

Nanocomposite Solar Cells Market: Projected 10.8% CAGR Through 2034

Integration of Smart Technology in Solar Panels Encompassing User-friendly Specifications Stimulating Demand for Nanocomposite Solar Cells

ROCKVILLE, MARYLAND, UNITED STATES, July 19, 2024 /EINPresswire.com/ -- The global <u>nanocomposite solar cell market</u> is expected to reach US\$ 5.16 billion in 2024, as revealed in a recently updated industry analysis published by Fact.MR,



a market research and competitive intelligence provider. Worldwide revenue from the sales of nanocomposite solar cells is forecasted to increase at a CAGR of 10.8% from 2024 to 2034.

There has been an increase in the integration of smart technology in solar panels. These panels are equipped with several specifications, such as high electrical conductivity, catalytic activity, high mechanical strength, and redox reactivity, which make them an attractive option among more end users.

Market growth is attributed to the rising demand for renewable energy sources across the world. In addition, increased emphasis on the adoption of sustainable energy solutions with a growing focus on environmental protection is stimulating market players to invest more in nanocomposite solar cells. Advancements in material science and nanotechnology are stimulating the development of cost-effective and more efficient nanocomposite solar cells.

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Key Takeaway from Market Study

The market for nanocomposite solar cells is projected to reach US\$ 14.4 billion by the end of 2034. Sales of nanocomposite solar cells in Japan are analyzed to rise at a CAGR of 12.1% through 2034. Demand for nanocomposite solar cells in South Korea is forecasted to increase at a 12.4% CAGR from 2024 to 2034.

North America is evaluated to account for a market share of 31.5% by 2034. Worldwide sales of organic nanocomposite solar cells are forecasted to increase at a CAGR of 10.6% and reach US\$ 7.48 billion by 2034-end. Nanocomposite solar cells for use in BIPV (building integrated PV) are analyzed to account for 40% share of the global market by 2034.

"Market players should leverage opportunities created by supportive government initiatives promoting clean energy sources, further widening the application scope of nanocomposite solar cells," says a Fact.MR analyst.

Soltecture Solartechnik GmbH, Antec Solar GmbH, Solar Frontier Europe GmbH, Waaree Group, Toledo Solar Inc., Abengoa, SoloPower Systems Inc., First Solar, United Solar Ovonic LLC, Hanergy Thin Film Power Group, Ascent Solar Technologies, and Nanosolar are some of the leading manufacturers of nanocomposite solar cells.

Surging Use of Nanocomposite Solar Cells in Building Integrated PV Projects

Global demand for nanocomposite solar cells for use in BIPV (building integrated PV) projects is projected to rise at a CAGR of 12% and reach a value of US\$ 5.75 billion by the end of 2034. Growing use of these cells in BIPV for use in building components, such as windows, roofs, and facades is helping generate renewable energy. There is a surging use of solar cells in broadening solar power reach, thereby making it more accessible and sustainable for sectors, such as automotive and others.

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Perovskite cells' ability to seamlessly integrate with thin, transparent panels

Businesses that deal with solar energy have been growing significantly. Global market growth is being aided by the use of perovskite solar cells, a well-known solar material that is suitable for crystal structure used for light absorption. When it comes to lowering lighting levels indoors or on foggy days, these cells largely outperform silicon, allowing for improved conversion efficacy.

The primary benefit associated with using perovskite to make solar cells is affordability. Because of its ability to produce solar electricity at a reasonable cost, end customers are favoring it. Because of their ability to integrate with small, very transparent panels, they are ideally suited for a number of cutting-edge applications, including BIPV projects. Perovskite is becoming a more popular option for end customers because to its expanding application in both residential and business settings.

Difference in Views Regarding Nanomaterials' Long-Term Environmental Impact

Opinions about the various perspectives of the long-term environmental effects of

nanocomposite solar cells used in solar energy applications disagree. This lack of clarity is preventing some end users from using these solar cells and preventing the market for nanocomposite solar cells from growing.

The incorporation of solar modules into the electric transportation industry is generating profitable prospects for emerging competitors in the market. These integrated solar panels provide power for air conditioners, reducing CO2 emissions and operational expenses. Larger roof spaces on buses enable the simple installation of solar systems for reduced energy usage. The market trends for nanocomposite solar cells are positively impacted by the reduced energy consumption of these recreational vehicles, which makes photovoltaics an additional source of electricity for optimal operation.

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<u>Sales Engagement Software Market</u> The global sales engagement software market has been valued at US\$ 9.6 billion in 2024 and is projected to increase at a CAGR of 14% to reach US\$ 35.7 billion by 2034.

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