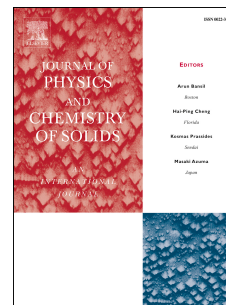


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Molecular design of novel fullerene-based acceptors for enhancing the open circuit voltage in polymer solar cells

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ABSTRACT

Organic solar cells, especially bulk hetero-junction polymer solar cells (PSCs), are the most successful structures for applications in renewable energy. The dramatic improvement in the performance of PSCs has increased demand for new conjugated polymer donors and fullerene derivative acceptors. In the present study, quantum chemical calculations were performed for several representative fullerene derivatives in order to determine their frontier orbital energy

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