

Special Issue on Recent Research and Development in the Processing, Microstructure, and Properties of Titanium and Its Alloys

PREFACE

The 15th World Conference on Titanium, the largest international conference on titanium science and technology, will be held in Edinburgh, Scotland in 2023. This conference is expected to boost research efforts into lowering its production costs, expanding its applications into several fields (such as aerospace, medicine, and environmental engineering), and enhancing its functionality, including also materials informatics. An academic organization, the Japan Institute of Titanium, has also been established in 2021 for work in titanium science and technology. *Materials Transactions* has published special issues on titanium and its alloys in 2004, 2009, 2013, 2017, and 2019, around the time of the World Conference on Titanium. We welcomed papers on the latest research and developments in the processing, microstructure, and properties of titanium and its alloys, and titanium-based intermetallic compounds in areas related (but not limited) to smelting and refining, additive manufacturing (AM), multi-materialization, hot/cold working, compositing, microstructure formation, phase transformation, and mechanical, chemical, and physical properties, and also materials-informatics.

This special issue contains four review articles on AM with focusing on processing, microstructural control, and biomedical applications of titanium and its alloys, and seventeen regular articles on AM, refining, microstructural evolution, and mechanical and fatigue properties related to microstructure, and biomedical applications of titanium and its alloys.

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