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Two-Dimensional Materials in Solar Cells

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Deadline for manuscript submissions:
closed (20 April 2022)

Message from the Guest Editors

Dear Colleagues,

Nowadays, the main challenge consists in harvesting the solar energy in an efficient way. In this context, two dimensional (2D) materials have attracted considerable attention due to their exciting optical and electronic properties. As a matter of fact, graphene, with its high transparency and conductivity, can be employed as an electrode in solar cells, but its ambipolar electrical transport also makes it suitable as a cell anode and/or cathode. Beyond graphene, a vast library of 2D materials, such as transition-metal dichalcogenides or transition metal carbides, nitrides, or carbonitrides (MXenes), is currently available. Those materials are commonly used as dopants or inter-layers in complex architectures of ultrathin solar cells. Despite the fact that 2D materials have starting to be included in PV technologies, there is still no adequate synergy between the recent progress of the 2D material scientific community and the PV industry and research.

In this regard, we are pleased to invite you to submit manuscripts for the Special Issue in the form of full research papers, communications, and review articles.

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Message from the Editor-in-Chief

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