

Special Issue

Recent Advances in Materials for Emerging Solar Cells

Message from the Guest Editors

Solar photovoltaics (PV) has become a strategic technology to mitigate climate change and enable ecological transition towards a carbon-free system. The astonishing growth of silicon-based PV technology suggests that the theoretical goal of 75 TWp installed worldwide by 2050 may be achievable. Given this high renewable demand in the coming years, there is a plenty room for a mix of PV technologies, and emerging materials, as small-molecule absorbers or In-free inorganic thin-films, whose production requires less energy and less raw material consumption than Si, could be competitive even for its scalability. This Special Issue will rapidly publish original and review contributions on the recent advances in theoretical and experimental research of new molecular materials for solar energy and novel architecture concepts for thin-film cells. The following topics are subject to particular interest:

- All-Small-Molecules organic solar cells
- Molecular charge transport layers in perovskite solar cells
- II-IV-N₂ Compounds
- Antimony/Bismuth Chalcogenides and Chalcogenides
- Earth-abundant and non-toxic absorbers

Guest Editors

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