Implications of engineering decisions

Engineering

Implications of Engineering Decisions

Solar energy is an important aspect of energy source whose utilization has not been maximized. It provides the best alternative to fossil fuels and a considerable solution to the carbon emission problem (Beard et al., 2507). The engineering works on the design and construction of the greatest solar bridge in the world which is in UK is a great breakthrough. In an attempt to come up with a cost effective system which meets environmental requirements, engineers meet a lot of challenges related to cost and environmental conservation.

The Blackfriars Railway Bridge project in central London is expected to cover a wide area but will only provide 50% of the total electricity requirement of the company. Whereas it will also reduce carbon emission, it is very expensive to obtain and install all the solar panels. When harnessed, the challenge of storing the energy for later use is of great concern to engineers. Also considering that there exists irregular fluctuation in solar radiation, reliance on the energy is not optimum (Beard et al., 2508).

Engineers have been trying to come up with new materials for use in the fabrication of solar cells which is expected to reduce the cost. As it stands, the available materials are costly which eventually render the entire project very expensive and therefore non economical. The key solution to the problem would be to ensure material purity which is intended to enhance current flow through the material (Beard et al., 2510). This calls for thin materials which have the limitation of not being capable of trapping maximum light. For easy travel of charges and trapping of maximum light, engineers have opted for the use of nanocrod cylinders which could trap light on the cylindrical surface and allow charges to travel through the cylinder.

The use of such a material will minimize on space while maximizing on energy output at fairly reduced costs.

Work Cited

Beard, M. C., et al.. Multiple Exciton Generation in Colloidal Silicon Nanocrystals: Nano Letters

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