



Formation of Intermetallic Phases in Solidifying Al-Fe-Si Melts

Guest Editor:

Dr. Małgorzata Warmuzek
Foundry Research Institute, 30-
418 Kraków, Poland

Deadline for manuscript
submissions:
closed (10 May 2020)

Message from the Guest Editor

Dear Colleagues,

This Special Issue will be dedicated to the presentation of the current state of knowledge regarding the formation of the intermetallic phases on the solidification path of aluminum alloys containing Fe, Mn, and Si.

Particular attention will be paid to kinetics and the mechanism of the polyphase reactions in which the intermetallics containing transition metals, such as Fe and Mn, take part. These phenomena are the subject of numerous publications, due to their importance for technical alloys but also due to the specific properties of the intermetallic phases in this group. These phases form microstructure constituents that are important for technical alloys properties, and the control of processes of their formation in liquid alloys is still a problem. The temperature and concentration limit the equilibrium phase stability regarding confirmation or correction. Research on determining the rule for stabilizing their crystalline structure and identifying the nature of interatomic bonds and subnet structures also affects the basic problem of stabilizing the structure of metal alloys.





an Open Access Journal by MDPI

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

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/metals
metals@mdpi.com
[X@Metals_MDPI](https://twitter.com/Metals_MDPI)