Special Issue

Transparent Ceramics: Sinterability, Optical Properties and Its Applications

Message from the Guest Editors

Transparent ceramics are high-performance materials applied in the field of solid-state lasers, phosphor ceramic plates for high power solid-state lighting, scintillators, infrared (IR) night vision, IR heat-seeking devices, transparent armor windows, cutting tools, wear and scratch-resistant parts, and synthetic opals and rubies. Almost full densification of ceramics is required to get optical grade transparent ceramics. Moreover, various sintering technologies, such as pressureless sintering, hot press (HP) sintering, hot isostatic pressure (HIP) sintering, and spark plasma sintering, are applied to achieve full densification. The most studied transparent ceramics include Al2O3, AlON, rare earth oxides (Re2O3), and spinel (MgAl2O4). There is always a need for novel transparent ceramics with novel optical properties. The fabrication of high-quality transparent ceramics needs high temperature and high pressure, which is not eco-friendly. Therefore, green synthesis technology is of importance. It is my pleasure to invite the researchers to submit their manuscripts in this Special Issue.

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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.

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