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Simulation of Abrasive Processes for Crystalline Materials by Means of Molecular Dynamics and Multiscale Methods

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Message from the Guest Editors

Abrasive processes are essential in manufacturing in order to render high-quality surfaces of mechanical parts. Given that experiments at the micro and nanoscale are very expensive, simulation methods can be employed in order to evaluate the capabilities of abrasive processes in these scales, and optimize them with respect to various materials. At the nanoscale, the molecular dynamics method is the most frequently used method to achieve reliable simulation of material removal.

This Special Issue plans to present an overview of the most recent advances in the field of simulations of abrasive processes at the nanoscale by means of molecular dynamics and multiscale methods, including:

-Simulation of abrasive processes using molecular dynamics;
-Meshless methods for the simulation of abrasive processes;
-Development of multiscale frameworks for abrasive process simulations;
-Prediction of microstructure during abrasive processes;
-Simulation of hybrid abrasive processes;
-Simulation of abrasive processes for nanostructured materials;
-Simulation of abrasive processes for high-entropy alloys;
-Simulation of abrasive processes for polycrystalline materials.

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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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