

Special Issue on  
**Advances in Organic Electronic Materials and Devices for Energy Conversion**

# CALL FOR PAPERS

As the human population continues to increase, so does the consumption of fossil fuels. This leads to an increased risk of air pollution, as well as an increase in the severity of the shortage of the conventional energy sources; therefore, the development of both renewable energy and energy saving methods is indispensable. Photovoltaic technology is one of the most efficient ways to utilize solar energy and provide clean energy, and light-emitting diodes (such as white LEDs) with a high luminous efficiency can save energy for lighting. Organic electronics such as organic/organic-inorganic solar cells and organic light emitting diodes have many advantages such as flexibility, being lightweight, low cost, facile fabrication/synthesis process, tunable bandgap, different semiconductor types, and diverse structures. Besides, hybrid photoelectronic detector also belongs to this family.

Optical and electrical properties are vital for the device performance of these organic electronics, and these properties should be compromised with crystal structure and morphology properties for material designing and material processing. The majority of the processing for these optoelectronics must occur at relatively low temperatures to prevent chemical decomposition, so this requires rigid processing procedures or fabrication methods. Particularly, these devices (even the simplest device) consist of several materials or multilayers, so forward deposition on one layer should not dissolve or destroy the previous layer. The multilayers also produce several interfaces in devices, and charge transport/injection is linked to these interface properties. In addition, recombination can occur in both film and the interfaces. Therefore, continuous efforts on these aforementioned factors are needed for accelerating the development of the organic electronic materials and devices for energy utilization.

The aim of this special issue is to collate original research and review articles that are closely related to organic/hybrid solar cells (OSCs), perovskite solar cells and photoelectronic detectors, and organic or hybrid light emitting diodes (OLEDs) to contribute to the fields of renewable energy utilization and low-cost advanced optoelectronic devices.

Potential topics include but are not limited to the following:

- ▶ New preparation methods or processing techniques for exploiting organic materials for solar cells, light emitting diodes, and photodetectors
- ▶ Device structure optimization for these devices
- ▶ Interfacial energy level alignment in these devices
- ▶ Defect properties and recombination properties
- ▶ Carrier injection and transport properties
- ▶ Theoretical calculation and simulation for materials designing and device designing
- ▶ Scale-up production methods for industrialization

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijp/oemd/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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