Message from the Guest Editors

Dear Colleagues,

As an unique group of lightweight heat-resistant materials, TiAl-based alloys are highly praised for their wonderful properties, which let them replace currently used heavy and expensive nickel-based superalloys and the conventional titanium alloys in some aspects. However, the wide application of TiAl-based alloys is still hindered by their difficult manufacturing and processing, high production cost, low ductility at room temperature, low fracture toughness and oxidation resistance at high temperature, low formability, and current lower operational temperature limit over 750 °C. Intermetallic TiAl-based alloys exhibit the highest potential for near-term application in future aircraft engines though a great deal of research is still required. This Special Issue is dedicated to presenting the current status of knowledge on the correlation between microstructure and properties of TiAl-based alloys and composites produced in different advanced processing technologies.
Message from the Editor-in-Chief

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 by the Science Citation Index Expanded (Web of Science) and other databases.

**CiteScore (2019 Scopus data):** 2.7, which equals rank 217/460 in 'General Materials Science'

Contact Us

Metals
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland
Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
www.mdpi.com
mdpi.com/journal/metals
metals@mdpi.com
@Metals_MDPI