Special Issue

Modeling and Simulation of Solar Cells

Message from the Guest Editors

Modeling and simulation of solar cells is an essential methodology for the analysis and characterization of solar cells. In addition, it can be utilized to enhance and design them. Modeling is the step directly before simulation, in which the device must be modeled before identifying solutions to ensure good performance. Modeling is divided into physical modeling, where the device is described physically, and mathematical modeling, where the mathematical equations describing the device and the initial as well as the boundary conditions are defined. Simulation is then used to solve these mathematical models numerically to determine the performance parameters of the device. Thus, this Special Issue is devoted to:

- Developing new modeling and simulation methods for solar cells
- Modeling materials building solar cells
- Introducing simulation of new types of solar cells using state-of-the-art simulation tools
- Developing modeling and simulation tools and stability of new thin film solar cells, such as perovskite and organic solar cells
- Developing models and simulation tools for solar cell and solar module diagnosis.

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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