

THE PHYSICS OF THIN FILM SOLAR CELLS

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DESCRIPTION

Understanding the physics of thin-film solid-state devices such as solar cells became merely more important than ever as the photovoltaic industry is driving towards thinner and more reliable devices. The second-generation photovoltaics are called thin-film solar cells that are fabricated by depositing one or more thin layers, or thin films (TF) of photovoltaic material on a substrate, such as glass, plastic or metal. Thin-film solar cells are commercially used in several technologies, including cadmium telluride (CdTe), copper indium gallium diselenide (CIGS), and amorphous thin-film silicon (a-Si, TF-Si).

Thin-film technology has always been cheaper but less efficient than conventional c-Si technology. However, it has significantly improved over the years. In this issue, we are interested to publish top papers on optoelectronics based on thin films and solid-state electronic devices for energy applications. We are particularly interested in solar cells and photovoltaic devices of various types e.g. CZTS, CdTe, CIGS, Perovskites, and tandem cells. Thin-film materials of interest are not limited to polycrystalline and crystalline but to new hybrid organic-inorganic materials. We are pleased to invite authors and research groups worldwide to submit their papers on energy harvesting devices, lasers, Solar cells, Photodetectors, sensors, and any device based on novel thin-film materials. The issue welcomes publications on both the theoretical and experimental analysis of carrier transport and device reliability analysis.

We also encourage the publications on graphene and nanotube application in the structure of thin film solar cells as the buffer layer, hole/electron transporting layers.

SUBMISSION DEADLINES

All papers will go through the Open Physics' high standard, quick, fair and comprehensive peer-review procedure. Before submission authors should carefully read the Instructions for Authors, which are located at https://www.degruyter.com/view/supplement/s23915471_Instruction_for_Authors.pdf. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at <http://www.editorialmanager.com/openphys> according to the following timetable:

- ▶ **1st round: Manuscript Due: Sep. 15, 2020**
- ▶ **1st round: Review Due: Nov. 1, 2020**
- ▶ **1st round: Publication Date: Dec. 15, 2020**

When entering your submission please choose the option type of an article: “The Physics of Thin Film Solar Cells”. Submissions for the special issue are now open.

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