



Special Issue Reprint

## **Cable and Electrical Fires**

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ISBN 978-3-7258-2515-8 (Hardback) ISBN 978-3-7258-2516-5 (PDF)

Cables, as the "arteries" and "nerves" of the national economy, are widely used in energy transmission, information transmission and various motor instruments. However, with the increasing demand for electricity and the energy infrastructure's inevitable aging, cable and electrical fires have become the main cause of fire-related accidents. Our Special Issue, named "Cable and Electrical Fires", compiles current research on cable and electrical fires, as well as present progress to the wider community and encourage further research in this area. Up to now, 11 high-quality articles have been included in this Special Issue. The articles included cover the progress of research on the fire characteristics of cables and wires; hazard and risk evaluation, especially the smoke toxicity hazard; and test standards in cable or electrical fires. We hope that the contributions published within this Special Issue will provide new insights in the field of cable and electrical fire safety. Although considerable research progress has been made on electrical and cable fire mitigation and control, much work remains to be conducted. Here are some promising research directions that may improve cable and electrical fire safety: 1) advanced materials for fire-resistant cables, including non-halogenated flame retardants and smart, self-healing materials; 2) predictive maintenance and monitoring technologies, such as using AI and machine learning to identify patterns indicative of potential fire hazards; and 3) fire safety standards for emerging technologies, including electric vehicles (EVs) and charging stations.



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