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INORGANIC AND ORGANIC SOLAR CELLS FUTURE

Abstract

Inorganic Solar Cells with particular attention to the Triple Junction configuration and Organic solar cells have attracted intensive attention due to its promising efficiency energy conversion. Researchers, are looking for a viable solution, a solar cell to be highly efficient capable to stand thousands of thermal cycles in orbit which additionally shows a limited degradation to cosmic radiations and ultraviolet, capable to bear linear accelerations and vibrations during launch and orbital maneuvers. Highest conversion efficiency solar cells for space application have been developed from monocrystalline materials, and now some organics materials have been used with that purpose. This has promoted manufacturers to work on four to six junction and now many companies, like IBM for example, have launched possible solutions in the field of Inorganic materials. The future about the systems is still unknown, but having an extremely efficient solar energy conversion would mean, even though the related constraints: the possibility of unlimited source of electrical energy for the satellite.