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Electricity from the Sun: A Bright Future Shines on PV

Tuesday 24 August 2010 12:00 (1 hour)

Present state of the art of the photovoltaic (PV) conversion of solar energy into electricity will be given. The prospects for this very dynamic and fast-changing field will be overviewed, with the emphasis on promising new solar materials, new technologies, market specifics, like incentives, etc. The specifics of this still very young industry is that materials and technologies for solar cells and solar modules production, which have been dominating over 90% of the market for decades (monocrystalline and polycrystalline silicon wafers), will soon have to yield their dominant position to fast-developing new materials and technologies (binary or ternary compounds like CdTe, CIS, CIGS, CIGSe etc, in the form of thin films –amorphous, crystalline, micro- or nano-crystalline), as well as new, emerging technologies ('third generation' of solar cells/modules). Despites all these perturbations the field is reaching maturity, with the life-expectancy of the best mass-produced cells/modules over 25-30 years.

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