



## Next-Generation Textiles: Advancements in Functional Polymers for Sustainable, Smart and Health-Enhancing Fabrics

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### Message from the Guest Editor

The role of textiles in occupational safety and health is pivotal, especially in the domain of personal protective equipment (PPE). Across diverse fields such as healthcare, the oil and gas industry, extreme weather operations, firefighting, and military service, the demand for advanced textiles that can provide enhanced protection against specific occupational hazards is increasing. The effectiveness of PPE depends significantly on the functional properties of the textiles used in their construction.

This Special Issue invites researchers to contribute original work on the latest developments in functional polymers for textiles. The focus is on innovative materials that offer smart solutions, such as self-decontaminating surfaces, temperature regulation, and improved mechanical durability, while also prioritizing sustainability and environmental friendliness. Contributions may explore the synthesis and application of novel polymeric materials in textiles, advancements in nanotechnology and biotechnology for textile enhancement, and the development of smart fabrics that respond to environmental stimuli with applications in occupational safety and health.





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