Special Issue

Fundamentals and Applications of Reactive Materials

Message from the Guest Editors

In the wide range of exothermic phase formations, transformations in reactive materials are of particular interest. Reactions can be externally driven or self-sustaining following a trigger impulse. They can serve as an energy source for triggering further reactions or for joining applications as well as for the synthesis of high-temperature materials under exceptional non-equilibrium conditions. Underlying processes happen in times as short as a few microseconds on the nanometer scale while easily achieving more than 1500 K and velocities of up to more than 100 m/s. This poses extraordinary challenges and opportunities for both fundamental research and applications, calling for high-resolution, time-resolved experiments, multiscale simulations and advanced modeling approaches that consider physical metallurgy, chemistry, advanced microstructure research and mechanical engineering. In this Special Issue, you are invited to share the latest results in this diverse field of research. Full-length articles, communications and review articles will be considered for publication.

Guest Editors

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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

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