

# Perovskite Solar Cell Market to Grow from \$0.4 Billion in 2020 to \$6.6 Billion by 2030 at 32.4% CAGR

WILMINGTON, DE , UNITED STATES, July 4, 2024 /EINPresswire.com/ -- The global [perovskite solar cell market](https://www.alliedmarketresearch.com/perovskite-solar-cell-market) size was valued at \$0.4 billion in 2020, and is projected to reach \$6.6 billion by 2030, growing at a CAGR of 32.4% from 2021 to 2030.

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Perovskite solar cell (PSC) includes the perovskite-structured material as an active layer based on the solution processed by tin or halide. Perovskite materials offer excellent light absorption, charge-carrier mobilities, and lifetimes, resulting in high device efficiencies with opportunities to realize a low-cost, industry-scalable technology. Perovskite solar cells (PSCs) are the most emerging area of research among different new generation photovoltaic technologies due to its super power conversion efficiency (PCE). The perovskite solar cells efficiency is high in devices using perovskite cells and has improved significantly over period, due to continuous developments in solar energy.

The goal of the perovskite solar cell is to boost cell efficiency while lowering solar energy costs. Solar cells made on perovskite may emit light in a wide variety of wavelengths. They can convert more solar energy into electricity as a result of this. One of the most significant benefits of perovskite solar cells over other solar technologies is their ability to store energy. These solar cells also have characteristics including flexibility, semitransparency, and lightness. These properties of perovskite solar cells are expected to open up new possibilities for a variety of solar cell applications. Gold is now the most popular electrode material in perovskite solar cells. As a result, perovskite solar cells are more expensive than other commercially available solar cells. This is projected to hinder the perovskite solar cell market during the projected period. These are some of the perovskite solar cell market trends observed globally.

The global Perovskite solar cell market is segmented on the basis of structure, product, method,

end-use, and region. Based on the structure, the global Perovskite solar cell market is segmented into planar perovskite solar cells and mesoporous perovskite solar cells. The planar perovskite solar cells segment accounted for the largest share in 2020, while the mesoporous perovskite solar cells segment is projected to witness growth at the highest CAGR of 32.8%.

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Based on the Product, the global Perovskite solar cell market is segmented into rigid perovskite solar cells and flexible perovskite solar cells. The flexible perovskite solar cells segment accounted for the largest share in 2020, while the rigid perovskite solar cells segment is projected to witness growth at the highest CAGR of 32.7%.

On the basis of method, the global perovskite solar cell market is segmented into solution method, vapor-deposition method and vapor-assisted solution method. The vapor-deposition method segment accounted for the largest share in 2020, while the vapor-assisted solution Method segment is projected to grow at the highest CAGR of 32.9%.

End use of Pervoskite solar cell includes aerospace, industrial automation, consumer electronics, energy and others. The energy segment accounted for the largest share of the perovskite solar cell market in 2020.

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On the basis of structure, the Planar Perovskite Solar Cells segment emerged as the global leader by acquiring more than 68% of the market share in 2020, and is anticipated to continue this trend during the forecast period.

On the basis of product, the Flexible Perovskite Solar Cells segment emerged as the global leader by acquiring more than 56% of the market share in 2020, and is anticipated to continue this trend during the forecast period.

On the basis of method, the Vapor-Deposition Method segment emerged as the global leader by acquiring more than 45% of the market share in 2020, and is anticipated to continue this trend during the forecast period.

On the basis of end use, the Energy segment accounted for 39% of the global perovskite solar cell market share in FY2020.

On the basis of region, Europe is the major consumer of pervoskite solar cell among other regions. It accounted for around 49% of the global perovskite solar cell market share in 2020.

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