
Title: Solar Cells Based on Nanostructured Organic/Polymeric Materials



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(Guest Editor)

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Proposal

The utilization of solar energy for electricity generation has been strongly demanded due to the limitations of conventional electricity sources in terms of availability, environmental impact and cost effectiveness. Clean, free and abundant electricity can be obtained from sun light by means of solar cell devices. Nowadays, the vast majority of solar cells used for this task are among the first and second generation devices, which are made from inorganic materials in various architectural designs. However, the main obstacle in the implementation of these devices is the high cost due to strong requirements to the high purity of the semiconductors and the techniques used in the devices fabrication. Moreover, it is seen that emissions to the environment mainly occur from using fossil-fuel-based energy in generating the materials for inorganic solar cells, modules, and systems.

Over the last two decades great efforts have been made to develop the low cost and ambient temperature processed solar cells based on organic and polymeric materials active layers. Despite easy fabrication of these devices, they are capable of showing extra important features, such as flexibility, light weight, and suitable degradability for recycling purpose. The unsatisfied issues of low power conversion efficiency and stability problem with organic solar cells requires rigorous research studies performed covering from studying various materials for organic solar cells to the devices fabrication and characterization.

Authors are invited to submit their original researches and review articles to this special issue of ***Journal of Technology Innovations in Renewable Energy***. Potential topics include, but are not limited to:

1. Synthesis of novel organic/polymeric materials for solar cells application.
 2. Nanostructures for efficient light harvesting in organic/polymeric based solar cells
 3. Fabrication and characterization of organic/polymeric based solar cells
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