

CALL FOR PAPERS

The solar photovoltaic (PV) industry has continued its rapid growth in recent years despite shrinking margins, phaseout of government subsidy, and issues such as decline in demand within many European countries. The solar PV industry strengthened in 2015 due to the continued emergence of new markets and strong global demand. The average module prices continued to fall in 2015, but less rapidly than previous years. Low module prices offer a continued challenge to many thin-film companies and the concentrating solar industries, which have struggled to compete, while the price stagnation helped to consolidate the positions of many leading companies. The industry continued to focus on soft costs (non-hardware) through optimization and improvements of equipment, including reducing mechanical mounting parts and using robotic technology for installation and maintenance. In 2016, the worldwide installed PV is expected to reach about 64 GW, but most of this is likely to be in Asian markets. Silicon technology is likely to continue its dominance, but emphasis is changing to higher efficiency technologies based on N-type wafers. At the same time, other technologies based on a-Si, thin-film Si, CIGS, and particularly CdTe are poised for larger share of the PV market. However, there are many challenges both in R&D and in commercialization. The PV R&D community is working on new materials, device designs, and process tools, while there is a rapid growth in commercial equipment for improved processing and higher throughput. One of the major areas expected to receive much attention is characterization and measurements. In particular, PV industry is keen to implement online monitoring.

This special issue will compile papers on all research aspects of measurements and characterization of photovoltaic materials and devices. We invite researchers, academicians, and industry technologists to contribute original research articles as well as reviews related to various PV technologies such as crystalline Si, thin-film technologies (CdTe, CIGS, and amorphous Si:H), and emerging solar cell technologies: organic solar, dye-sensitized, multijunction, nanocrystalline, perovskite, and quantum dots.

Potential topics include but are not limited to the following:

- ▶ All research aspects related to current materials and solar cells
- ▶ Approaches for commercial production, focusing on precursor and feedstock materials, module design and processing, advances in device fabrication, and innovations for device fabrication
- ▶ New materials for PV applications, such as organics, quantum dots, thin-film Si, polymers, and biohybrids
- ▶ Device and process simulations
- ▶ Advanced module design and fabrication technologies
- ▶ Advanced measurement/characterization methods and instrumentation for in situ measurements, defect monitoring, and process control and performance, reliability testing, and standards
- ▶ Technology and process development in industry

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijp/pvmd17/>.

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

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