Special Issue

Advances in Acoustic Emission Testing of Metals and Alloys

Message from the Guest Editors

Acoustic emission (AE) techniques have been successfully used as a non-destructive means for testing metallic materials and structures over the past 50 years. Driven by industrial demands, the AE technique has evolved as a powerful tool for integrity testing. With the advent of microelectronics, signal processing and information technologies, modern AE techniques have experienced rapid growth. In recent years, many publications have appeared, revisiting the classical topics of AE covering various aspects of foundations of AE phenomenon, understanding of which still leaves a lot to be desired. This Special Issue of *Metals* provides a platform for communication and exchange between AE professionals on AE basics and applications. We seek contributions covering a wide range of subjects related to AE phenomenon in metallic materials during their plastic deformation, degradation and fracture. We seek advances in theoretical and modelling studies serving as guides for data analysis by laboratory experimentalists and in-field practitioners. Experiences with AE signal processing, proven for materials testing and characterization, are also welcomed.

Guest Editors

Prof. Dr. Alexei Vinogradov

Department of Engineering Design and Materials, Norwegian University of Science and Technology, Trondheim, Norway

Prof. Antolino Gallego

Department of Applied Physics, Building Engineering School, Campus Fuentenueva, University of Granada, 18072 Granada, Spain

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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