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Scientific and Technological Advances in Photovoltaic Solar Energy Conversion

Guest Editor:

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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.









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Message from the Editor-in-Chief

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