Special Issue

Scientific and Technological Advances in Photovoltaic Solar Energy Conversion

Message from the Guest Editor

Photovoltaic research has provided lower-cost solar electric generation and, as is often the case in science, it has generated a far-reaching positive impact. For example, thin film semiconductor solar research is the basis for flat panel display. This issue explores present photovoltaic research and its impact on solar electric generation and related emergent technologies. Topics of interest include: next generation solar cells, low-cost thin crystal silicon, molecular absorber, organic absorbers, quantum dots and nanotube photovoltaic, waste heat conversion, optical manipulation, and related topics.

1. Advances in silicon solar cell design, thin silicon, commercialization, high-efficiency processes, pastes, thin solar cell performance and manufacturing progress;
2. Advances in molecular and quantum dot photovoltaics;
3. Novel methods for photon collection and energy convesion;
4. Advanced organic and carbon nanotube photovoltaics;
5. Novel high-impact and large-scale photovoltaic installation;
6. Advanced thermal photovoltaic and waste heat conversion.

Guest Editor

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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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