Solar power fission device

Singlet exciton fission (SF), in particular, is a potentially important photovoltaic technology promising a compelling combination of efficiency and simplicity. It is implemented in single-junction ...

Singlet fission occurs when an organic molecule absorbs one photon of light, then splits that light"s energy in two - a doubling effect that has the potential to improve the light-harvesting ...

Abstract: rovement is hindered by the single junction limit. One potential solution is to use molecular singlet exciton fission to generate t o electrons from each absorbed high-energy photon. We ...

Exciton fission in tetracene is coupled to silicon solar cells, enhancing the efficiency of the cells by generating more than one electron per photon in the blue-green spectrum.

When the color of incident light is varied, peaks in the cell"s output current correspond to exciton fission. This confirms that exciton fission is coupled to the silicon solar cell and is successfully improving its ...

NREL scientists have confirmed the first molecular compound specifically designed to exhibit multiple-exciton generation through singlet fission--in efect, producing two electrons for every one photon ...

Fission surface power can provide abundant and continuous power regardless of environmental conditions on the Moon and Mars. NASA plans to demonstrate and use a fission ...

Working with an effect known as singlet exciton fission (SF), scientists from the Massachusetts Institute of Technology (MIT) have demonstrated a novel silicon solar cell concept ...

We present the advantageous spectral stability of using voltage-matched tandem solar cells with respect to their traditional series-connected counterparts and experimentally demonstrate how singlet fission ...

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