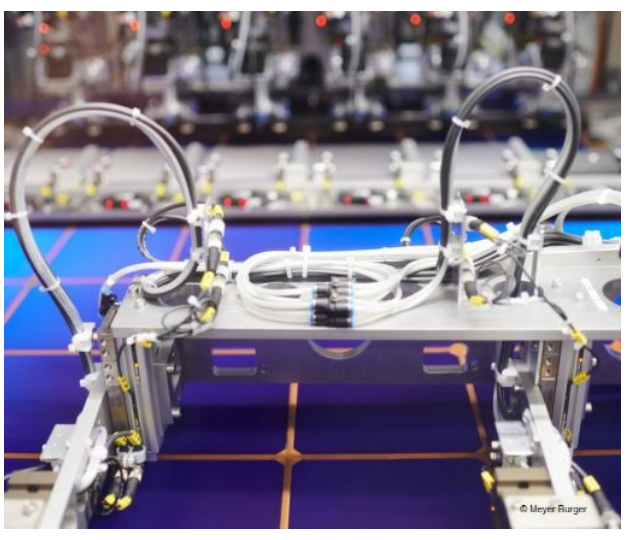
Read the newsitem on the PILATUS website.

Progress on inline metrology

The IBC solar cell technology to be developed in PILATUS also requires new inline-capable measurement methods. Together with PASAN, Fraunhofer CSP and Meyer Burger have integrated a new type of contacting unit into an automated cell analysis tool and inline cell characterisation. In this way, imaging methods, such as lock-in thermography or light-beam induced current, can now be combined and compared with inline IV measurements to find and rectify cell defects more quickly. Integration of photoluminescence and electroluminescence imaging into the IV station was also tested in an inline platform with a promising throughput. Another method based on spectral photoluminescence measurements was also tested in a lab-to-fab platform. This demonstrated that even complex cell structures can be imaged at high throughput conditions.

This was also highlighted in a recent deliverable; you can find a summary of the article here.





EUPVSEC 2024

At EUPVSEC 2024 in Vienna held in September 2024, a parallel event was organised with IBC4EU and PEPPERONI sister projects with the topic "Manufacturing Innovative PV technology in the EU – Chances and Challenges". The PILATUS Strategy and project Innovation Coordinator Gizem Nogay from Meyer Burger Switzerland represented PILATUS, with a short presentation on the project as well as in the panel discussion that followed. All-in all, this was a very interesting cluster event with some of the PILATUS sister projects, also learning about the progress and issues of other projects involved in PV industrialisation in Europe.

Upcoming events

bifi PV workshop
Zhuhai, China
November 20-22, 2024

Integrated Photovoltaic Conference
Florence Italy
November 28, 2024

SiliconPV and nPV-workshop
Oxford, UK
April 8-11, 2025

Intersolar 2025
Munich, Germany
Exhibition: May 7–9, 2025
Conference: May 6–7, 2025

Other news

In the last months, there was also progress on the specification of the M10 wafer pilot line as well as on the manufacturing execution system (MES) of the module production line.

Summaries of the recent reports can be found here for the M10 wafer pilot line and here for the MES of the module pilot production line respectively.

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