



## Next Generation Materials for Thin-Film Solar Cells: Synthesis and Characterization

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### Message from the Guest Editor

This Special Issue is dedicated to the next generation of materials, including Earth-abundant and newly emerging materials, designed for thin-film solar cell technology, such as  $\text{Cu}_2\text{ZnSn}(\text{Se},\text{S})_4$  kesterite and their related materials obtained by cation substitution by, e.g., Ag, Ge, Ba, Sr, Mn, hybrid organic–inorganic, chalcogenide perovskite and antimony chalcogenide materials. The issue covers new synthesis processes for the preparation of all layers of thin-film solar cells, combined with advanced techniques for the characterization of the bulk, interfaces and surfaces. Theoretical calculations, modeling and simulation are important in order to acquire a better understanding of the device's performance and its limitations. Therefore, theoretical analysis and device simulation related to charge carrier transport, defects and so on are also within the scope of this Special Issue.

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*Guest Editor*





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## Message from the Editor-in-Chief

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