Special Issue

Future Trends in Non-destructive Testing of Materials Using Ultrasound Technology

Message from the Guest Editors

Ultrasonic testing is a representative, non-destructive inspection technique that is safe for use in the human body and is widely used to detect defects in materials or evaluate physical properties. Generally, ultrasonic testing is mainly applied to metal materials, and recently, its application to materials such as polymers and composite materials has been expanded. However, ultrasonic waves have different propagation properties depending on physical properties such as the speed, density, grain size and orientation of the material, which poses a problem. For the evaluation of material integrity and properties, various ultrasonic non-destructive evaluation techniques such as PAUT, FMC/TFM, non-linear ultrasonic guided waves, and SAM have been proposed. Most ultrasound techniques were developed for use in both in situ and laboratory examinations and play a pivotal role in various industries. This Special Issue will cover simulation and experimental studies regarding the latest ultrasound techniques for material evaluation.

Guest Editors

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Deadline for manuscript submissions

closed (20 March 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/126730

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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