

Special Issue

Processing, Manufacturing and Machining of Advanced Alloy Materials: Latest Advances and Prospects

Message from the Guest Editors

Advanced Alloy Materials include both titanium, nickel and chromium alloys, as well as light alloys, including aluminum and magnesium alloys. Each material group finds different applications in various industries. For example, titanium or nickel alloys are used for components such as aircraft engine elements. On the other hand, light alloys (e.g., magnesium alloys) characterized by insignificant weight and considerable strength, find increasingly wider applications as weight-saving elements. In the case of magnesium alloys, properties such as excellent electromagnetic shielding, advantageous casting properties, good machinability, the ability to damp vibrations, recyclability and accessibility are considered beneficial.

Problems occurring in the manufacturing and machining of various groups of materials may have various causes. For example, the problems occurring in the milling of magnesium alloys can be classified depending on the type of machining (i.e., dry, wet or with oil). In dry machining, the critical machinability indicator is the temperature in the cutting zone. However, magnesium alloys have proven to be suitable for both rough, finish and precision machining.

Guest Editors

Dr. Ireneusz Zagórski
Dr. Agnieszka Skoczylas
Prof. Dr. Witold Habrat

Deadline for manuscript submissions

closed (20 July 2025)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/199412

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

[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

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), Ei Compendex, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)