

Special Issue

Photovoltaic and Electrical Fires: 2nd Edition

Message from the Guest Editors

PV systems and their electrical components are exposed to extreme environments over long periods, thus, the issues of electrical faults and wiring aging are exacerbated, increasing the risk of PV and electrical fires. Additionally, the complex structures of PV systems, high voltages continuous currents in electrical wiring, and the insignificant smoke or flame in the early stages of a PV fire pose major challenges for photovoltaic fire detection and prevention. The SI will comprehensively explore PV and electrical fires, including the behaviors and mechanisms of their occurrence, as well as evolutionary detection and prevention technology and risk assessment methods, to provide new ideas for improving the safety of PV and electrical systems, thus promoting the widespread application of PV technology in a safer environment. Potential topics include but are not limited to the following: Ignition mechanism of PV module; Flame spread behavior of PV panel or array; Detection and prevention technology for PV fires; Risk assessment for PV fires; Mechanisms of electrical fault and electrical fire; Evolution law of electrical fire; Detection and control technology for electrical fire.

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