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

Guest Editors:

Prof. Dr. Ik-Keun Park
NDT Research Center, Seoul National University of Science and Technology (SeoulTech), Seoul, Republic of Korea

Dr. Chungseok Kim
Department of Materials Science and Engineering, Chosun University, Gwangju, Republic of Korea

Dr. Wonjae Choi
Korea Research Institute of Standards and Science, Daejeon, Korea

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Message from the Guest Editors

Dear Colleagues,

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.

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Dr. Chungseok Kim
Dr. Wonjae Choi
Guest Editors

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Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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materials@mdpi.com
𝕏@Materials_Mdpi