Special Issue

Advances in Hard-to-Cut Materials: Manufacturing, Properties, Process Mechanics and Evaluation of Surface Integrity

Message from the Guest Editors

Hard-to-cut materials have excellent properties, such as a high hardness and abrasion resistance, high strength at room or elevated temperatures, increased thermal conductivity, as well as resistance to oxidation and corrosion. Nevertheless, the unique features of hard-to-cut materials significantly affect their machinability. The fundamental problems occurring during machining of hard-to-cut materials include the high values of cutting forces, high levels of vibrations in machining systems, the concentration of heat, the growth of cutting temperature, rapid tool wear and the risk of catastrophic tool failure, as well as frequent stability loss and a significant deterioration of surface finish. This Special Issue provides an excellent opportunity for researchers who are studying and working with hard-to-cut materials, such as hardened and stainless steels, titanium, cobalt and nickel alloys, composites, ceramics, hard clads fabricated by additive techniques, and others. It is our pleasure to invite you to submit original research papers, short communications or state-of-the-art reviews which are within the scope of this Special Issue.

Guest Editors

Prof. Dr. Grzegorz Królczyk

Dr. Radosław W. Maruda

Prof. Dr. Szymon Wojciechowski

Deadline for manuscript submissions

closed (30 October 2019)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/18202

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

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)