

Special Issue

Glass, Glass-Ceramics, and Ceramics for Nuclear Waste Immobilization and Other Environmental Applications

Message from the Guest Editors

The world faces many environmental challenges. Glass, glass-ceramics, and ceramics are critical materials in modern technologies. For the past few decades, these materials have been under testing for many important environmental applications. Even though glass, glass-ceramics, and ceramics are being investigated for use in different environmental applications, there are many issues that are not yet solved. For example, glass and glass-ceramics for nuclear waste immobilization, although borosilicate glasses show the favorable characteristics of high waste loading and long-term durability, the nuclear waste immobilization issue is not yet fully resolved due to a lack of understanding of microstructural alteration and phase separation issues, and the need to improve waste loading capacity further. The current Special Issue focuses on glass, glass-ceramics, and ceramics, the study of CO₂ capture and storage in zeolite, MOFs, and cementitious materials is strongly encouraged. The catalytic reduction of CO₂ and solid-state battery development, where glassy or ceramic material electrodes/electrolytes are used for the study, will also be considered for the current Issue.

Guest Editors

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Editor-in-Chief

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