Special Issue

Recent Advances in Materials and Technologies for Photovoltaic Systems

Message from the Guest Editors

Recent studies on second- and third-generation PV cells, including among others organic solar cells and perovskite solar cells, demonstrate that these technologies can reach high efficiency and longer lifetime, not only at the laboratory level, and have the potential to rapidly be competitive with the well-established crystalline silicon solar cells technology. On the other hand, due to the intermittent nature of solar energy and its high penetration in smart grids, the modelling, design, monitoring, control, and diagnosis of PV systems are becoming increasingly complex. To deal with these challenges, novel techniques employing massive computational intelligence and IoT technologies are being developed for both the design (off-line) and the control, monitoring, and diagnosis (on-line) of PV systems, as well as for energy forecasting.

Guest Editors

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Deadline for manuscript submissions

closed (31 December 2022)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/73904

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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