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Advances in Magnesium Alloys: Microstructure, Coating, and Machining

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Message from the Guest Editors

Magnesium alloys are an interesting material for construction and design. They have many interesting and specific characteristics. Some of these characteristics could be interesting for the telecommunications industry, space industry, etc.

Starting from the 1970s, attempts have focused on defining the recommended machinability parameters for light alloys, including magnesium alloys. The problems occurring in the milling of magnesium alloys can be classified depending on the type of machining (i.e., dry machining or wet machining with the application of emulsion or oil). In dry machining, the critical machinability indicator is the temperature in the cutting zone. However, magnesium alloys have been proven to be suitable for both HSC (high-speed cutting) and HPC (high-performance cutting). The machining of magnesium alloys can be up to four times faster than that of popular aluminum alloys. Magnesium alloys can be dry machined because of a longer tool life—in the case of magnesium alloys, the tool life is ten times longer than that of tools used in the machining of aluminum alloys.

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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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