

## Special Issue

# Residual Stresses—Prediction, Measurement, and Management

### Message from the Guest Editor

Residual stresses are the locked-in stresses inevitably introduced in fabricated parts as a result of manufacturing processes. They cause distortion and can combine with operational stresses and result in premature failure of components. Alternatively, if residual stresses are engineered at the design stage, they can lead to improved performance and enhanced product lifetime. In the former case, knowledge of residual stresses is required for assessments supporting the safe operation and life extension of critical infrastructure, whereas in the latter case, detailed knowledge is required to manipulate the residual stress field through careful design, controlled manufacture processes, and lifetime management. The aim of this Special Issue is to cover the recent progress and new developments regarding all aspects of residual stress characterization and approaches to control residual stresses in engineering components. This includes advances in residual stress prediction, development of hybrid techniques for measurement of residual stresses, and novel approaches in residual stress engineering.

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### Guest Editor

Dr. Foroogh Hosseinzadeh  
The Open University, Milton Keynes, United Kingdom

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### Deadline for manuscript submissions

closed (31 October 2021)



## Metals

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

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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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