

Substrates and Encapsulation for BIPV

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Abstracts

Summary

This report identifies the opportunities for encapsulation and substrate materials and systems in the emerging building-integrated PV (BIPV) market. NanoMarkets believes that the BIPV sector will be the fastest growing part of the solar industry in the next decade, but that demand patterns for encapsulation and substrate materials from this sector will be different from the traditional PV industry.

Even though glass will be the most widely used material for both encapsulation and substrates in the BIPV sector, special coatings may be required as the result of the use of novel absorber materials in BIPV. In addition, NanoMarkets believes that in the emerging BIPV market there will be a considerable trend toward flexible PV because of its ability to offer lightweight installation and improved aesthetics. On the one hand this means new opportunities for suppliers of special metal substrates. But it will also require cost effective flexible encapsulation systems.

With all this in mind, in this report, NanoMarkets quantifies the new business revenues that will be generated by novel substrates in the BIPV sector as well as by advanced multi-layer encapsulation systems, including the new breed of encapsulation system that makes use of atomic layer deposition (ALD). The report also discusses how, as monolithic integration becomes more common in BIPV, specialist encapsulation systems will be required to protect the relatively delicate CIGS, OPV and DSC absorber materials that will be used in such products.

Finally, the report takes a look at how the leading suppliers of encapsulation products are viewing BIPV as a market for their products. In addition, this report includes a granular eight-year forecast of the BIPV encapsulation and substrate markets in volume and value terms.

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