Special Issue

Advances in Welding and Joining of Similar and Dissimilar Materials

Message from the Guest Editors

Today's rapidly evolving advanced manufacturing technologies (e.g., additive manufacturing, field-assisted sintering technology) provide diverse innovative solutions for the welding and joining of similar or dissimilar materials. Joining similar materials with advanced techniques makes it possible to realize new structure designs and offer significant performance enhancement. Although new techniques could advance the joining process, challenges still exist.

This Special Issue aims to highlight recent findings in the joining of similar or dissimilar materials, both from experimental characterization and numerical modeling. Topics covered in this Special Issue include but are not limited to: welding and joining; new joining techniques and strategies; novel dissimilar materials design; functionally graded materials; hybrid joining techniques; additively manufactured structures; interfacial bonding strength; phases, microstructure, and porosities at the joint; and residual stress modeling and measurement. This Special Issue endeavors to share recent advances and provide future insights in this crucial area.

Guest Editors

Dr. Xinchang Zhang

Energy and Environment Science and Technology, Idaho National Laboratory, Idaho Falls, ID 83415, USA

Dr. Wei Li

Department of Mechanical Engineering, University of Texas at Dallas, Richardson, TX 75080, USA

Deadline for manuscript submissions

closed (30 June 2022)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/93644

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

mdpi.com/journal/crystals

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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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