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High-Entropy Ceramics: Synthesis and Applications

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Message from the Guest Editors

Dear Colleagues,

The solid solutions of complex ceramics are currently attracting growing scientific interest due to their unique combination of functional and mechanical properties. In particular, the entropy-driven stabilization of new phases and compositions represents a kind of new “far west for ceramurgists”. This approach allows the development of novel materials with still unexplored properties.

Due to their complex composition, high-entropy ceramics require advanced processing routes, often aided also by the development of predictive models to define their thermal stability. As such, HECs have been manufactured by various synthesis processes, including sol-gel processing, wet chemical synthesis, spray pyrolysis, solid-state synthesis, and others. Moreover, various sintering processes have been applied to high-entropy ceramics, such as SPS, flash sintering, UHS, and conventional sintering.

In this Special Issue, new trends in the field of high-entropy ceramics are highlighted with a specific focus on structural simulations, processing, and properties. Both theoretical and experimental works are welcomed, including full-length papers, communications, and reviews.





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Message from the Editor-in-Chief

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