

Special Issue

Application of Nondestructive Testing in the Structural Health Monitoring of Industrial Materials

Message from the Guest Editors

Nondestructive testing (NDT) and structural health monitoring (SHM) are critical for ensuring the integrity, safety, and longevity of industrial materials across sectors such as aerospace, energy, and manufacturing. As aging infrastructure and complex engineering systems demand proactive maintenance, NDT techniques (e.g., ultrasonic testing, thermography, and eddy currents) enable the early detection of defects without compromising material performance. Meanwhile, SHM integrates sensor networks, data analytics, and AI to continuously assess structural conditions, reducing downtime and operational risks.

This Special Issue aims to foster interdisciplinary dialogue by highlighting novel NDT methodologies, SHM systems, and real-world applications. Contributions should emphasize technical innovation, validation using case studies, and alignment with industry standards.

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Message from the Editor-in-Chief

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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