

# 第三届异质结、钙钛矿与叠层电池论坛

3<sup>rd</sup> Heterojunction, Perovskite & Tandem Solar cell Forum

**2021.5.11-12**

**苏州 Suzhou**

主办:



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## Background

Heterojunction(HJT) solar cell has the advantages of high conversion efficiency, simple manufacturing process, thin silicon wafer application, low temperature coefficient, no LID and PID, and bifacial power generation. At present, the highest efficiency of HJT cell has reached 26.63%. The key to achieving low-cost mass production of HJT cells is the localization of equipment, improved yield and productivity, and reducing costs for wafers, low-temperature silver paste, TCO targets, cleaning and texturing chemicals.

In 2021, the construction of China's HJT solar cell production capacity is rapidly advancing, Jinery, Tongwei, Risen, Akcome, GS-Solar, Huasheng, etc. have begun mass production or are about to mass production. In addition, SPIC, Yingfa, CSI, Sumin, Talesun, Shanxi Coal, Belight, Baofeng, etc. also plan to build HJT production lines. In January 2021, Jinery's mass production efficiency of large-size HJT cells reached 24.7%. In February 2021, the highest power of Risen Energy's HJT modules reached more than 606W, setting a new world record.

Perovskite solar cell is a promising next-generation photovoltaic technology and is rapidly entering the market. In July 2020, Microquanta Semiconductor perovskite production base in Quzhou was completed, with a planned production capacity of 5GW. At the beginning of 2021, Microquanta Semiconductor mass-produced perovskite modules passed the rigorous stability test based on the IEC61215 standard. GCL has built a 10MW-level large-area perovskite module pilot production line and has begun mass production line construction, the perovskite module size reaches 1\*2 meters. The challenges of perovskite solar cells are mainly stability and large-scale manufacturing, and related test standards and test techniques have not been perfected.

The tandem cell formed by HJT and perovskite, is expected to achieve a photoelectric conversion efficiency of more than 30% in the near future. In December 2020, Oxford PV announced that its perovskite tandem cell efficiency reached a new high, reaching 29.52%. At the 2020 Shanghai Photovoltaic Exhibition, GCL, Aiko solar and Saiwei solar exhibited related products of perovskite tandem cells. In January 2021, Longi issued a patent for a tandem cell, which includes bottom cell, hole transport layer, perovskite absorption layer and transparent conductive layer. The manufacturing process of the HJT/perovskite tandem cell is complex, which will bring huge market opportunities to the equipment and auxiliary materials industry.

**3rd Heterojunction, Perovskite & Tandem Cell Forum 2021** will be held on **May 11-12** in **Suzhou**, Jiangsu, China. The conference will discuss the outlook of the photovoltaic industry in the context of carbon neutrality, market analysis of HJT, perovskite and tandem cells, optimization of HJT cell structure and process with mass production efficiency of 25%+, key technology and equipment of HJT cells-Cleaning and texturing, deposition, screen printing and sintering, potential and path of cost reduction for HJT cells, improvement of conversion efficiency and long-term stability of perovskite cells, process and equipment of HJT/perovskite tandem cells manufacturing, HJT, perovskite and tandem cell test standards and test technology, etc.

English-Chinese Translation will be Provided

## Topics

1. Outlook of the photovoltaic industry and market analysis of HJT, perovskite, tandem cells
2. Key technology and equipment of HJT cells-Cleaning and texturing, deposition, screen printing and sintering
3. HJT cell production process, key equipment and consumables materials
4. Optimization of HJT cell structure and process with mass production efficiency of 25%+
5. Low-temperature silver paste and metallization for HJT cell
6. Potential and path of cost reduction for HJT cells
7. Light injection annealing boosts HJT cell efficiency
8. N-type silicon wafer quality improvement, thinning & cost reduction prospect
9. Application advantages of HJT cells based on large-size silicon wafers
10. Large-area industrialized perovskite solar cell and module manufacturing processes
11. Improvement of conversion efficiency and long-term stability of perovskite cells
12. HJT, perovskite and tandem cell test standards and test technology
13. HJT/Perovskite tandem cell structural design and efficiency limit analysis
14. Process and equipment of HJT/perovskite tandem cells manufacturing
15. HJT and Tandem module encapsulating technology and materials
16. The market potential of HJT, perovskite and tandem cells for BIPV

## Agenda Outline

**May.10** 17:00-20:00 Pre-conference Registration

**May.11** 08:30-12:30 Speech

12:30-14:00 Networking Lunch

14:00-18:30 Speech

18:30-20:00 Banquet

**May.12** 08:30-12:30 Speech

12:30-14:00 Networking Lunch

15:00-16:00 Onsite visit