

Special Issue

Application of Diamond Burnishing to Improve the Performance of Materials

Message from the Guest Editors

Potential topics include the following:

- Correlation between diamond burnishing (DB) process parameters and surface integrity (SI) characteristics;
- Correlation between the SI characteristics obtained through DB and the operational behavior of the corresponding component (fatigue, wear, corrosion resistance and others);
- Development of novel processes for modifying surface layers based on combining DB with other surface engineering (SE) processes;
- Development and research of novel diamond and other structures as materials for deforming elements in slide burnishing processes;
- DB application for processing complex surfaces and novel materials;
- Development of novel slide burnishing tools and devices and novel strategies for the processing of slide DB deforming elements and tools;
- Exploring the physical nature of slide DB processes;
- Development and application of optimization procedures in slide DB process.

Guest Editors

Prof. Dr. Jordan Todorov Maximov

Material Science and Mechanics of Materials, Technical University of Gabrovo, 5300 Gabrovo, Bulgaria

Prof. Dr. Galya Velikova Duncheva

Material Science and Mechanics of Materials, Technical University of Gabrovo, 5300 Gabrovo, Bulgaria

Deadline for manuscript submissions

15 March 2025



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/137542

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

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





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[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), Inspec, CAPIus / SciFinder, and other databases.

Journal Rank:

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