Abstract Submitted
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A Study of Efficiencies of Nano Molecules Used in Organic Solar Cells as Electron Acceptors YUN JIN JEONG , RICHARD KYUNG, Choice Research Group — Organic Solar Cells (OSCs) are the types of photovoltaic cells which produce electricity from sunlight by the photovoltaic effect. Conductive organic polymers are used for light absorption and to charge the cell. Research validating the potential use of the OSCs in the solar cell have led scientists to assess the safety of fullerene derivatives such as thermodynamical stability. Recently, computational and numerical simulation technology has been used as a means to determine the thermodynamic stability of such molecules. Scientists have modeled nano fullerene complexes, which are believed to be able to virtually attach large quantity of functional groups and donate electrons to polymers. The current research on organic solar cells has discovered that there are many advantages regarding the use of these solar cells. Organic, polymer-based solar cells, also commonly referred as OSCs, have been found to be a new and better alternatives to inorganic cells in several ways. Compared to silicon-based devices, the OSCs have many advantages such as light weightness, flexibility, semi-transparency, and lower manufacturing costs. This would make OSCs useful for cheap, large scale energy production.

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